LONG LIVE THE ANCESTORS

FOUNDATION THREE

HEAVEN IS ROUND

Heaven is Round

- a Chinese theory of cyclical change -

Cover

Detail on a Fangyi ritual vessel, 12th century BC. Harvard Art Museums, Arthur M. Sacker Museum, bequest of Grenville L. Winthrop.

Acknowledgements

Thanks to John A. Matthews for giving me permission to adapt a map from a scientific article by Tristram R Kidder and Yijie Zhuang (p.5, n.12). Adam Smith likewise let me adapt his diagram of the 60 day cycle (p.40, n.67) and kindly sent copies of his own diagram.

F3: Long Live the Ancestors

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Foundation Series – Guidance Notes

I write as a storyteller; I am not a historian. To keep the story flowing and light-hearted, sources are acknowledged in the Notes at the end.

- If you are reading on a device, hover over the number at the end of a paragraph and its requisite note will pop up.
- Online sources are linked and underlined. Images are licensed under Creative Commons unless another source is given.
- A cross-referencing system connects themes across different articles: e.g. Foundation Series, Issue Two, page 7 is abbreviated to (F2, 7).
- Characters and tone marks are included as a footnote or an illustration when a word or phrase is first used. 'Ancient' refers to characters inscribed onto oracle bones or bronze vessels. Check the Audio Guide on the website or the F1 appendix (F1, 18 - 21) for more details.
- Apart from F1, I do not analyse characters. To learn more about their origins and meanings, try Wiktionary or the extensive databases of the Chinese University of Hong Kong or the National Taiwan University.

Early Chinese dynasties

The Foundation series is set in the timeline below, except for Foundation Two which is set in the late Ming dynasty (1368 – 1644).

Xia	c. 2070 - 1600		
Shang	c. 1600 – 1046 BC		
Zhou	c. 1046 – 256 BC	Western Zhou	c. 1046 – 771 BC
		Eastern Zhou	771 – 256 BC
		Spring & Autumn	771 – 481 BC
		Warring States	481 - 221 BC
Qin	221 – 206 BC		
Han	206 BC – 220	Western Han	202 BC – 9
		Eastern Han	25 – 220
Xin	9 – 23		

Xià 夏 Shāng 商 Zhōu 周 Qín 秦 Hàn 漢 Xīn 新

Introduction

Why five? Why did the number five and sets of five things come to have a central place in Chinese thought? And why those five? Fire, water, and earth are typical choices of ancient peoples who sought to identify vital natural phenomena, but wood and metal are unusual choices.

There are no definitive answers. There was no solitary sage who grasped the profundity of five when he nicked one of his fingers in a rare moment of mindlessness while preparing his winter log store. Instead, I'll offer examples of how the number five, and those natural resources were significant before the theory arose. In doing so, I'll also begin to introduce the historical context which gave rise to *wuxing*.

In Mission of the Five Elements, Matteo Ricci noted that fire, water, trees, soil and ores were initially described as essential resources for people's livelihoods (F2, 14). Perhaps so, but I want to introduce their role in myths and rituals, especially ones which confer power and authority. The sacred use of these resources could be a bridge for their transformation from raw natural materials to rarefied cosmic powers.

This issue, Long Live the Ancestors, begins with a famous myth of how a clod of soil was used to stem a great flood. This myth is linked to the sage-king, Yu, founding ancestor of China's first dynasty, the Xia. I explore whether the Xia was a dynasty, explain the predominant type of soil in northern China, and how deforestation in prehistoric times exacerbated floods. Next, I shift focus to myths of drought, rituals of fire, and the legend of King Tang, founder of the following Shang dynasty. I introduce the use of bronze in ancestor worship, revisit the Shang oracle bones (F1, 1- 2), and explore how the auspices of five were reflected in a configuration of sacred space and a cycle of ritual time.

While there is no guarantee that any of the examples given in this issue are the conceptual ancestors of *wuxing*, a handful of prospective candidates can be put forward, nonetheless. Lastly, this is a long article. We are covering a lot of ground, much of it is fine soil, so take your time.

LONG LIVE
THE ANCESTORS

Quelling the Primordial Flood

In high antiquity, a great flood had submerged everything except for the highest mountain peaks. To allay the flood, Gun stole a clod of soil from Di, the High God (F2, 4). The clod had magical self-replicating properties: the more it was dug the more abundant it became. Gun used the soil to build dams that would keep the flood at bay. At least that was the plan. For nine years he tried to stem the rising waters but to no avail. Worse still, Di was displeased by this celestial shoplifting and had Gun banished to a morose mountain in the gloomy western lands where he was duly executed. Despite lying motionless for three years, however, there was something inside of Gun which refused to die. When he was slain again, for good measure, out of the caesarean section came his son, Yu. Gosh! What a way to introduce the seminal importance of the patriline.[1]

His father having paid the sacrificial price for cosmic felony, Yu could use the magical self-replicating soil without incurring the wrath of Di. From tiny trowels to enormous excavators, Yu sculpted the soil into high mountains and deep valleys, so the flood drained down the rivers into the eastern seas. In this way, Yu channelled the flow of water rather than blocking it by dams. Nor as he alone in his world-saving duties; his aquatic aides included dragons and turtles. Indeed, the work was so demanding that sometimes Yu took on a bestial bearing. Submerged up to his waist for years on end, his legs gradually became less able. Or less human. Yu is famous for hopping about with a lop-sided gait. [2]

So engrossed in his duties Yu passed by his home three times without stopping in. Hardly a family man! He spent a mere five days with his bride, long enough for his lop-sided sperm to swim upstream, before heading back to the day job. Once, when he asked his wife to bring him

lunch at work (a big ask because she was heavily pregnant) she was so frightened by his wild appearance that she ran away! Her petrified flight resulted in a petrified body; she turned to stone. Out from her corpse came their son, Qi. The patriline was henceforth set in stone.

ancient modern


鯀

Gǔn


禹

Yǔ

Their names derive from creatures: a fish (Gun) and an insect (Yu).

The great flood slowly but surely subsided to reveal land fit for habitation, cultivation, and in turn civilisation. Yu measured the terrain which extended over five hundred thousand paces. Not an easy job if the five hundred thousand steps were in fact twice as many hops, but then again Yu did not yearn for an easy life. Having delineated the watersheds of antiquity, he divided the terrain into nine regions where different peoples could grow their own cultural specialities. He felled trees to make paths through forests so they could travel from one niche of civility to another. He showed them how to mark out fields and form governing structures. Following the boundless nature of the flood, Yu defined the boundaries of human order.[3]

Yu, fondly called Da Yu, the Great Yu, is one of a select number of sage-kings: legendary rulers who set the primordial chaos to rights and guided primitive peoples in the arts of civil behaviour from making fishing nets to making calendars. After all, the common people could not have come up with such ingenious ideas themselves through trial and error? No, they needed a figure of authority to lead the way.

Was Yu ever a real person? The tall tales of the sage kings blur the boundaries of humanity, nature, and spirits. His bizarre birth, animal attributes, and ability to make mountains out of mole hills put Yu closer to myth than reality. That said, his legendary exploits have an eminent history. A bronze vessel dated ca. 8th century BC is inscribed with a song of praise for Yu who spread the earth, dug the mountains, dredged the rivers, demarcated regions and set up structures of government. Other

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Qǐ 啟, son of Dà Yǔ 大禹

famous sage kings such as the Yellow Emperor only make their literary debut many centuries later, even if typical accounts reverse the order.[4]

Yu is also the founder of China's first dynasty, the Xia, because he passed the baton of ruling to his son rather than one of his able aides. Is the Xia dynasty also consigned to the league of legends, like the Shang until the oracle bones were unearthed? If a dynasty is a successive line of rulers—be they kings or CEOs—whose family dominates a particular region or industry, are there signs of such a ruling lineage in China 4000 years ago? The short answer is yes and no. The long answers are long indeed, but let me try to summarise.

In the 1950s, a Chinese archaeologist, Xuxusheng, and his team undertook a quest to find the fabled Xia royal capital. Near the village of Erlitou in Henan province, they found the remains of a magnificent ancient city. There were semi-subterranean huts for the lower orders and palatial properties for the elite. Signs of social hierarchies indicate the advent of inherited rule. Over 300 regional settlements with similar cultural hallmarks have since been unearthed. If a dynasty is a powerful family that dominates a region, maybe there was a dynasty of sorts? [5]

If so, who were the Xia? Was it a family name or the name of a place? The word, *xia,* can mean summer, grand, vast, resplendent, and even a palatial property. However, as an ancient dynasty, Xia makes its literary debut about a thousand years after its purported era of rule. On thousands of Shang oracle bones and Zhou bronze vessels, there is no sign of the Xia. The inscription which lauds the great works of Yu makes no mention of the Xia. Yu appears to be more ancient than his dynasty.

During the last three centuries of the Zhou dynasty, the era of the Warring States when no one ruled supreme, rival groups claimed ever more ancient origins for their beliefs and practices.[6]

> Moreover, you take Zhou and not Xia as the model,
> so your "ancient" is not really ancient. [7]

It was in this context that the notion of a dynasty more ancient than the Shang and Zhou arose. The Xia, also known as the Huaxia, became the

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Xià 夏 Xúxùshēng 徐旭生 1888 – 1976 Èrlǐtou 二里頭
Shāng 商 Zhōu 周 Huáxià (華夏)

name for the peoples who inhabited the vast floodplains of the Yellow River. *Huá* means flourishing, blossoming, magnificent. Without doubt many peoples flourished on those floodplains 4000 years ago, probably making love and war with each other. But what they called themselves is anyone's guess. On the positive side, a list of Shang kings in historical texts had been relegated to mere legend until the oracle bones proved their authenticity. Perhaps the requisite list of Xia kings may turn out to be true one day? A fragment of pottery inscribed with the list would do nicely, but as a prehistoric era (before writing) no such piece of a broken pot has yet been unearthed.

Going forward, I'll use Erlitou to denote the city and its settlements, but I'll still refer to the Xia dynasty for legendary accounts. I'll also use Xia in the broader sense of prehistoric peoples of northern China whose flourishing may have unwittingly led to a great flood. Or even several.

Layers of Loess

How about the great flood and self-renewing soil? What is the border of myth and reality in this case? The site of Erlitou nestles into the south-eastern corner of a vast upland region called the Loess Plateau. Loess is highly fertile soil, because its particles are so small that plants can easily access nutrients. That's the plus side; the downside is the tiny particles are easily lifted up by a strong wind to form a cloud of dust. Dust clouds are more likely to form when the soil is not held down by plant roots. Loess is the name for this type of soil which is lifted into the air and then deposited elsewhere. [8]

In the Ice Age, when vegetation was thin on the ground anyway, the soil of Central Asia was transported by wind freight and deposited across northern China. The resulting Loess Plateau, formed over millions of years, is a great mound of topsoil averaging a hundred metres deep. The thick layers of loess compact into a soft stone. For many thousand years people dug caves into the loess hillsides. Warm in winter and cool in summer, the caves made comfy homes until a terrible tremor shook up their cosy lifestyle.[9]

Going back to Yu, he did not even need excavators to sculpt the mountains and valleys as this friable rock is so easily carved. Besides,

the work was being done for him by snaking dragon-like rivers. Starting as tiny trickles in the high western mountains, the rivers incise the Loess Plateau with deep valleys. The rivers then meander across vast alluvial plains—the North China Plain—before fanning out as coastal deltas that flow into the eastern seas. As well as the deep layers of loess that form the Plateau, a smattering of fertile dust was also strewn over the North China Plain. With access to fertile soil and majestic rivers the peoples of the Plateau and the Plain were among the first in the world to instigate agriculture as a way of life.

Adapted from Tristram R Kidder and Yijie Zhuang, "Anthropocene archaeology of the Yellow River, China, 5000 – 2000 BP", The Holocene 25 (10), July 2015, 1628. (Acc: 29/07/2026).

During the Ice Age, roving bands of humans survived by hunting wild animals and foraging for wild plants. They travelled with migrating herds and lived in seasonal camps. As the big freeze thawed, ca. 10 000 BC, the great human experiment of domesticating plants and animals began in earnest. Growing millet and rearing pigs enabled communities

of the Plateau and Plains to put down roots, to live in one place rather than roaming about all over the place. The transition from a nomadic to a settled existence took place over several thousand years. Therefore, the impact upon the landscape may not have been apparent from one generation to the next. Yet the more people put down roots the more they uprooted the wild vegetation which held the fine loess soil in place. Forests were felled or burned to make way for fields and settlements. Brushwood was used for cooking, to fire pottery in kilns and smelt metal in forges. Timber was also used to build palatial properties for the elite. Thatched loess mud huts were standard issue for everyone else.[10]

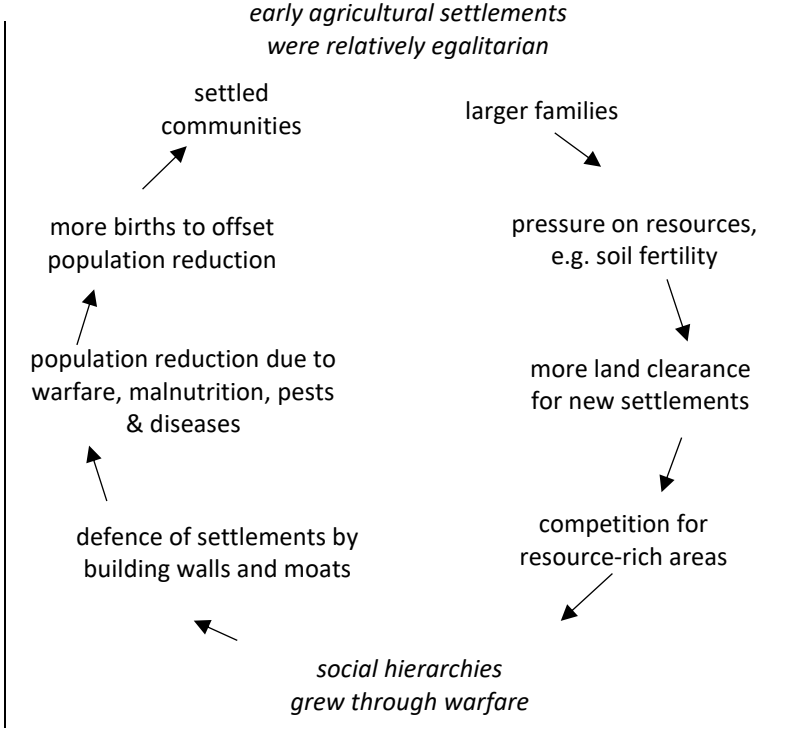
Let's turn to drainage issues and the spectre of the great flood. The best soil for growing crops is not only fertile, but it also has a spongy texture. A sponge holds water and the same quality applies to soil. Loess is fertile but the soil particles are too small to have that spongy texture which absorbs and retains water. Too little rain and the soil easily dries out. Too much rain and the soil becomes waterlogged. Too much wind and it turns into dust clouds and flies away! Human hands have to add clay, sand, muck and compost to prevent the loess from becoming too compact or flying away.

As long as there is dense vegetation, especially deep tree roots to hold the soil in place and 'drink up' excess water, heavy rainfall need not lead to floods. However, shallow-rooted cereal crops such as millet neither hold the soil nor absorb excess water. If wind erosion had swept the fertile dust into northern China, water erosion washed it down the hillsides into the rivers. In the high western mountains, where rivers are narrower and the gradient steeper, the rapidly flowing water carries the silt (soil suspended in water). Not so once the rivers meander their way through vast alluvial plains. Because of the shallow gradient the silt sinks to the riverbed where it forms a sludgy sediment. The riverbed rises, as a result, making the river shallower and so more likely to burst its banks. Add a protracted period of heavy rain and nearby settlements flood all too quickly.[11]

Throughout Chinese history the Yellow River, the largest river of northern China, is notorious for its devastating floods. Sometimes its floodwaters never return to their old channels but form new channels right through towns and villages. Yet the course of the Yellow River was

stable until land clearance began in earnest ca. 3000 BC onwards. Hence, Yu and his aquatic assistants spent their days dredging the riverbeds and raising the riverbanks. Since his deforestation projects were part of the problem, dredging rivers was work on top of work. A noble cause? [12]

Indeed, farming communities had to be as hard-working as Yu. Wild weeds self-seeded in their orderly fields; runt piglets needed hand-rearing when mummy pig lost interest; dykes had to be dug; mounds of muck had to be raked back into the soil to improve its structure so it did not fly away as a dust cloud or collapse as a mudslide. Another factor of settled communities was larger families. The Xia were flourishing. While larger families lightens the workload, more mouths to feed meant more land was needed in a self-replicating loop of expansion. Moreover, soil which is intensively worked loses its fertility over time, creating another incentive to gain new terrain.[13]

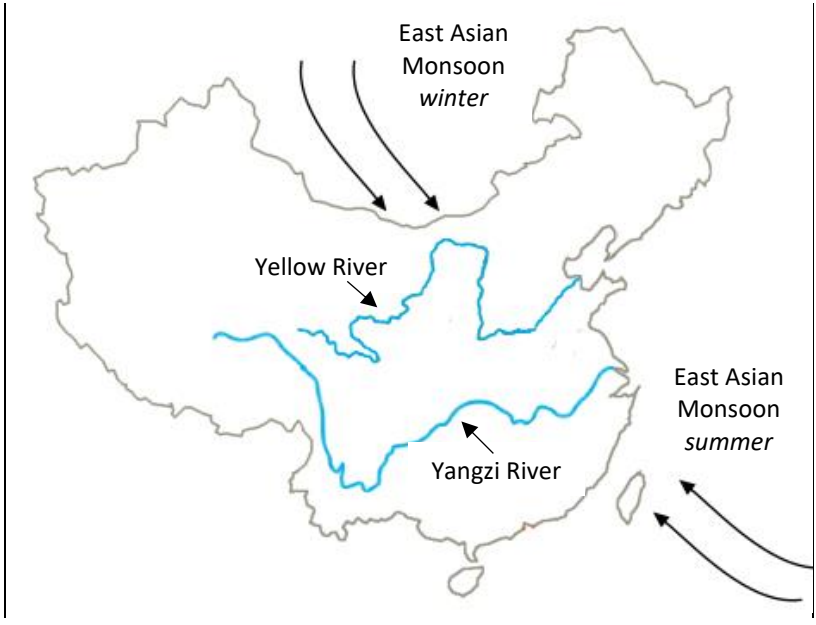


As settlements grew in size and number, competition grew for the best land. Territory was either gained by force or you needed force to

defend your territory. Fortified walls began to appear around ancient settlements. Yu's father, Gun, is renowned not only for building dams to keep the floods at bay but also for building walls to keep invaders at bay. The dams and walls were made from the same material—rammed earth—that is, soil densely compacted by human hands. In this case, the tendency of loess to compact worked well. Alongside walls, moats from the dug-out soil formed a second protective ring around settlements. Gun would have so loved the invention of excavators but at least there were plenty of menials to put to the task: conquered peoples who had failed to defend their settlement had little choice but to hand over their crops, livestock, and labour as tribute to their new overlords. From now on we journey through a highly militarised landscape with uneven social terrain.[14]

Demons of Drought

Human activity may have exacerbated floods by clearing wild vegetation to make way for civilisation, but climate change also contributed to the decrease in forests. In the East Asian monsoon cycle, balmy ocean winds from the south and east bring spring showers and summer deluges over the Loess Plateau and North China Plain. Whereas in autumn and winter, dry harsh winds from the north and west predominate. It was those dry winter winds which had deposited the fertile dust across northern China during the Ice Age. Around 2000 BC, however, the time ascribed to the start of the Xia dynasty, the degree of sunlight in northern temperate latitudes began to wane. There was nothing anyone could do about this; it was just the way the world turned. A warmer atmosphere holds more moisture: water droplets in clouds become larger and fall as a heavier deluge. Less summer sunlight resulted in less warmth and less moisture. Since the monsoon rains did not fall with the same intensity, forests did not grow as profusely. This was a double whammy: as populations grew more people were felling or burning trees at a faster rate while climate change was also reducing forest cover. Not an auspicious coincidence.[15]



The same change of warmth and rainfall affected crops. The seeds of agriculture as a way of life and as a means of wealth were sown during warmer wetter times (ca. 5000 – 3000 BCE). However, just as the dawn of history arose across that northern temperate belt—from Egypt and Mesopotamia to the Indus Valley and China—this subtle reduction in summer sunlight had profound consequences. The spectre of drought loomed over the fields of cereal crops which grew under the edifices of civilisation. If elite peoples, let's call them aristocrats, had grown used to living off the fruits of other people's labours they would hardly deign to roll up their silk sleeves and muck in. Instead, farming communities had to work ever harder to feed their growing families and the insatiable appetites of those higher up the pecking order.

Droughts sound like the opposite problem to floods, and yet both could happen. The loess soil which was not good at water retention anyway compacted into a hard layer during a drought. Loess hardens when it is dry, more like concrete than a sponge, hence its use to build impenetrable walls. When rain finally falls this compacted soil cannot absorb the excess water. Unable to drain downwards the water spreads outwards and rises upwards flooding the fields. That's on top of rivers

bursting their banks. Floods, droughts, wars and the demands of overlords increased at the same time. This was no bucolic idyll.

In this context, we'll shift focus to the myths and rituals of fire and drought. We'll also shift focus from the Xia to the Shang eras, albeit still through the vehicle of myth. As mentioned in the Introduction, the myths and rituals described are largely found in texts of the late Zhou dynasty. There are hints on the oracle bones but no details. Rituals to appease drought may hark back to the changing climate but they cannot be traced with certainty. We'll begin a ritual of fire.

In Neolithic times, the indigenous cereal crop of northern China was millet. Millet does not need continuous irrigation (unlike rice, which was a staple of southern China), but it still needs warmth to germinate and rain to flourish. Therefore, it was sown in late spring when the damp heat of the monsoon had begun. Wheat arrived from pastures further west (F1, 19) about the same time as the drier climate (ca. 2000 BC) and possibly as a response to it: if the millet harvest failed wheat was sown as a back-up winter crop. Having reaped the ripe kernels of grains the leftover stalks (stubble) was burned. Fields were set ablaze post-harvest. Scorching the soil helped to destroy weed seeds and lingering pests and diseases that could hamper the healthy growth of a new crop. The ashes also enriched soil fertility. Withered, diseased, and decaying remains of the last planting cycle were torched before a new one began.

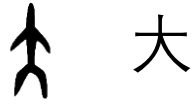
A ritual of exorcism mirrored this agricultural activity. Flaming torches of brushwood (the burning stubble?) were poked into the nooks and crannies of dwellings where the spirits of the last season lurked in dusty corners. Apparently attracted to the tips of a bundle of sticks the spirits alighted the torches like fleas hopping onto a dog. These blazing spirit-collectors were then carried aloft before being plunged into a river. Fire and water together exorcised the impure remains of the last cycle of activity. As well as seasonal rites, a great exorcism took place at the end of the dry season in late winter. Malign spirits of the year past were expunged lest their toxic influence sully the vigorous, healthy growth of next year's crops.

Following this winter rite of renewal the monsoon rains would surely follow? Unfortunately, the spirits of climate change had another atmospheric agenda. As mentioned, less sunlight resuted in less rainfall,

yet the power of the sun must have seemed to increase without as many clouds in the sky to dampen its radiant presence. As the blazing heat of summer wore on the spectre of drought loomed ever more ominously over parched fields. Irrigation—digging channels from a river to fields—offset the need for water, but a river's sediment also flowed along those channels. That sediment built up salt deposits in the fields which slowly rendered them less fertile. The cleansing, purifying spring showers and summer deluges were still needed.

A sky river cannot be dredged of its overflowing sunny weather. Instead, people prayed to the sky spirits who held 'the right to rain' and must be withholding their shower power as a some sort of punishment. A ritual called 'burning the shaman' was a form of extreme prayer. The shaman, often a woman or someone with unusual physical attributes remained outside for days with little food, water or clothes. And a little too much exertion by way of dancing and chanting for rain to fall. If she failed to induce divine cloud-seeding, and her inner themostat lost its regulatory settings, she would keel over from heat stroke. More extreme, but a quicker fate, she was encircled by a pyre of brushwood and set alight. Her rain dances had clearly failed to impress the panel of judges on high, so she was sent by way of smoke and ash as a sacrifice to the sky spirits. This eye popping practice is at least three thousand years old. In later eras, although shamans were no longer burnt to death, the ritual of extreme sunburn was still taking place in the early 20th century.[16]

ancient modern



dà - big, adult

wāng – an adult with a bent/damaged leg

huǒ – fire

chì – red, also means bare

guāng – sun's rays, also bare or naked

Images from www.hanziyuan.net: wāng: J30073; chì J23135

huáng - yellow, may have depicted a burning shaman

guǐ - left graph of Ba - means a ghost, demon, or ugly

tián – field

Another ancient ritual continued into modern times is to oust a drought demon from parched fields. Back to the first line: 'In high antiquity, a great flood submerged everything except for the highest mountain peaks. Ba, also called Drought Fury, lived on those peaks so she had never known the flood. The dutiful daughter of the Yellow Emperor, he asked for her help to fight a nemesis who caused too many deluges. Having vanquished her father's foe, once and for all, she could no longer ascend to her lofty abode. Her arid lost soul has been wandering in farmers' fields ever since causing drought issues. Wherever she roams there is no rain. While dad became famous, revered by both emperors and commoners, Drought Fury is still being hounded by farmers with pitchforks. No wonder she's grumpy! Described as either naked or wearing green clothes, green symbolises verdant lush growth or the innocence of youth which she lost on the battlefields of male egos. Joy.[17]

A goddess with similar traits is Woman Chou who wears green and lives on a mountain peak. Woman Chou was born but ten suns scorched her to death. Like Drought Fury, she doesn't die but rather she is caught in a loop of regeneration. The word, *chou*, implies a claw or curved hand. Think of how we cup our hand over our forehead to shade our eyes from the glare of the sun. That is her signature gesture, except she shields her face because she is so wizened from extreme sunburn that she is extremely ugly (*chou* also means ugly). A gesture of using your hand to hide your face can also convey shyness or shame. In her wizened state she cannot bear to be seen. Whereas Drought Fury is the personification of drought, Woman Chou is the shaman who exposes herself to the sun to pray for rain. As soon as she is utterly shrivelled, however, she spontaneously regenerates into a verdant young woman who then exposes herself to the sun all over again.[18]

In this way, Woman Chou reflects a mythic motif the world over of an ugly old hag who transforms into an alluring beauty, and vice versa, much to the bemusement of their bewitched beaus. Not that she had a beau. Instead, she had a crab, or she was likened to a crab. Woman Chou may not have been furious, but she was certainly crabby. Thinking back to her cupped hand, the word, *chou*, also means the curved profile of a crab's pincer. In order to grow, a young crab periodically sheds her shell which does not grow. Having wriggled out of her old exoskeleton, a young crab is vulnerable for a while until her new soft shell hardens up. Likewise, Woman Chou discards her crabby old self and regenerates as a soft vulnerable young woman only to be scorched to death again by a surfeit of suns.[19]

The ten suns feature in a famous drought myth which probably precedes that of Woman Chou In this myth, a goddess Xihe was the mother of the ten suns. Every morning before dawn she bathed her sunny offspring in a pool at the bottom of an eastern valley called *tang* (hot water) or *yang* (hot, sunny). The bathing suns heated up the pool, so it was like a hot spring. After their refreshing morning dip, the suns perched on the branches of a mulberry tree which grew out of the pool. Nine suns stayed on their perches to drip-dry while one sun rose into the sky for the day. At dusk, this sun settled down to roost on a tree in a western valley which also had a pool of water at its base. The next day, the next sun would soar into the sky. A dark bird travelled with each sun on their journey from east to west.

All was well with the ten suns rising and setting in their orderly sequence until one day the flock of sun birds soared upwards together scorching the vegetation below. Crops withered and leaves dropped off tree branches leaving not even a shady respite from the searing suns. Enter the hero, Archer Yi, who shot down nine of the suns which fell, feathers and all, into the western valley leaving only one sun aloft. Cosmic order was restored! [20]

In summary, the monsoon is an annual cycle of wet and dry, hot and cold. Balmy south-easterly winds in spring and summer and biting

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Xīhé 羲和 Archer Yi, Hòu Yì 后羿

tāng 湯 *yáng* 陽

north-westerly winds in autumn and winter blow across northern China. Drought is a meteorological spanner in the works of that cycle. Burning the shaman is a ritual to get the cycle moving again. The exorcism ritual removes the lingering spirits from the last planting cycle before a new one begins. Drought Fury is the spanner: she is to be exorcised from the parched fields for the monsoon rains to fall. Woman Chou embodies the withered remains of the last cycle and the verdant growth of a new cycle. Archer Yi shoots down the surfeit of suns which had failed to follow their cyclical order.

Dynastic echoes of the agricultural cycle

The appearance of more than one sun in the sky does reflect a natural phenomenon. When solar rays pass through ice crystals in cirrus clouds, the refracted light creates the illusion of two mock suns. Endearingly called sun dogs in western lore, the accompanying suns usually appear just above the eastern horizon at dawn or the western horizon at dusk.[21]

In Chinese folklore the appearance of more than one sun in the sky is an omen of impending doom, especially political doom such as the downfall of a dynasty. Leadership is shaky when more than one sun is shining in the sky; a belief still held nowadays. According to Confucius:

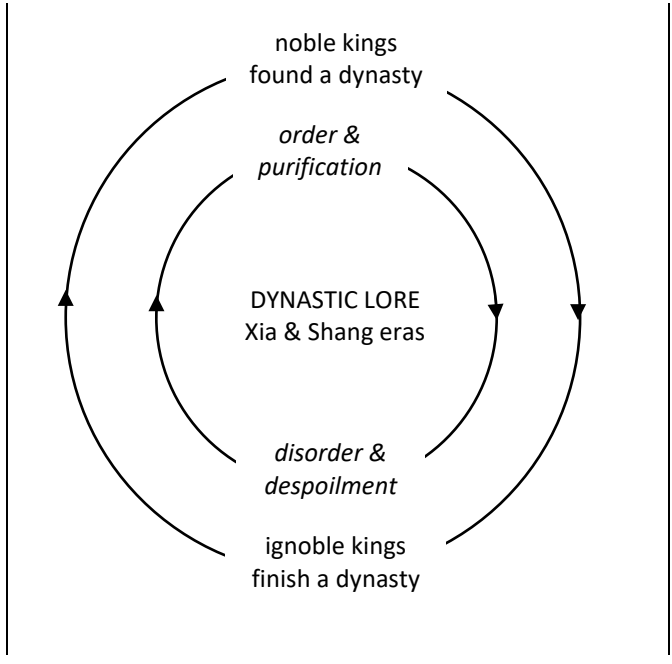
> There cannot be two kings for the people just as there cannot be two suns in the heavens.[22]

In legend, the ten suns put in a baleful appearance during the reigns of the last kings of the Xia and Shang dynasties. On that note, let's look at how the cycle of growth and decay, fertile and infertile, pure and impure took on a political bent: a dissolute disorderly period of rule followed by a renewed orderly period of rule.

Yu was born of impurity, the cosmic felony of his father, but by dredging the turbid waters and creating channels of flowing waters Yu instigated a purified era. Fast forward to the last Xia ruler, King Jié (桀) who represents the lingering noxious remains of the old year. Indulgent and self-serving he embodied the opposite qualities to the hard-working Yu. The last ruler of a dynasty is, by default, an abject failure regardless of his actual behaviour. Whether or not King Jie was a real person, let

alone a drunk and disorderly ruler, the point is how the dynastic cycle echoes the agricultural cycle. The putrefying remains of the last era of rule must be exorcised so that a new one can begin afresh.

Modern election propaganda follows a similar lore: the current lot are inept, corrupt, and suffer from the inertia of too long in power. A new party will bring fresh energy and purpose, and its public-spirited ministers pledge not to use their new-found powers for ill-gotten gains. Nothing new under the sun, then.



That the founding ruler is noble and pure-hearted and the final ruler ignoble and heartless was a cautionary tale, applied in retrospect to the Xia and Shang dynasties, but the target audience was the kings and emperors of later eras. If you ignore the sagacious counsel of your erudite aides, yet heed the pillow talk of your ill-educated favourites, not only do you brook being the downfall of your dynasty, but you may also acquire the posthumous reputation of a *cruel tyrant/lackadaisical playboy/weak-willed mummy's boy (*delete as appropriate). And since

that reputation will last forever, you may as well mend your ways while you are still alive. That was the moral missive of the tales of old.

Paradoxically, however, to vanquish the toxic legacy of an ailing dynasty entails the taint of treason. The founder of a dynasty, however noble, nevertheless deposes his erstwhile ruler, however ignoble. The divine retribution for deposing King Jie was years of drought sent by the High God, Di. This was the legendary fate which befell the founder of the Shang dynasty, King Tang.[23]

To atone for his treachery Tang offered himself as the burning shaman, so his people would no longer have to suffer a surfeit of sunny weather. Of course, as the story goes, no sooner did the flames lick at his toes than Di witnessed his sincerity and devotion to his people and delivered a deluge. The blood-stained slate of treason was wiped clean. Rain fell not only at the ritual site but also across extensive terrain. In an echo of Yu's nine provinces, wherever rain fell King Tang had the right to reign. He is also known as Cheng Tang: Tang the Successful.[24]

Whereas Yu quelled a great flood, Tang quelled a great drought. As rulers of agricultural peoples, they proved their worth by allaying the perils of extreme weather. They were self-sacrificing, not self-serving, and received divine favour in the form of self-renewing soil and copious rainfall, both symbols of fertility. Their right to reign spanned extensive terrain; they did not simply rule their own people but a range of peoples. Unlike Yu, Tang is not the Shang founding ancestor. We'll come to the myth of the Shang founding ancestor shortly. Again, the initial target audience of these tales was regional rulers of the late Zhou dynasty, the era called the Warring States when no one ruled over extensive terrain; divine favour was keenly sought but rarely forthcoming; and moral compasses had gone haywire amid battles for power.

Returning to the myth of the ten suns, there are parallel motifs with the legends of King Tang. His name, *tang*, is the same as the valley of the suns, albeit a different character on the oracle bones. Before his self-immolation he undertook rituals of purification. Admittedly, there is no mention of him having a dip in a hot spring, but a spa bath would surely do the trick. [25]

As sites of purification and renewal the guardians of hot springs were often fertility goddesses. Ageing males wanting to reinvigorate

their waning careers or libidos could go skinny-dipping with these nubile nymphs. Young couples would get together in a hot spring after the toils of harvest time. Woman Chou soothed and smoothed her skin after decades of work in the fields.[26]

ancient modern

唐

táng – King Tang

* left graph means soil

*塘

táng – pool, dam, dyke

咸

xián – salty, also name of suns' bathing pool

成

chéng - success

*城

chéng – walled city

*土

tǔ – soil / spirit of soil

社

shè - earth altar

Another parallel is the ritual site of his self-sacrifice which is the Mulberry Grove, which is thought to have been the Earth Altar of the Shang royal capital. The suns perched on branches of a mulberry tree. An outdoor site for fertility rituals and sacrifices, the Earth Altar was a large mound of sacred soil with trees planted upon or around it. We'll look at the Earth Altar in more detail in Foundation Five.

Mulberry trees have been grown in China since the Neolithic era to farm silkworms. Unwitting hungry caterpillars munch fresh young mulberry leaves until they are ready to wrap themselves into a cocoon—a single thread several hundred metres in length—which will be their cosy home while they transform into moths. Sadly, many never get to flap their wings. Those which do barely live for more than a week, long enough to lay eggs. Forever enticed by the finer things of life, humans found they could wrap themselves in luxuriant cloth made from that single thread. In another nod to the myth of the ten suns, the cocoons are plunged into boiling water or blasted with steam to unravel the silk threads with the living caterpillar still inside. [27]

It was women who reared the silkworms, spun the reels and wove the cloth. Perhaps they also had to shoo away

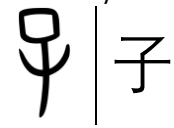
birds after the easy pickings of arboreal grubs. By Shang times, silk production took place at an industrial scale. Workers weaved coarser hemp for their own clothes and silk robes for their overlords.[28]

Another parallel motif is the origin myth of the Shang royal clan. As the suns traversed the sky from east to west they were accompanied by a dark bird. Dark implies black—the crow family are intelligent social birds—but dark also implies a mysterious origin. In an avian twist on the seminal importance of the patriline, a dark bird swooped down from on high to lay an egg. A young woman swallowed the egg and duly or dutifully became pregnant. She gave birth to a human hatchling, called the Dark King, who is the Shang founding ancestor. As if to link one origin myth to another the fledgling leader helped Yu to quell the great flood. Let's hope he had time off to preen his feathers to keep them waterproof. Once dry land was ready to be cultivated, Yu gave the fledgling leader a place called Shang to set up a royal roost for his clan. In this account, therefore, the Shang were loyally subordinate to the Xia until King Tang turned the tables of power. Shang artefacts do not convey this myth in any obvious way, but I am intrigued by the inscriptions inside this bronze vessel. The family name of the Shang royal clan was Zi (子) echoing the image of the child. [29]

Inscription in a Shang ritual wine vessel

lid

body *



zǐ – child, egg; may refer to a Shang prince

One more legend about the Xia to Shang transition also features a mulberry tree. In this case the tree is hollow: it is dead wood which nurtures new life. King Tang's prime minister, Yi Yin, has his very own origin myth. His mother

* Images reproduced from Robert W. Bagley, *Shang Ritual Bronzes in the Arthur M. Sackler Collections*, Harvard University Press, 1987. The ritual wine vessel was a bequest of Grenville L. Winthrop.

lived in a settlement by the Yi River. When she was pregnant, she dreamt of a god who told her that if she saw water in her mortar (a wooden or stone bowl used to grind grains) she must walk towards the east and not look back. As soon as a trickle seeped through a crack she set off. Of course, like other curious humans subject to the lore of mythic necessity, she did look back and saw a great flood engulfing her city. Civilisation lay in ruins all because one woman did not do as she was told! Rooted to the spot she instantly transformed into a hollow mulberry tree, echoing Yu's petrified wife who turned into stone. Baby Yi Yin was found by a woman picking mulberry fruits.[30]

This lowly foundling was talent-spotted by King Tang, raised in his court and eventually became his prime minister. Their relationship reflects another dynamic of the dynastic cycle: behind every successful ruler is a hard-working minister who whispers wise ideas into royal ears. Moreover, the ruler has the good sense to listen. Founding kings choose worthy aides who speak truth to power; final kings select sycophants whose overt flattery masks covert agendas. The moral of the tale being King Tang would not have conquered the Xia, however hapless its last king, without the strategic counsel of Yi Yin.[31]

Made in Bronze

As for the actual shifts of power among the polities of prehistoric China, debates continue. Warfare amid drought is one scenario. At Erlitou (p.2) there was a dramatic increase in the number of arrowheads. Moreover, a 'remarkable megadrought' began ca. 1675 BC, a date which coincides with the historical transition from the Xia to the Shang eras. Perhaps the drought pushed competition for fertile land or then to wrest harvest as tribute. The relative dearth of rainfall lasted for another five centuries. On the oracle bones, the Shang kings divined obsessively about rain and harvests. Perhaps the High God was not so forgiving after all? [32]

Initial signs of a shift of power was a new city a few kilometres from Erlitou, then another city about 85 km away at Zhengzhou which had fortified walls so huge they are estimated to have taken ten years

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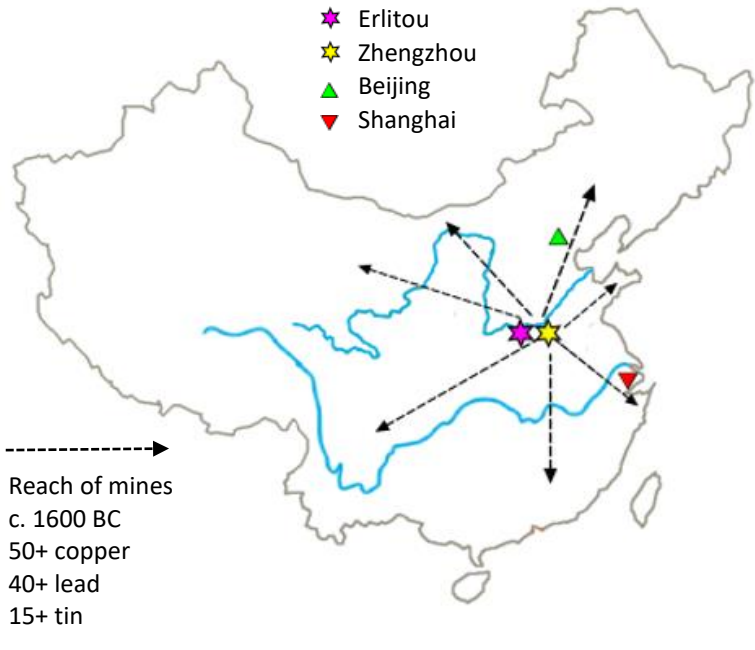
Yī Yǐn (伊尹) Zhèngzhōu 郑州

to build by 10 000 pairs of muddy hands. Both sites are thought to have been early Shang royal capitals.[33]

As well as the royal capitals, the Shang also commandeered far-flung regional settlements which had been part of the Erlitou sphere. Turned into mini-fortresses, walls were built were previously there had been none. Work for us now or get out and stay out! Some settlements lay hundreds of miles from the royal heartlands with scant agricultural value. In other words, even if drought was an incentive to control fertile land or to exact tribute, food security was not the motivation to acquire these outposts. High in the mountains lay a resource which had grown in value so exponentially that it was worth fighting for. When mountain ranges were thrust upwards by the moving jigsaw puzzle of tectonic plates, deeply buried ores also came to the surface. The Shang wanted to wrest control of mines.[34]



Adapted from Li Liu and Zingcan Chen, *The Archaeology of China – From the Late Paleolithic to the Early Bronze Age,* p.279

Copper and gold had been fashioned into tools and ornaments since the early Neolithic (ca. 8000 BC) but the subsequent Bronze Age starting in Mesopotamia (ca. 3500 BC) gave a sharper edge to our new-found use and abuse of ores. We've been mining and refining that edge ever since. Bronze is an alloy: copper, tin, or lead are smelted to form a hard durable metal that is perfect to make weapons. Better to hold the hilt of a bronze sword than face its point. Only the elite could command the size of a labour force needed to mine the ores and smelt the bronze, a toxic business laced with lead and arsenic, but the shining results were an ostentatious display of their power and wealth. The Bronze Age took another thousand years to arrive in China, probably via the prehistoric silk route. The Xia and Shang eras fall within the Bronze Age.[35]

While one reason to wrest control of the mines was to produce weapons, another vehicle of power fashioned from bronze was of equal or greater importance. Because, however grand your arsenal, to win a battle you needed the support of your ancestors. Conversely, if you lost a battle, you may have failed to keep the dead in good spirits. Ancestral spirits were lifted by sumptuous banquets served in ornate bronze vessels. Ancestors had remarkably healthy appetites despite being dead. As long as your ancestors received sacrifices they would have your back in a battle. By this logic, your enemies must be deprived of the means to nourish their ancestors. Erlitou was once a thriving city with multiple foundries and skilled craftsmen. Yet a century after the Shang cities had been built, Erlitou had shrunk to a mere tenth of its original splendour. Foundries were left to crumble, craftsmen may have left to find work in Zhengzhou, and a farming village left in its stead. There, 3500 years later, curious archaeologists carefully pieced together the remains of bronze vessels which had once served the ancestors of the peoples of Erlitou. Whoever they were and whatever they called themselves.[36]

While the original creation of bronze may have hailed from afar, two local plentiful resources helped to fashion an indigenous approach. Firstly, sources of copper, tin and lead were more abundant than in the west. Modern copper mines in China still throw up occasional remains of their prehistoric counterparts. As a result, bronze vessels were made in abundance. Over 150 000 have been unearthed to date and no doubt many more were made. Unlike wafer-thin western bronzes, the vessels

had thick walls and bases. The tomb of Fu Jing, a Shang queen contained a vessel weighing over 830 kgs or 1835 lbs. Put to the test of deadlifting, the heaviest deadlift on record is just over 500 kgs.[37]

Hou Mu Wu Ding
832 kgs - over a 1 metre high & wide

A cautionary tale relays a young king who wanted to prove himself in the manosphere of antiquity by lifting a bronze vessel. This much he managed, but when he lost his grip the vessel fell and crushed his legs. Ironically, it was his blood vessels that burst, and he died a few days later. The salutary lesson for tomb raiders is not to bother stealing the heavy stuff; you may die trying.[38]

The thick sides were not to stop tomb raiders in their tracks, but rather ornate grooves could adorn the vessels. Thin western bronzes lacked the depth to make intricate patterns. The designs evolved over time, but one motif was present throughout: a pair of eyes stared back out at the beholder. From ancient artefacts to digital emojis, we are wired by evolution to look at eyes. Mask-like faces of birds, tigers, dragons, sheep, cattle, birds, snakes set in swirling thunder clouds populated the outside of the vessels. Theories abound as to what these animal motifs meant to their makers and beholders but there is no consensus. One point is clear, however, the ornate grooves were made possible by the second plentiful resource - the fine loess soil that had blown into China along the atmospheric silk road.[39]

Taotie – animal mask

Bear in mind this soil is so fine it is like dust. Formed into a mud pack, it can be pressed into the tiniest grooves of a mould. This was rammed earth in miniature. Once the soil dried out it was so hard that even molten metal could not change its shape. In temperatures over 1000°C the staring faces remained implacable. Different moulds were used to

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Fù Jìng 婦姘

make each section of a vessel. For example, the vessels to serve meat were square or rectangular. The four sides, base, and legs were made separately before being welded together with more molten metal. The 'piece-mould' system is probably indigenous. Without the fine soil particles other techniques of making bronze could not replicate such exquisite details. The sacred clod was magical indeed. And, of course, many more trees were burnt to fuel the furnaces.[40]

Circulation of Tribute

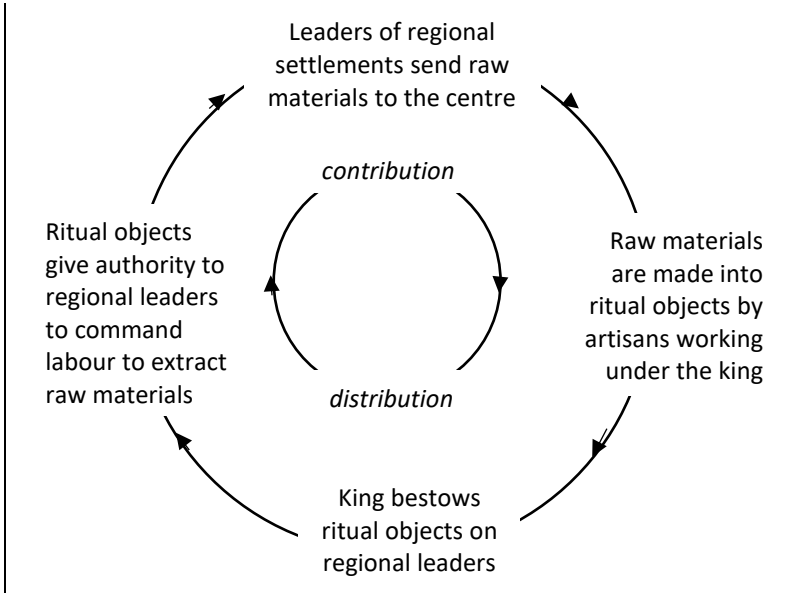
Back to the regional outposts, the ores were probably made into ingots on site and sent to the capital to be transformed into sacred vessels of ancestor worship. Transporting hundreds of heavy metal bars overland was no easy task, Yu's mountains got in the way, but his rivers were ideal to ship bulky goods from regional settlements to royal capitals. If a tributary is a minor river flowing into a major river, tribute is goods from a minor settlement flowing into a major city. In myth, Yu created a network of rivers to enable this flow. He identified which resources lay in which of the nine provinces, and which river flowed into another, so regional goods could be shipped as tribute to his capital. He did not hop about saving the world for entirely selfless purposes. Alongside ingots, other products sent to the royal capital were jade, turquoise, salt, shells, kaolin to make fine pottery, as well as grains, livestock and people.[41]

If you *contributed* to the centre, you received resources in turn. Once the ingots had been transformed into sacred vessels of ancestor worship, sets of bronze vessels were *distributed* by the king to regional leaders so they could conduct sacrifices to their ancestors. The number and type of vessels you received reflected your rank. Only the king and crown prince possessed the largest vessels to serve the royal ancestors. Regional leaders who were not in the royal line of succession used less prestigious vessels to serve their less prestigious ancestors. Still, in this way, Shang ancestors protected all the settlements although fortified walls did not go amiss. Worship your ancestors and build your walls.[42]

This flow of resources – regional settlements contributing raw materials to the centre and the centre distributing rarefied goods to the regions – was a system of political order. The king was enriched by the

influx of resources, but he was also dependent upon them. The site of a royal capital may have been chosen for strategic purposes, perhaps a natural defence of a mountain range or at the confluence of two rivers, but it was unlikely to have sufficient resources to create all the prestige goods needed to adorn the living and the dead. The king had to be seen as the crux of transformation, the alchemical process of transforming natural resources such as ores and gems into objects of power.

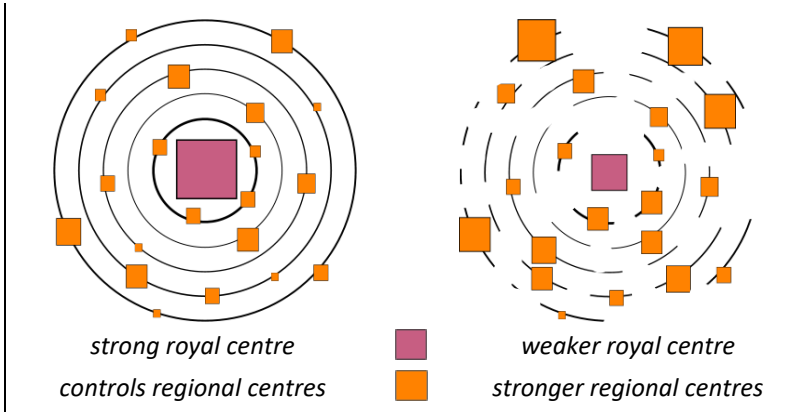
On the one hand, a bronze vessel or a jade talisman displayed your worldly power – your rank and right to rule a regional roost. Yet in the process of turning raw materials into rarefied artefacts, the objects became vehicles of otherworldly powers to be used in religious rituals. Only the king possessed the most prestigious objects to perform rituals to the most powerful of spirits. The divine powers of the king were then bestowed, by degrees, whenever he gave (or gave permission to make) a sacred object to a regional lord, and with it the right to perform certain rituals albeit to less powerful spirits. The circular system of tribute thus embodied a religious rationale which held the political order in place.[43]



The system worked as long as royal power was efficacious: battles were won and harvests were plentiful. By virtue of his achievements King Tang surely had the forces of fortune with him. We like to rally

around a success story and offer tribute. In a system of inherited rule, however, there is no guarantee that the descendants of the founder of a dynasty will muster equally impressive track records. If harvests were meagre, battles were lost or rain failed to fall, perhaps the current king had fallen out of favour with the spirits? If so, why send tribute to the royal capital if the spiritual capital of the king has dropped in value? Why not join forces with enemy tribes rather the messy job of taking them captive and sending them as sacrifices for the meat fests of the royal ancestors? A regional leader could attract (or be in a position to demand) tribute. His enlarged, enriched settlement could become a rival centre of gravity which pulled resources away from the capital.

This dynamic of a strong centre keeping regional powers in its orbit followed by a weaker centre losing control over regional powers is a cyclical pattern throughout Chinese history. We'll look at this dynamic again in Heaven's Order (F5) because the theory of *wuxing* came about when the old religious rationale and political order had lost its currency. The spiritual capital of the Zhou kings had dropped through the floor.



As for the Shang dynasty, the early period (ca. 1650 – 1440 BC) seems to have had a strong central command over regional settlements. King Tang and his immediate descendants maintained power. During the middle period (ca. 1400 – 1250 BC) the power of the centre seemed to wane. The royal capital at Zhengzhou was abandoned forever. So much for the mega-walls. A tell-tale sign of beating a hasty retreat is when a hoard of bronze vessels is unearthed not from a grand tomb but

a rapidly-dug pit that was covered up before the advancing enemy arrived. Hopefully, once the former political order is restored, the cache can be recovered. X marks the spot! However, if a stashed hoard is unearthed by archaeologists thousands of years later, no-one ever did return to reclaim the treasure trove. Another indication is flourishing regional centres with locally made bronze vessels sporting quirky cultural styles. In this case, regional leaders clearly felt little need to pay heed to the dictates of central fashions. In the late period (ca. 1250 – 1045 BC), an ambitious king called Wu Ding endeavoured to rectify the balance of power through waging expansionist wars. Eager to keep a record of his impressive track record, the earliest evidence of Chinese writing on the oracle bones is dated to his reign.

By way of a reminder (F1, 1-4), the bones and shells of deceased animals were used as the medium of communication with the spirits of deceased Shang kings and queens. The favoured bones and shells were flat and wide—the shoulder blade of cattle or the plastron (underbelly) of turtles—because they could double up as writing tablets. Two things must have existed prior to this development. First, divination by bone (osteomancy) had been in use for thousands of years. Second, since the inscriptions are written with grammar and syntax, the origins of writing must predate Wu Ding's reign, although by how long is still debated. The innovation was neither divination nor writing but their combination. Lest anyone dare to doubt royal authority, the worldly and otherworldly powers of the Shang kings were henceforth set in bone.[44]

Back to the Oracle Bones

Using animal bones to divine human fortunes was by no means unique to ancient China. Many cultures across different continents have done likewise. All sorts of animals from seals to camels, beavers to porcupines, have unwittingly aided the insatiable human quest for divine knowledge.

The origins of divination by bone may lie in roasting a kill over a fire. As bones fracture in the heat, they make a sudden piercing crack. Was this sound the animal's spirit voicing its presence at its fiery wake?

Wǔ Dīng 武丁

Was the pattern of the crack a message? Wiling away long evenings by a fire, why not try to crack the code of the crack? Shoulder blades were favoured presumably because they fractured more easily than a chunky femur. A modern vestige of this ancient practice is a wishbone. During a festive meal, two people pull apart the collarbone of a roast fowl while making a wish. A more recent tradition is Christmas crackers! [45]

Harking back to the Neolithic transition from hunting animals and foraging for plants to rearing livestock and growing crops, if your community settles in one place over time the remains of your forebears will remain nearby. Add to this a belief in an afterlife and the spirits of the dead will also remain nearby. Neolithic cultures of northern China mostly buried rather than cremated their dead, so the remains entered the soil; land became sacred ancestral lands. As populations increased and new settlements were established, ancestors also acted as a bond among communities because they shared common forebears. Ancestor worship thus not only kept the dead in good spirits, but it also kept the living closely tied to each other.

Assuming meals were social occasions, especially lineage feasts when relatives from different settlements came together, coupled with a belief that the very hungry ancestors needed food to remain powerful, the sound of the crack somehow became associated with their presence at a meal. And if the meal, especially the meat, was shared out so senior members received their portion first, perhaps food was offered to the ancestors in order to give thanks before the living tucked in. After all, it was your ancestors who had once cleared the land and built settlements long ago. Where would you be today without your ancestors? Their hard work in the past led to your present fortunes. Or if times were hard who better to consult than your elders? Further, if the head of a lineage was the most senior figure among the living, his elders were his ancestors. Ancestors had the spiritual oversight to guide and chide their living kin. Cracking the code of the cracks was the means to access their wisdom; they spoke through the fissures between this life and the afterlife. [46]

As head of the royal lineage and responsible for the fortunes of the realm as a whole, the Shang king held the ultimate authority to read between the cracks, so to speak, because it was his deceased relatives—the royal ancestors—who had the greatest clout in the afterlife. Such

high-brow spirits would hardly deign to convey their missives to any old village soothsayer. As a busy man with matters of state stacking up each day, however, a cohort of royal diviners also worked under his authority.

Reading cracks on bones to consult the ancestors and offering food to the ancestors may have both originated in cooking meat over a fire. By Shang times, they were distinct and yet complementary rituals of divination and sacrifice. Indeed, many divinations were made to work out which ancestor required which sacrifice. The ritual use of fire remained a connecting thread. Fire was used in sacrifices because the ancestors preferred roast dinners over a raw food diet. As for divination, the royal diviners did not casually toss a few bones into a fire and go off for a tea break while the bones heated up. The whole process was a ritual. Each bone was scraped clean and an orderly lines of hollows bored into it. At the time of divination, a red-hot poker was pressed into the hollow until – CRACK – an ancestral text message pinged into the king's inbox.

hollows bored into a shoulder blade

By subjecting the bones to intense heat they were fired up, charged up, transforming them into a sacred channel between the living and the dead. The king further charged the bone: he ordered the 'shell of turtle' to reveal its missive as if he were casting a spell over it. "Next week it will rain!" he thundered with incantatory might amid a drought. Shout loud enough and the clouds may burst open. Each positive charge was paired with a negative charge: "*Except it might not rain*." He may have tried to downplay the negative result by dampening the charge in his tone of voice, so the negative polarity would have less prophetic potency. The red-hot poker was pressed into the bored hollows, and the crack interpreted through this positive and negative charge: "Yes, divine assistance is on its way or, no, divine assistance is unavailable today." [47]

Indeed, sometimes, the same divination was made on another day just in case the ancestors responded more positively this time. Think of using the same lucky numbers on Friday's lottery because Tuesday's draw had failed to change your life. Once the divination was inscribed onto the bone the charge was signed and sealed, rather like a contract.


五

F1 *wǔ* – five


人

rén - person


來

lái - wheat to come


大

F3 *dà* - big


鬼

guǐ - ghost


子

zǐ - child

See if you can spot the words!

A few inscriptions state the prediction—what the king says will happen—and the verification; what actually happened. For example, on one inscription, the king stated that if the queen gives birth on a lucky day it will be a good birth (code for having a boy). After one month the verification was duly recorded: 'she gave birth; it was not good; it was a girl'. If only she'd gone into labour 24 hours earlier, the outcome would have been completely different! Oh well, better luck next time.[48]

Indeed, as much the king wished for all the luck in the world, the ancestors didn't always play ball. They were just as likely to hinder and harm as to help and heal. If the king had toothache, for example, perhaps a deceased uncle was harbouring a dental grudge of accession? That or too much wine was causing the caries. In this case, the positive and negative charge would be: it is Uncle X causing the toothache; it is not Uncle X causing the toothache. If it was not him, the diviners would try to identify another ancestor as the source of the dental distress. This

laborious yes or no process continued until the right ancestor and the right sacrifice had been identified. It must have been like playing twenty questions with dead people. [49]

Any eventuality beyond human control, beyond human agency, must be controlled by something, so went the religious rationale of the Shang and other ancient peoples. This was the realm and remit of spirits. Humans could not control the weather, or whether a child would be a boy or a girl, but they could appeal to spirits who did have those powers. Back to the transition from a nomadic to a settled way of life: if animals migrate due to a changing climate or plants flourish in a certain place or time of year, hunter-foragers will follow the food chain. Settled farming communities lost that flexibility. Food security lay in a bountiful harvest rendering them more vulnerable to inclement weather. With no control over the sun and rain, agricultural communities appealed to a variety of weather gods and fertility goddesses to aid their security. Sky and soil deities self-seeded among the fields of wheat and millet. While hunter-foragers also lived in a world populated by spirits, there was less need to pay heed to almighty weather gods.[50]

In this light, alongside royal ancestors, the Shang pantheon included spirits of natural phenomena such as Wind, Cloud, Sun, Soil, River and Mountain. At the apex of the hierarchy was Di, the High God, who could order other spirits to send disasters! Especially of the meteorological kind. As the supreme sky god, Di controlled extreme weather events. Cultures which practise ancestor worship tend to envisage distant ancestors, who died long ago or are mythic figures as having blended with natural forces. Since any trace of humanity is long gone, there is no juncture when ancestral powers end and natural powers begin. The Shang pantheon reflected this spectrum. The king's parents were not yet fully-fledged ancestors. Having been the senior tier of the living, they

Examples of nature powers

cloud wind

sun soil

river mountain

Examples of distant ancestral powers

Wáng Hài *Kuí*

Dōng mǔ *Xī mǔ*

Eastern Mother Western Mother

became the junior tier of the dead. They underwent rites of passage (enacted by the living) to receive powers befitting their new afterlife status. Recent ancestors such as grandparents still took an interest in family life: they caused illness or assisted with childbirth. Whereas distant ancestors were impersonal powers, who had scant regard for such human foibles; they could control harvests and rainfall. [51]

As well as having agency the ancestors were also agents in the sense of acting as intermediaries within the spirit heirarchy. Junior ancestors lobbied seniors on behalf of the living, perhaps by hosting feasts! If wining and dining were how deals were done in life, why not also in the afterlife? There is no such thing as retirement for a working royal. Senior or 'high' ancestors in turn negotiated with the High God, Di, for clemency on behalf of the living. Or at least for clement weather.[52]

An auspicious result such as a bountiful harvest was a reward; a spirit had blessed the king. An inauspicious result such as toothache was a punishment; a spirit had cursed the king. But which one? The purpose of divination was to figure out which spirit at work and what sacrifice would honour or placate that spirit. The reason for being cursed was not a moral breach. For the Shang there was no moral transgression such as murder or adultery which upset the spirits. Rather, the king and his diviners had failed to address the right spirit on the right day with the right sacrifice conducted in the right way. The spirits were upset by a ritual breach, a failure of protocol, rather than dodgy human behaviour. Apparently the spirits did not care how many murders were committed on their behalf. Offering meat to the ancestors makes sense, because it would have been the food they most savoured in life, but the nature spirits also received meat as if they had human appetites. Sadly, a sirloin

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xī J25749 mǔ J26113

of human was on the menu as well as beef and pork. The body count of ensuring spiritual blessings was extreme by late Shang times.[53]

Nowadays, with the benefit of scientific hindsight, we are more knowledgeable about what lies within human control, what lies beyond it, and what if anything we can do about the gap in between. However, we do still turn to our leaders as decision-makers to ensure safe passage as we face current issues and future uncertainties (F1, 12-14). The Shang king had a similar role: divination reiterated his ability to explain what is happening (which spirit is at work and why), predict what may happen (positive or negative outcome), and potentially mitigate an inauspicious prediction by offering the right sacrifice to the right spirit. Offer them a hearty meal and the spirits may change their minds. Privileged access to his ancestors, and through them the High God, Di (who did not receive sacrifices) gave the king more bargaining power than anyone else. His worldly power was legitimised by his negotiations with otherworldly powers. He was best placed to strike a spiritual deal. Every divination, every sacrifice, reiterated his right to reign. No wonder Wu Ding wanted to have them all written down.[54]

The Sacred Square

Keeping the ancestors in tow, let's shift focus to the auspices of five on the oracle bones. Many ancient cultures took pains to align their sacred rites and monuments to the four cardinal directions: north, south, east and west. Add the centre as your location, your angle of view, and that makes five sacred zones. Any hegemonic polity like the Shang presides over the centre. Capitals are the political centre of a country, even if they are located at a port such as Tokyo or London. The headquarters of a company is head of the (four) quarters, the centre of its regional outlets.

Given the relative power of the centre, however, one plus four does not equal five. In other words, the Shang may not have connected the number five to their conception of space; that was most likely a later development. Rather, they envisaged the world through the lens of a square or cross. They inhabited the centre while non-Shang peoples and spirits inhabited the four sides. Divinations often took place through this

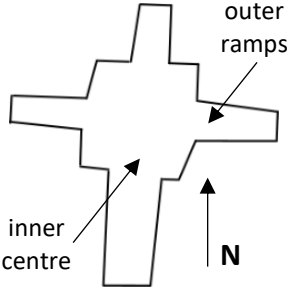
lens: rain will come from the east; grain will arrive from the west; a battle is to be fought in the north or land opened in the south.[55]

This four-sided view of space was also reflected in the design of Shang structures. Royal tombs were built as a cross shape. The deceased king or queen resided in the central chamber. with a few servants or family members interred as afterlife companions, and who probably had little choice about the timing of their demise. An array of bronze vessels enabled the now-junior ancestor to make offerings to elders in the spirit hierarchy. Four ramps which led down to the chamber were lined with human and animal sacrifices, who also had no choice about the timing of their demise.[56]

yà 亞 - a symbol of Shang clans and lineages

nw	N	*ne*
W	C	E
sw	S	*se*

Cardinal directions were favoured. See also the grid structures (F1, 5 – 6).



Shang royal tombs had a slight NNE alignment.

Settlements were built in a square or rectangular shape. Roads that ran north to south and east to west linked the outer gates to the centre (F1, 1-4). The gates were set in thick, high earthen walls. Fortified walls were needed because the land beyond a settlement was not Shang land. Nowadays, if you leave the four walls of your home to go north to the shops, east to the gym, or west to the office you are still within the vicinity of your local community. Go further on a business trip, and assuming you have not gone abroad you are still within your country. When the Shang left their home square, however, they did not enter their home country. Modern borders which delineate one country from the next did not exist back then. Rather, every wall of

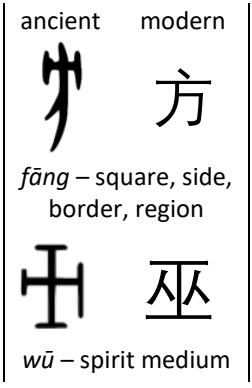
every settlement was the border of Shang jurisdiction. Borders define an edge of safety, certainty, and even legality. Stepping outside the box is a risky business. Wild animals, enemy tribes, powerful alien spirits and dense undergrowth lay between Shang settlements. Picture knights on a chessboard hopping from one square to another. The Shang kingdom grew by adding more squares to its chequerboard of dominion. [57]

The heads of regional settlements *contributed* resources to the Great Settlement, the Shang royal capital. But how about if the tribute was waylaid due to a slip-up in the local defence? "Ahem, I was going to offer a hundred sacks of millet, ten pigs and my two daughters as tribute, but floods waterlogged the fields and raiders made off with five pigs and both daughters. Sorry about that." How embarrassing for his deceased relatives! He's going to suffer from so much toothache. Fortune or misfortune could affect a settlement via one of the four directions, be it wind from the east, lightning raiders from the north, or a swarm of locusts from the west. Let's put some guards atop the four walls looking out for any dangers looming on the horizon. They hear a distant rumble coming from the northern front: is it a gathering storm or the galloping hooves of marauders? Whereas a bright, sunny prospect illuminates the southern front; there is no need to marshal the forces within.

Scanning the horizon for incoming fronts also took place on the oracle bones. Diviners had to foresee any thunderous rumblings before they grew too close for comfort. What is heading your way, when, and whence? A weather forecaster helps us make plans for the week ahead. An Arctic wind will blow in from the north on Tuesday so wrap up warm. A military analyst predicts incursions on the western front next month, so mobilise troops on that border. The more accurate your predictions the more you can prepare to act at the right time, in the right direction, and with the right resources in the right place. Whatever lay beyond the safety of the squares but could come pounding at the walls, it was surely prudent to heed news of an incoming front.

These fronts were called *fāng* 方, a word which means a square, border, or region. Enemy tribes were called *fang*; they were 'them over there' beyond the inner sanctum of the Shang clans, and *fang* can also mean a person or people. However, the spectrum from allies to enemies was fluid. An enemy tribe which became an ally was no longer deemed

to be *fang*. A regional lord who decided to side with the enemy crossed the geopolitical border of otherness; his settlement was no longer deemed to be Shang. Thinking back to the system of tribute, since the kings did not divine for tribute from the *fang*, a crucial difference between *fang* and Shang was thus whether tribute was sent to the king. A new ally would send tribute, but a rebellious lord would no longer do so. [58]



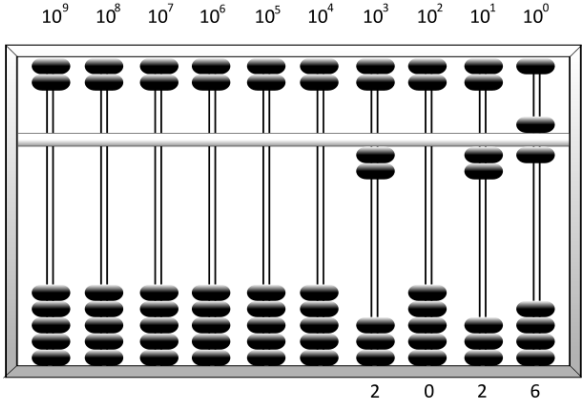
As well as hostile peoples, *fang* also referred to spirits of the cardinal directions. The *fang* of the North, South, East and West were one of several powers that could control the wind, for example, which certainly blows from a direction. Another directional power was *wu*, a word which has come to mean spirit medium or shaman. The Shang did not know what made the wind blow, but the king riding on his horse into a fierce headwind surely felt the spirits were against him. Before leaving the safety of the home square, the royal diviners gauged the likely wind speed and direction. Would the king be swept along by a benign tailwind or battle into a malign headwind? [59]

> Today…when His Majesty goes out to the field to hunt,
> (he) will not happen to encounter any strong wind.
> Greatly (auspicious). [60]

Hunts were used to clear land of wild animals before it was turned into fields. Imagine the king and his huntsmen set fire to a forest to smoke out its inhabitants and shoot them as they flee. Suddenly, from nowhere, the Power of West whips up a mighty gust. The flames, smoke and ash head towards the hunters. With eyes smarting they cough and splutter. Meanwhile their prey make a quick getaway. The tigers and boars would hardly wait for the weaponised predators to divine which of them would be sacrificed to placate the Power of West. It was their lucky day.[61]

Counting the Days

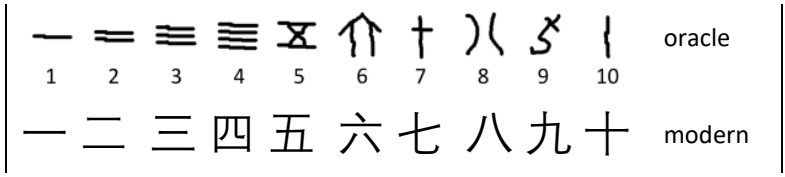
Let's look at another example of the auspices of five on the oracle bones. The Shang used a decimal system, so five and ten were used to record and recall the amounts of things. That they used a decimal system does not mean they counted on their fingers any more than we do nowadays; the scale of operations was too vast. Even the relatively small tomb of one of Wu Ding's wives, Fu Hao, contained some 7000 cowrie shells, 750 jade ornaments and nearly 500 pieces of bronze. The Shang did not do things by halves, as to do so would halve the power of the ancestors. They may have used a system of tallies for the tribute, possibly counting rods which led to the invention of the Chinese abacus about a thousand years after the Shang. The base units of the abacus are one and five, and each column represents a power of ten.[62]

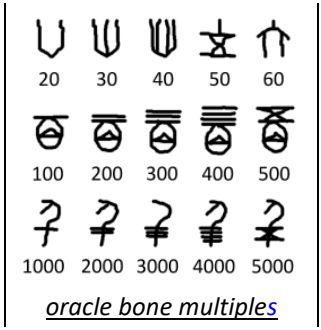


two thousand and twenty six

On the oracle bones, smaller sacrifices were generally counted up to five and larger sacrifices were multiples of ten. For example, a disgruntled uncle who was identified as the culprit behind the king's toothache was offered three cows up front but pledged ten times that amount—thirty sheep and thirty humans—once the dental distress had

Fù Hǎo 婦好





oracle bone multiples

abated. From five pigs to fifty pigs, one cow to ten cows, the ancestors did not receive a free lunch; the king had bargaining power. Booty was rounded up in the same way such as seventy-five captives after a battle or twenty deer after a hunt. Tribute was also counted in lots of thirty, forty, or fifty. There are a few references to nine dogs or eleven pigs, for example, and archaeological signs of sacrifices are not strictly in lots of ten, which reiterates using a decimal system on the oracle script to round up or down. 'Nearly 500 pieces of bronze' is easier to remember than, say, 460.[63]

A week on the Shang calendar was also ten days long. A day, a month and a year are natural cycles. Plants, animals, and fungi respond to solar and lunar cycles whereas the cycle of a week, so essential as it is to coordinate our collective routines, is of human design. Animals do not wake up on Monday mornings with a sense of foreboding about disasters lurking in their inbox. A seven-day week reflects four divisions of a lunar cycle punctuated every fortnight by a full moon or new moon. A period of 14 - 15 days was also used in the Shang calendar, but the length of a week was ten days. That's about three divisions of a month. The length of Shang months varied as do ours nowadays. [64]

The ten-day week appears on the oracle bones as a pre-existing system. Its origins are shrouded in the mysteries of prehistory, and the names of each day are archaic and obscure in meaning. We'll revisit this point in more detail in the following issue (F4). One point is clear: more divinations took place on the tenth day, the last day of the week. This was the Shang equivalent of a weekly risk assessment: "Phew, we got through last week without a major disaster but what's heading our way

next week?" On the tenth day they divined about the weather, whether disaster would strike, and preparation for next week's rituals. Really not that dissimilar to our weekly forecasts.[65]

10 day week		
1	甲	*jiǎ*
2	乙	*yǐ*
3	丙	*bǐng*
4	丁	*dīng*
5	戊	*wù*
6	己	*ji*
7	庚	*gīng*
8	辛	*xin*
9	壬	*rén*
10	癸	*guǐ*

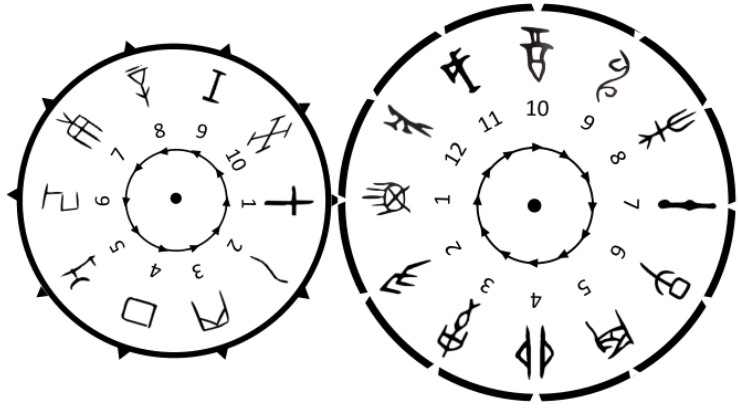
Upon joining the ancestral ranks, a king or a queen received a new title: one day of the week plus an extra word which reflected their role in life. King Tang's title was Da Yi (大已). *Da* means great and *yi* is the second day of the week. As for Wu Ding (his ancestral title), *wu* means martial and *ding* is the fourth day of the week. Queens were all called *bǐ* (妣) meaning a deceased mother. Fu Hao's title was Bi Xin, the eighth day of the week. Royal ancestors received sacrifices on their day of the week. [66]

If a week is a handy human guide, a series of weeks is another marker of our collective routines. School semesters run for ten to twelve weeks while financial quarters are every three months. The equivalent of this longer period on the Shang calendar was sixty days. Each day had a two part name which combined the ten-day week with a set of twelve signs. We'll look at these signs in more detail in the next issue. Suffice to say for now that the sixty-day cycle was used as dates on the oracle bones. A Shang scribe could easily record and recall that Fu Hao gave birth on day 51 of the last cycle and King Tang's next sacrifice would be on day 22 of the next cycle.

12 signs		
zǐ	子	1
chǒu	丑	2
yín	寅	3
mǎo	卯	4
chén	辰	5
sì	巳	6
wǔ	午	7
wèi	未	8
shēn	申	9
yǒu	酉	10
xū	戌	11
hài	亥	12

Examples of the 60-day cycle names		
Day 51	jiayin	甲寅
Day 22	yiyou	乙酉

Five clockwise turns of the right wheel (12 signs) and six anti-clockwise turns of the left wheel (10 days) brings the cycle back to 1:1. The oracle bone characters correspond to the modern characters on the previous page. Two interlocking gears is a modern visual aide. On the oracle bones, the 60 day names were written as a 10 by 6 table.[67]



Adapted with permission from Adam Smith, "The Chinese Sexagenary Cycle and the Ritual Origins of the Calendar," in *Calendars and Years II: Astronomy and Time in the Ancient and Medieval World*, ed. John M. Steele. (Oxbow Books 2011) p.3.

Identifying which spirit lay behind one of the royal headaches, and what sacrifice may appease them was a time-consuming business. If the aim of divination was to ensure that the right spirit received the right offering on the right day, perhaps a systematic approach could reduce the time spent on all the divinatory detective work and back-and-forth bargaining. During the reign of one of Wu Ding's sons, signs of a new system appeared in which the ancestors were put on a schedule of five rites. In this way, the royal events team knew which sacrifice to prepare for which ancestor on which day. Moreover, if all the ancestors could be pleased all the time, they would not need to complain about customer service by giving the living a nasty tummy bug. While distant ancestors and nature spirits were not on this schedule, at least the rank and file of the deceased could be kept in good order.[68]

Little is known about these sacrificial rites, or how they differed from one another, but the ancestors were probably served generous portions of meat washed down with copious amounts of wine. The living

presumably helped to hoover up any leftovers. The oracle bones stress the need to keep the spirits happy, even entertained, so perhaps music, songs and dances were part of the rites. The king may have worn a mask, echoing the faces on the bronze vessels, as he called forth each ancestor to request their blessings and hopefully reduce their 'cursings'.[69]

Even if it is not clear what happened, or how the rites differed from one another, the schedule has been studiously pieced together. In the first week there was a presentation of tablets or something similar, perhaps to inform all the ancestors of the schedule so they knew when they would be called forth. In the second week, six kings who reigned before King Tang received sacrifices. In other words, their reigns may have run in parallel to the rulers of Erlitou reiterating the idea that the Shang were a rival and/or related polity. King Tang received his sacrifice in the third week, Wu Ding was not until the tenth week, and the queens' rites always took place a few days after their husbands'. [70]

The first rite took eleven weeks, just shy of two sixty-day cycles or four months. The second, third and fourth rites were packed together starting one week after the next. This was the busy season when several ancestors received different sacrifices on the same day. This period took just over four months. The fifth rite also took eleven weeks. Combined with a rest week at some point—phew—and the five rites for fifty plus ancestors took a year to complete. As to when the cycle began there are different theories. One idea about the four-month period is that it is the same time needed for crops to grow from planting to harvesting. The graph of the fourth rite is a set of ploughs, so perhaps the royal rites had originated in agricultural cycles? [71]

Week after week, month after month, year after year, the five rites encircled the daily lives of the royal court. Every passing generation brought more ancestors to high table. By the end of the dynasty over thirty kings and twenty queens received the rites. If each king reigned on average for twenty years the royal roster would have spanned six centuries. The royal lineage was ritually reenacted five times a year. A history class in action, everyone knew their kings and queens.

A system which developed when there were less ancestors to feed or less need to fight on all four fronts grew ever more complex over time. Neither the number of rites nor ancestors could be easily pared

down for fear of spiritual retribution. Instead, the rites became more routine: "Today's offering is shepherd's pie with peas and gravy. What? You've decided to go veggie? Well, just leave the minced human to one side then, I've got other hungry spirits to feed." The ancestors might as well have been living in a care home.

Indeed, that is where they were heading. Another possibility as to why the rites became more routine is because other matters of state were pressing, not least challenges to Shang dominance. Divinations also became more routine. Tellingly, the predictions made by the king were invariably correct: he said it would rain; it did rain. Moreover, they were invariably auspicious: there were no disasters looming upon the horizon. The king was totally in charge, nothing bad would happen, and so only he could guarantee safe passage. But was he trying to convince the living and the dead that all was quiet on the western front? Because a powerful polity to the west of the Shang heartlands was amassing allies in preparation to launch an attack upon the Great Settlement. The days of Shang dominance were numbered.[72]

Conclusion

Let's revisit the two opening questions: why five and why those five? Do the conceptual ancestors of *wuxing* lie in any of the examples given in this issue? As for the five rites, the oracle bones were unearthed in the early 20th century. For three thousand years this rich source of Shang history lay buried. The Shang performed rites to their ancestors, that much is clear from historical texts, but the system of five rites had been lost in the mists of time. Meanwhile, *wuxing* has become ingrained into Chinese thought during the last two thousand years. Coming across this royal roster it is therefore tempting to assume a connection: 'Ooh, there were five rites; that sounds significant.' We pattern-matching creatures will be on the lookout for any forerunners of five, which may or may not be relevant to later developments. Either way, ancestor worship is an important backstory to the historical context of *wuxing*.

The other two examples: five as a counter in a decimal system and the spatial configuration of a centre and four cardinal directions do continue past Shang times through to the emergence of *wuxing* and

beyond. Going forward, I'll keep these two examples and drop the five royal rites. It is also worth reiterating other significant numbers. Adding the intercardinal directions makes eight zones around a centre. Nine became an auspicious number, as in Yu's nine provinces and the three-by-three grid (F1). We'll look at the auspices of nine in Foundation Five. The ten-day week and sixty-day cycle will return in the next issue.

As well as counting the days, numbers are used to organise and group resources. From abacuses to spreadsheets we keep tabs on the inflow and outflow of resources. Turning now to the other question—why those five—what other raw materials could have been transformed into rarefied powers? Jade, silk, and bone were used in sacred rituals as much as copper, lead, soil or timber. Bone, stone, and gems do not have the mutability of ores: they can be carved but not smelted and reforged which argues for the versatility of metal. Timber has flexible properties as well, but I am not aware of any ancient treatise arguing for wood and metal and against jade and bone. Grain was sometimes added as a sixth resource, but still in the context of *wucai* as natural resources for human utility rather than transformative cyclical powers (F2, 9-11 & 16). Grain along with water, fire, wood, metal and soil were called *liufu*. *Liu* means six and *fu* implies the storage of a valuable resource. Quite how fire was stored, I am not sure, but certainly nature is our storehouse even if we have conducted a few too many raids over the passage of time.

Yet all these resources underwent a process of transformation. From millet panicles to wine; copper seams to bronze bells; cocoons to silk cloth; tree trunks to palatial pillars, it was skilled action (F1, 9) which transformed raw materials into vehicles of communion between the living and the dead, between worldly and otherworldly powers. That magic is as much in the dexterity of our two pairs of five fingers. The ten thousand brain waves flow down generations of ancestral knowledge.

This issue seems to have focused on terrestrial activities. It has felt quite earthly with soil qualities, ores, settlements, mountains and rivers, warfare and burials. The next issue turns to celestial activities. Prospective candidates for the conceptual ancestors of *wuxing* circulate in the heavens as well.

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liù fǔ 六府

Notes: Online sources checked on 01/08/2026.

Quelling the Primordial Flood **1 - 4**

[1] Gun first appears in texts compiled during the Warring States. See:

Lihui Yang and Deming An with Jessica Anderson Turner, *Handbook of Chinese Mythology* (Oxford: Oxford University Press, 2005), 127 – 130

Anne Birrell, *Chinese Mythology: An Introduction* (John Hopkins University Press, 1999), 79 – 81

[2] Lewis explores how stories about the flow or blockage of water reflected the flow of *qi*, i.e., flowing rivers are earthly channels of *qi*.

Mark Edward Lewis, *The Flood Myths of Early China* (State University of New York Press, 2006), 38 - 43.

[3] Lewis elucidates the primordial flood as a state of non-distinction whereas civilisation is predicated on social distinctions.

Mark Edward Lewis, *The Flood Myths of Early China*, 103 – 104.

[4] For a translation and analysis of the inscription on this vessel, as well as the role of Yu as a nature spirit and sage king, see:

Constance A. Cook, "Sage King Yu 禹 and the Bin Gong Xu 豳公盨", *Early China*, **35/36**, (2012–2013), 69-103.

The *Shijing* (Book of Songs) is the earliest work of classical literature, but it only mentions Yu. The *Shangshu* (Book of Documents) includes Yu, Yao and Shun but not the Yellow Emperor who only appears in works of the late Warring States. Yet the established chronology is in reverse: the Yellow Emperor purportedly reigned before Yao, Shun, and Yu. This reversal is likely due to different Warring States groups competing for patronage by rulers.

Mark Edward Lewis, "The Mythology of Early China" in *Early Chinese Religion, Volume One, Part One: Shang through Han (1250 BC – 220 AD)*, eds. John Lagerwey and Marc Kalinowski, (Brill 2011), 543 – 548,

[5] The discovery of Erlitou was made by Xu Xusheng in 1959 following information in ancient texts.

Li Liu and Xingcan Chen, *The Archaeology of China, From the Late Palaeolithic to the Early Bronze Age* (Cambridge University Press,2012), 259.

[6] Brooks traces this debate to rivalries among the followers of Confucius and Mozi in the late 4th century.

Victor H. Mair with contributions by E. Bruce Brooks, "Was There a Xià Dynasty?", *Sino-Platonic Papers* **238**, May 2013, Department of East Asian Languages and Civilizations, University of Pennsylvania

[7] Mozi, *The Book of Master Mo*, trans. Ian Johnstone (Penguin Classics, 2013), 319.

[8] This description of loess is drawn from the work of my late father, who was a geomorphologist.

A.F. Pitty, *Geography and Soil Properties* (Methuen 1979), 51 – 55.

[9] For a short, illuminating study of contemporary cave construction, see:

Yoon, Hk. "Loess cave-dwellings in Shaanxi province, China", *GeoJournal* **21** (1/2) May 1990, 95–10.

In 1556, four years after the Jesuits arrived in China (F3,1), the Shaanxi earthquake is estimated to have killed over 100 000 people. The majority were loess cave dwellers. Wikipedia accessed 28th Oct 2025.

[10] Drawing on historical texts and scientific research, Fang and Xie chart how the Loess Plateau transformed from being a highly fertile landscape rich in flora and fauna, to the barren landscape it is today.

Jin-qi Fang and Zhiren Xie, "Deforestation in preindustrial China: The Loess Plateau region as an example", *Chemosphere* **29** (5), September 1994, 983-999.

[11] Xue explains how the 'the upper Yellow River has a relatively low concentration of suspended sediments and a great drop in height. The middle section … has a high suspended sediment concentration; the drop in height is 890 m over a length of 1206 km. Consequently, the upper and middle river channels cannot be silted up' (p.324).

Chunting Xue, "Historical changes in the Yellow River delta, China", Marine Geology, 113 (1993) 321-329.

[12] Kidder and Zhuang elucidate how the Yellow River was largely stable until 5kya (3000 BCE) and large-scale flooding was uncommon. Erosion and sediment transport, and subsequent flooding disasters, began once human habitation and cultivation became more intensive.

Tristram R Kidder and Yijie Zhuang, "Anthropocene archaeology of the Yellow River, China, 5000 – 2000 BP", *The Holocene* **25** (10), July 2015, 1627 – 1639.

[13] Pests and diseases increased in settled communities, as animals and humans shared living quarters, so having a larger family offset likely deaths. However, the demographic curve largely increased in prehistoric states based on agriculture.

James C. Scott, Against the Grain, a Deep History of the Earliest States, (*Yale University Press, 2017*), 31 & 93 – 115.

[14] Lewis explores the mythic aspects of Gun building city walls, which blocked the flow of interaction among peoples, whereas Yu dismantled the walls and used them to fill the moats.

Mark Edward Lewis, *The Flood Myths of Early China*, 63 – 64.

Demons of Drought **8 - 14**

[15] Bao Yan et al., Ed. Neil J. Loader, "Long-term decrease in Asian monsoon rainfall and abrupt climate change events over the past 6,700 years", PNAS **118** (30) July 2021, 1 – 7.

[16] Edward H. Schafer, "Ritual Exposure in Ancient China", *Harvard Journal of Asiatic Studies* **14** (1/2), June 1951, 130 - 144.

[17] The earliest mention of the goddess, Ba, is in the Shijing (Songs), ca. 600 BCE. In some descriptions of her unwelcome presence, she is captured and plunged into excrement! In one regional tradition, since she is believed to inhabit a newly deceased corpse (to hitch a ride home?), the corpse is exhumed and whipped. Such rituals emphasise the idea of drought as toxic whereas rainfall is cleansing and purifying.

Yang, An, and Turner, *Handbook of Chinese Mythology*, 79 – 80.

[18] Woman Chou is mentioned in the Classic of Mountains and Seas (*Shanhaijing*) ca. 3rd century BCE. I've drawn the theme of rebirth from Birrell's description of her myths.

Birrell, *Chinese Mythology,* 169 – 170.

[19] To see the crab's regenerative process in action, watch, "Army Of Spider Crabs Shed Their Shells | Blue Planet II

[20] This famous myth has many regional variations. I have particularly drawn on the work of Sarah Allan who provides an in-depth analysis.

Sarah Allan, *The Shape of the Turtle*: *Myth, Art, and Cosmos in Early China* (State University of New York Press, 1991), 25 – 38.

Agricultural Echoes of the Dynastic Cycle 14 – 19

[21] Chiu Hung-yu, "In-depth Anatomy of the Atmospherical Phenomenon, Sun dog", Hong Kong Observatory website, accessed March 16th 2026

[22] Mencius, *Mencius: Translated with an Introduction and Notes by D.C. Lau*, (Penguin Books, 2003), 103. Quote in Book V · Part A.

[23] In *The Heir and the Sage*, Allan explores a recurring theme of how the usurper, in this case King Tang, attempts to absolve the taint of treason by offering to cede the throne to a worthy sage. However, the sage refuses and throws himself into a river.

Sarah Allan, *The Heir and the Sage, Dynastic Legend in Early China* (State University of New York Press, 2016), 88 – 91.

I am struck by the parallel with the exorcism rite in which flaming torches of brushwood are plunged into a river. Perhaps, by drowning themselves, these 'ruler-refusers' help to purify the transition of power without being party to it.

[24] Allan explores the legend of King Tang and the drought in greater detail:

Sarah Allan, "Drought, Human Sacrifice and the Mandate of Heaven in a Lost Text from the "Shang shu", *Bulletin of the School of Oriental and African Studies* **47** (3) 1984, 523 – 539.

[25] I wonder if the myth of the bathing suns was once an explanation for geothermal activity. There are about 2500 thermal springs in China, some of which are in the vicinity of the Shang capitals (Henan Province) and a third of which are in eastern coastal regions.

An Keshi, "Thermal Springs in China" GeoJournal **4**, (6), 1980, 507-513

[26] During the Song and Ming dynasties, the medicinal properties of hot springs were analysed through the lens of *yin-yang* and *wuxing*. This article reflects themes from F2 including Jesuit studies of hot springs in light of the four elements and *wuxing* (pp. 68 – 74).

Fei Huang, "Knowledge Building on Nature and Body: Hot Springs in Premodern Chinese Sources. An Overview", *Journal of Asian History* **57**, August 2023, 47 - 80.

[27] The silk moth, Bombyx Mori, is a domesticated species. Even the moths kept for reproduction can neither fly nor eat. Watch: Silkworms Spin Cocoons That Spell Their Own Doom | Deep Look

[28] David N. Keightley, *Working for His Majesty: research notes on labor mobilization in late Shang China,* (University of California, Berkeley, 2012) China Research Monograph 67, 16 – 17.

[29] The earliest account of this origin myth is in the *Shijing* (Songs) dated ca. 1000 – 600 BC. The account of the Dark King (also called Xie or Qi) helping Yu quell the flood is in the *Shiji* (Records of the Grand Historian) written by Sima Qian in the late 2nd/early 1st century BC.

[30] This myth appears in the *Lüshi Chunqiu* compiled ca. 240 BCE. Henricks explores various accounts which feature a sacred mulberry tree including the parallel legends of the birth of Confucius and Yi Yin.

> Robert J. Henricks, "On the Whereabouts and Identity of the Place Called 'K'ung-sang' (Hollow Mulberry) in Early Chinese Mythology", *Bulletin of the School of Oriental and African Studies*, **58** (1) 1995, 69-90.

[31] Yi Yin receives sacrifices on the oracle bones alongside King Tang and sometimes with six pre-dynastic kings (before King Tang). Although his connection to the royal line is not clear, he was certainly regarded as a powerful ancestral spirit who could influence Shang fortunes.

> Robert Eno, "Shang State Religion" in *Early Chinese Religion, Part One: Shang through Han (1250 BC – 220 AD)*, eds., John Lagerwey and Marc Kalinowski, (Brill 2011), 58 – 62.

Made in Bronze **19 - 23**

[32] For the dates of the megadrought, 1675 – 1185 BC, see n. 15. For the dramatic increase in arrowhead production, plus dates of the Xia to Shang transition, see:

> Li Liu and Xingcan Chen, *The Archaeology of China,* 268 – 269.

[33] Ibid. The two cities are dated to a period archaeologists call Lower Erligang, ca. 1600 – 1415 BC, based on a style of ceramic production which differs from the styles at Erlitou. The final phase of Erlitou is ca. 1560 – 1520 BC. For the construction and size of the cities, see 278 – 282.

[34] Ibid. 284 – 288.

[35] Harper, M. "Possible Toxic Metal Exposure of Prehistoric Bronze Workers", *British Journal of Industrial Medicine* **44** (10) 1987, 652–56.

[36] The maximum expansion of Erlitou was ca. 300 ha. Bronze production at Erlitou ceased after ca. 1520 BC. A century later, the site had become a village ca. 30 ha. before being abandoned completely.

Li Liu and Xingcan Chen, *The Archaeology of China*, 266 – 269.

[37] The highest deadlift record is 510 kg (1,124.4 lbs), set by Hafþór Júlíus Björnsson on September 6, 2025, at the World Deadlift Championships in Birmingham, England.

[38] http://www.chinaknowledge.de/History/Zhou/rulers-qin.html

[39] Anthony Barbieri,"The Design, Function, and Meaning of the Bronze Ritual Vessels of the Shang Dynasty of China" uploaded in 2022. His overview of different *taotie* (mask faces) theories is 37.40 – 47.40 mins.

[40] Ibid., see 14.20 to 18.50 mins to see this ancient technique in action.

Circulation of Tribute **23 - 26**

[41] The "Tribute of Yu" is a chapter of the *Shangshu* (Book of Documents). A translation is available to read online at the China Text Project.

[42] Liu and Chen write: 'The regional centers in the periphery provide raw materials and exotic goods as tribute to the core area to support urban growth and craft production in the major center and to contribute to the formation of hierarchical sociopolitical structures. In return, the major center redistributed the products (mainly prestige goods, including bronze ritual vessels) of its restricted and sacred crafts.'

Li Liu and Xingcan Chen, *The Archaeology of China*, 284.

Childs-Johnson proposes that 'the monumental tetrapod *ding* [the square or rectangular vessels with four legs] were produced for the exclusive use of Shang kings and Shang princes eligible for succession to the throne. Thus, their function and primary role were as symbols of divine authority and royal power that constituted the foundation of the Shang patriarchal system. This symbolic role was the stimulus for the later myth linking *ding* and dynastic power'.

Elizabeth Childs-Johnson,"Big Ding 鼎 and China Power: Divine Authority and Legitimacy", *Asian Perspectives* **51** (2), 2012, 164-220.

[43] Li Liu and Xingcan Chen, *The Archaeology of China*, 296

[44] Boltz proposes that the Chinese script was created relatively quickly in the middle of the second millennium B.C.

William G. Boltz, "The Origin and Early Development of Chinese Writing", *American Oriental Series* **78**, 1994, 39.

Smith proposes a gradual development going further back in time.

Jonathan Smith, "The Luni-Stellar Solution to the Sexagenary Cycle and the (More or Less) Indigenous Origins of Chinese writing" in *Dialogue of Four Pristine Writing Systems,* Eds. Kuang Yu- Chen et al., (Confucius Institute of Rutgers University, 2019), 168 – 173.

Back to the Oracle Bones **26 - 32**

[45] David N. Keightley, *Sources of Shang History, The Oracle-Bone Inscriptions of Bronze Age China*, University of California Press, 1978), 5.

[46] 'Considerable evidence links the ancient Chinese dead to the increasing use of pyromantic divination during the Neolithic. The practice may have originated from the cracking of the bones when animal meat was offered in sacrifice to the spirits, to the ancestors, and historical texts suggest that the divinations were addressed to the ancestors, who were thought to be responding to their descendants through the cracks made in the bones'.

David N. Keightley, "Art, Ancestors, and the Origins of Writing in China", *Representations*, **56,** Autumn 1996, 71- 72.

[47] Echoing the king's charges, I have been more emphatic on this point than can be proven. Keightley writes, 'The evidence is not as strong as one would wish, but it seems reasonable to suppose that much Shang divination was incantatory in nature'.

David N. Keightley, "Late Shang Divination", Explorations in Early Chinese Cosmology, ed. Henry Rosemont, Jr. (Scholars Press, 2006), 15.

[48] David N. Keightley, "The "Science" of the Ancestors: Divination, Curing, and Bronze-Casting in Late Shang China", *Asia Major*, **14** (2) 2001, 163

[49] The royal line of succession was not only from father to son and from brother to brother, in which case a former king could be an uncle of the present king. As well as his father, three of Wu Ding's uncles had reigned before him. In an extreme case, about seventy divinations were used to ascertain which ancestor had caused Wu Ding's toothache, and another twenty to figure out which sacrifice would appease his deceased uncle.

Ibid., 154

[50] Jeremy Lent, *The Patterning Instinct, A Cultural History of Humanity's Search for Meaning*, Prometheus Books 2017), 103 - 116

[51] Kui has been associated with a mythic figure called Di Ku, the avian 'father' of Xie, the Dark King (p.18). Wang Hai is widely regarded as the father of Shang Jia, the first king who is part of the five rites schedule (p.39). Both Kui and Wang Hai are 'high' ancestors. The Eastern and Western Mothers are not high ancestors. They may be connected to the myth of the ten suns, but since the oracle bones were not used to convey myths, it is hard to prove the connection. For more details, see:

Sarah Allan, *The Shape of the Turtle*: *Myth, Art, and Cosmos in Early China*, 31 – 36.

Riccardo Fracasso, "Holy Mothers of Ancient China: A New Approach to the Hsi-wang-mu 西王母 Problem", *T'oung Pao* **74** (1/3), 1988, 19 – 30.

[52] David N. Keightley, "The Making of The Ancestors: Late Shang Religion and Its Legacy", *These Bones Shall Rise Again: Selected Writings on Early China* (State University of New York Press, 2014), 155 – 206.

[53] Allan cites a study by Hu Houxuan, who counted the sacrifices on oracle inscriptions as over 13 000. Across two centuries of inscriptions, that's 65 people a day. Another 1145 inscriptions mention human sacrifice without the number of victims, so the body count will be higher.

Sarah Allan, *The Shape of the Turtle*: *Myth, Art, and Cosmos in Early China*, 8, n.10.

[54] Keightley notes that successful predictions, even unfavourable ones, conferred political and religious legitimacy upon the Shang king.

David N. Keightley, "The "Science" of the Ancestors" 148.

The Sacred Square **32 - 35**

[55] David N. Keightley, *The Ancestral Landscape: Time, Space, and Community in Late Shang China* (University of California, Institute of East Asian Studies, 2000), 81 – 86.

[56] The ritual purpose of the inner and outer artefacts of the tombs is explored in this interesting open source article:

Zhengyuan Wang, "Ritual re-representation and the making of sociality: rethinking elite burials in the Late Shang Yinxu", *Archaeology International*, **28** (1), 2025, 63–84.

[57] Keightley notes that the king rarely divined about 'hosting' ancestors (i.e. ritual feasts) when he was away: 'Just as the king was concerned for this safety when he travelled, so were the ancestors thought to be at risk if offered cult on hostile ground'.

David N. Keightley, *Ancestral Landscape*, 117

[58] Aihe Wang, *Cosmology and Political Culture in Early China*, (Cambridge University Press, 2000), 26 – 28.

[59] The agency of wind was complex. Wind could be sent by the High God, Di; a messenger of Di called *feng* (a divine bird); as well as the powers of *fang*, *wu* and *tu* (soil). Yet more complex, there were four wind gods and each of the four winds had a name. Echoing the monsoon cycle the eastern and southern winds were 'harmonious' and 'gentle' whereas the northern and western winds were 'confronting' and 'afflicting'.

Fa Li and Ken-ichi Takashima, "Sacrifice to the wind gods in late Shang China – religious, palaeographic, linguistic and philological analyses: An integrated approach", *Journal of Chinese Writing Systems*, **6** (2) 2022, 84 - 91.

[60] Ibid., 82.

[61] Keightley notes that the royal hunts appear to have been linked to Shang farming. 'The burning of brush involved in the driving of game led to the opening up of new lands for cultivation…and to the fertilization, from the vegetative ash, of the new fields'.

David N. Keightley, Ancestral Landscape, 109

Counting the Days **36 - 41**

[62] Ho Peng Yoke, *Li Qi and Shi, An Introduction to Science and Civilization in China*, (Hong Kong University Press, 1985), 55 - 57.

[63] As well as the predilection for five as a counter, Schwartz also notes that odd numbers were favoured with smaller sacrifices of one, three, five, and seven and larger sacrifices favour thirty, fifty, or a hundred.

Adam. C. Schwartz, "Shang Sacrificial Animals: Material Documents and Images" in *Animals through Chinese History, Earliest Times to 1911,* eds., Roel Sterckx, Martina Siebert, Dagmar Schäfer (Cambridge University Press, 2018), 20 – 45.

Archaeological remains are also more varied reiterating the use of round-up numbers for written records.

Yuan Jinga and Rowan Flad, "New zooarchaeological evidence for changes in Shang Dynasty animal sacrifice", Journal of Anthropological Archaeology, **24**, 2005, 252–270

[64] David N. Keightley, *Ancestral Landscape*, 37 – 47.

[65] Ibid., 40

[66] Only consorts whose son became a king received sacrifices through the five rites. For example, although Wu Ding likely had at least sixty consorts, only three are part of the five rites, i.e. three of his sons subsequently became kings (n. 49). For all other kings, only one or two consorts were part of the five rites.

[67] Adam Smith, pers. com, 07/08/2026. He sent a link to a painting of the Tzolk'in cycle of the Maya calendar, by Patricia Martin Morales, which combines cycles of 13 and 20 to make 260 day names.

[68] Keightley thinks that signs of a new ritual system, including the siting of royal tombs, may have begun in the reign of Wu Ding but consolidated during the reign of one of his sons, Zu Jia.

David N. Keightley, "The Making of The Ancestors", 177- 181

[69] Childs-Johnson proposes that the king may have worn a mask while invoking the ancestor spirits.

Elizabeth Childs-Johnson, "The Ghost Head Mask and Metamorphic Shang Imagery", *Early China* **20**, 1995, 79 - 92.

[70] For a clear exposition of the complexity of the five rites roster, see:

Adam Smith, "The Chinese Sexagenary Cycle and the Ritual Origins of the Calendar," in *Calendars and Years II: Astronomy and Time in the Ancient and Medieval World*, Ed., John M. Steele (Oxbow Books, 2011) 18 – 25.

[71] Fei Deng and Xu Wen, "一组甲骨卜辞中 "翌" 之意义推论 / New Interpretations of Yi 翌 in a Group of the Oracle Bone Inscriptions", *Journal of Chinese Linguistics*, **45** (2) June 2017, 394-422.

[72] David N. Keightley, "Late Shang Divination", 15 – 16.