# 1. Details on “personal gods” theories of rain

### 1.1. Rain as produced by ancestors

Ancestor worship has been a familiar anthropological phenomenon documented the world (Steadman et al., 1996). In early China, systematic veneration of the dead occurred particularly intensely during the Shang period (1600-1046 BC) (Liu, 1999), where people sought help from their deceased ancestors on issues from military decisions to weather control (Chou, 1979). The Shang people conceived the power of their gods to be hierarchical[[1]](#footnote-1): recently deceased ancestors were seen as less powerful than their elders, and the most distant ancestor, Di, is believed to be able to influence weather (Keightley, 1998). Therefore, asking for rain requires pleasing Di with offerings and sacrifices, which often involves food, drink, animals, and occasionally humans (mostly slaves) (Shelach, 1996). There has been much anthropological theorizing on the nature of such sacrifice (Hubert & Mauss, 1981; Taylor, 1871), and the classic view is that it is a form of *du et des* (I give that you might give; tapping our reciprocity psychology; see Henrich and Henrich 2007). According to this view, sacrifice is a kind of gift to the gods with the expectation that the gods may return the favor: a war victory, a harvest, or a much-needed rain.

In the case of rainmaking, a particular approach, *bao wu* 曝巫 (burning of the shamans), deserves some special attention. On the surface it seems like ordinary human sacrifice, but its nature is rather different from sacrifices using slaves and war captives. *Bao wu* refers to the practice of placing the shamans naked under the sun, yet the shamans here do not serve as gifts but to invoke sympathy from the deity (Schafer, 1951). Sometimes the supplicant himself (who could be a magistrate or even a king) would even attempt to throw himself onto a burning pyre (Cohen, 1978). The most famous case here is probably the founding king of the Shang dynasty, Tang, *preparing* to sacrifice himself when the rain began to fall just in time. This case was frequently referenced in later texts, typically in the context of illustrating the importance of sincerity when asking Heaven for favors. As Cohen (1978) points out, this kind of sacrifice can also be seen as a kind of threat to the deity: either produce rain or bear the sin of causing death (rain would put out fire and thus save the sacrificial individual). It is important to keep in mind that this is not the go-to option but an act of desperation to produce rain; it was used as the last resort when everything else fails. This phenomenon is not uncommon in human-human interactions: suicide is often used in situations of desperation and frustration where one wishes to demonstrate her strong will in this extreme form (Jorgensen-Earp, 1987) as well as a bargaining tool (Syme et al., 2016). Among the Yi today in southwest China, for example, the threat of suicide is still often employed to achieve various ends (Zhou 2020). Granted, it is unclear whether people would believe a divine entity may respond to this kind of self-sacrifice in the exact same way as a human would (Horton, 1960), yet it seems reasonable to assume that both types of actions result from the same psychological underpinnings (McNamara et al., submitted).

### 1.2. Rain as produced by local deities

Another large category of folk theories regarding rain-making is that it is produced (or at least controlled) by local deities. These local deities are generally believed to be benevolent spirits in charge of a particular localities’ socio-ecological environment (Hansen, 2014) and are thus responsible for natural phenomena such as rain and snow as well as individual fortunes and misfortunes. Crucially, these deities are not necessarily one’s ancestors; in fact, they are often famous (deceased) individuals or folk heroes with specific achievements (Cahill, 1993).

The exact mechanism of how these local deities are believed to produce rain is not entirely clear from historical records. In fact, most people did not seem to care about the mechanism via which the deceased individuals bring about rain, yet they do not hesitate to turn to them in times of drought or other natural calamities for help (Hansen, 2014). Due to the personal nature of these deities, people would sometimes make “promises” to them (许愿) that if their wishes are fulfilled, they would “return the favor” (还愿), usually in the form of additional offerings or financial support to the deities’ earthly manifestations (e.g. donation for temple renovation) (Zhou and Su 2019). Here, we again see a bargaining situation that invokes the logic of reciprocity.

### 1.3. Rain as produced by dragons

Dragons[[2]](#footnote-2) in Chinese mythology are serpent-like creatures that symbolize imperial strength and power (Ruppert, 2002). Their association with water, and in particular, rainfall was primarily imported from India with the spread of Buddhism (Zürcher, 2007). The diffusion of Buddhism during the Northern and Southern Dynasties (386-589 AD) meant that many Buddhist concepts were incorporated into Chinese folklore. Normally, the association between dragons and rain was justified with sympathy and correspondence (see section 2.2.2. for detail), and techniques to induce rain were often based on the belief that dragons and rain co-occur. For example, throwing tiger bones -- which dragons were believed to fear – into places where dragons are said to reside to force them out and cause rain to fall (Chavannes, 1919). Confucian scholars such as Zhu Xi attempted to provide a quasi-naturalistic interpretation of the co-occurrence of dragon and rain (Wang 2006). Its anthropomorphic version, the dragon king (龙王) however becomes a typical personalized rainmaking deity in popular religion (Snyder-Reinke, 2020), and had their own temples and enjoyed offerings just as any other local deities (Chen and Lu 2016).

# 2. Details on ancient skepticism towards rainmaking

### 2.1. Wang Chong’s skepticism

Wang Chong (27-100 AD), a Han philosopher and astronomer known for his rationalism and mechanistic worldview, also offered a series of arguments against several rainmaking actions. Wang first points out that it is very improbable that heaven would be aware of human requests because the distance between mankind and Heaven is so large. When discussing the ancient tale of King Tang successfully inducing rain after preparing to self-sacrifice, Wang commented:

[Suppose] there is someone on top of the stairs; someone else down at the bottom kneels and asks something from the one on top. If the one on top hears the request, then he may grant it out of sympathy and pity; if he does not hear the request, the one at the bottom gets nothing regardless of how sincere the requester is. The distance between Heaven and mankind is much greater than the length of a stair; despite Tang’s sincerity, how could Heaven hear him and grant rain? (*Lunheng, chapter 19*)

Elsewhere in *Lunheng*, Wang Chong straightforwardly denies the causal relevance between politics and natural disasters by suggesting that extreme conditions will naturally reverse on their own:

Sometimes when the drought lasts for a long time, it will rain [eventually]. King Tang thought that he should blame himself as the drought lasts for so long; the people observed the self-blaming and the subsequent rain, and believed that Tang’s prayers caused the rain *(Lunheng, chapter 19)*.

Similarly,

Drought and rain are like day and night. The flood and drought during Yao, Tang’s time are like winter and summer [that alternate]. If one wishes to intervene such natural changes through ritual actions, how could this possibly work? If it rains for a long time without stopping, just have some good sleep, and rain will stop. As for long-lasting drought, just have some good sleep again, and the drought will stop and rain will come. Why is this? Extreme *yang* will reverse towards *yin,* and extreme *yin* will reverse towards *yang* (*Lungheng, chapter 46*).

Here Wang Chong offers a philosophical basis for changes in nature according to the principles of *yin* and *yang*. Because of such principles, Wang suggests that trying to influence nature’s order through prayers is a waste of time.

### 2.2. Wang Anshi’s skepticism

Wang Anshi (1021-1086) is a Song politician and poet who implemented large-scale socioeconomic reforms. During the reform conservative politicians attacked him by interpreting the occurrence of natural disasters as Heaven’s disapproval of his policies, Wang Anshi said:

The changes of Heaven are infinite; the possibilities of human actions are also infinite. [if one] forces conclusions, how could there not be some coincidences (偶合)? This is why such claims (about Heaven’s change being related to human action) are not to be believed. (*Xu Zizhi Tongjian Changbian*)

This argument has a surprisingly modern feel, and was also one of the first few that invokes the concept of coincidence or chance[[3]](#footnote-3). By emphasizing the infinity of Heaven’s changes and human possibilities, Wang Anshi points out that the apparent correlation between politics and heavenly phenomena may be merely the result of chance. Of course, one could question the sincerity of Wang Anshi’s argument, since he was defending himself against conservative attacks. Nonetheless, the skepticism was clearly there, and even though Wang Anshi was not talking about rainmaking per se, by denying the causal relevance between natural phenomena and government policies, one could easily reach the conclusion that policy reforms will not influence the weather.

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1. Puett argues that ancestral spirits can be capricious and even malicious if left alone, and the sacrificial rituals in fact *create* a hierarchy in which these spirits would act in the interest of the living (Puett, 2002). But in either case, *Di* is conceived of as a spiritual power that has wills and desires and would respond to the offerings provided by the living. [↑](#footnote-ref-1)
2. Chinese dragon (龙) is usually associated with water, which is rather different from dragon in western mythology capable of breathing fire. [↑](#footnote-ref-2)
3. See (Tang, 2016) for a discussion of the concept of chance and coincidence during the Song dynasty. [↑](#footnote-ref-3)