Beat the Drums or Break Them: Bells and Drums as Communication Devices in Early Chinese Warfare

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Abstract

Warring States (453-221 BCE) and Western Han (206 BCE-9 CE) texts abound in references to drums and bells in discussions of warfare and martial affairs. This begs the question: how are we to understand such references? What role did these instruments have to play on the battlefield? This paper examines the role of sound in early Chinese warfare. By analyzing textual references to sound-producing instruments within the context of warfare, it seeks to emphasize the importance of organized sound production on the battlefield. I argue that, rather than mere ornamental “military music,” drums and bells were perceived by early Chinese strategists as indispensable sonic communication devices, which played a crucial role in victory or defeat in any battle.

Keywords

early China – military thought – music – Warring States – drums – military communication – Chinese history

1 Introduction¹

擊鼓其鐃、踊躍用兵。
土國城漕、我獨南行。

¹ This article is the winner of the 2019 Edward L. Dreyer Prize for best article in Chinese military history by an early-career scholar.

“Tang!” The clamor of the beaten drums;
 We use our weapons with leaps and jumps.
 [Some] toil the land, [or] fortify Cao town
 As we alone are marching down.²

In the poem above, cited from the *Shijing* 詩經 (*Book of Odes*), drumbeats form the backdrop of a military procession. The appearance of drums (*gu* 鼓) in the context of the representation of warfare is not unexpected; Warring States (戰國, 453–221 BCE) and Western Han (西漢 206 BCE–9 CE) texts abound in references to drums and bells in discussions of military and martial affairs. This begs the question: how are we to understand such references? What role did these instruments have to play on the battlefield?

The relation between sound-producing instruments and acts of killing and violence is multifaceted. Several sources mention the consecration (*xin* 釁) of both drums and bells by smearing sacrificial blood on them. Warring States texts—and above all the *Zuozhuan* 左傳—describe how musical instruments, as well as an array of ritual and military-related objects, were consecrated with the blood of sacrificial animals—or possibly, at times, even with the blood of a human victim.³ Perhaps the best-known story involving a blood-consecrated musical instrument is an anecdote in the *Mencius* 1A.7. The figure of Mencius

2 Mao 31 (“Ji gu” 擊鼓). See *Shi Maoshi zhuan shu*, 3.61 (“Bei feng” 邶風). Cf. Waley 1996, 27. The term 南行 at the last line literally means “heading south.” According to Zhu Xi’s commentary, heading towards an extremely dangerous place. See *Shi ji zhuan*, 78.

3 Robin D.S. Yates argues that human sacrifice was a common punishment for undisciplined behavior in the military, or for not adhering to covenants. See Yates, “Law and the Military in Early China,” in Di Cosmo 2009, 26. Lewis 1990, 26–28, discusses the issue of human sacrifice between the Shang and the mid-Warring States periods, including the use of prisoners’ blood for the consecration of newly cast war drums. Lewis concludes that “It is true that in the cases cited in the [*Zuozhuan*] no prisoner is ever actually sacrificed, but the speeches and narration show that no one questioned the possibility or probity of the action, and from the [archaeological] evidence of human sacrifice [...] there is no reason to doubt that men were sacrificed in such circumstances.” For a comprehensive discussion on the custom of consecration with blood see Yang 2003; also “Xian Qin xueji liyi yanjiu” 先秦血祭禮儀研究 in Yang 2012, 87–114; “Xian Qin xin li yanjiu” 先秦釁禮研究, in Yang 2012, 115–35; Campbell 2018, 81–84. On methods of animal sacrifice for consecration see Sterckx 2002, 58–59, 76–77. The ritualistic execution of soldiers was a form of punishment for undisciplined behavior in the military. The *Zuozhuan* 左傳 (compiled sometime before the third century BCE) contains three different narratives in which a human—generally in the position of a captured enemy—is almost killed to be used as a source of blood for anointing drums, but eventually spared. See *Chunqiu Zuozhuan*, 499–500 (Xi 33); 813 (Cheng 3); 1271 (Zhao 5). In the last the text marks specifically that the aim is to consecrate military drums (釁軍鼓). Note that references to the *Zuozhuan* appear here in the following form: *Chunqiu Zuozhuan*, page number (Duke name, year of reign).

in the text describes a case in which King Xuan of Qi (齊宣王 r. 319–301 BCE) is sitting in his hall when he sees an ox being led on a leash. The ox, the king is told, is about to be sacrificed so that its blood might be used for the consecration of a bell. Upon encountering the fragile and frightened look on the ox's face, however, the king cannot bear the thought of the innocent creature's killing, and orders that it be set free and that a sheep be sacrificed in its place. Judging by this incident, Mencius then determines that King Xuan of Qi has a heart befitting of a true monarch: "this heart is sufficient to rule with as a king" (是心足以王).⁴

While the bell referred to in the passage from the *Mencius* seems to be a ceremonial bell, it is much more common to encounter instances of the consecration of sonic instruments which are intended to be used in war.⁵ Drums of war,

4 *Mengzi zhengyi*, 1.50 ("Liang Hui wang shang" 梁惠王上). Lewis (1990, 1–2), speaks of sanctioned violence (i.e., socially accepted or approved forms of violence) as helping to distinguish between "self" and "other." "Violence as a definer and creator of social groupings" is one of four usages that Lewis suggests. The other three are violence as a compelling force, as the decisive element of the political order; violence as a marker of significance; and violence as an element in myth or in metaphoric thinking. The killing of sacrificial animals, too, may be permitted and legitimized because they are not part of the realm of humans. In the anecdote above, once the king encounters the eyes of the frightened ox and sees in them something resembling human emotion, this distinction—and the act of killing—are no longer valid. For more elaborate views on the role of sacrifice see, for example: Girard 1972; Bloch 1992, 24–45; Smith 1987. Girard (3, 39) speaks of sacrifices as incorporating a delicate combination between having some characteristics of the self and representing an "other." Drawing on Joseph de Maistre's "Éclaircissement sur les sacrifices" (*Les soirées de Saint-Petersbourg*, Lyons, 1890), he argues that "from the animal realm were chosen as victims those who were [...] the most *human* in nature" (e.g. lambs). Bloch similarly argues for a balance between the identification and the alienation of the sacrifice to and from the sacrificer, but speaks of a division between the former and the latter that happens at the moment of killing, followed by a stage of "consumption." Smith emphasizes sacrifice as the killing of the domesticated animal, and posits that sacrifice is therefore a "meditation on domestication," and a ritual expression of domestication that symbolizes the difference between the civil or the domesticated, and the wild. For an example of a later case where violence (this time human-to-human, conquerors to conquered) is legitimized by creating a segregation between self and other, see Yang 2017.

5 The bell in the *Mencius* is *zhong* 鐘, a term which is not frequently used in military contexts. Lothar von Falkenhausen adds that this method was used to anoint newly cast bells. See Falkenhausen 1993, 32. The bells and drums usually consecrated were a part of the category of "military tools" (*jun qi* 軍器) that were consecrated to ensure success in battle (see Yang 2003, 70–71). See also *Huainan Honglie jijie* (hereafter *Huainanzi*) 8.319 ("Ben jing" 本經): "Hence the bells (*zhong*) and drums, reeds and pipes, shields and arms, feather and oxtail banners—are those by which one expresses joy. [...] weapons and leather [armors], feather and oxtail banners, *jin* bells and drums, execution axes and battle axes, are those by which one expresses anger." (故鐘鼓管簫, 干鉞羽旄, 所以飾喜也。[...] 兵革羽旄, 金鼓斧鉞, 所以飾怒也。) See the section "The Identity of *jin* and *gu*" below for more on the specific types of bells and drums used in war.

in particular, appear as consecrated with the blood of different sacrificial entities. The relationship between drums and violence begins with depictions of the very origin of the drum. Thus, according to one source, the Yellow Emperor (*Huangdi* 黃帝) is said to have hunted the mythical *Kui* 夔 creature to make a thunderous resounding war-drum from its skin.⁶ The skinning of the magnificent and dangerous creature—who emits a light equal to that of the sun and the moon, and brings about wind and rain as it moves—bears a violent air in its own right. As a war drum, we learn that not only did this drum serve a violent means, but it was also produced in violent circumstances.⁷

It is no coincidence that these ritual and mythical traditions connect drums and bells with violence—and particularly with acts of war. Archaeological and textual evidence shows that these instruments were commonly present on the early Chinese battlefield. An examination of textual evidence further reveals that during battle, their function was far from limited to the symbolic or the ritualistic. On the contrary, as we shall see below, a variety of sonic instruments such as bells, drums, and even wind instruments were active and essential military communication tools, used for signaling commands to the troops during battle. This function was not unique to China. Drums, specifically, are the oldest known sonic instruments used for signaling. The Persians are believed to have used kettle drums from at least ca. the fifth century BCE, and the Egyptians to have used long wooden drums as early as the sixteenth century BCE, while the Greeks, Romans, Israelites, and other ancient cultures of Europe and the Near East predominantly used horns and trumpets during battle.⁸ However, the extent to which these methods and codes are elaborated

6 *Shanhajing jiaozhu*, 14.361 (“Da huang dong jing” 大荒東經). The *kui* is depicted as a one-legged ox-like creature who lives in the Eastern Sea. According to the *Shanhajing* its body is deep-green (*cang* 蒼) in color, it has no horns, and “its voice resembles thunder” (其聲如雷). Interestingly, the character *Kui* is also the name of a mythical music master appointed by emperor Shun. Whether the graph is intentionally used dually in early sources is unclear, however later sources definitely make use of this duality. The *Han Feizi* narrates a case depicting a confusion between the mythical creature and a human (though not the music master, but an uncanny person of a sort). See *Han Feizi*, 33.730–31 (“Wai chu shuo zuo xia” 外儲說左下). Cf. Sterckx 2002, 125–29.

7 Commentators of the *Shanhajing* throughout history have asserted that the *kui*-skin drum was used in the Yellow Emperor’s battle against Chiyao 蚩尤. See Yuan Ke’s commentary in *Shanhajing jiaozhu*, 362.

8 See Sterling 2008, 307. On military drums (and trumpets) in ancient Egypt see Wilkinson 2014, 259–65 and 266–69. Henry George Farmer provides a very brief history of instruments used on the battlefields, with an emphasis on instruments used for marching or for signaling. Farmer mentions the early Greeks, Egyptians, Hebrews, Romans, Celts, Britons, and Saxons; however, his overall aim is to depict the evolution of the Western military band. See Farmer 1912, 3–11. Farmer’s statement from 1912 that “One has to seek among the highways

in early Chinese texts is unique in its magnitude, and has received scant attention in scholarly accounts so far. This lack of critical attention can be largely attributed to the lack of porosity of the disciplinary boundaries of scholarly analysis: sound-producing instruments, when placed in a military context, fall in between disciplines and fields of interest. Military historians may mistake them for mere ornamental instruments, bracketing them out of the realm of scholarly enquiry. For them, drums may not seem to be arms *per se*. For scholars within music-related disciplines, on the other hand, the usage of sound in war does not appear as musical *per se*. This paper sets out to redress this gap in the literature and examine the role of sound-producing instruments in early Chinese warfare. I argue that the skillful operation of these instruments was considered key to winning battles, a fact that has thus far been unjustly overlooked by scholars. I begin the discussion with a brief investigation of the two types of instruments most commonly found in early Chinese military texts, namely the bell (*jin* 金) and the drum (*gu* 鼓). Next, I analyze textual references to these instruments which demonstrate the way they operated on the battlefield. In addition to revealing the complexity of their operation, these textual references prove how immensely important these sonic instruments were perceived to be. Having investigated the way in which early Chinese authors discuss military drums and bells, I then attempt to correct some of our modern misconceptions and challenge the “musicality” of such instruments. By comparing methods of military training with views on how music affects the human body, I suggest that within the context of warfare, these instruments were perceived not as producers of *music*, but as strategically important *communication devices*, which are used to signal commands to the troops and are valued above all for their sonic, rather than so-called musical, qualities. While this may seem like a trivial claim to be making, I would argue that changing our own perspective to follow historical perspectives on how sound

and by-ways of literature for data” (vi) still holds true today. The Ancient Israelites used the ram’s horn (*shofar*) as a signal instrument. See Sendrey 1969, 73–74. Interestingly, horn-like instruments suspected to have been used for military purposes were also excavated in several tombs in China. These include two wooden hornlike instruments dating to the Warring States that were excavated in Hubei in 1978 (Jiangling county, Tianxingguan M₁) and 1984 (Zhijiang, Yaojiagang M₂). These excavations are briefly discussed in Li 1996, 408–11. Such instruments have very rarely been excavated, and are not mentioned in texts prior to the Jin 晉 dynasty (266–420 CE). Xu Guang 徐廣 (352–425 CE) confirms that no records prior to his time mention horns. According to him, some say horns derived from the practice of the Qiang 羌 and Hu 胡 peoples blowing them to scare Chinese horses; while others say that horns came from the states of Wu 吳 and Yue 越. See *Taiping yulan* (“Bing bu” 兵部 69/338.1550). Since horns were not frequently used or referred to in the periods under discussion, we shall not further address them here.

operated on the battlefield essentially opens the door to a better understanding of communication in early Chinese warfare. Finally, I explore some metaphors that utilize the drum, and examine discussions on the potency of drums which are *not* played, as markers of battles not fought.

2 The Identity of *Jin* 金 and *Gu* 鼓

Two main categories of sound-producing instruments dominate Warring States and Western Han military-related textual discussions. The drum—*gu* 鼓—is the sonic instrument most frequently mentioned in the context of warfare. The *jin* 金, which I translate as “bell,” is next in frequency. *Jin* refers to a type of audible metal-made instrument (most likely made of bronze), which often appears in conjunction with *gu*. Judging by both textual and archaeological evidence, it would seem that the two refer to *categories* of instruments rather than specific types of drums and bells. The *Wuzi* 吳子,⁹ for example, identifies the *jin* and *gu* in one place as the *pi* 鼙 drum and the *duo* 鐸 bell;¹⁰ while the *Zhouli* 周禮 lists as many as “six [types of] drums” (*liugu* 六鼓) and “four [types of] bells” (*sijin* 四金) to be taught to drummers (*guren* 鼓人), at least some of which were for the purpose of use in the military.¹¹ This suggests that several types of drums and bells were in use in the military. While some kinds of drums and bells, as will be suggested below, shifted their function between

9 Named after Wu Qi 吳起 (ca. 440–381 BCE). Sawyer estimates that the core of the text may have been composed by Wu Qi himself, with the text then expanded by his disciples and taking its present form during the Han dynasty (Sawyer 1993, 192).

10 *Wuzi*, 4.119 (“Lun jiang” 論將)—“the *pi* drums and the bronze *duo* are those by which one compels the ear” (鼙鼓金鐸，所以威耳). The *pi* are small barrel drums, the *duo* were mallet-struck hand drums. For brief descriptions and a few textual examples see Xue 1985—for the *pi* see p. 133, for the *duo* pp. 309–13. For images of some of the bell types discussed here, see Figures 1 and 2 below.

11 See *Zhouli zhengyi*, 898–910 (“Gu ren” 鼓人). The types of drums and bronze bells mentioned in the text are as follows: The *lei* (thunder) drum 雷鼓; the *ling* drum 靈鼓; the *lu* drum 路鼓; the *fen* drum 鼗鼓; the *gao* drum 鞀鼓; and the *jin* drum 晉鼓; the bronze *chun* 金鈸; the bronze *zhuo* 金鑼; the bronze *nao* 金鐃; and the bronze *duo* 金鐸. The *fen* drum, which was a large brass drum, is said to be that by which one “drums for affairs of the military” (鼓軍事), while the other drums mentioned are said to be drummed in different, non-military, circumstances. The *jin* are all described as complementing and guiding the actions of the drums; e.g. “with the bronze *nao* one stops the drumming” (以金鐃止鼓). The commentaries indicate that the *zhuo* is the same as the *zheng*, and is carried by the head (*sima* 司馬) of a ten-man squad, while the *duo* was held by the commander of a twenty-five man unit. For a discussion on the *sijin* see Falkenhausen 1989.

the musical or the ritual and the military, others may have been intended exclusively for military use.¹²

Bell types often associated with warfare include the *chun* 鐃, or *chun yu* 鐃于, the *zheng* 鉦, and its smaller counterpart, the *nao* 鐃.¹³ The *ling* 鈴 clapper-bells may also have been involved in military practices. Lacking an accurate sound and functioning more as noise-producing bells tied to chariots and horses, they are, however, unlikely to have been used directly for signaling.¹⁴ The *zheng* bell, in particular, is thought to have been used solely for signaling during the Warring States period. Archaeologist and art historian Ingrid Furniss describes the *zheng* as “a long-shanked mallet-struck” bell, and lists between three and four tombs containing *zheng* bells alongside barrel drums.¹⁵ Relying on the locations of their burials, she argues that there is a very slim chance that *zheng* ever, even occasionally, served musical purposes. Lothar von Falkenhausen asserts categorically that the sole function of the *zheng* bells was signal giving, and Li Chunyi also argues for their non-musical usage.¹⁶ The *chun yu*, a large and uniquely shaped bell (see Fig. 2 below), was commonly used for military purposes and, while highly unlikely to have served strictly musical purposes

12 Lothar von Falkenhausen has recently pointed out, following his analysis of recent archaeological excavations, that there are close typological links between bells used for ritual/musical purposes and bells used for signaling. Moreover, down to Han times bells for both ritual and military usages were occasionally buried side by side. See Falkenhausen 2018, particularly pp. 52–53.

13 See Furniss 2008, 250–51; Sun 2016, 370; Xiao 1991, 53; and Falkenhausen 1993, 68–72, and 2018, 51–53. Apart from Sun Wenbo, who briefly determines that “*gu* refers to *gu* or *pi*; *jin* refers to *zheng* or *nao*” (Sun 2016, 370), no account written by modern scholars seems dedicated to discussing which instruments were the *jin* and the *gu* that appear in military texts. Analyzing recent archaeological excavations, Falkenhausen (2018, 51) suggests that *zheng* bells may have derived from the late Shang and early Western Zhou *nao* bells. It is worth noting that *zheng* as a signaling bell does not appear in transmitted texts predating the Eastern Han period (25–220 CE). The bells referred to here are ones classified by archaeologists as *zheng* on the basis of their typological features. However the *dingning* 丁寧, another name for the *zheng* (see Falkenhausen 2018, 51), does appear in early sources.

14 *Ling* possibly occasionally served musical purposes, as in some tombs they were found buried alongside musical instruments. See Furniss 2008, 249–50 on their appearance in the Dangyang Caojiagang M5 tomb.

15 Furniss 2008, 250–51. The tombs she mentions are Hubei Jiangling Yutaishan M556, Hunan Cili Shibancun M36, Changsha Hehuachi M1, and possibly (the identification of the bell is subject to debate) Baoshan (Jingmen) M2. See also Li 1996, 310–20 on the physical features of the *zheng* and archaeological records of it.

16 Falkenhausen 1993, 69. Li 1996, 310–11. Li doesn’t rule out the possibility that *zheng* were used in ancestral sacrifices, too.

FIGURE 1 A Song dynasty illustration of a Zhou period bell, depicting the bell as a *dingning*, a bronze *duo* or a bronze *zheng* (SOURCE: CHEN, YUESHU)

FIGURE 2 A Song dynasty depiction of a Zhou *chunyu*, here depicted as “the bronze *chun*”
(SOURCE: CHEN, *YUESHU*)

(that is, played performatively and as part of a tune), there is a high probability that it was used in sacrificial ceremonies.¹⁷

The case is similar with drums—several types of drums seem to have fulfilled military-related functions. While some were used on the battlefield itself, others may have been used in war ceremonies, military drills, and preparations for war. Pole drums (*jiangu* 建鼓) and small barrel drums (mostly the *biangu* 扁鼓, which Furniss translates as “flat drum”) are thought to have served for signaling during battle, while other barrel drums, suspended on stands—such as the bird-and-tiger drums (themselves containing a suspended *biangu*)—may have been used in war-ceremonies.¹⁸ Since most texts do not mention the specific type of instrument used, I will refer to the two below simply as “drums” and “bells” or at times, for the sake of emphasis, as “war/military drums/bells.”¹⁹ Some musical tunes and some wind instruments are also mentioned in military treatises—and will be discussed here in passing. It is drums and bells, however, that are overwhelmingly present in the texts under study.

3 Sonic Warfare—Sound in War

軍政曰：「言不相聞，故為金鼓；視不相見，故為旌旗。」夫金鼓旌旗者，所以一人之耳目也；人既專一，則勇者不得獨進，怯者不得獨退，此用眾之法也。故夜戰多火鼓，晝戰多旌旗，所以變人之耳目也。

The *Administration of the Army* says: “Since they spoke and could not hear each other, they made [military] bells and drums; since they looked and could not see each other, they made banners and flags.” Thus, bells and drums, banners and flags are the means by which to unify men’s ears and eyes. If men reach the point of controlled unity, the courageous ones cannot advance on their own; the cowardly ones cannot retreat alone—this is the method of utilizing the many. Hence in night-fighting [using]

17 See Falkenhausen 1993, 69–72; Xiao 1991, 59–64. For the *chun* in military texts, see: *Zhouli zhengyi*, 213.902 (“Gu ren”); *Guoyu*, 398 (“Jin yu”); 608 (“Wu yu” 吳語); *Huainanzi* 15.595; 15.621 (“Bing lue” 兵略).

18 See Furniss 2008, 35, 60.

19 While potentially a fascinating subject for a study, a comprehensive typological analysis of textual references to military bells and drums is beyond the scope of our present discussion. Some useful information can be found in Xiao 1991, 48–64, 71–88; Jia 1997, 33–36; Chen 2005, 21–55.

more fires and drums, in day-fighting [using] more flags and banners—these are ways of altering people's ears and eyes.²⁰

The above passage, cited from the *Sunzi bingfa* 孫子兵法 (“Master Sun’s Art of War,” hereafter *Sunzi*), is a good starting point for understanding the practical role filled by bells and drums in the military, as it elaborates on both the reasons for using them in battle and the situations in which they were to be used. Compiled at a time when armies were becoming larger and battles more complex,²¹ the *Sunzi* provides its readers with a simple and logical explanation for the use of drums and bells. Troops signal to each other by means of sounds, fires, and banners, since they are too widely spread across the terrain to hear or see each other clearly. War drums and war bells are thus used to signal commands by means of sound; fires and banners by means of sight. In a sense, then, all of the above function as a unique code-system, the understanding of which is necessary for a successful progression of military affairs. They work as a substitute for verbal commands or, one could say, as the parallel of the modern Morse code.²² The notion that sonic instruments and

20 *Sunzi bingfa xinzhuzhu*, 13.69 (“Jun zheng” 軍爭). Sawyer (1993, 445 n. 101) comments that “night battles did not commence until late in the Spring and Autumn period.” The term “sonic warfare” is predominantly used in the context of modern times, and often refers to ways in which technological sound-systems are deployed in war. See Goodman 2010. Yet, the present study seeks to demonstrate that sound and sound-effects played a vital role and were deployed in warfare from ancient times. Therefore, I take “sonic warfare” in its wider sense to denote any kind of sonic activities that support or play a role in warfare.

21 Opinions are divided regarding the time of compilation of the *Sunzi*. Different views place its compilation sometime between the fifth and third centuries BCE. Sawyer posits that although the text is likely to have been edited and changed after Sun Wu’s 孫武 lifetime to fit the growing sophistication of battles, the core of the text was at least in part composed by the hand of the historical figure of Sun Wu (active late sixth-early fifth centuries). See Sawyer 1993, 149–51. Jens Østergård Petersen raises doubts as to the existence of the historical Sun Wu, and implies that the attribution of the military text known as *Sunzi bingfa* to his name took place much later than his alleged lifetime. See Petersen 1992. In 1972, a long-lost work of Sun Bin 孫臏 (ca. 380–316 BCE)—presumed to be one of Sun Wu’s descendants, was excavated at Yinqueshan 銀雀山, Shandong province. The tomb was sealed between 134 and 118 BCE, and included fragments of the military accounts of *Sunzi*, *Wei Liaozi*, and *Liu tao*, thus attesting to their historical importance and placing their compilation no later than the Western Han. On the *Sun Bin*, its similarities and differences in comparison to the *Sunzi*, including a translation of the excavated text, see Lau and Ames 2003. Sawyer states that “this important find increased the total extant military materials from the ancient period to eight classic works in all”; see Sawyer 1993, xii.

22 This is reminiscent, though perhaps not as developed as, systems of speech surrogates (speech substitutions) still in existence today. In some African countries a culture of

bonfires were intended to be used in night-fighting (or in some cases fighting at dusk), with flags and banners as their daytime counterparts, is widely acknowledged in discussions of warfare.²³ Both drums and bells together—and drums individually—appear in such discussions, with each having its designated role. Beating the drum generally means that the troops should advance, while sounding the military bell means they should stop moving or retreat.²⁴ Yet the code of conduct and the instructions are not limited in scope to these two commands alone. The exact actions that should be taken for each sonic signal are also enumerated; for example, in the passage below from the *Wuzi*, several commands are described, involving other sonic instruments which join in and function as sonic signaling devices:

凡戰之法，晝以旌旗幡麾為節，夜以金鼓笳笛為節。麾左而左，麾右而右。鼓之則進，金之則止。二吹而行，再吹而聚，不從令者誅。

In general, as for the way of war: In daytime [fighting] take banners and flags as regulators [of the troops],²⁵ in night-time [fighting] take bells, drums, reeds, and whistles as regulators. Signal with the banner left, they'll go left; signal right, and they will head right. Beat the drum for them and

"talking drums" still lives—with drums having a whole system of language-substitutions. For more about speech surrogacy, see Ong 1977 and Kaminski 2008.

- 23 See, for example, *Huainanzi*, 15.517 ("Bing lüe"): "[using] many flags at daytime; at night-time [using] many bonfires; at the dimness of dusk [using] many drums—this is being good at [military] strategy" (晝則多旌，夜則多火，晦冥多鼓，此善為設施者也). The ideas of using sound in night fighting and visual signs in day-fighting (albeit with no details of the specific instruments used to produce them) appear already in the *Guoyu*: See *Guoyu*, 6.232 ("Qi yu" 齊語)—"Hence when fighting at night, using sounds to hear each other is enough for [the military] to not scatter around; and when fighting in daylight, if their eyes can see each other it is sufficient for [the forces] to comprehend one another" (故夜戰聲相聞，足以不乖；晝戰目相見，足以相識). This notion is also repeated in other texts. See, for example, *Guanzi jiaozhu*, 20.413 ("Xiao kuang" 小匡); *Heguanzi*, 9.200 ("Fu wang" 王鈇); and (albeit in slightly different wordings) in the *Hanshu*, 3.1084 ("Xing fa zhi" 刑法志), 19.2289 ("Yuan Ang Chao Cuo zhuan" 爰盎錯傳).
- 24 See, for example, *Shi ming shu zheng bu*, 23.121 ("Shi bing" 釋兵)—"*jingu*—'jin' (金) means 'stop short' (*jin* 禁); it is what puts an end to actions of advancing and retreating." (金鼓，金禁也，為進退之禁也。) And *Guoyu* 11.402, ("Jin yu 5"): "the chariots show no intention of retreating; the drums sound no 'retreat' [signal]—this is how military affairs are accomplished." (車無退表，鼓無退聲，軍事集焉。)
- 25 The graph *jie* 節 also means rhythm, or tempo. The fact that visual aids are used, however, implies that its meaning here does not refer to tempo but to the guidance and regulation of the forces.

they'll advance,²⁶ strike the bell and they'll stop short. Blow [the reeds and whistles] twice and they'll move, blow them again and they will gather tightly; those who do not follow these commands [shall be] punished.²⁷

In most references of this type, however, drums and bells are the only sonic instruments that take part. In some cases, the intensity of their beating is what cues the precise command:

金、鼓、鈴、旂四者各有法。鼓之則進，重鼓則擊。金之則止，重金則退。鈴，傳令也 [...]. 一鼓一擊而左，一鼓一擊而右。一步一鼓，步鼓也；十步一鼓，趨鼓也；音不絕，驚鼓也。

The bells, the drums, the jingle bells (*ling* 鈴) and the flags—these four each have their methods [of use]. Beat the drum for them and [the troops] will advance; double²⁸ the beat and they'll attack. Strike the bell for them and they'll stop short; strike faster and they'll retreat. The jingle bells are the transmitters of commands. [...]. To one strike of the drum, the left [foot shall advance], to one strike of the drum the right [foot shall]. One step for one drumbeat is called the “step-drumming”; ten steps for one drumbeat is the “quickstep beat”; when the sound [of the drum] is unbroken, this is the “racing beat.”²⁹

26 *Gu* 鼓 means “drum,” but also functions as a verb meaning to strike, to beat, or even to strum a musical instrument (one can *gu* a drum, but also a stringed instrument). The expression *gu zhi* 鼓之, which I translate here as “beat the drum for them,” is a transitive verb commonly used in the context of the military. *Gu zhi* may perhaps be translated simply as “drum them [i.e. one's troops] into war”, although the pronoun *zhi* 之 may also refer to the drums (hence rendering it “strike them [i.e. the drums]”). The underlying meaning of “drumming the troops” is that one initiates action in war, hence the decision to do so is a weighty one. Several anecdotes exist in which generals or rulers are seeking advice as to whether or not they should “drum their troops”—some of which we shall see below. The reason why I chose to refrain from translating *gu zhi* in this specific passage as “drum them” is the presence of the immediately following expression, *jin zhi* 金之, which is less common, and would appear unnatural if translated as “bell them.” Durrant et al. in their translation render 鼓之 as “sound the drums to attack”, see Durrant et al. 2016, 161.

27 *Wuzi jin zhu jinyi*, 5.126 (“Ying bian” 應變).

28 *Chong* 重 is translated by Sawyer as “again” (“beat the drum once ... beat the drum again”). See Sawyer, *The Military Classics*, 266. In light of the second part of the passage, I take *chong* to imply “double” or “increased,” and to refer to the speed of drumming.

29 *Wei Liaozi*, 18.62 (“Le zu ling” 勒卒令). I follow Sawyer's translation for the names of the last two beat-types. See Sawyer 1993, 266. The *Wei Liaozi* is thought to have been compiled in the late Warring States period. Several chapters of the text were excavated in 1972 along with the *Sun Bin bingfa*. For further discussion on the textual history of the *Wei Liaozi* see Sawyer 1993, 238–41.

In other passages, the exact number of drumbeats to be beaten in each strike is specified, followed by their corresponding actions on the troops' side:

吳子曰：「教戰之令，短者持矛戟，長者持弓弩，強者持旌旗，勇者持金鼓，弱者給廝養，智者為謀主。鄉里相比，什伍相保。一鼓整兵，二鼓習陳，三鼓趨食，四鼓嚴辨，五鼓就行。聞鼓聲合，然後舉旗。」

Wuzi said: "In the commands educating for warfare [it should be taught that]: the short ones hold spears and halberds; the tall ones carry the bows and crossbows. The strong ones carry the flags and banners; the courageous carry the bells and drums; the feeble ones help support the forces. The wise ones plot and plan. Villages and towns are arranged in balance; squads of ten and five guard each other. To [the sound of] a single beat they set their weapons; to a double beat they exercise a formation; to a triple beat they are urged on to eat; to a quadruple beat they carry out a severe inspection [of their arms]; to a quintuple beat, they move along.³⁰ They [first] hear that the drums are in unison, and only then raise the banners."³¹

Not only does this passage from the *Wuzi* instruct us as to the number (or pattern) of drumbeats that mark each action; it also elaborates on which characteristic qualities should define those who hold the drums. Holding in their hands the military's most valuable communication device—the signaling device that bonds the troops together—drummers are most likely to be the first targeted by an enemy.³² Thus, the ones chosen to hold the drums and bells

30 The numbers of drumbeats are likely to have indicated a rhythmic pattern rather than a single occurrence of one, two, three—and so on—drumbeats. *San gu* 三鼓 (which I translate as "triple beat"), in such case, could mean that the drums were beaten in groups of three beats with intervals in between one three-beat strike and the next. This makes more sense than a single command of x number of drumbeats (i.e., "one beat, two beats, three beats" and so on), which might have been misheard. J.E. Scott argues that using a single instrument (he speaks of the trumpet) for all commands caused some cases of misunderstanding in ancient Rome. See Scott 1960, 412.

31 *Wuzi*, 3.102 ("Zhi bing" 治兵).

32 Archaeological finds support this textual information and provide further explanations regarding the demand that the holders of the drums be the most courageous soldiers. Furniss describes a recent excavation from a Western Han burial pit in Zhangqiu Weishan 章丘微山 (Shandong), in which a standing drummer figurine, ready to beat his drum, was positioned "directly behind a horse-drawn war chariot and in front of standing infantry soldiers holding shields" (Furniss 2008, 43). Furniss suggests that this

should be “the courageous.” Elaborate codes of drumming similar to those depicted in the *Wuzi* example above feature in a number of other texts and in different versions and variations. Mostly, they appear as instructions to be given to one’s own army. The following *Zuozhuan* passage, however, describes how familiarity with the drumming manners of the *enemy* may help win a battle:³³

公將鼓之，劇曰，未可，齊人三鼓，劇曰，可矣，齊師敗績，公將馳之，劇曰，未可，下視其轍，登軾而望之，曰，可矣，遂逐齊師，既克，公問其故。對曰：夫戰，勇氣也。一鼓作氣，再而衰，三而竭，彼竭我盈，故克之，夫大國難測也，懼有伏焉，吾視其轍亂，望其旗靡，故逐之。

The Duke [of Lu] was about to drum the troops [into battle], when [Cao] Gui said “Not yet!” [Only] after the men of [the state of] Qi have drummed their drums three times, said Gui, “[Now] you can [attack]!”³⁴ The military of Qi suffered a great defeat. The Duke then wanted to chase away [what remained of their forces] with his own forces’ horses. [Again, Cao] Gui said: “Not yet.” He looked down and observed the tracks of the [Qi army] chariots, then climbed up atop the chariot’s crossbar, looked far, and said, “Now!” The troops of Qi were thereupon scattered away as well as defeated, and the Duke inquired about the reasons [Cao Gui advised as he did].

[Gui] replied: “Now war is [all about] valorous *qi*. The first beat of the drums creates [this] *qi*, a second beat [causes it] to wane;³⁵ by the third [drumbeat the *qi*] is all depleted. [Since] theirs was depleted and ours was in its fullest—we won. Now, the [army of] a larger state is difficult to fathom, its weaknesses are deeply concealed. When I saw that their

position shows that “the pole drum set the rhythm for the processional march.” However, this position—in front of the shielded infantry soldiers—also demonstrates the high risk faced by the drummer.

33 For ancient Roman techniques of deceiving the enemy by means of issuing misleading sounds/sonic commands, see Scott 1960, 412.

34 Lewis, upon translating the same passage, explains: “The armies would not advance till both sides had sounded their drums. Qi drummed, waited for Lu’s reply, drummed again, waited again, and drummed again.” See Lewis 1990, 228.

35 As opposed to the previous passage, following *yi gu* 一鼓 here is not *er gu* 二鼓 (i.e. “double drumbeat”), but *zai* 再 (“again”/“another”). Unlike the previous passage, then, *yi gu* here would probably mean “upon the first beat of the drums”—one can imagine that each time such drumbeat occurs, the enemy army assembles and prepares for battle. Three such commands would then naturally render the enemy forces feeling depleted.

chariot routes were amiss, I looked at the signaling of their banners—hence we chased them away.”³⁶

The concept of *qi* 氣, which gained popularity as a key term in Warring States-period discourse, is also widely used in military treatises. An active, stirred *qi* is directly associated with anger and war.³⁷ However, unlike music-related discussions (some of which we shall see below), this term features very little in discussions relating to the usage of sound-producing instruments contained in military accounts. Indeed, if the passage above exemplifies an instance in which *qi* and drumming techniques appear as closely related, it stands as a rare exception.³⁸ *Qi*, in this case, emerges as a term integrated into the way ideas are expressed, testifying to an overall discourse of the time, rather than standing in its own right as a principal topic of discussion. Cao Gui does not advise his lord to pay attention to *qi*, but rather explains—by means of *qi*—why he should pay attention to the number of drumming occurrences on the enemy’s side. Instead of being theoretical and *qi*-oriented, his argument is relatively straightforward and concerns the quantity of drumming (and, subsequently, of line assemblages) that renders an army exhausted.

One of the usages of *qi* in warfare was its deployment in the art of making military prognostications. In such cases, the *qi* of the enemy was to be analyzed *prior* to battle, thus enabling the prognosticator—often a music master who could interpret *qi* through sounds and winds—to foretell the results of an upcoming battle. While the passage above may be mistaken for prognostication, its context and timing—in the midst of the battle scene, when both armies face each other, rather than in advance of heading to war—marks it as something different. This passage, if examined closely, depicts a case of strategic advice *on the battlefield itself*. In his advice, Cao Gui relies not on the learning of some mystical method, or the analysis of sound, but on his familiarity with drumming habits, and his understanding of the operation of drums by the military of the state of Qi. True, *qi* here—as in some cases of prognostication—is mentioned as one of the leading factors informing the advisor’s knowledge, yet it is the drums, rather than *qi*, that are the signifiers of information. It is thus a case of analysis rather than prediction—military advice, rather than military prognostication. Cases of prognostication by means of sound, however, do

36 *Chunqiu Zuozhuan*, 183 (Zhuang 10).

37 On *qi* and violence see Lewis 1990, 222–26.

38 One more such appearance occurs in the *Chunqiu Zuozhuan*, 398 (Xi 22), where Zi Yu 子魚 accuses his lord of being ignorant and not drumming his people to war, claiming that “bells and drums are how one gives sound to *qi*” (金鼓以聲氣也).

exist. When it comes to prognostication by means of musical tunes or sounds, rather than drum sounds, the foretelling of a battle's results bears a more mystical air and the technique underlying it is not quite clear:

晉人聞有楚師，師曠曰，不害，吾驟歌北風，又歌南風，南風不競，多死聲，楚必無功。

The people of Jin [state] heard that there were troops of Chu [around]. Music Master Kuang said: “[They] are harmless. I sang the *Northern Air* [tune] several times, followed by singing of the *Southern Air*—The *Southern Air* did not prevail, and included many dimmed sounds. Chu will surely have no success.”³⁹

This passage depicts a case of pre-battle prediction, while the previous example involving drums is advice in live battle. It is safe to assume that the singing of tunes (and specifically “airs,” which tend to be gentle and flowing) did not occur on the battlefield itself.⁴⁰ Drumming and bell-beating, on the other hand, most certainly did. From the examples above one can draw several conclusions concerning the practical usages of early Chinese war-drums and

39 *Chunqiu Zuozhuan*, 1043 (Xiang 18). Durrant et al. comment that “musical notes are tied to military movements, and one form of divination involves listening to reverberations of musical notes to predict the fate of military endeavors”; see Durrant et al. 2016, vol. 3, 1058 n. 524. While it is clear that some form of acoustic resonance is in action, the operation of tunes for the sake of prediction is much more opaque than the analysis of the enemy's drumming. This anecdote is also cited in the *Shuijing zhu*. See *Shuijing zhu shu*, 31.1589-90 (“Zhi shui” 澁水). For another anecdote of musical/sonic-martial strategic advice, see *Chunqiu Zuozhuan*, 1038 (Xiang 18), where Music Master Kuang, by listening to the calls of the crows, concludes that the Qi army has retreated. The “Wu yin” 五音 section of the *Liu tao* depicts a method that seems to be an amalgam between mystical prognostication methods and more practical battlefield strategy. In this case, Tai Gong 太公 provides a detailed explanation in response to a question by King Wu 武王, which begins with cosmological meanings assigned to the pitch-pipes, and ends with a guide to analyzing the enemy's sonic signals during battle. Tai Gong suggests approaching the enemy's camp ahead of battle, blowing the pipes loudly, and listening to which pipe resonates in order to foretell the outcome of the battle; once the enemy troops have been “startled into movement”, the sound they produce may help understand the chances to win the battle. See *Tai Gong liu tao jinzhu jinyi*, 3.138-39 (“Wu yin”). On Han martial prognostication and its relations with *qi*, see Ralph D. Sawyer, “Martial Prognostication,” in Di Cosmo 2009, 45-64. See also Galvany 2015.

40 While archaeological evidence for singing in battle cannot exist, one would expect to find textual evidence for singing on the battlefield, had any such custom existed. However, neither in early Chinese texts, nor in texts from other early cultures, is there any evidence pointing to singing that occurred during the time of battle.

war-bells: drums usually marked advance while bells marked retreat; these instruments provided the troops with a set of audible commands by which to abide, at times in conjunction with additional audible instruments (and almost always in conjunction with visual devices); they were held by those who were considered to be particularly brave; and the knowledge of the drumming codes of one's enemy could also prove useful in battle. All of the above render sound-producing instruments crucial to victory. It is understandable, then, that their importance is clearly and consistently stressed in texts, and that those striking them ranked high in the military hierarchy.

4 The Importance of the Drums and Bells

The competence of those using the drums is so highly regarded, that the very survival of the individual commander and his whole country is said to lie at the tip of the drumstick. In the following passage, the general himself is mentioned as being the one holding the drums.⁴¹ He operates the drums—and his own reputation and life are at stake:

夫將提鼓揮枹，臨難決戰，接兵角刃，鼓之而當，則賞功立名，鼓之而不當，則身死國亡。是存亡安危在於枹端，奈何無重將也。

Now, when the general grasps the drum and waves the drumstick; when [he] faces calamities and battle-decisive situations; when [he] accompanies the troops and blades [come to] clash—if he drums for them and they appropriately [abide by his drumming], then he is praised for his achievements and establishes a reputation; if he drums and [the soldiers do] not appropriately [abide by his commands], then he himself dies and the state perishes. This is how survival and demise, peace or danger

41 "The general" (*jiang* 將) refers in these cases to the commander of a division or a regiment. We obtain this information from a story that appears in the *Zuo zhuan*, which states that "Xi Ke was commanding the middle division" 郤克將中軍. Later on in the story, Xi Ke is wounded and lets go of the drum, which his charioteer, Zhang Hou—though also wounded—grabs in his stead. The latter claims that "The eyes and ears of the forces are [depending on] our banners and drums—in advancing and retreating they follow them! [...] How, on account of one's injury, can you lose the ruler's great affair?" (師之耳目，在吾旗鼓，進退從之，[...] 何其以病，敗君之大事也?) See *Chunqiu Zuo zhuan*, 791-92 (Cheng 2). In Xi Ke's story, it appears as if the general himself was responsible for physically holding the drum and beating it. Whether or not this was always the case is unclear. It is more plausible that the general usually only *commanded* the beating of the drums, and that instances describing the general's acceptance of the drum mark a symbolic act.

reside at the tip of the drumstick. How can one not regard the general as important?⁴²

The importance of drums and bells as a type of invaluable military “equipment” is repeatedly stressed in the *Wei Liaozi* 尉繚子. The passage below emphasizes that the general should prioritize them above all else, to the extent of disregarding his own life:

將受命之日，忘其家，張軍宿野忘其親，援枹而鼓忘其身。

On the day the general receives the command, he forgets his household; as he enters the field where the soldiers lodge, he forgets his kin; as he holds the drumsticks and drums [for the troops], he forgets himself.⁴³

Immediately thereafter, the text makes the claim that the general's control of drums is more important than the control of arms:

吳起臨戰，左右進劍。起曰：「將專主旗鼓爾，臨難決疑，揮兵指刃，此將事也。一劍之任，非將事也。」

[When] Wu Qi was facing battle, his assistants handed him a sword. [Wu] Qi said: “The general alone controls the banners and the drums; he faces calamities and resolves uncertainties, directs the army and points their

42 *Wei Liaozi zhuyi*, 8.30 (“Wu yi” 武議).

43 *Wei Liaozi*, 8.32. The general was considered solely responsible for any victory or defeat once he had assumed authority over the troops, which was symbolized by taking up the drums and banners. See *Huainanzi* 15.592 (“Bing lüe”): “After the general has accepted the *fu* and *yue* battle-axes, he replies: ‘The state cannot be governed from without, and the military cannot be managed from within [the state]. [...] Here before your majesty I receive control over the might of the drums, banners, and battle-axes. I do not have further requests [but the] wish that your majesty shall not pass down to me a single word of command.” (將已受斧鉞，答曰：「國不可從外治也，軍不可從中御也 [...]。臣既以受制於前矣，鼓旗斧鉞之威，臣無還請。願君亦以垂一言之命於臣也。)」) A famous anecdote from the *Wu Yue chunqiu* 吳越春秋 (ca. first century CE) further elucidates this point. It depicts the story of Sunzi's arrival at the court of King He Lü 闔閭 (or Gai Lü 蓋聞—See Milburn 2010-2011) of Wu. To demonstrate his military strategy, Sunzi borrows the king's concubines. He appoints the king's two favorite concubines as “generals.” As the improvised “military” fails to execute Sunzi's orders, the latter orders the execution of the two “generals”/concubines, who are then put to death in spite of the king's remonstrations. See *Wu Yue chunqiu*, 4.51-3 (“Gai Lü 3” 闔閭三年).

blades [the right way]—these are the affairs of the general. Carrying the responsibility for a single sword is not an affair of the general!”⁴⁴

The value of an army, we learn elsewhere, lies not in its size, but in its discipline. A core part of this discipline is the troops’ ability to listen to the commands given by drums and bells:

武侯問曰：「兵何以為勝？」起對曰：「以治為勝。」又問曰：「不在眾寡？」對曰：「若法令不明，賞罰不信，金之不止，鼓之不進，雖有百萬，何益於用。[...]」

Marquis Wu asked: “How does an army become victorious?” [Wu] Qi replied, saying: “If it is well-managed it becomes victorious.” [The Marquis] again asked: “Is it not in [its soldiers being] numerous or few?” [Wu Qi] replied: “If the methods and commands are not clear, the rewards and punishments are not trustworthy, if you beat the bell for them and they don’t stop, or beat the drum for them and they don’t advance, even if you have a million [soldiers], what use are they?”⁴⁵

In the drums and bells, then, lies the outcome of a battle. However, the successful operation of the bells and drums is derived from the troops’ ability to comprehend the commands transmitted to them by these instruments. This, as we shall see below, is a taught, rather than an instinctive, form of comprehension.

5 Sound, Not Music: Changing Our Perception of Sound-Producing Instruments in the Context of Warfare

With the exception of some archaeological accounts which do distinguish between “musical” and “extra-musical” functions of bells and drums, scholars discussing the appearance of military drums and bells in textual sources have generally tended to treat them as musical instruments. For example, when discussing the status of drums as signaling devices, Mark Lewis argues that “[t]he patterns of *music* thus formed the nerves through which the commands of the general’s mind passed to the collective body of his army, or in the images of natural philosophy they *musically* gave direction, harmony, and order

44 Wei Liaozi, 8.32.

45 Wuzi, 3.93 (“Zhi bing”).

to the formless *qi* of the troops.”⁴⁶ Erica Brindley similarly perceives military drumming and bell striking as a form of music-making, mentioning it within the larger frame of her discussion of music’s effects on the human body. She argues that “the sounds of drums and bronzes could have a clear effect on the morale, spirit, and aim of one’s troops. Because of their effects on the physiology of the body, such sounds could therefore be used to enhance the general health of a military body as a unit.”⁴⁷ The signaling functions of bells and drums thus almost always appear (oftentimes only in passing) in the context of discussions of, at best, “military/martial music,” or, more commonly, general music histories.⁴⁸ I wish to suggest, however, that such instruments on the battlefield were not necessarily perceived as “musical.” On the contrary, I argue that it is precisely a willingness to question the “musicality” of these sounds that can shed new light on our understanding of how they were perceived by early Chinese military theorists. Ultimately, and paradoxically, it is in setting these sounds in dialogue with contemporaneous musical thought that we can negate the musicality of this type of sounds. To demonstrate this point, let us briefly examine the role of the *listener*—the recipient of sound—first in early Chinese musical thought, then in military thought.⁴⁹ Perhaps the most vivid depiction of the effects of music on its hearers is the following passage from the *Xunzi*’s 荀子 “Yue lun” 樂論 (*Discourse on Music*) chapter. In strong and decisive language, this passage conveys the idea that those who listen to music have no choice but to react to it in a uniform manner (note the parts in *italics*, which emphasize the overarching and all-encompassing influence of music on different groups of humans):

46 Lewis 1990, 227 (emphasis added).

47 Brindley 2012, 149. “Bronzes” is the translation suggested by Brindley for *jin*.

48 Two exceptions are Sun Wenbo, who dedicates a whole chapter in his monograph on martial history to drums and other sonic instruments (see Sun 2016, 370–90), and Chen Yuyin’s Master’s thesis, which includes a chapter on war drums, paying specific attention to their importance and to theories about the division of drum-types by social status within and outside the military (see Chen 2005, 56–68). While not involving issues in musical thought, Chen’s thesis provides ample textual evidence and dedicates more attention to the function of drums in war than most other available studies.

49 The topic of music features prominently in political and philosophical discourses of pre-imperial and early imperial China. Textual evidence indicating the importance of musical activities appears as early as the *Book of Odes* (10th–6th centuries BCE) and *The Analects* of Confucius (trad. 5th century BCE). The Warring States period, in particular, saw a development of progressive acoustical theories as well as a surge in philosophical writings related to music. For studies dealing with musical thought in the Warring States and Han periods, see e.g. DeWoskin 1982, Xiao 1991, Cook 1995a and 1995b, Cai 1995, Brindley 2012, Hegesh 2018, and Rom 2020.

故樂在宗廟之中，君臣上下同聽之，則莫不和敬；閨門之內，父子兄弟同聽之，則莫不和親；鄉里族長之中，長少同聽之，則莫不和順。

Thus if Music⁵⁰ is [played] inside the ancestral temples, the ruler and the minister, and the higher and lower ranks listen to it all the same, *there is then none who is not* harmoniously respectful; if [Music is sounded] within the [residential] doors and gates, and fathers and sons, older brothers and young listen to it all the same, *there is then none who is not* in harmony with their kin; if [played] within the villages and communities, with the older and younger brothers listening to it all the same, *there is then none who is not* harmoniously compliant.⁵¹

The same account teaches us that this uniform reaction is an instinctive, uncontrollable one. Sound activates a certain form of *qi* in humans: negative sounds trigger negative *qi*, and positive sounds activate positive *qi*. This process is based on a natural mechanism of stimulus (*gan* 感) and response (*ying* 應).⁵²

凡姦聲感人而逆氣應之，逆氣成象而亂生焉；正聲感人而順氣應之，順氣成象而治生焉。

In all cases—when licentious sounds move people, the disruptive *qi* [from within them] responds; when disruptive *qi* takes form, chaos arises from it. When correct sounds move people, the compliant *qi* [from

50 I follow Scott Cook (1995a, 21) in translating *yue* 樂 as “Music” (capital M). The term *yue* is that which comes closest to the all-encompassing *music*. It generally refers to a refined kind of music, which is human-made and includes visual aspects such as dance and clothing.

51 *Xunzi jijie*, 20.448-9, (“Yue lun”).

52 The mutual stirring of sounds and emotions is perceived like a form of echo, or resonance, which is a recurring theme throughout many musical as well as non-musical discussions. In particular, texts describe the phenomenon of sympathetic resonance—how striking a string of a certain tone results in the natural reaction of an elsewhere located string with a similar tone. See, for example, *Zhuangzi jishi*, 24.839 (“Xu wu gui” 徐無鬼): “when one strums a *gong* [string], a *gong* [string on another instrument] vibrates; when you strum a *jue* [string], a *jue* [string elsewhere] vibrates” (鼓宮宮動，鼓角角動). A similar notion is repeated in *Huainanzi*, 11.438 (“Qi su” 齊俗) and the *Lüshi chunqiu* 13.683 (“Ying tong” 應同). For a comprehensive account about the mechanism of stimulus and response (*gan ying* 感應) see Le Blanc 1985 and Le Blanc 1994. For a comparative discussion about musical theories in the Warring States Period see Cook 1995b. For a comparative discussion about musical theories in Western Han, see Rom 2017.

within them] responds; when compliant *qi* takes form, good order arises therein.⁵³

According to the *Xunzi*, musical sounds operate within communities by changing their people. Sounds (*sheng* 聲) and Music (*yue*) “move men deeply and change them rapidly,”⁵⁴ and the role of well-governed Music is to ameliorate the heart-minds of the masses (*shan min xin* 善民心), to avoid the prevalence of “licentious sounds,” and thereby to bring order to society.⁵⁵ Musical sounds are famous for their ability to “change manners and alter customs.”⁵⁶ The extent to which humans and their emotions are perceived as malleable in the face of music is further attested in the following passage from the *Yueji* 樂記,⁵⁷ which provides an elaborate account of six types of sounds and their precise effects on human society (referred to as *min* 民, “the people”):

夫人有血氣心知之性，而無哀樂喜怒之常，應感起物而動，然後心術形焉。是故志微焦衰之音作，而民思憂；啍緩慢易繁文簡節之音作，而民康樂；粗厲猛起奮末廣賁之音作，而民剛毅；廉直經正莊誠之音作，而民肅敬；寬裕肉好順成和動之音作，而民慈愛；流辟邪散狄成滌濫之音作，而民淫亂。

Now humans in their nature have the blood and the *qi*, the [feeling] heart and the [knowing] mind, and are not constantly in [one of the states of] grief, joy, delight or anger; they react to stimulations by things that arise and move them, and then their mind and skill achieve form therefrom. Thus, when tunes which consider the most minute details and are anxious and grieving are produced, the people are pensive and troubled; when relaxed tunes, slow and easy are produced, the people are tranquil and joyful; when rough and harsh tunes, vigorously rising

53 *Xunzi jijie*, 20.451.

54 *Xunzi*, 20.449: 聲樂之入人也深，其化人也速。

55 The text further suggests that because of the volume and the rapidity with which sound is capable of changing conduct and realities, the sage-ruler has to be cautious (*shen jin* 慎\jin 謹) when dealing with it. See *Xunzi jijie*, 20.449-50.

56 I refer here to the common term *yi feng yi su* 移風易俗. What seems to be the earliest appearance of this expression are its two occurrences in the “Yue lun.” This expression then appears multiple times in later texts. In *Hanshu* 漢書 it appears as many as eleven different times.

57 The *Yueji* is likely to be a Western Han compilation, and is embedded as a chapter into both the *Liji* 禮記 and the *Shiji* 史記 (in the latter appearing under the title “Yue shu” 樂書), albeit with slight alterations. For discussions on the dating of the “Yue ji” and “Yue shu” chapters respectively, see Cook 1995a, 3-10; Kern 1999, 673-77.

and fiercely ending, wide and large are being produced, people are resolute and steadfast; when tunes upright and honest in their arrangement, straight, dignified and truthful are being produced, people are respectful and deferential; when tunes [characteristically] generous, magnanimous and soft, pleasant and with complete smoothness, harmonious and dynamic are produced, people are compassionate and kind; when tunes aimless and repellent, evil and scattered and completely barbaric, overflowing and corrupt tunes are produced, the people are licentious and disordered.⁵⁸

Music in early China, then, was thought to elicit an *untamed, instinctive* reaction in humans, which affects all its listeners at once. This quality of music is what makes it dangerous at times—and is the reason why the state sought to control the sounds emitted under its rule.⁵⁹ Its effects are immediate, instinctive, and physical; and indeed (as suggested by Lewis) are transmitted into the human body by means of *qi* 氣 (an energy, or “stuff” that comprises all things, occasionally translated as “ethers”). In presenting wartime sound-production as essentially inducing *qi* and causing a physical reaction in the troops, both Brindley and Lewis rely on the assumption that military drumming and bell-striking operate on the troops similarly to the way in which musical sounds operate on individuals and societies. But to what extent can we truly speak of the *musical* effects on the bodies of the soldiers as being the key to victory or defeat? Are sound-producing instruments used in war still musical? While it is tempting to associate the unity of troops with the spontaneous social unity created by the playing of music, a reading of military accounts suggests otherwise. The secret to a successful reaction to the military drums and bells lies not in instinct. Rather, it is the very opposite—that is, *discipline*—that underlies the response of the soldiers to such sounds. This discipline is not a spontaneous response of the soldiers to the beat of the drums—but the result of strict *training* (and conditioning) and of strong military commanding. In other words, it is not *qi* or the emotion stirred within the troops, but

58 *Liji*, 19.998; *Shiji*, 24.1206. For slightly altered versions, see also *Shuoyuan jiaozheng*, 19.503 (“Xiu wen” 脩文); *Hanshu*, 22.1037 (“Liyue zhi” 禮樂志).

59 The *Huainanzi* demonstrates just how universally powerful the human response to music is: “When Shun was the son of Heaven, he plucked the five stringed zither, sang ‘the Airs of the South’ and thereupon the whole world was governed” (舜為天子，彈五弦之琴，歌《南風》之詩，而天下治). See *Huainanzi*, 20.825 (“Tai zu” 泰族). For a discussion on the way music was thought to have operated on humans, and the rise of its importance as a political tool during the late Warring States period, see Rom 2020, 26–72.

the commands they have to learn and practice prior to battle, that make them take action upon hearing the sound of drums and bells. The method of martial training is depicted in the following passage:

武王問太公曰：「合三軍之眾。欲令士卒練士教戰之道，奈何？」

太公曰：「凡領三軍，有金鼓之節，所以整齊士眾者也。將必先明告吏士，申之以三令，以教操兵，起居、旌旗指麾之變法。故教吏士：使一人學戰，教成，合之十人；十人學戰，教成，合之百人；百人學戰，教成，合之千人；千人學戰，教成，合之萬人；萬人學戰，教成，合之三軍之眾；大戰之法，教成，合之百萬之眾。故能成其大兵，立威於天下。」

武王曰：「善哉。」

King Wu asked Tai Gong:⁶⁰ “Bringing together the multitude [soldiers] of the army,⁶¹ if we want the officers and the soldiers to practice [well] and the officers to teach the way of warfare, how do we do it?”

Tai Gong said: “Generally, in leading the army: there are the regulations of the bells and drums by which you tidy and unify the officers and the multitudes. The general should, first of all, give clear orders to his officers in charge, explaining all with three commands—by teaching the changing methods of grasping of weapons, the mobilization of camps, and the pointing and signaling of flags and banners.

“As for training the officers in charge: have one man study warfare. As his studies are complete, have ten men join him [in learning]; ten people [will thus have] studied the art of warfare. When they have completed their studies, have a hundred men join them; a hundred men [will then have] studied the art of warfare. When their studies are complete, have a

60 Tai Gong 太公 or “The Grand Duke”, the protagonist of the *Liu tao* (whose given name was Jiang Shang 姜尚), is the somewhat mysterious figure of an elderly advisor who fled the Shang court to join as an advisor to the Zhou kings Wen and Wu. In his late years, following the Zhou’s rise to power, he was enfeoffed as the ruler of Qi 齊. For the narrative of his rise to power, see *Shiji*, 32.1477-1513 (“Qi Tai Gong shijia” 齊太公世家). Cf. Sawyer 1993, 27-31.

61 *Sanjun* 三軍 (lit. “three armies”) is the general appellation for the army of prominent local lords, who during the Zhou times were allowed a three-fold force. Such an army comprised either an “upper” (*shang* 上), “middle” (*zhong* 中), and “lower” (*xia* 下) force, or “left” (左), “center” (*zhong*) and “right” (*you* 右) forces. Cf. *Sunzi bingfa xinzh*, 26 n. 4. The term *sanjun* will therefore be translated hereafter simply as “the army” or “the forces,” and sometimes, when talking about one section of the three (one *jun*)—“a division.” See also Rand 2017, 61.

thousand men join them; a thousand men [will then have] studied warfare. When their studies are complete, have ten thousand men join them; ten thousand men [will have then] studied the art of warfare. When their studies are complete, have the multitude [soldiers] of the army join them—this is the method of the mighty art of warfare. As they complete their studies—have the mass of a million join them. This is how one can bring to accomplishment his grand army and establish fear in [the hearts of] all under Heaven.”

“Fantastic!” said King Wu.⁶²

This method of training in chain results, on the one hand, in all the soldiers responding in unison to a single signal issued by the drum. Yet on the other hand, this unified response of the troops does not at all resemble the human response to music as depicted by musical theorists of the time. A convention common to all musical thinkers of early China is their perception of music as something that stimulates a *spontaneous* response—either in people or in the natural world around them. The *Xunzi* speaks of music as relating to people's deepest emotions and unavoidably sparking joy in them.⁶³ Thus, even music that is carefully planned and not spontaneous in its own right will result in the masses reacting spontaneously. Other accounts, while also acknowledging its effects on humans, refer to Music (*yue*) and its components as being the final links in a chain of natural instances of spontaneous stimuli and responses. The sounds produced in the context of warfare, however, are neither *yue* nor any form of music—they do not operate like musical sounds and are not presented as such.⁶⁴

62 *Tai Gong liu tao*, 6.204-5 (“Jiao zhan” 教戰).

63 In addition to the sections cited above, the *Xunzi*'s “Yue lun” begins with the grand statement: “Music is joy—which is what human sentiment *by necessity cannot avoid*.” (夫樂者、樂也，人情之所必不免也。) See *Xunzi jijie*, 20.448. Even the *Mozi*, a strict opponent of music, treats music as a distraction, which people follow and abide by—although it does not deal with perceptions of sound. While Music *can* be taught (*jiao* 教), learnt (*xue* 學), and practiced (*xi* 習), the difference between musical and non-musical effects in the present discussion lies in its reception, or its effect on the “audience” (i.e. troops, listeners) and the way the latter responds to it, rather than its production.

64 One way to think about it is to understand that if these sounds *were* “musical,” one would almost expect the soldiers of both sides to respond equally to a beat of the drum. That is, if a bell marking “retreat” was to operate on the principle of the universal emotional reaction of humans to music, both sides, not one side, would instinctively flee upon a “retreat” command struck for any one army.

The soldiers' responses to the war-drums and war-bells are *taught* responses rather than spontaneous and emotional ones.⁶⁵ This implies that drums and bells were not used in war for their *musical* value, and that they were not seen in that context as musical agents. While they do not operate in a musical way, importance is still attached to maintaining their sonic accuracy:

三軍齊整，陳勢已固，深溝高壘，又有大風甚雨之利；三軍無故，旌旗前指，金鐸之聲揚以清，鼙鼓之聲宛以鳴。此得神明之助，大勝之徵也。

行陳不固，旌旗亂而相繞；逆大風甚雨之利，士卒恐懼，氣絕而不屬；戎馬驚奔，兵車折軸；金鐸之聲下以濁，鼙鼓之聲濕如沐。此大敗之徵也。

When the forces are in unison and order; when the formations have been solidly [put into practice]; when the trenches are [dug] deep and the [defense] walls [constructed] high; and in addition they have the benefit of high winds and heavy rains; when the forces are not beset by complications, the flags and banners are set up straight; [*when*] *the sound of the metal bells rises above with purity*;⁶⁶ *and the sound of the hand-drums is winding as they call*—This is [how one] obtains the assistance of the spirits, and these are portents of great victory.

When the formations and movements are not solid; when the flags and banners are in chaos and entangled with each other; when one is opposing the advantageous directions of great winds and heavy rains, and the officers and troops are terrorized with fear; when the *qi* is cut off and not orderly; when the war horses are startled and on the run and

65 An elaborate passage in the *Zhouli* depicts the teaching of both military formations and drum/bell usages by the Grand Minister (*Da Sima* 大司馬), followed by drills for practicing the taught commands. The training includes the methods of “differentiating between the usages of the *gu*, *duo*, *zhuo* and *nao*” (辨鼓鐸鐃鐃之用) with which the forces (comprised of the folk, *min* 民) “are taught [the ways of] resting and acting, advancing and retreating” (以教坐作、進退) among other things. While scenarios depicted in the *Zhouli* are unlikely to have taken place in reality in the same orderly manner, this is still an educating example of the function of drums. See *Zhouli zhengyi*, 2299-307; 2323-31 (“Da Sima” 大司馬).

66 *Qing* 清 and *zhuo* 濁 are two antonymous terms often used in a musical context. Their literal meanings—“pure” and “turbid” or “clear” and “muddy”—are taken to denote two opposing qualities of sound. Often, they are considered as the equivalent of what we know as “high” and “low” notes, or as denoting “correct” or “incorrect” notes. In this passage, the authors are concerned with the clarity of sound and its quality. See also DeWoskin 1982, 125.

the military's chariots have broken axles; *when the sound of the metal-bells falls below with muddiness and the sound of the drums is as wet as drenched hair*—these are portents of great defeat.⁶⁷

Such allusions to the drums' musical essence, however, are uncommon, and can be said to present a sense of sonic clarity and organization rather than musicality. Indeed, the value of war-drums and war-bells as stressed in military-related discussions seems to relate not to their qualities as *musical instruments*—not to their effect on the *emotions* of the soldiers—but to their highly practical *sonic* qualities that make them efficient as communication devices. Unlike their function within the context of music, which operates on human instincts, in warfare the drums activate the masses mostly through their minds. The mechanisms of *qi*, stimulus and response, and similar natural mechanisms activated in the reaction of humans to music, while occasionally mentioned in a warfare context, are not those emphasized in textual references to sound-producing military instruments.⁶⁸ Their loudness and unique timbre are what make them helpful to the general, and if they are not heard—loud and clear—the battle is doomed to defeat. For these reasons, I propose that we think of them as “sound-producing” or “sonic” rather than “musical” instruments (or devices).

Before proceeding with the discussion, it should be noted that I do not seek to negate the claim that a culture of *martial music*—i.e. stylistically militant or military-related music—did exist in early China. Music and dance were unquestionably an indispensable part of pre-battle practices and rituals, utilized to stimulate motivation and morale amongst troops, and to inspire awe and fear in the hearts of their enemies. Lewis notes that prior to battling the Shang, the Zhou troops performed an impressive war dance. This custom seems to have changed in later periods: the Zhou military dance came instead to be represented in ritual as the famous *wu* 武 (“martial”) dance, while pre-battle

67 *Tai Gong liu tao*, 3.139 (“Bing zheng” 兵徵).

68 In fact, even the making of actual instrumental music within the context of war seems to be going against, rather than following, one's instinct. Several versions of the famous story of Confucius' entrapment between Chen and Cai depict the Master as playing his zither, singing and dancing amidst danger. The story appears in multiple sources in different versions. See e.g. *Zhuangzi jishi*, 14.511 (“Tian yun”), 20.679,690 (“Shan mu” 山木), 28.981 (“Rang wang” 讓王); *Lüshi chunqiu*, 14.810-11 (“Shen ren” 慎人), 17.1076-77 (“Ren shu” 任數); *Fengsu tongyi jiaozhu*, 7.315-16 (“Qiong tong” 窮通). This is one of the only instances in which music making seems to be completely contradicting the emotional state of the composer. Indeed, the Master's disciples question this act of music making in the midst of hunger and war. For a discussion on the philosophical motivations of the different versions of this anecdote, see Meyer 2017.

military dances in the Warring States included elements of military practice performed in unison to the sounds of drums, music, and chant.⁶⁹ Such performances were indeed musical in nature, and they constitute what I would define as “martial *music*.” These practices would have achieved exactly what early Chinese musical performances were meant to achieve—a strong emotional effect and a unified feeling amongst their audiences.⁷⁰ On the eve of battle, the importance of such sentiments cannot be dismissed. Yet none of these musical practices took place *during* battle. Conversely, these were military-related *ritual* practices, which—significant as they may be—were part of the ancient Chinese military culture which surrounded war, but not part of war itself. It may well be the case that some war-drums and bells doubled up as instruments used in such performances—an assumption which is supported by archaeological finds of military bells alongside musical or ritual ones⁷¹—but it is nevertheless important that we distinguish between the different functions of these objects, or at least acknowledge that early Chinese thinkers made such distinctions. The culture surrounding warfare is a fascinating subject in and of itself, and it has not received the scholarly attention it deserves.⁷² However, the focus of our discussion is the utilization of sounds on the battlefield, rather than the examination of all sound that obliquely relates to the military. An analysis of early Chinese cultural expressions of warfare is, regrettably, beyond the parameters of the present article.

69 Lewis 1990, 226–27. See also Xiao, 240–43 (discussing dances with military paraphernalia) and 262–63 (on the martial dance 武舞). For a discussion on similar pre-battle dance-rituals in early Israelite culture, see Sendrey 1969, 469–70.

70 Apart from dance, another artistic way of speaking of war and bloodshed is the writing of poems. On poems documenting war in Ming-Qing times, see Grace S. Fong, “Writing from Experience: Personal Records of War and Disorder in Jiangnan during the Ming-Qing Transition,” in Di Cosmo 2009, 268–75.

71 See, for example, Falkenhausen 2018, 48–53, where he discusses the Early Western Zhou tomb 1 in Dahekou, Yicheng (Shanxi) 山西翼成大河口 and some additional tombs featuring both signal-giving bells and musical bells. Falkenhausen proposes to take this as evidence that the development of military bells was linked to that of musical bells.

72 Probably the most comprehensive account examining expressions of warfare—as well as other types of violence—in everyday culture is Lewis’ *Sanctioned Violence*. More accounts looking into Chinese military culture include Di Cosmo 2009 and Kierman and Fairbank 1974.

6 From Practice to Analogy—Han Dynasty Drum Metaphors

By the middle of the Warring States period, methods of military drumming had seemingly become a matter of conventional, concrete knowledge. This is evidenced by texts from the period, which gradually begin to use these methods in their metaphors and analogies. Edward Slingerland posits a broad conception of metaphor as “the use of one, usually concrete, domain to structure our understanding of another, usually more abstract, domain.”⁷³ Since the drawing of any metaphor relies solely on the familiarity of the reader with what Slingerland calls the “concrete domain” or the “vehicle”⁷⁴ used as an explanatory tool, we can safely assume that its usage in metaphors proves that military drumming, by this time, was a matter of common knowledge. The *Mozi* uses this convention to make a claim about righteousness. It tells the story of Wu Lü 吳慮, a person who tills his land in solitude, who puts himself on a par with the mythical emperor Shun, claiming to be as righteous as the latter. Mozi thereupon confronts the man and his assertions, using the military drummer as a metaphor for the teacher of righteousness, rather than a mere practitioner of it:

吳慮謂子墨子曰：「義耳義耳，焉用言之哉？」[...] 子墨子曰：「籍設而攻不義之國，鼓而使眾進戰，與不鼓而使眾進戰，而獨進戰者，其功孰多？」吳慮曰：「鼓而進眾者其功多。」子墨子曰：「天下匹夫徒步之士，少知義而教天下以義者，功亦多，何故弗言也？若得鼓而進於義，則吾義豈不益進哉？」

Wu Lü said to Mozi: “Righteousness is righteousness, what’s the use of talking about it?” [...] Mozi said: “Suppose an attack is carried out on an unrighteous state⁷⁵—between the two who is of greater merit: he who drums and stimulates the multitude into advancing in battle; or he who does not drum and stimulate the multitude into advancing in combat, but

73 Slingerland 2011, 12.

74 A “topic” of a metaphor (sometimes called “tenor” or “target”) is the subject that the metaphor aims to explain; a “vehicle” (sometimes referred to as “basis”) is the thing to which this topic is equated and that is used to explain the topic. See Ritchie, “Understanding Metaphors,” in Ritchie 2013, 25–42, and page 10 in the introduction to his book.

75 Here, resonating with the theories of sacrifice mentioned in the beginning of the paper, which emphasize the separation between “self” and “other,” we witness the need to create an “other” in order to justify violence. By defining the attacked state as *bu yi* 不義—unrighteous—Mozi leaves no doubt that the attack is justified. For discussions on the justification of warfare in early China, see for example Lewis 2006; Graff 2010; van Els 2013; Fraser 2016a.

advances on his own in combat?" Wu Lü said: "the drummer who stimulated the multitude into advance is of greater merit." Mozi said: "Among those petty and narrow-minded *shi* in the world, those who know little about righteousness, but teach the world about righteousness, [themselves] have much merit, what reason is there not to talk about them? If I were to 'obtain a drum' to advance righteousness, would my righteousness not be further advanced?"⁷⁶

Eric Prieto proposes that we analyze metaphors as "interpretive tools rather than as the primary object of interpretation." He points out that for Aristotle, "the value of the metaphor is in its ability to instruct, to teach us something new about the relation between two objects."⁷⁷ If, for the early readers of this text, the drum served as a means by which to explain the workings of righteousness, for us as modern readers—already familiar with the philosophy of the *Mozi*—the concept of righteousness serves as a tool for re-learning the forgotten significance of the war drum.⁷⁸ Furthermore, if this metaphor would have made sense to us before, an awareness of the crucial role the drum played in warfare nonetheless allows for a more developed understanding of the emphasis Mozi places on the importance of righteousness and its transmission to others.⁷⁹

The *Huainanzi* 淮南子 (compiled under the auspices of Liu An 劉安 king of Huainan, and submitted to Emperor Wu of the Han 漢武帝 in 139 BCE) uses the metaphorical drum on several occasions. The following passage utilizes the image of the drum to metaphorize none other than the military general. Curiously, while the drum referred to in the text is not necessarily a war-drum,

76 *Mozi jianqu*, 49.474 ("Lu Wen" 魯問). This is an excerpt of the full passage in which Mozi contemplates the merits of teaching righteousness over doing anything else (farming, weaving, fighting wars). In this last part he uses two metaphors—the drumming metaphor seen above, and a metaphor that uses the act of plowing (plowing one's own field vs. teaching others how to plow).

77 See Prieto 2002, 53–54. Prieto refers to the long-lasting debate about the role of musical metaphor within the field of word and music studies, and criticizes the over-analysis of the structure of metaphor and the abandonment of analysis of meaning within metaphor.

78 For the philosophy of the *Mozi*, see Fraser 2016b; Defoort and Standaert 2013.

79 The fact that Mozi uses the war-drum in his analogy further supports our earlier claim that drums and bells in the context of war are not "musical," or at least that they are not Music (i.e. *yue*); after all, Mozi is famously strongly opposed to the making of *yue*, and thus would not have used anything belonging to the realm of *yue* in metaphorizing a superior concept such as righteousness. On the *Mozi's* attitude towards music see, for example, Wang 2009; Cook 1995b, 146–201.

the metaphor reveals a generally complex relationship between the drum and music, even when the former is used for musical purposes:

故鼓不與於五音，而為五音主；水不與於五味，而為五味調；將軍不與於五官之事，而為五官督。

Hence, the drum does not add [its own note] to the five notes, but it is the ruler of five notes; water does not add [its own flavor] to the five flavors, yet it is the conductor of five flavors; the general's command of military matters is not an addition to the affairs of five offices, yet [he] directs the five offices.⁸⁰

The general is likened to a drum; he is as much of an outsider to court politics as the drum is to the musical sphere—but a powerful outsider, we learn. The general is a ruler without an office, and the drum is a conductor of music with no tone of its own. In light of the present discussion, this analogy can be seen not only as highlighting the power of the general, but also as magnifying the role of the drum. The drum is a ruler without a realm; a musical instrument that is sometimes not at all musical, as toneless as water is flavorless; yet it is an object that almost becomes a commander in its own right.

Another passage in the *Huainanzi* may help reiterate the conceptual differences between musical and military theories. The topic of this metaphor is the sage-ruler, who is analogous with the drum. But if, in the previous passage, the drum acts as a director of sound, here it acts as a musical instrument that reacts to human motion:

鼓不藏於聲，故能有聲；鏡不沒於形，故能有形；金石有聲，弗叩弗鳴；管簫有音，弗吹無聲。聖人內藏，不為物先倡，事來而制，物至而應。

80 *Huainanzi*, 15.614-15 ("Bing lüe"). Elsewhere, the *Huainanzi* explains what the five offices are: "That of the east is Agriculture. That of the south is the Grand Marshal. That of the west is Public Order. That of the north is Public Works. That of the center is Metropolitan Affairs." See *Huainanzi*, 3.111 ("Tian wen" 天文): 東方為田，南方為司馬，西方為理，北方為司空，中央為都。Cited here is Major et al.'s translation (Major et al. 2010, 121), apart from the translation of *Da Sima* 司馬 as "Grand Marshal," which follows Pines 2002, 314. This is translated by Major et al. as "Military Command"—which is accurate, but may be confused with the "general," who—as the reference above shows—is not an office holder.

A drum does not store sounds [of its own], and therein lies its ability of sounding out. A mirror does not hold on to form, therein lies its ability to manifest [any] form. [Musical instruments of] metal and stone (i.e. bells and chimes) have sounds, [but if] unstruck, they shall not ring. Pipes and flutes have voices, [but if they are] not blown, there will not be a sound. The sage stores [actions] within [himself], but does not act as an initiator among things. Affairs come his way—and he then regulates [them]; things appear—and he then reacts [appropriately].⁸¹

In this passage the drum *is* just as musical as any other instrument. Accordingly, it corresponds with the principles of music: it does not store, it responds; it is not taught, but spontaneous. Paralleled with other musical instruments, it acts as “one of them.” The sage is comparable with these instruments, bearing their qualities. To understand this metaphor, the reader should be familiar with the human reaction to music, thus deducing that the sage is able to react instinctively to the affairs and events that come his way. Acting on the principle of stimulus and response the drum—and the sage in its footsteps—begins devoid of contents and reacts to a beat or an external stimulus as it comes. Both of these passages use the drum—*gu* 鼓—as their metaphoric vehicle. The topics of the metaphors and the function of the drum in each of them, however, are inherently different. These differences are subtle, yet they gesture towards the duality of the drum as both a musical instrument and an instrument external to music. In both cases, the drum produces no note of its own. In the first metaphor (the general as a drum) the drum *initiates* action; by means of its rhythms, it is in control—or in command—over the tones, and no spontaneity is in action. In the second case, on the other hand (the sage-ruler as a drum), the drum is reactive, not active, and the rhythm it emits is the consequence of an external impetus. Thus, while the drum/general is an operator who actively regulates (military) affairs, the drum/sage is a reactor who shifts (presumably political) affairs by means of organic response.

7 Breaking the Drumsticks: the Power of the Silent Drum

So far, we have focused on sound-producing instruments as sonic communication devices—that is, as devices that actually *produce sound*. Before we conclude, however, let us examine one further type of reference relating to these

81 *Huainanzi*, 14.574-575 (“Quan yan” 詮言).

instruments—namely, references that deal with them in their *unplayed* mode. For silent drums, as we shall see, have their own symbolic role to play.

The power of drums and bells lies in the sonic effects they produce in war. However, in the passage below, taken from the *Huainanzi*, we learn that even the mere sight of the neatly positioned instruments of one's army should suffice to scare away the enemy:

兵有三詆，治國家，理境內，行仁義，布德惠，立正法，塞邪隧，群臣親附，百姓和輯，上下一心，君臣同力，諸侯服其威，而四方懷其德。修政廟堂之上，而折沖千里之外，拱揖指撝，而天下響應，此用兵之上也。

There are three levels of [conducting] military affairs:

When one orderly governs the state and the households; puts in order the borders and internal territories, puts into practice humaneness and righteousness; spreads virtue and benevolence; establishes correct laws; puts an end to perverse ways; brings together ministers in affinity-like intimacy, and the masses in harmonious collectiveness, the higher and lower ranks in unity of heart, the rulers and ministers in united force—[when] the lords all submit to one's might and the four directions embrace one's virtue; [when] one sets straight the governance of the superiors managing the temples and halls, and stretches one's authority over a thousand *li*; [when] with hands put together, [one] points here, points there, and all under heaven responds, echoing [their will]—This is the superior form of using the military.

地廣民眾，主賢將忠，國富兵強，約束信，號令明，兩軍相當，鼓鐃相望，未至兵交接刃，而敵奔亡，此用兵之次也。

When the terrain is broad and the people are many, the ruler is worthy and the general loyal; when the state is wealthy and the military strong, treaties and pacts are trustworthy, commands and orders are clear; [when] the two levels of the military correspond with each other, *the drums and the bells*⁸² *face each other*; yet before the troops meet and clash blades the enemy flees—This is the second best way of using the military.

82 Liu Wendian's 劉文典 commentary identifies the *chun* 鐃 as *chun yu* 鐃于 and defines it as "a big bell" (*da zhong* 大鐘).

知土地之宜，習險隘之利，明奇正之變，察行陳解贖之數，維枹綰而鼓之，白刃合，流矢接，涉血屬腸，輿死扶傷，流血千里，暴骸盈場，乃以決勝，此用兵之下也。

When one knows the appropriate [usage] of the ground and the terrain, is familiar with the ways to best use the narrow passes; understands how to alter [between] surprise and routine [tactics];⁸³ and has investigated the execution of the techniques of dispersing and gathering [the troops]; [when one] *unbinds the drumsticks and drums* [for the troops], when white blades meet and flying arrows collide [in the sky]; when you step in [pools of] blood and follow trails of [spilled] intestines, load the dead on carts and support the wounded, and the blood flows for a thousand *li*, with exposed corpses filling the battlefield—and with this you emerge victorious—this is the inferior form of using the military.⁸⁴

We might note that in the superior form of using one's military forces, that is, in those instances when the military is not deployed at all, drums and bells are not even mentioned. In the inferior form of utilizing the army, the drumsticks are unbound, the drums are beaten, and the battle is won. What is truly striking, however, is what happens in the middle category: this category describes a situation in which one is perfectly prepared for war—but does not have to engage in battle. At the sight of the readily available and organized army, the enemy flees before blades clash. The drums and the bells, visible to the enemy, face each other, ready to be struck. Their sight alone provides the enemy with the information that a strong—and, most importantly, well-organized—military awaits it and is ready for battle. It seems, therefore, that the most desirable thing for a ruler is to be able to keep their war-drums and war-bells silent. “[If] the borders have collapsed, the state is being defended [in the face of the enemy], and the sounds of the [military] drums and bells reach the ear”—we are told in the *Han Feizi*—“it is then too late to put into use the

83 Major et. al. comment that *qi* 奇 and *zheng* 正 bear a meaning specific to military use here, which refers to the tactics used by the commander. See Major et al. 2010, 588 n. 19.

84 *Huainanzi*, 15.595-96 (“Bing lüe”). For the convenience of reading the Chinese side by side with the translation, I’ve divided the passage into three sections. Note the bits in bold (Chinese) and italics (English).

plans of one's ministers!"⁸⁵ Essentially, all seem to agree that is better not to have fought a battle rather than to have fought and won.⁸⁶

The drumsticks, which in the passage above are untied to mark the beginning of battle, commonly symbolize the unseen line between battle and rest, between clamor and silence. In the following excerpt, they are cast aside with frustration:

趙簡子圍衛之郭郭，犀楯、犀櫓立於矢石之所不及，鼓之而士不起，簡子投枹曰：「烏乎！吾之士數弊也。」

When Zhao Jianzi was surrounding the walls of Wei, Xi Shun and Xi Lu stood [in a place] where arrows and stones could not reach them. He drummed for the soldiers, but they wouldn't move. Master Jian threw his drumsticks [in frustration]. "Alas!" he said, "My soldiers are a ruin!"⁸⁷

The anecdote ends well, with Master Jian eventually learning how to properly drum his troops into battle. Letting go of the drumsticks, however, implies that in that same moment he is unwilling to engage in battle. While in this case the dropping of drumsticks is an act of despair and frustration, in other cases it is an act performed intentionally to eliminate all symbols of war and to mark peace. This usage is documented only in the *Huainanzi* and nowhere else—but it appears in it three times. To give one example:

昔武王伐紂，破之牧野，[...] 破鼓折枹，弛弓絕弦，去舍露宿以示平易，解劍帶笏以示無仇。于此天下歌謠而樂之，諸侯執幣相朝，三十四世不奪。

In ancient times after King Wu fought tyrant Zhou and vanquished him in Mu Ye [...], he *destroyed the drums and snapped the drumsticks*; unbent the bows and cut their strings; he left his abode to reside outdoors to prove that he was completely at ease. He untied his sword [from his waist] and wore the ceremonial tablets [in its stead] to show that there

85 *Han Feizi*, 2.45 ("Cun Han" 存韓): 邊鄙殘，國固守，鼓鐸之聲於耳，而乃用臣斯之計晚矣。

86 It is already in the *Sunzi bingfa*—which is likely to precede both the Western Han *Huainanzi* and the late Warring States *Han Feizi*—that we learn that "He who knows [the conditions in which] fighting is possible from [those in which] fighting is not possible shall be victorious" (知可以戰與不可以戰者勝). See *Sunzi bingfa xinzh*, 3.27 ("Mou gong" 謀攻).

87 *Han Feizi*, 37.890 ("Nan er" 難二); see also *Lüshi chunqiu*, 23.1543 ("Gui zhi" 貴直).

were no longer any enemies [around]. On account of this, all under heaven sang ballads and rejoiced in him, and the lords brought him gifts of silk and paid respects. For thirty-four generations [the land remained] uninterrupted.⁸⁸

The drums and bells, then, are both visual and sonic markers of war. The drumsticks represent the border between battle and no battle. When the drumsticks are broken, the drums remain silent, and the realm at peace.

8 Conclusion: Beating the Drums of War. Literally.

昧明，王乃秉枹，親就鳴鐘，鼓丁寧、鐸于振鐸，勇怯盡應，三軍皆譁鉦以振旅，其聲動天地。

At dawn, the king took up the drumsticks, personally leading the sounding of the bells and beating of the *dingning*, the *chunyu*, and the *zhenduo*. The brave and the timid all [to the very last] responded. The forces, roaring aloud, all took formation, their sounds moving Heaven and Earth.⁸⁹

The roaring echoes of the drums and bells on the early Chinese battlefield were not merely intimidating sound effects. The usage of these instruments within warfare consisted of a complex code system, and the beat of a drum was a matter of life and death, both for the drummer himself and for his whole force. In this paper, I suggested that we reconsider some preexisting modern views on the role of sound-producing instruments within the context of early Chinese warfare. Rather than a rhythmic and dramatic background to battle, or mystical transmitters of belligerent *qi*, I substantiate that these instruments were perceived as indispensable sonic communication devices (operating side by side with additional visual devices, such as banners and flags), without which any battle from the Warring States period onward was doomed to fail. One of my contentions in this paper was that to truly understand the concept of “military *drumming*” (or military bell-striking) would mean, first and foremost, to separate it conceptually from the idea of “military *music*.” The movement of

88 *Huainanzi*, 12.496 (“*Dao ying*” 道應). See also *Huainanzi*, 20.836 (“*Tai zu*”); 21.862 (“*Yao lue*” 要略).

89 *Guoyu*, 608 (“*Wu yu*”). This section is sometimes punctuated 親就鳴鐘鼓，丁寧、鐸于振鐸, and can be translated as “leading the calling of the bells and drums, the *dingning*, *chunyu* and *zhenduo*.” I take *ming* 鳴 and *gu* 鼓 to be verbs, depicting the striking of the different bells (as drums are not mentioned in this paragraph).

troops in unison, while affected by the so-called musical rhythm of drums, was in essence the result of the extensive learning of codes of conduct in warfare, rather than a spontaneous emotional response. Their well-rehearsed response to sound-producing instruments diverges significantly from the instinctive human reaction to *music*. Early Chinese theoreticians, as this study has demonstrated, perceived these objects as sonic—but not musical—communication devices, aimed first and foremost to signify commands for the troops to follow. The production of sound in war is thus better thought of as an essentially *non-musical* object of theorization. I further proposed that as their usage in metaphors shows, the key role of sonic instruments (above all the drum) in battle was a matter of common knowledge by the mid- to late Warring States period. Ultimately, I argue, any comprehensive study of ancient Chinese military strategies should revert to understanding the thinking of early Chinese strategists themselves—and acknowledge sonic instruments not as philosophical, musical, or ornamental elements of warfare, but as valuable military essentials that were necessary for the initiation or cessation of any act of war.

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