

Textual Organization, Visibility, and Readability in Eastern Zhou Bell Inscriptions

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Over the past several decades, scholarly opinions on bronze inscriptions have remained at odds over their practical purpose. Some have made claims for their role in religion and ritual.¹ Others have emphasized their use in terms of documentary use.² Among the many inscribed bronzes extant, bell inscriptions are unique in that they seem to intrinsically possess a display function. The nature of such a function, however, remains unclear.

In this paper, I will argue that a close look at the layout of inscriptions on bells reveals valuable information as to their purpose as visual objects. Through examples on a few well-known sets, I will show that inscription distribution on Eastern Zhou (particularly Spring and Autumn period) bells may have developed in connection with their visual coherence. I will also look at the role inscriptions might have played in terms of reading and later imitation.

“Chu” Bell Set Inscriptions

The sets I will discuss are: the bells of Qin Gong 秦公, Hougudui 後古堆, Marquis Shen of Cai 蔡, the Wangsun Gao 王孫告, and the famous bells of Marquis Yi 乙 of Zeng 曾.³ I will

¹ Lothar von Falkenhausen, *Suspended Music: Chime-bells in the Culture of Bronze Age China* (Berkeley: University of California Press, 1993), 12-20 & “Issues in Western Zhou Studies: A Review Article” *Early China* 18 (1993), 121; Constance A. Cook, “Auspicious Metals and Southern Spirits: An Analysis of the Chu Bronze Inscriptions” (Ph.D. diss., University of California, Berkeley, 1990), 41-93; Martin Kern, “Bronze Inscriptions, the Shijing, and the Shangshu,” in *Early Chinese Religion, Part One: Shang Through Han (1250 BC to 220 AD)*, ed. John Lagerway and Marc Kalinowski (Leiden: Brill, 2009), 193.

² Li Feng, *Bureaucracy and the State* (Cambridge: Cambridge University Press, 2009), 11-20; David S. Nivison and Edward L. Shaughnessy, “The Jin Hou Su Bells Inscription and Its Implication for the Chronology of Early China,” *Early China* 25 (2000): 29-38; Gilbert Mattos, “Eastern Zhou Bronze Inscriptions,” in *New Sources of Early Chinese History: An Introduction to the Reading of Inscriptions and Manuscripts* (Berkeley: The Society for the Study of Early China and The Institute of East Asian Studies, University of California, 1997), 85-123.

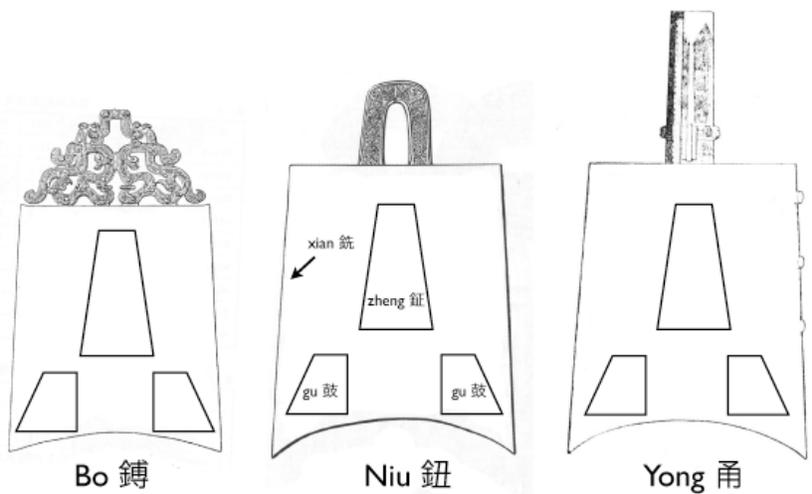
³ Archaeological reports are listed in order of mention: Lu Liancheng & Yang Mancang, “Shaanxi Baoji xian Taigongmiaochun fajue Qin Gong zhong, Qin Gong bo,” *Wenwu* 1978 (11): 1-5, 97-98; Henan sheng wenwu kaogu yanjiusuo, *Gushi Hougudui yi hao mu* (Zhengzhou: Daxian, 2004); Anhui sheng wenwu guanli weiyuanhui, *Shouxian Cai hou mu chutu yiwu* (Beijing: Kexue chubanshe, 1956); Henan sheng wenwu yanjiusuo, *Xichuan Xiasi Chunqiu Chu mu* (Beijing: Wenwu chubanshe, 1991); Hebei sheng bowuguan, *Sui xian Zeng Hou Yi mu* (Beijing: Kexue, 1980). Chinese (and Japanese) characters for all sources are contained in the Bibliography.

define “set” as any grouping of bells (a) excavated in close proximity in the same tomb enclosure, and/or (b) associated with each other through nearly identical inscriptions and similar typology. I will also assume that the tomb occupants figures of some importance in Spring and Autumn period political strife at the time of burial.⁴ I will not maintain that the role of states like Chu in the politics of smaller states did not exist, but instead emphasize that even though we know these states were definitely involved in the political relationships of the period, the specifics remain murky at best.⁵ A consideration of these ambiguities, however, are important when thinking about the audiences of bell sets in general.

Textual Layouts

First, a word about the evolution of textual distribution and layout on bells. The vast majority of Eastern Zhou bell inscriptions contain the entire text on both faces of a single bell

Fig 1



and do not exist in sets.

Western Zhou bells were different. Most Western Zhou inscriptions were (1) limited to a single bell face and (2) much longer than their Eastern Zhou

⁴ It is generally acknowledged that bells were objects of some importance in early China, although the specifics of their usage cannot be concretely known. There is no doubt, however, that they were very precious. See Bagley, “Percussion” in Jenny So, ed., *Music in the Age of Confucius* (Washington: Smithsonian Institution, 2000), 35.

⁵ The association of tombs with a political entity called “Chu” is based on a variety of disparate criteria, but the primary association is with a geographic area largely defined by received texts. From an archaeological perspective, this is problematic at best. For a simplistic summary of Chu dating criteria, see Guo Dewei, *Chu xi muzang yanjiu* (Wuhan: Hubei jiaoyu chubanshe, 1995), 32-36. For the broad assumptions that can be made about the extent of Chu power in the Spring and Autumn period from such loose associations, see Li Xueqin, *Eastern Zhou and Qin Civilizations*, trans. K.C. Chang (New Haven: Yale University Press, 1985), 155-160.

counterparts, and thus more likely to stretch over several bells.⁶ At some point, casters began to utilize the verso face of the bell before using another bell to continue an inscription.

Eastern Zhou inscriptions frequently follow a slightly variable reading order, most often restricted to the central *zheng* 鉦 panels on each side of the bell, as well as the left and right side *gu* 鼓 panels on the lower flanges.⁷ Lothar von Falkenhausen had emphasized the way in which such a display developed from a “process of stylistic development aimed at framing and visually emphasizing a written textual message.”⁸ This is most definitely true. However, this is different than saying such texts were meant to be read, per se, and also does not automatically suggest a divine or ritual audience.⁹

Before taking up this point, let us step outside of China for a moment to consider another inscribed object: The Pantheon, in Rome (Fig 2).¹⁰ When we look at such a monument, we almost instantly know where our eyes are drawn. We should not be surprised that this location probably includes the inscription. Why does this occur? Is the reason we find the inscription prominent simply because we can read it? Given the presumed literacy of the Roman commoner, this is doubtful. What the Pantheon inscription *does* say: “*Marcus Agrippa, son of Lucius, Thrice*

⁶ Falkenhausen, “Ritual Music in Bronze Age China: An Archaeological Perspective” (Ph.D diss., Harvard University, 1988), 635-638.

⁷ The physical structure and nomenclature of bells is succinctly summarized in Chen Shuangxin, *Liang Zhou qingtong yueqi mingci yanjiu* (Baoding: Hebei daxue chubanshe, 2002), 14-20 and Falkenhausen, *Suspended Music*, 72-75.

⁸ Falkenhausen, “Ritual Music,” 628.

⁹ The effect of display in diplomacy may have well contributed to the construction of alliances and power relationships that figure deeply into the textual accounts of political life in the late Spring and Autumn period. This includes the establishment of covenants, and the gradual transformation of state relationships over time. For a recent and concise discussion of these relationships in *Zuozhuan* related to Chu specifically, see Yamada Takahito, “Shunjū Sobaku kō - So no tai chūgen senryaku” *Ritsumeikan bungaku jinbun gakkai* 554 (1988): 37-39.

¹⁰ Figure from Ministero per i Beni e le Attività Culturali, *Pantheon: Storia e futuro* (Rome: Gangemi, 2007), 24. For details related to the inscription, see Susanna Pasquali, *Il Pantheon: Architettura e antiquaria nel Settecento a Roma* (Modena: Franco Cosimo Panini, 1996), 5-6.

Consul, built this,” does not tell us the purpose of the Pantheon, or why it was important enough to be built in the center of Rome, but it does tell us loud and clear: This building is important, and he who built it



Fig. 2

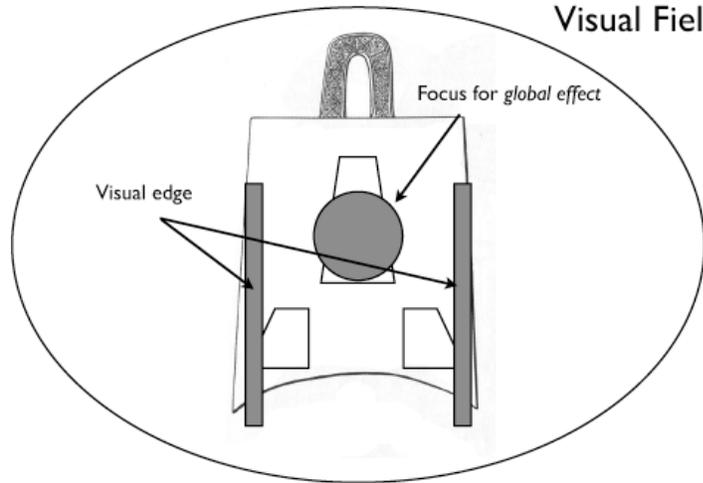
especially so. In short, we know inscriptions and inscribed objects are important not because of what they say, but simply because they are inscribed.

In order to get an idea about how we view objects in general, I'd like to remain outside of China for the time being and show what perceptual processes may be able to tell us about how bells inscriptions may have been perceived.

Perception and Bells

What scholars have identified as the orientation of bell decor toward visibility of text - in the invention of the *zheng* space, for example - convincingly show that the Zhou caster was interested in making sure the inscription could be viewed. This does not seem to be a coincidence.

Research in the area of eye focus and perception by psychologists demonstrate that in initial perceptual orientation, the eye is almost always automatically drawn to what it perceives to be the center of a



Visual Field Fig. 3

object. (Fig. 3) This is referred to as the **global effect**, and is generally considered to be universal. Aside from the center, the other point of focus recognized instantly and most clearly by the eye is the **visual edge**, which is essentially the recognition of texture change and the points that remain at a fixed distance from

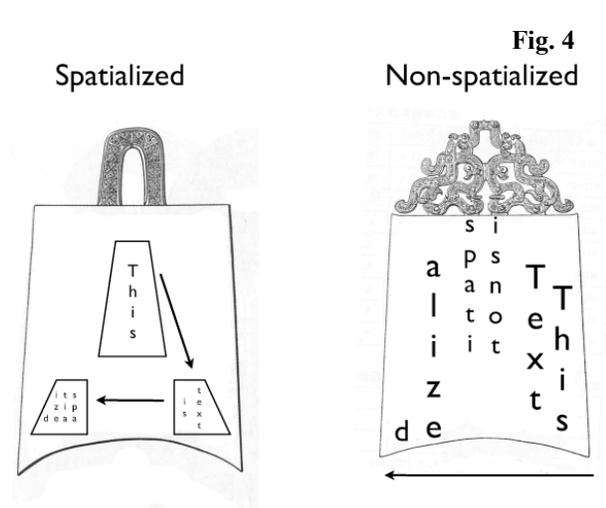
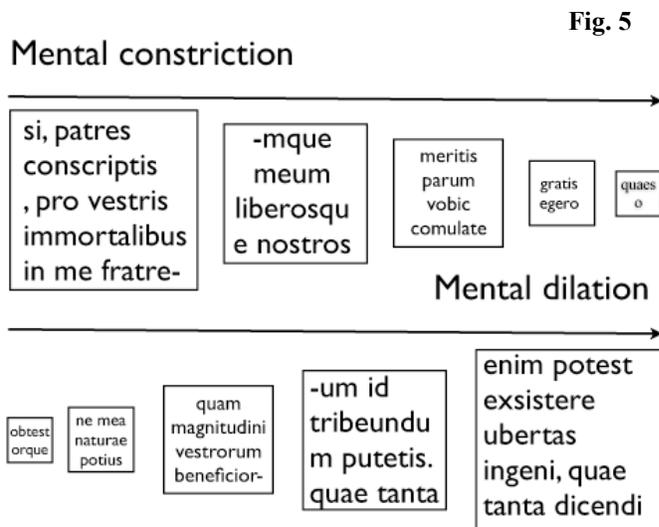


Fig. 4

the central point. These locative features are then “tagged” with reference to a pattern, which operates in parallel with finer perceptual recognition.¹¹

Recognizing fixed visible features on an object, however, is different than rendering a certain format appropriate for reading, and studies regarding ideal placement of text for

¹¹ John M. Findlay, “Programming of Stimulus-Elicited Saccadic Eye Movements,” in Keith Rayner, ed., *Eye Movements and Visual Cognition: Scene Perception and Reading* (New York: Springer-Verlag, 1992), 15-16 & Stephen M. Kosslyn & Lisa M. Shin, “Visual Mental Images in the Brain,” in *Proceedings of the American Philosophical Society*, 135:4 (Dec., 1991), 527.



optimal reading and comprehension suggest that what is called “spatialized” presentation - or the staggering of words or word chunks - is much more conducive to both viewing and understanding than “non-spatialized” word orientation, here shown by contrasting later bell layouts with the

long and unorganized inscriptions seen on some Western Zhou bells (Fig. 4).¹² In a sense, the restriction of the text to more controlled spaces and spacing on bells is not surprising.¹³ Another interesting feature is the near absence of Eastern Zhou inscriptions stretching over more than one bell that begin on a bell smaller than itself and continue to larger bells. This, again, is not surprise. Perceptual psychology has shown that the eye processes reductions in the size of objects of similar shape - called *mental constriction* - much slower than it does *increases* of shape, which is referred to as *mental dilation* (Fig. 5).¹⁴ In short, we can see that some aspects of visual universals manifest in what we see in inscriptional distribution.

Now, let’s look at some actual examples, beginning with the Qin Gong set.

¹² Many examples exist. The Liangqi zhong is an especially good example. For rubbing, transcription, and annotation, see Shirakawa Shizuka, *Kinbun tsūshaku* 22-27 (Kobe: Hakutsuru bijutsukan, 1968-69), 388-392.

¹³ By “spacing” I refer to the arrangement of characters. Some Western Zhou examples - like the X zhong or Shifu zhong - array characters across zheng or gu of radically different sizes, each with character components spaced rather unevenly apart. See *Kinbun tsūshaku* 15-21 (1966-68), 285-292 & 22-27 (1968-69), 382-387.

¹⁴ James H. Howard Jr. & Stephen M. Kerst, “Directional Effects on Size Change on the Comparison of Visual Shapes,” in *American Journal of Psychology* 91.3 (Sep., 1978), 20.

Qin Gong bells

Of the 5 *yong* 甬 and 3 *bo* 罇 commonly considered to be a part of the Qin Gong bells (Fig. 6), all but 1 *bo* were excavated in 1978 at the Taigongmiao 太公廟 site in Baoji, Shaanxi.¹⁵ One version of the inscription occupies the first three *yong*, while a partial version of another text divided into thirds occupies the latter two (N4-N5). The two *bo* (B1-B2) each contain a full version of the almost identical text, while the third contains a slightly modified version.

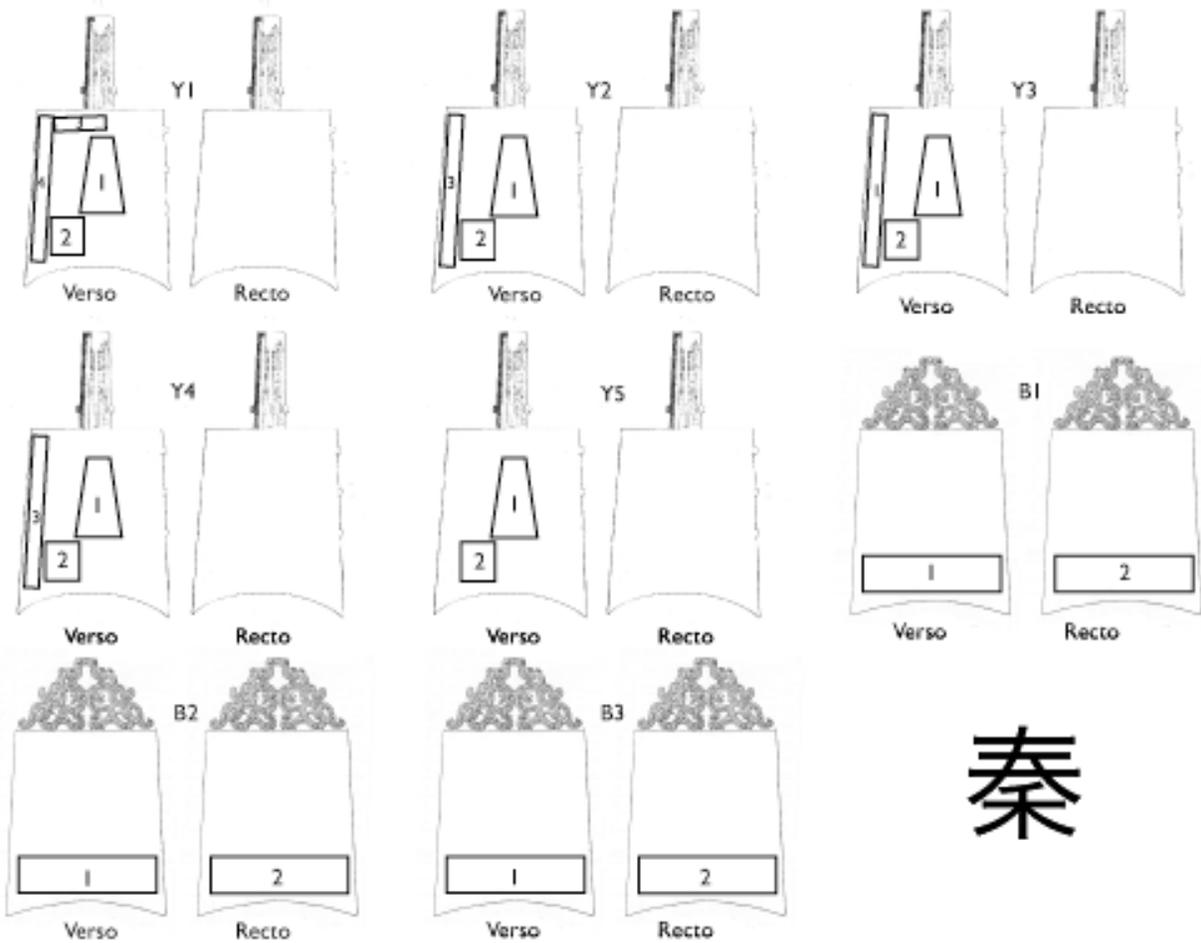
The inscriptions can be divided into several sections, the large majority of which are rote phrases we know from both Western and Eastern Zhou contexts. The first section, in which the lord of Qin proclaims his “mandate” (*tianming* 天命) is located in the most visible part of the first bell face. There are phrases mentioning Qin Gong and his control over his immediate subjects, the subjugation of barbarian peoples, and instructions to descendants, all are which are phrases familiar from Western Zhou bells. Also included are phrases that become common in the Eastern Zhou, such as mentions of the sound of the bells, and the enjoyment of guests. Aside from the third *bo*, only slight variations exist between different versions of the inscription within the set.¹⁶

On the three smaller *yong*, the right flank on the verso side is occupied by a bird symbol indicating the B-tone strike point, and the inscription is laid out conscious of this fact - even on the larger bells that lack the symbol. On the largest bell, the text curves awkwardly sideways over the top edge for what seems to be lack of space. This shows how size only may have

¹⁵ Hu & Yang, 1-5.

¹⁶ Shirakawa, *Kinbun tsūshaku* v. 50, 398-408.

Fig 6



partially affected how the text was distributed on the bell. The text reads as the numbering on Figure 5 indicates (Further graphs will be laid out in this fashion.) The smaller *yong* containing a full text version (Y4-Y5) have identical amounts of characters and are all readable from right to left, moving from the central *zheng* to the lower left *gu* and down the left *xian* blade 銑.

However, on N5, the inscription only extends to the *gu* and not the *xian*, which makes me think that some sacrifice was made to stretch the inscription out to three bells for some purpose relating to balance of display. On the *bo*, the text uniformly wraps around from right to left on both sides, requiring a 180 degree turn to view the whole text.

We can see from this example that the Qin Gong casters struggled with two things: (1) visual coherence, and (2) some sort of consideration that necessitated the inclusion of both one awkwardly displayed inscription and a fragmentary text - both confined to the *yong*. This seems to have been a compromise, and that from the visual order of the other bells, making the set at least appear that *all* the bells were inscribed was important, even if some aspects of the display were not ideal.

Hougudui

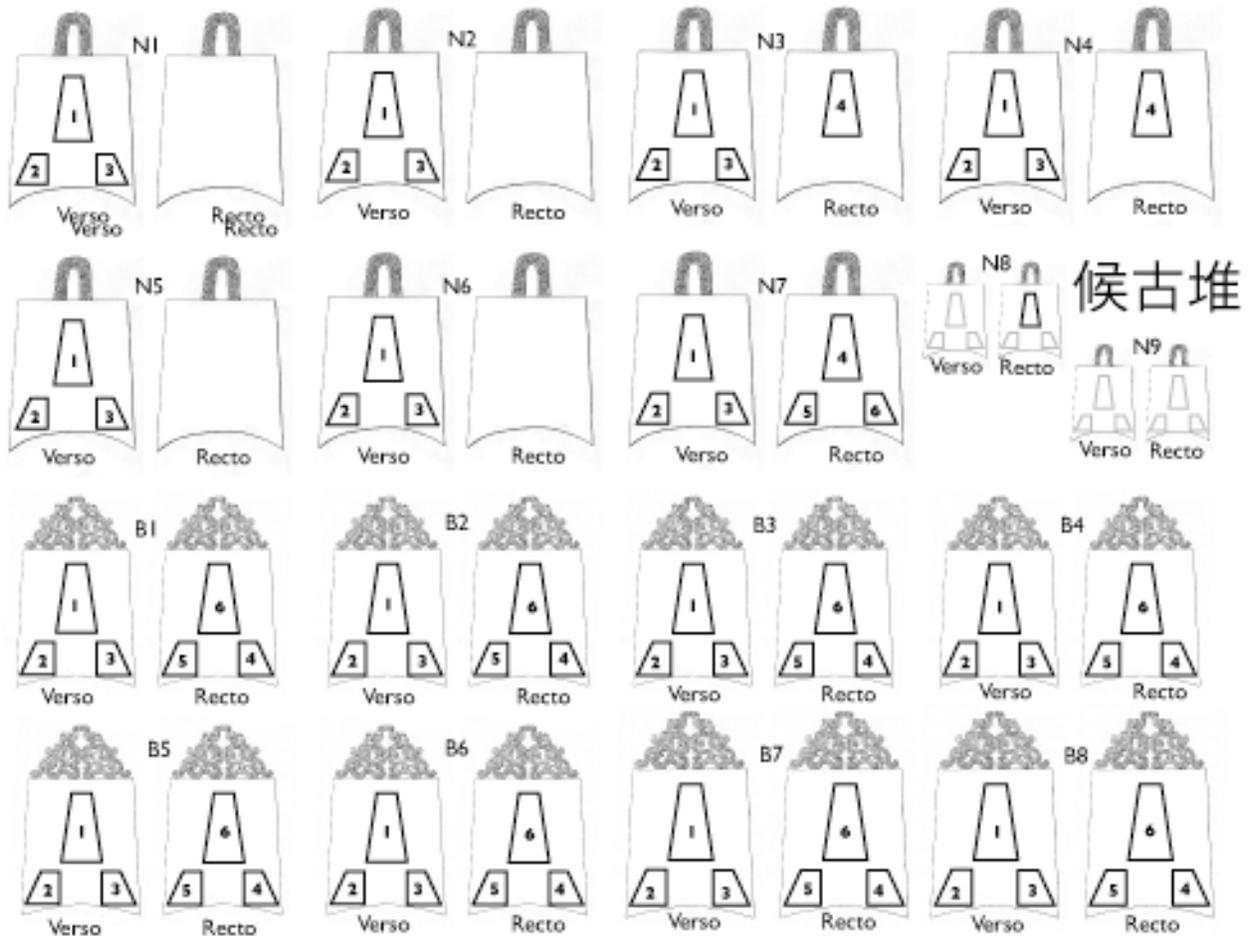
The Hougudui bells (Fig. 7) were unearthed in 1978 in Gushi 固始 city, Henan, and have roughly been dated to the 6th or 5th centuries BC.¹⁷ Included in the primary tomb were 9 *niu* 鈕 and 8 *bo*, surrounded by the remnants of a double-tiered rack with the *niu* likely on the bottom level. The identify of the tomb occupant remains unclear, but the inscriptions on the bronzes in the tomb identify their owner as prince of Fan. Whether or not this identification is borne out by future evidence, there are some personal names scratched off some of the bell inscriptions implying that the set may have been assembled in a piecemeal fashion. Among the *niu* with the prince's name cast directly on the bells (N1 & N2) the reading order remains coherent. However, in the bells that have the name of the prince carved over what is presumably the original commemorated caster, the reading order changes.

In the first two bells, the inscription consists of two identical versions with the cast name of the prince, and N3 and N4 each contain one full variant stretching over two bells - N3 containing the replaced name. There are two and a half full versions of the text on N5, N6, and

¹⁷ Henan sheng wenwu kaogu yanjiusuo, 49-60. All subsequent dating estimates are made in conjunction with the archaeological report cited, and an average of dates in recent scholarship as cited in Falkenhausen, "The Waning of the Bronze Age: Material Culture and Social Developments, 770-481 B.C." in *The Cambridge History of Ancient China*, edited by Edward L. Shaughnessy and Michael Loewe (Cambridge: Cambridge University Press, 1999), 450-544.

N7 with the name scratched off completely. The inscription on the smallest *niu* is unintelligible. The text on the modified bells (N3 & N4) are similar in all other respects to the “complete” inscriptions on N1 & N2, except for the fact that the name is changed.¹⁸ As for reading

Fig. 7



progression, we see that a relatively uniform layout exists within the *niu*, whereas the *zheng* is consistently inscribed first, moves to the left *gu* and then the right *gu*. This continues on the recto as well. We see several different variants, each involving different ways of organizing the text. Note that this is consistent even among inscriptions that do not match, which is quite odd.

¹⁸ Henan sheng wenwu kaogu yanjiusuo, 53-54.

A comparison of this phenomenon with the *bo* is interesting. Seven out of eight *bo* (excluding B7) contain one continuous text, with the personal name again scratched off and replaced. With the exception of several characters, the message carried by the *bo* is almost identical to that assembled haphazardly on the *niu*, except that it is continuous and uniform. The order of the phrases is even almost identical. The inscription begins on the *zheng* panel of the verso side, follows to the left *gu*, crosses to the right *gu*, and then continues on the right *gu* of the recto side. It then follows through to the *zheng* over to end on the right *gu*. We note that the reading progression developed on the *niu* is entirely different from the *bo*.¹⁹ What are the implications of such a phenomenon?

Let's imagine for a moment that the prince of Fan - or whoever this assembled this set - started collecting bells with the *bo* set.²⁰ The bells may or may not have been used in a musical capacity at this point, but he scratches his name right on nonetheless - that's important. At some point, stimulated by contact with a neighboring country - perhaps Chu - he realizes what a bell set is supposed to contain to be either musically or visibly viable, and it isn't only *bo* bells. He is able to amass the resources to cast one matching pair, and through trade or conquest, he acquires others selectively so that while they do not match exactly, the inscription at least appears coherently inscribed from far away, and even if someone can read them, the key phrases are there, and they match what is on the *bo*. In short, the presence of such phrases and their visibility

¹⁹ Henan sheng wenwu kaogu yanjiusuo, 49-50.

²⁰ What exactly may have motivated the collection of bells remains unknown, but if we can imagine that some sort of ritual context factored into the relationship, there is some textual evidence that points at the ancestral temple itself serving as a focus of protective power from assassinations, attacks, and other dangers. Whether or not such beliefs were connected to the projection of authority as present *in or around* such locations is unclear, but it is possible that bells may have served as part of such a projection. For linkages of ancestral temples and what seems to be the protection of the spirits that inhabit them in Spring and Autumn period politics, see Mizuno Takashi, "Shunjū jidai no kunshu - Kunshu no satsugai, shūpon, horyo no kentō kara," *Shigaku* 71:2-3 (2002): 128-129.

on the bronze is what carried the authority the prince needed, and thus he did not need identical inscriptions on every bell.

Although this is purely hypothetical, it would suffice to explain several problems: 1) The discrepancies between a well-ordered set of bells and one apparently made from mixing and matching, 2) The significance of some kind of textual coherence in the set, and 3) How bells were organized in terms of visibility.

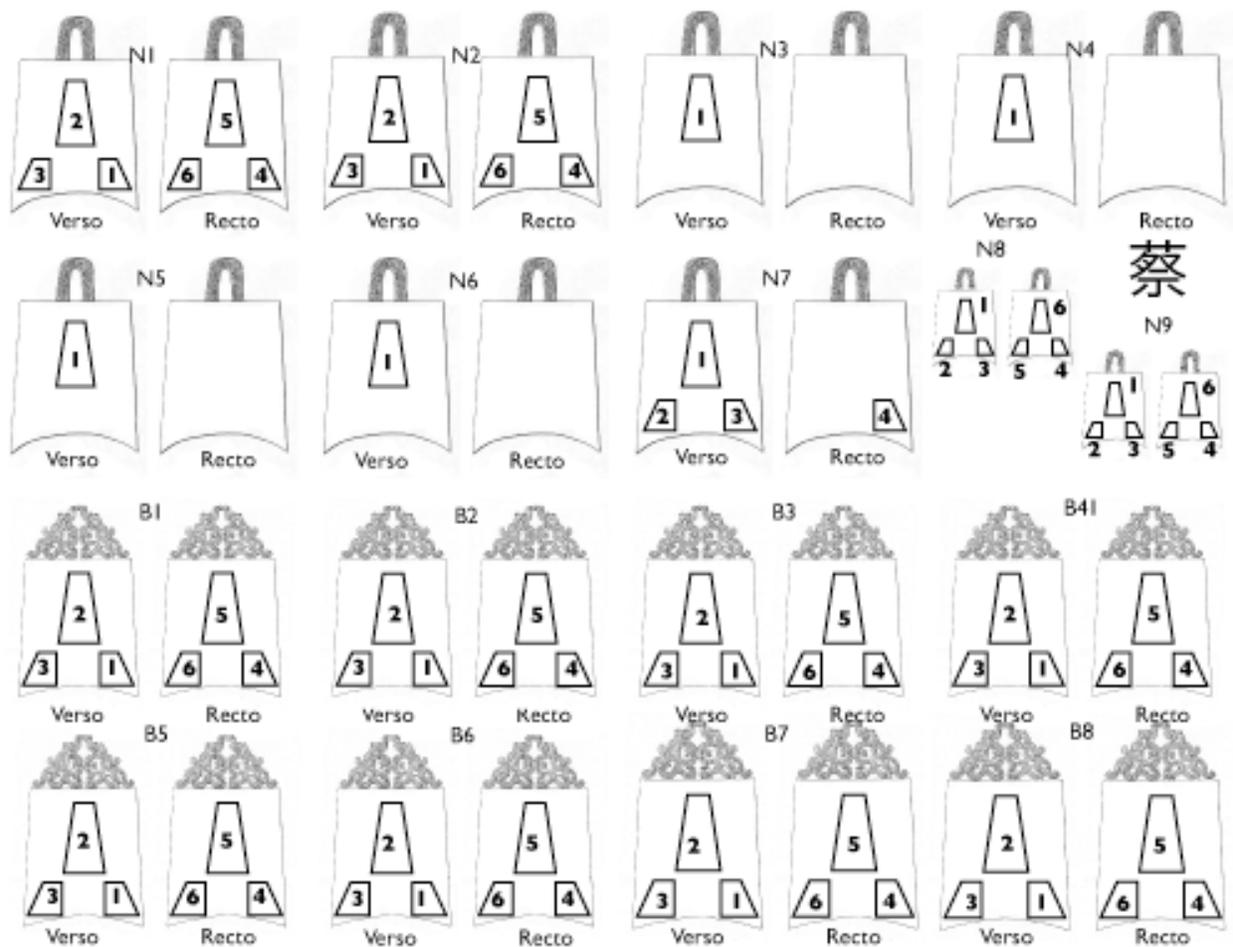
Marquis Shen of Cai

These bells supposedly belonged to Marquis Shen of Cai date from the 5th century BC, and consist of 12 *yong*, 9 *niu*, and 8 *bo*, with the inscriptions on all but the *yong* being fairly distinct (Fig 8, *yong* not included).²¹ The most coherent version of the text is on both the largest and smallest bells, as indicated here. The central four, on the other hand, each only contain a brief description of the caster and his casting of the bells. Given what we have seen in the Hougudui set, it is no surprise to discover a half version of the whole text from N1 & N2 - as well as all the *bo* - on N7, and, again, on the smallest bells - N8 & N9. In the complete version, we see a familiar textual form: The date, the personal proclamation of the Marquis, which is then followed by mention of allegiance to the king of Chu, support of his “heavenly mandate”, the caster’s merits, and instructions to descendants to treasure the bells. These phrases were highly repetitive. Therefore, to say the texts were impractical for frequent observance and consultation is probably right. However, saying that inscriptions were not meant to be read - but simply recognized - is very different from saying their use **had** to be exclusively religious or ritual in

²¹ Anhui sheng wenwu guanli weiyuanhui, 20.

nature.

Fig. 8



The distribution is listed on Figure 6. Both the complete and partial texts located on bells N1, N2, N8, N9, and the *bo* start from the right *gu* of the verso side and stretch into the *zheng*, over to the left *gu*, then intuitively slide over to the right *gu* of the recto side, continuing in the same order. If we venture here to assume that the *standard* textual layout for the Cai bells was for them to begin on the right *gu*, we would then think that the short inscriptions on the four “middle” bells should start on the right *gu* as well. Instead, the inscription here begins on an area of the object switches to begin on the *zheng* - or the area that made it most convenient for both close reading and recognition from a distance.

Why did the casters of the Cai bells not put complete versions of the inscription on the middle bells? I'm not sure, but based on the fact that Marquis Shen's name is mentioned on every bell, and we do not have any sign that the bells were mismatched, I might venture a guess that the Cai court cared less about emphasizing what the bells said than it was concerned with the text being visible. This implies that there was a reason for the text external to both direct reading and potential ritual considerations.

Wangsun Gao bells

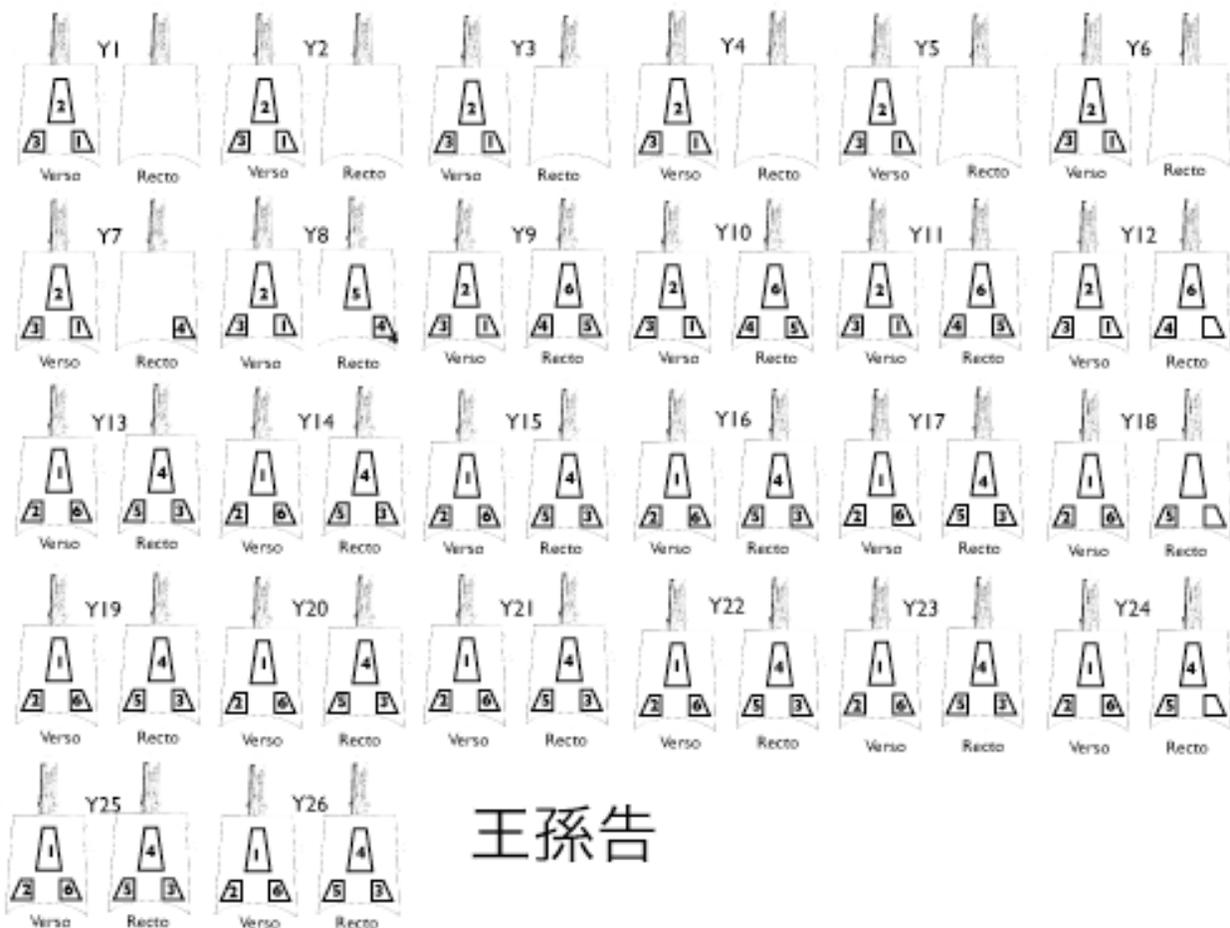
The 6th century Wangsun Gao set from Tomb 2 at Xiasi 下寺 consists of 26 *yong* bells, all of which carry versions of a single inscription (Fig. 9).²² The wording contains much of what we've already seen. The date appears, followed by the personal name of the caster. The proclamation of allegiance to the king of Chu (*jing shi Chu wang* 敬事楚王) occurs after to the sentences announcing their sound, and anterior to a very long self-laudation, which is very similar to the Cai bells. The king of Chu is mentioned twice - once near the beginning where we would expect - proclaiming allegiance - and once again in the bell dedication. Whether or not this proves that both the occupant of Tomb 2 and the occupants of the tomb complex were directly related to the Chu royal "family" is anyone's guess, but in reference to set coherence, the textual layout is quite revealing.

The first six bells of the set - which are also the largest - contain inscriptions only on their verso face. Each contains a full version of the text, following directly from the beginning on the right *gu*, sliding to the central *zheng*, and ending on the left *gu*. The spaces between characters remain quite uniformly spaced while it remains restricted on the verso side - even though Y6 is

²² Henan sheng wenwu yanjiusuo, 140-179. For dating, see 318-319.

more than a third smaller than the first bell - (120.4 cm vs. 79.7 cm). On the next two, the inscription begins to wrap around the bell to the right *gu*, extending only to the *gu* on Y7 and all the way to the recto *zheng* on Y8, which itself is exactly half the size of Y1 (60 cm). At this point in the sequence, the inscripational layout *switches* to a new distribution. Starting on Y9, the beginning of the inscriptions shifts to the *zheng*, which is similar to what we observed on the Cai bells holding shorter inscriptions.

Fig. 9



On these bells, however, the inscription is not shorter. It is also not being crammed onto spaces beyond the visible range, as it is on Y1 of the Qin Gong set, if you recall. Instead, the entire inscription is packed tighter and tighter onto bells Y9 through Y12, until Y12's height of 50

centimeters - which, I remind you, is less than half the size of the largest bell - seems to be recognized as the limit to which the inscription can be both fit onto the bell and appear in a readable manner. Instead Y13 through Y26 begin to group their inscriptions together into coherent groups of three, all of which both begin and end on the verso face, as well as carry evenly divided character count and distributions. I believe all of these factors suggest that they were arranged in a manner strongly rooted in both symmetry and visibility.

Even this exceptional set- in all of its size and inscriptional coherence - shows that textual distributions and inscriptional layouts vary widely within a group sharing inscriptions, and yet still seem constructed and formed primarily with human observation in mind.

Marquis Yi of Zeng bells

Now, I'd like to briefly turn our attention to the set I've already had up here a few times, and that is, of course, that contained in the tomb of Marquis Yi of Zeng (Fig. 10 - Partial). Although limits on our knowledge regarding their exact use remain, their discovery in a pre-arranged state give us a slightly more clear picture of how they may have appeared in a historical context.²³ As many scholars have pointed, the *Zeng yong* inscriptions are truly the only example we have of bronze bells being textually linked to music.²⁴ The science of these inscriptions has received a fair amount of attention of scholars in both China and the West, yet in regard to whom these inscriptions were important, there are still many questions that remain unanswered. In short: were the bells equally as valuable as visual objects as they were musical objects?

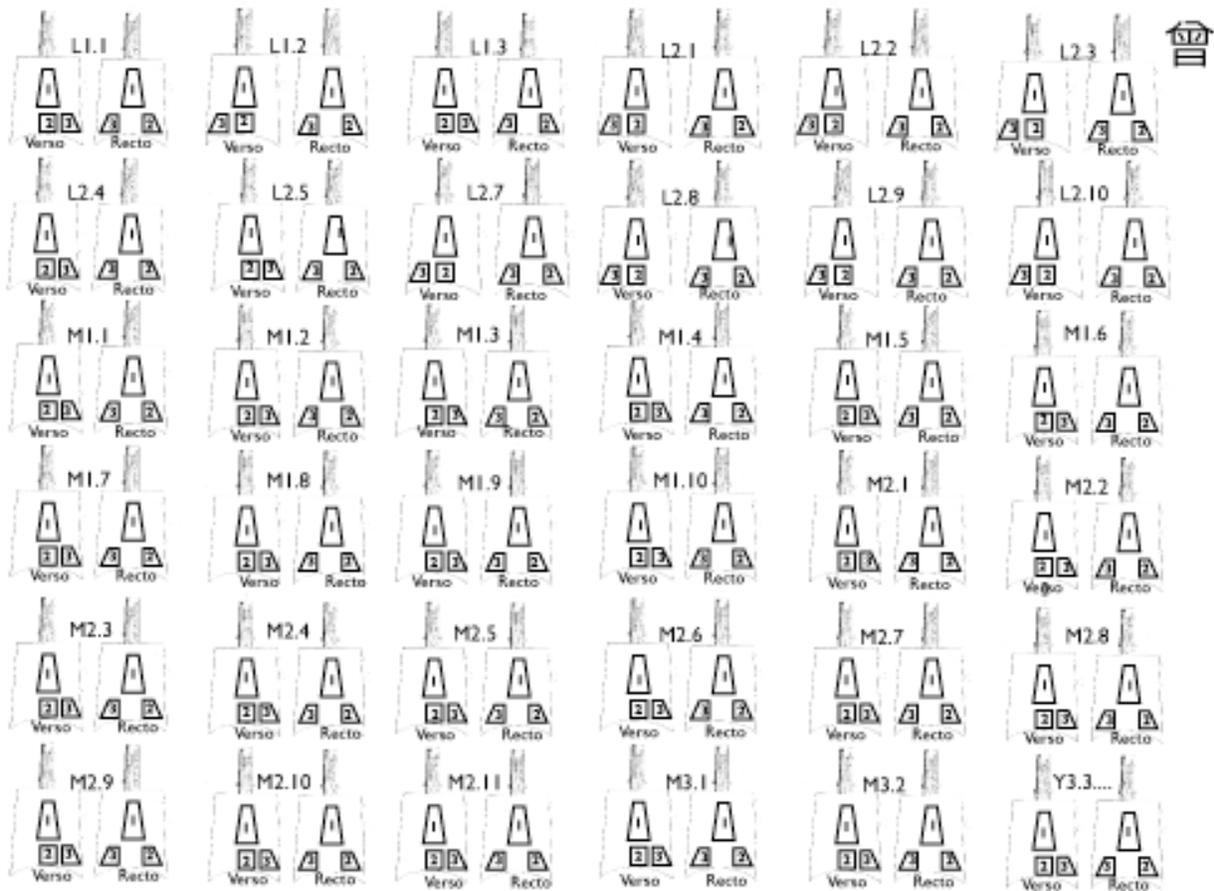
As we've touched upon in some of the talks so far, the placement of the *yong* on the rack is simply not conducive to easy viewing from both sides. Moreover, the basic notation

²³ For the section of the archaeological report that discusses the bells, see Hebei sheng bowuguan, vol 1., 76-118.

²⁴ For a discussion of the bells, see Hebei sheng bowuguan, vol. 1., 532-582.

information - in addition to the repetitive phrase “Marquis Yi of Zeng made these (bells for himself)” (*Zeng hou Yi zuo zhi* 曾侯乙乍 (作) 時(之)) in the *zheng* - is located on the

Fig. 10



verso face (presumably facing the player) while the notational equivalents are listed on the opposite. Even if we can conceive of an experienced bell player needing to use notational conversion in the middle of a performance, he would literally have to walk around the rack and duck under the tilted side of the bells to read the inscription. Thus, we must conclude that even in a unique case when bell inscriptions like those of Marquis Yi lack the familiar formulas we’re used to in inscriptions, a display purpose external to directly practical use seems inherent.

As would be expected in a bell set as intricately organized as that of Marquis Yi, there is relatively little variation. If we examine the sides on which the theory is written, we quickly notice that it is laid out in a way that is intended to fill space efficiently and still remain quite symmetric. If the grand aim of such inscriptions was to display the mastering of certain musical principles, then we certainly must consider that an audience would have been able to understand and comprehend the implications of such a collection - which is a tall order, to say the least. Suffice to say, the inscriptions on the Zeng bells complicates what we know about the legibility and rote nature of bell inscriptions, but their complexity does suggest that their visual impact to potential viewers might have been much more important to the Zeng court than any sort of musical apparatus could have been to the few people that were capable of understanding it.

One feature in particular stands out as unique among the generally uniform Zeng inscriptions, and that is the inversion of the tone markers signaling the alternate “B” tone on the bells from the right side of the verso face to the left side (L1.2, L.1.3, L2.2., L.3.3, L2.7, L.2.8, L.2.9, L.2.10). On these bells, all musical notations remain identical on the verso side of the bells, yet there is seemingly little reason why these bells would contain these odd ducks, and even less why they would be stuck on the lower level only. The reason for this is unclear, but it does at least show that even in an inscription with relatively few visible discrepancies, some amount of asymmetry exists.

Comparative Contexts

I’ve tried so far to show some aspects of inscriptions that seem to reflect concerns for visibility, reading order, and coherence within a set display. In short, the visibility of inscriptions was important. Even a statement like this, however, brings up more questions. “Display” itself is

a problematic concept in most contexts.²⁵ What exactly do we mean when we apply it to bell and ritual culture in general? How does it relate to larger problems like reading and even just plain comprehensibility? Did casters integrate old bells into new sets for musical purposes while they had only been showpieces before?²⁶ We can't really know for sure, but if we imagine how an elite observer of the Eastern Zhou might have incorporated the display of a set into the writing that he might later put on bells of his own commission, it's not hard to think about how similarities in bronze inscriptions appear the way they do.

The stelae of Sehetepibre and Mentuhotep are two Egyptian epitaphs contained at the temple of Abydos, both dating to the Twelfth dynasty, or roughly 2000 - 1800 BC (Fig. 11).²⁷ Both were royal officials, with the former living almost a century after the latter.²⁸ Sehetepibre's stele is quite famous in Egyptology primarily for its elegant diction, which finds a good amount of imitation in the century after its composition.²⁹ The stele provides a long exhortation of the deceased's own virtue, an appeal to the living to emulate his virtue, and instructions to descendants to value it - all phrases we're not exactly unfamiliar with at this point. The second

²⁵ John Baines makes the case that the integration of writing and representation likely figured into the initial use of writing for ownership. Also key was the fact that those who had writing always had access to display to a larger audience, while those who did not have the former never had the latter (non-elites). See his *Visual and Written Culture in Ancient Egypt* (Oxford: Oxford University Press, 2007), 282.

²⁶ The orchestrator of such a collection may indeed been the sort of person responsible for the theory on Marquis Yi's bells in the first place. See Bagley, "The Prehistory of Chinese Music Theory," *Proceedings of the British Academy* 131 (2005), 81.

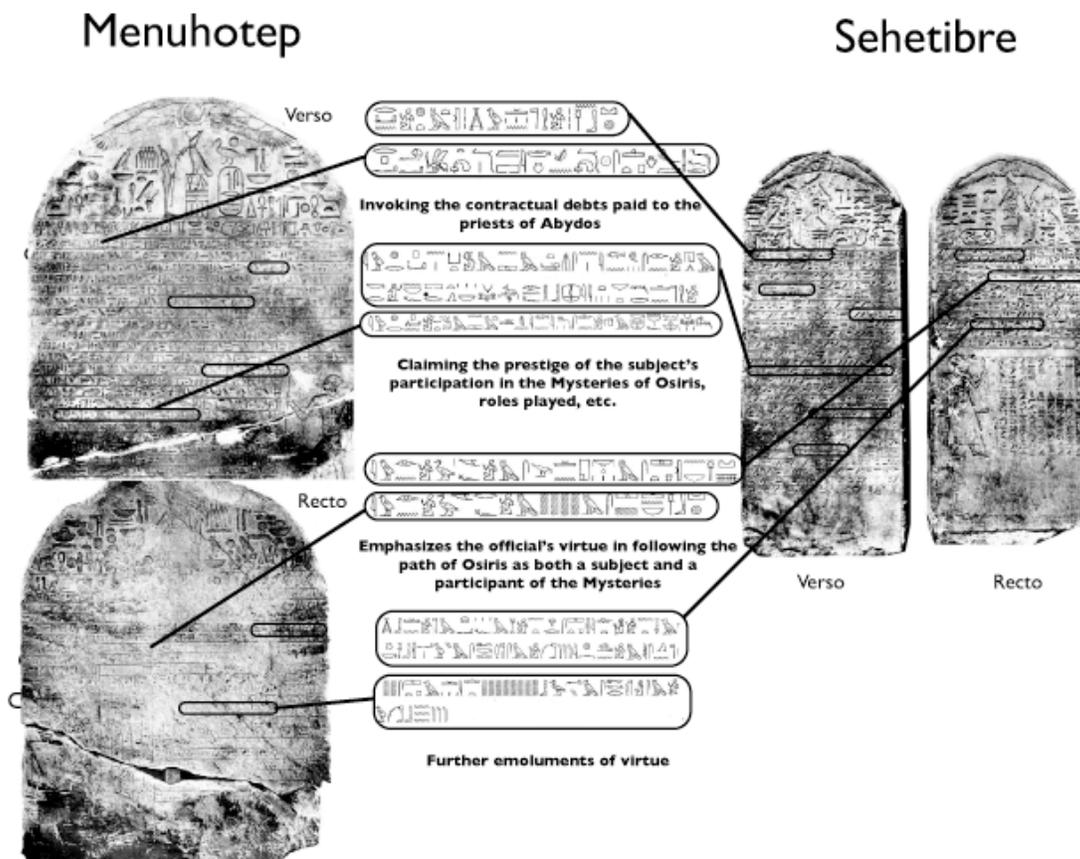
²⁷ Figures reproduced from Kurt Lange and Heinrich Schäfer, *Grab und Denksteine des Mittleren Reiches im Museum von Kairo*, vol. 2 (Berlin: Reichsdruckerei, 1908), 145-50, 150-158 & K. Lange and H. Shafer, *Grab und Denksteine des Mittleren Reiches im Museum von Kairo*, vol. 4 (Berlin: Reichsdruckerei, 1925), pl. 40, pls. 41-42.

²⁸ A. Kamal, "The Stela of [Sehetepibre] in the Cairo Museum" *Annales du Service des Antiquités de l'Égypte* 38 (1938): 265-83; W.K. Simpson, "Mentuhotep, Vizier of Sesostri I, Patron of Art and Architecture" *Mitteilungen des Deutschen Archäologischen Instituts Abteilung Kairo* 47 (1991): 331-340.

²⁹ Ronald J. Leprohon, "The Stela of Sehetepibre (CG 20538): Borrowings and Innovation," in *Archaism and Innovation: Studies in the Culture of Middle Kingdom Egypt*, W.K. Simpson and Josef Wagner, eds. (Boston: Peter Der Manuelian, 2009), 277-294.

monument is located nearby the former, and the extent to which it imitates and borrows the vocabulary of its predecessor has long been noted in philological analysis. The pattern of such borrowing in this instance, however, is unique for the fact that it seems to point at the method in which the composer of the text read the stele, which may have been by walking around the object, verso to recto, reading and either copying or memorizing the phrases he felt appropriate to his own epitaph, which he then arranged in a similar order.³⁰

Fig. 11



³⁰ Oral aspects may have very well factored into the composition of eulogy texts. See Simpson, 290. For the way oral transmission contributed to the construction of inscribed texts in the context of early China, see Kern, *The Stele Inscriptions of Chi'n Shih-huang: Text and Ritual in Early Chinese Imperial Representation* (New Haven: American Oriental Society, 2000), 94-104 & Wolfgang Behr, "Reimende Bronzeinschriften und die Entstehung der chinesischen Endreimichtung" (Ph.D diss.: J.W. Goethe-Universität, 1997).

I have highlighted a few of the many borrowings, all of which emphasize the way the text was used as a model. What is notable here is not only the ability of those composing these texts to adapt existing inscriptions to their own purposes, but also the way in which display and the reading of a display may have affected the construction of similar objects.³¹

But what about those who couldn't read inscriptions? Similar debates to ours over the readability of inscribed objects in early China also rage in classicist scholarship, the object of which is these: Roman legal code transcribed onto bronze tablets (Fig. 12)³². Traditional interpretation attributes the plaques to having served an archival role, in which they were freely available for consultation - in public - representing the common foundation of the laws put forth by the senate and its lawmaking bodies. There are two problems with this interpretation, however, and they're similar to criteria used when talking about the viability of bronze inscriptions for reading. One, the inscriptions themselves were difficult to read, the lettering was cramped, and they were simply not

suitable for convenient consultation. Two, a separate writing tradition existed alongside the bronze record in the form of parchment, and wax tablets. Those who needed to use legal language in a practical way certainly consulted manuscript copies



Fig 12

³¹ Such considerations of reading and (possibly oral) replication - or vice-versa - need not exclusively apply to large-scale “display” objects with text. There are many examples in the cuneiform tradition, for example, that reflect the gradual division of writing into smaller sections of text, reflecting both prosodic breaks and the division of what may have been oral or mnemonic breaks. For annotated examples of these tablets in an Assyrian context, see David Heinrich Müller, *Die Propheten in Ihrer Ursprünglichen Form* (Alfred Hölder: Vienna, 1896), 1-19.

³² Figure taken from VROMA, “Index of Images, Part XI: Barbara F. McManus. Latin Inscription on Bronze Tablet , Recording the Senatus Consultum de Bacchanalibus,” VROMA, <http://www.vroma.org>.

of the law codex or a similar document for such purposes.³³ Instead, the plaques likely served as symbolic and ceremonial displays of the enduring nature of the laws inscribed upon them.³⁴ Their authority was thus inherent to the medium. The nature of the Roman monument is, of course, much different in terms of context than what we are talking about when we speak of bells. However, the gap between practical writing and symbolic writing is crucial to working toward an understanding of bronze inscriptions as a whole.

These comparisons are certainly not intended to imply close associations in terms of context. They is also not intended to imply that objects like bronze bells found specifically in Zhou China are exactly the same as public monuments. I have demonstrated the above in hopes of challenging some of our conceptions of how inscribed bronze bells were cast and why they were as important as they appear to be in the archaeological record. As the Zeng Hou Yi slips show, just because bells are almost always found in tombs does not mean that the internment of the bells itself was not also a spectacle with an audience - which would imply that those who saw the bells knew that they were important. The fact that they were bronze and - inscribed bronze at all - likely figured into that relationship.

We must also not discount the role of inter-state relations in the lives of the Spring and Autumn period elite.³⁵ Even if the extent to which Chu enveloped territory was not as grandiose as the received texts have claimed, the large presence of weapons and other battle implements in Spring and Autumn era tombs suggest a time in which interaction with potential enemies was

³³ Callie Williamson, "Monuments of Bronze: Roman Legal Documents on Bronze Tablets," *Classical Antiquity* 6.1 (Apr., 1987), 160-164.

³⁴ Williamson, 167.

³⁵ Emura Chirō, "Shunjū jidai no "kokusai" chitsujo ni tsuite - so no genri to shisosetsu," *Jūkan dōyōgaku* 87 (2002), 2-5.

constant, and although the holding of actual strength was undoubtedly important, so must have been the ability to project such strength. If we continue to keep in mind that the most common outwardly inscribed objects in this period were bells and weapons, the relationships between such displays of power and the role of inscriptional content may one day become clear.

Conclusion

To conclude: If I may re-emphasize one notion that comes up repeatedly in discussions of bells, it is simply that one theory does not exist that explain all of the roles they were meant to perform. We may suggest - based on content and their musical functions - that their use was confined to ritual considerations seemingly critical to aristocratic life at the time. However, we must not let such ritual considerations blind us to the human aspect of ritual and visual experience. Moreover, we must not let them override the qualities of display that have - since long before bells were cast - taught our eyes and brain what to see as significant and comprehensible in reading, interpretation, and reproduction alike.

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