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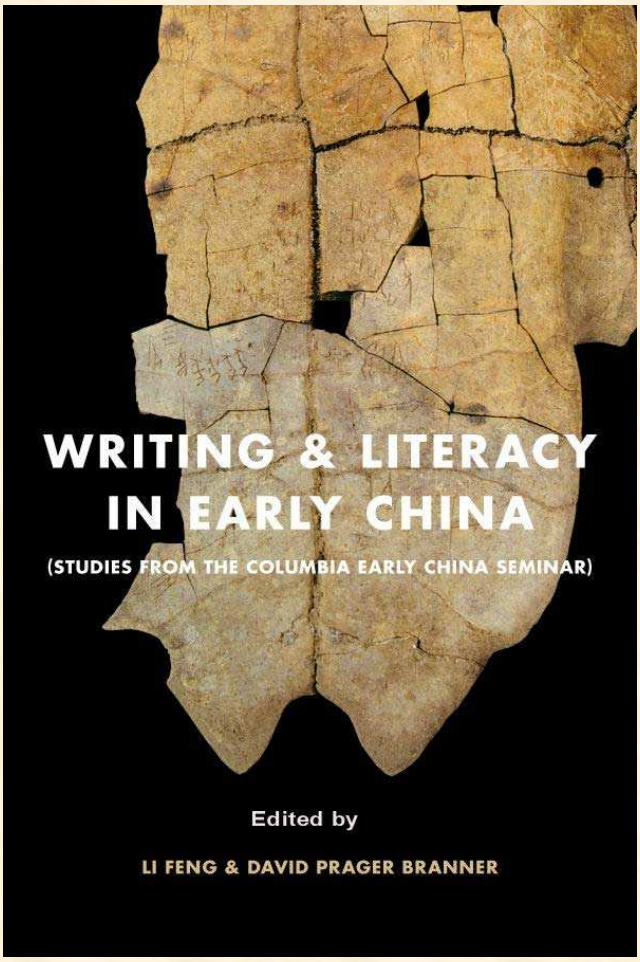

Writing and Literacy in Early China examines a topic of international importance: the emergence and spread of literacy in ancient human society. Writing arose separately in Mesopotamia, Egypt, Mesoamerica, and China, and it is widely acknowledged that modern Chinese orthography preserves logographic principles shared by its most ancient forms three thousand years ago, being unique among all the known writing systems in the modern world. In the past three decades, the discovery of previously unknown texts dating to the third century BCE and earlier as well as older versions of transmitted texts has revolutionized the study of early Chinese writing.

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Writing & Literacy in Early China

Studies from the Columbia Early China Seminar

Edited by
Li Feng and David Prager Branner

Contents

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CHAPTER 5

The Evidence for Scribal Training at Anyang

Adam Smith

Determining the functional, geographic and social range of literacy during the Anyang period (circa 1300–1050 B.C.E.) remains a difficult problem. The same could be said for literacy during the preceding five hundred years (if there was any at all) and subsequently during the Western Zhou and Spring and Autumn periods. Evidence for late-second-millennium Chinese literacy is overwhelmingly dominated, numerically speaking, by records of divination from inside the moated elite enclosure at the Late Shang site complex at Anyang. Does this salience of the divination record among attested text genres tell us something about the uses to which literacy was put? Or is it an accident of preservation and discovery?

Writing and Scribal Training at Anyang and Their Mesopotamian Parallels

There are many approaches to the question of literacy during the Anyang period, but one can simplify matters by considering where a particular theory of Shang literacy falls on a continuum between the two imaginary extreme viewpoints. The first extreme conceives the Shang world having a population of more than a thousand literate individuals, deploying their skills not just at Anyang but also at relatively minor centers, managing the flow of raw materials, grain, and manufactured goods, communicating royal pronouncements, transmitting diplomatic correspondence to neighboring kingdoms, and registering the population of Henan, Hebei, and Shandong for the purposes of taxation, forced labor, and military service. The other extreme imagines a literate population of less than a dozen individuals, all in the immediate entourage of the Shang king and

his family, based at Anyang but participating in excursions outside, and preoccupied with documenting divination, scheduling sacrifices, and occasionally labeling ritual implements and expensive gifts. In this chapter, these extremes will be referred to as the "maximal" and "minimal" hypotheses for Late Shang literacy.

Drawing extensively on previously underexplored parallels with other early traditions of literacy, Robert Bagley has recently articulated an account of Chinese literacy in the second millennium that lies closer to the maximal extreme of literacy than to the minimal.[1] Although there is support for an alternative point of view lying closer to the extreme of minimal literacy,[2] the question is not at all close to being resolved. Exploring the detailed implications of the two competing hypotheses, and testing them against the evidence that is available, should continue to motivate research. The continued and growing preponderance of divination records on bone and shell is not, in itself, simple evidence one way or the other. Each hypothesis accounts for that preponderance in different ways. Instead, we need to seek out evidence that is accommodated and explained better by the implications of one hypothesis than by those of its competitor. The proposition here is that the evidence relevant to scribal training is more in keeping with the minimalist account. The evidence is also of considerable intrinsic interest and has previously attracted less attention than it deserves.

Bagley states that we lack "the smallest archaeological clue to how Wu Ding's diviners acquired their literacy."[3] This is to make an implicit claim about the nature of what are known in the Chinese-language literature as *xíkè bǔcí* 習刻卜辭 'practice-engraved divination records' that are

I would like to thank two anonymous reviewers, Lothar von Falkenhausen, Adam Schwartz, Ken-ichi Takashima, Crispin Williams, and the organizers of and participants in the Early China Seminar at Columbia University for their contributions to this chapter. Research was supported by the Cotsen Institute of Archaeology, University of California, Los Angeles, and a Henry Luce/ACLS East and Southeast Asian Archaeology and Early History Dissertation Fellowship (2006).

1. See Bagley, "Anyang Writing," 190–249.
2. See Smith, "Writing at Anyang."
3. See Bagley, "Anyang Writing," 221. Since diviner names occurring in divination records do not correlate one-to-one with the writing styles of the records, we know that it was not consistently the diviners (in the conventional sense of *zh--ēnrén* 貞人) who inscribed the records of their own divinations. See Keightley, *Sources of Shang History*, 48–49. Strictly speaking, we have no evidence that diviners (in general) were literate at all. In this chapter, however, I will make a tentative identification of a named diviner with a scribal trainee.

abundantly attested in the published corpora. We will assess this implicit claim below. "We depend on comparative evidence," Bagley continues, "to remind us that literacy is the result of schooling." The comparative evidence he adduces includes the curricular use of "myths, hymns to gods and kings, and dialogues" and accounts of Mesopotamian school life including Kramer's well-known "Schooldays" translation.[4] The claim, then, is that since the cuneiform tradition in Mesopotamia had schools (in the narrow sense of a building housing specialist instructors and offering a curriculum based around literary texts), so, too, did Anyang. According to Bagley, the absence of any remains of written exercises from such an institution is to be explained by — and indeed taken as evidence for — the massive failure of Anyang-period writing to be preserved on perishable media, as required by the maximal model of second-millennium Chinese literacy.[5]

The problem with this line of argument is that it compares evidence from very different points in the evolutionary history of the two literate traditions and so generates a potentially misleading comparative expectation. The depiction of the Mesopotamian "tablet-house" in "Schooldays," for instance, postdates the first attestation of cuneiform literacy by considerably more than a thousand years.[6] It thus invites comparison with the Han period rather than the Chinese second millennium. Exact parallels are readily found in the biographies of Han literati preserved in transmitted literature. See, for instance, the account of Wang Chong's education in the early first century.[7] At age eight, he joined more than a hundred other children in a local "writing hall" (*shūguǎn* 書館), where ugly writing "earned a whipping," before advancing to the study of difficult old literary texts and then an administrative career. Is there any good reason to think that the comparative parallel holds good for the earliest attested stage of Chinese literacy?

Sumerian literature, as Bagley notes, "has come down to us in the form

4. Samuel Noah Kramer, "Schooldays: A Sumerian Composition Relating to the Education of a Scribe," *Journal of* the *American Oriental Society* 69.4 (1949): 199–215.
5. Bagley, "Anyang Writing," 222.
6. Kramer, "Schooldays," 199, 213 n. 220.
7. See *Lunheng* 論衡, by Zhang Heng 張衡, *Sibu beiyao* edition (Taipei: Zhonghua Shuju, 1965), 30:1. For schools and the transmission of literacy during the Han period, see "Soldiers, Scribes, and Women: Literacy among the Lower Orders in Early China," by Robin D. S. Yates, chapter 10 in this volume.

of schoolboy exercises."[8] However, it has done so primarily as the debris of Old Babylonian (2000–1600 B.C.E.) scribal education,[9] and not from scribal training activities of the Late Uruk period (late fourth millennium), the period when cuneiform is first attested. Again, the Old Babylonian materials are a fruitful source of expectations about the developed state of literate and literary education during the Han period, expectations that are substantially fulfilled by what is known about the place of the *Book of Poetry* (Shijing), the *Book of Documents* (Shangshu), and Warring States literature in the higher scribal curriculum. But unless there is reason to think that the earliest literacy in China predates the Anyang period by close to a millennium, arguments about the form Anyang scribal training took that are based on Old Babylonian parallels should be regarded with suspicion.

If we were to take the evidence for scribal training from the Late Uruk period as our point of Mesopotamian comparison, we would derive a different set of expectations. The Late Uruk period provides no evidence for the existence of schools, in the sense of institutions where specialist instructors taught writing away from the context of its everyday use. Nor is there any sign of a curricular role for "myths, hymns to gods and kings, and dialogues." Rather, Late Uruk "school texts" (if we want to force that name on them) are very narrowly focused on the founding genre of the cuneiform tradition, namely, the administrative accounting text.

Englund describes several examples of practice accounting texts from Uruk.[10] The lexical lists are the most frequently discussed texts with a possible pedagogical function.[11] Although they are likely to have been elaborated beyond the needs of everyday administration as part of what Veldhuis refers to as their compilers' systematizing "drive to be complete,"[12] their categories — official titles, vessels and their contents, manufactured objects, livestock and other animals, and place-names — are

8. Bagley, "Anyang Writing," 221.
9. Niek Veldhuis, *Elementary Education at Nippur: The Lists of Trees and Wooden Objects* (PhD diss., University of Gröningen, 1997), sections 2.3-2.4:23–67.
10. Englund, "Texts from the Late Uruk Period," 106–10, 188–92.
11. Englund, "Texts from the Late Uruk Period," 82–110. For parallels between the Mesopotamian and later Chinese use of lexical lists, see Wang Haicheng, "Writing and the State in Early China in Comparative Perspective" (PhD diss., Princeton University, 2007), 328–36.
12. Niek Veldhuis, "How Did They Learn Cuneiform? 'Tribute/Word List C' as an Elementary Exercise," in *Approaches to Sumerian Literature in Honour of Stip (H.L.J. Vanstiphout)*, ed. Piotr Michalowski and Niek Veldhuis (Leiden: Brill, 2006), 189.

nevertheless those required for contemporary bookkeeping. Perhaps most remarkable is the so-called Word List C, of which fifty-six (fragmentary) witnesses survive from Uruk.[13] The text is organized around two verbatim presentations of a mundane list of quantified commodities: five units of salt, five ducks, one suckling calf, four metal knives, ten units of milk, and so forth. The habituating repetition of this text by trainee accountants propelled its conservative replication through the curricula of the Early Dynastic and Ur III periods, into the Old Babylonian, transforming the elementary scribal exercise into "a piece of venerated [and 'rather opaque'] traditional knowledge."[14]

If we were to assume that Anyang literacy, the earliest attested stage of Chinese writing, could be better approximated by the earliest attested stage of cuneiform literacy than by the activities of the Old Babylonian scribes, we would expect Anyang scribal training to be tightly focused on techniques for learning a narrow range of text genres around which the writing system first evolved. If Chinese literacy first emerged in the context of the routine performance by Shang kings of sacrifice, divination, and elite gift exchange, as the minimalist account of early Chinese literacy sketched above proposes, we would expect trainee scribes to concentrate on directly relevant text genres. It would be surprsing to find a curriculum with a free-floating scholastic rationale, dominated by literary texts.

Drawing a simple analogy between literacy at Anyang and the Late Uruk period is itself not unproblematic. In contrast to the case of proto-cuneiform, whose emergence from precursor non-literate accounting techniques can be traced with considerable chronological precision, it is not known exactly how long writing was in use prior to the reign of Wu Ding. The Anyang inscriptions' widespread use of phonetic determinatives in compound signs and complex natural-language syntax (both of which are absent from Late Uruk period proto-cuneiform) certainly suggest the possibility of development from a prior script stage. Nevertheless, the point here is to stress the inadequacies of an Old Babylonian model for literacy acquisition at Anyang. Selecting a different point of comparison within the cuneiform tradition generates very different expectations.

13. Of the thirteen multiply attested (i.e., standardized) lexical texts in proto-cuneiform, "Word List C" is third in frequency, after the "Professions" list (Lu A), and the "Vessels" list; see Veldhuis, "How Did They Learn Cuneiform?" 186.
14. Veldhuis, "How Did They Learn Cuneiform?" 196.

Anyang "Schools" and "Learning"

A number of recent works have summarized inscriptional evidence for the existence of "schools" at Anyang, sometimes suggesting that they may have been places for literacy training,[15] and it is useful to review the evidence and its interpretation here, since in several cases. the summaries are inadequate and misleading.

The evidence concerns usage in the Anyang divination records of various graphs related to the received forms 學 and 教.[16] This range of graphic variation is not the issue here, so for typographical convenience, all graphs in this group will be written as 學. It is likely that many instances of these graphs are writing members of the word family that includes 學 *xué* ~ *xiào* 'to learn; to instruct'.

HJ: 8304 and HJ: 16406, a pair of small Wu Ding period plastron fragments with almost identical inscriptions in the same hand, are credibly taken as indicating that 學 can also write a noun, "school," possibly referring to the construction of one (*zuò xué* 作學). In isolation, this is exceedingly weak evidence for a place of literacy training. Several of the above-mentioned authors omit to mention the inscription on TN: 60, in which *dàxué* 大學 appears to be a candidate location for an obscure ritual procedure, as an alternative to other public structures.[17] Whatever the nature of this *dàxué*, there is a prima facie case for lexical and cultural continuity with the *xiǎoxué* 小學 and *tàixué* 大學 of much later received literature. Some further support is provided by two Western Zhou occurrences of *xiǎoxué*, possibly referring to a place of education or training (JC: 2837, JC: 4324-5). *Xué* 學 could possibly be a noun in HD: 181 (*wǎngxué* 往學 'to go to the *xué*') and in HD: 450 (*rùxué* 入學 'to enter the *xué*'), but these examples could equally be verbs (i.e., 'to go to learn,' 'to go in and learn'). That is the limit of the evidence from Anyang

15. Oliver Moore, Chinese (Berkeley: University of California Press, 2000), 25; Song Zhenhao 宋鎮豪, "Cong jiaguwen kaoshu Shangdai de xuexiao jiaoyu" 從甲骨文考述商代的學校教育, in Wang Yuxin et al., eds., 220–30; Wang, "Writing and the State," 322; Thomas H. C. Lee, *Education in Traditional China: A History* (Leiden: Brill, 2000), 41; Yang Kuan 楊寬, *Xi Zhou shi* 西周史 (Shanghai: Shanghai Renmin Chubanshe, 2003), 664.
16. To avoid lengthy paleographic descriptions of signs, I simply refer the reader to the literature collected in *Gulin*; see GL: numbers 3230–3233.
17. For the procedure, see discussions under GL: 1036.

for the use of *xué* 學 as or in a nominal phrase referring to an educational institution.

We must also exclude HJ: 3250, which provides no support for the existence of institutionalized literacy training, despite its being often mentioned in discussions of the issue. The following is a loose transcription and partial translation of its divinatory proposition:

> 多子其延學疫，不遘大雨。
>
> If the Many Children continue practicing X, they will not run into heavy rain.[18]

The only uncertain point of interpretation is the graph *yì* 疫, which is left untranslated.[19] There is no hint, however, that this inscription concerns literate education. Anyang diviners' concern with the prospects of rain is often connected with group activities performed in the open air, including rituals in ceremonial spaces. The concern in HJ: 3250 is probably whether rain will disrupt the practice of some such open-air activity.

This connection between the verb *xué* 'to practice' and group performances, specifically of dance or music, rather than literacy, is supported by records from Huayuanzhuang Dongdi (花園莊東地) of divination for a patron who was probably one of the Many Children.[20] For example, in five records (on HD: 487, HD: 336, and HD: 150), 學 writes a verb with *shāng* (?) 商 as its object. The meaning of this *shāng* is not known, but Song Zhenhao has plausibly argued that it refers to a dance or musical performance.[21] There are also divinations about "continuing to

18. "Many Children" is an indicator of kinship, not of age. It seems to include, but may not be limited to, offspring of the Shang king, who need not have been what we would think of as school-age children.
19. Adam Schwartz (personal communication) has cautioned against taking *yì* 疫 as the object of the verb *xué* 學 'to practice', on the basis of a comparison with HD: 181, in which the two words occur in a different syntactic relationship. He tentatively suggests that 疫 may instead be a verbal complement, to be rendered something like 'to practice to exhaustion'.
20. The patron is referred to as *zǐ* 子 'Child'. For the identity of the patron, and his ancestry, see the discussion in Yao Xuan, *Yinxu Huayuanzhuang dong di jiagu*, ch. 3; Chen Jian 陳劍, "Shuo Huayuanzhang Dongdi jiagu buci de 'ding' " 說花園莊東地甲骨卜辭的丁, *Gugong bowuyuan yuankan* 故宮博物院院刊 114 (2004.4): 51–63.
21. Song Zhenhao, "Cong jiaguwen kaoshu Shang dai," 224–25.

perform *shāng*" (*yán zòu shāng* 延奏商, on HD: 86, HD: 150, and HD: 382) and about "dancing shāng" (*wǔ shāng* 舞商, on HD: 130). At one point, an inspection of the Child's dance by Wu Ding is anticipated ("Ding will come to observe Child dancing" *Dīng lái shì Zǐ wǔ* 丁來視子舞, on HD: 183). The central theme of Song's article is appealing: the importance attached to learning ritual music and dance seen in inscriptions from Anyang and the descriptions of music and dance in elite education in early received literature represent a significant cultural continuity.

To summarize, the examples of *xué* 學 in the divination records, including HJ: 3250 translated above, are substantially focused on performance activities of that kind. A survey of Anyang inscriptions must firmly conclude that there is no evidence that the Shang elite received a literate "schooling" and that no association can be made between the abundant instances of the graph 學 and literacy acquisition.

The Xíkè Practice Inscriptions as Evidence for Scribal Training

The *xíkè* 習刻 (lit., "practice engraved") inscriptions are a large and well-known subset of the inscriptions on divination bones and shells from Anyang, characterized by varying degrees of incompetent writing or other features that suggest that the scribe is not recording divinations but rather learning or practicing the skills required to do so.[22] The questions are: Which skills are being practiced? Is literacy itself among them?

Date Tables

There is a strong association between incompetent *xíkè* handwriting and certain categories of text content, most prominently tables of *gânzhî* 干支 cyclical dates. Matsumaru Michio classified 156 occurrences of these date tables from *Heji* according to how competent or otherwise the writing on them appeared, ranging from the "extremely immature" (which he labeled

22. Wang Yuxin 王宇信 and Yang Shengnan 楊升南, eds., *Jiaguxue yi bai nian* 甲骨學一百年 (Beijing: Shehui Kexue Wenxian Chubanshe, 1999), 254–55; Keightley, *Sources of Shang History*, 47, nos. 99–100. A useful catalog of *xíkè* inscriptions from Xiaotun South is provided in Yao Xiaosui 姚孝遂 and Xiao Ding 肖丁, *Xiaotun nandi jiagu kaoshi* 小屯南地甲骨考釋 (Beijing: Zhonghua Shuju, 1985), 197–206.

type A), through relatively inferior (B), to "normal" competence (C).[23] For example, among 129 examples of Period V date tables in *Heji*, Matsumaru found thirty-six examples of type A hands, sixty-eight of type B, and thirty-one of type C (with several instances of hands of differing competence appearing on a single bone). He proposed that the type C date tables were model texts for sight copying by students, and that types A and B were student copies, but without making any claim as to whether the students were acquiring literacy or merely engraving skills.

Guo Moruo was probably the first to write about these practice inscriptions, in a 1937 annotated catalog. He described a *xíkè* date table in the following terms:[24]

> The content [of CB: 1468=HJ: 18946] consists of the gânzhî for days 1 to 10 engraved repeatedly. In the fourth line of text, the graphs are finely written and orderly, as though engraved by a teacher (xiānshēng 先生) to serve as a model (fànběn 範本). The rest are crooked and inferior, as though written by someone learning to engrave (xuékè 學刻). This is no different from the method by which today's children practice writing (xízì 習字). Shedding light on the educational circumstances of three thousand years ago, it is of the utmost interest. Furthermore, interspersed within the columns written by the trainee are finely written graphs identical to those of the model, where presumably the attendant teacher took up the knife. Examples include the 辰，午, and 申 of the second line and the 卯, 己, and 辛 of the third.

There are two ways of interpreting this inscription, either as the remains of literacy acquisition (as arguably Guo seems to be doing) or as the remains of engraving practice by someone already literate. According to the first interpretation, the trainee was learning to write *gānzhī* dates. This would be a natural first exercise for a novice scribe. A *gānzhī* date is a standard component of a divination record and many other text-genres, and the various uses of the twenty-two *gānzhī* signs make up almost a quarter of the total graph-count of one corpus for which precise counts are

23. Matsumaru Michio 松丸道雄, "Jieshao yi pian sifang feng ming keci gu" 介紹一片四方風名刻辭骨, in Jinian *Yinxu jiaguwen faxian yibai zhou nian guoji xueshu yantaohui lunwenji* 紀念殷墟甲骨文發現一百周年國際學術研討會, ed. Wang Yuxin 王宇信 and Song Zhenhao 宋鎮豪 (Beijing: Shehui Kexue Wenxian Chubanshe, 2003), 83–87.
24. See CB: 1468.

readily available.[25] "Practicing one's *jiǎzǐ* " (*xí jiǎzǐ* 習甲子) remained a byword for acquiring the rudiments of literacy into the medieval period,[26] and *gānzhī* tables are among the most poorly executed examples of scribal training texts from the Han garrisons of the northwest frontier.[27] According to the second interpretation, the previously literate trainee already knew the *gānzhī* signs (as any literate person would) and was simply using them as a starting point for learning the engraving technique.

Both interpretations are possible, but the second has become the consensus. Consider, for example, Zhang Shichao's response to the remarks of Guo Moruo quoted above: [28]

> Prior to becoming engravers [of divination records], Shang people had to undergo a period of training. . . . the not inconsiderable number of practice inscriptions is proof of this. [Guo Moruo in his commentary on CB: 1468] did not distinguish learning to engrave from learning to write, and thereby invited misunderstanding. . . . the handwriting styles classified as practice inscriptions [*xíkè*] merely reflect the circumstances of learning to engrave. Those who were being trained to engrave would have previously mastered literacy skills.

No evidence or argument is offered for the final claim. One is left to fill in the reasoning that led to it, namely, that literacy during the Late Shang period was far more routinely performed on media other than those that are attested, that divination recording on bone and shell was an unusual specialization of literate practice that just happens to have been abundantly preserved, and hence that scribes would have first acquired the ability to

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25. According to the electronic transcription of the Huayuanzhuang Dongdi corpus presented in Smith, "Writing at Anyang," appendix II, 4,014 graphs out of a total of 16,990 are written with signs from the *gānzhī* repertoire. This includes usages of the twenty-two signs other than for dates and day names (*rìmíng* 日名).
26. "Anyone who has ever recited the *Jijiu* or practiced his *gānzhī* dates is wielding his writing brush and flourishing his literary talent, debating institutions and discoursing on the Way" (曾諷《急就》、習甲子者，皆奮筆揚文，議制論道). See *Jinshu* 晉書, "Xiahou Zhan liezhuan" 夏侯湛列傳, *Sibu beiyao* edition (Taipei: Zhonghua Shuju, 1965), 55:2.
27. See, e.g., Michael Loewe, *Records of Han Administration* (Cambridge: Cambridge University Press, 1967), 2:418–21; Gansu Sheng Wenwu Kaogu Yanjiusuo 甘肅省文物考古研究所, *Dunhuang Han jian* 敦煌漢簡 (Beijing: Zhonghua Shuju, 1991), item no. 841 (251, plate 80) and no. 1458 (274, plate 132).
28. Zhang Shichao 張世超, *Yinxu jiagu ziji yanjiu: Shizu buci pian* 殷墟甲骨字跡研究 — 師組卜辭篇 (Changchun: Dongbei Shifan Daxue Chubanshe, 2002), 27–28.

write on "everyday" media and subsequently retrained as engravers if called upon to specialize. A number of other scholars have recently reached similar conclusions.[29]

However, the learning-to-engrave interpretation leaves many questions unanswered that the learning-to-write interpretation has no difficulty dealing with. The date table is by no means the only category of trainee inscription, but why do trainees concentrate so much effort on producing this particular category of text?[30] If they were learning the script for the first time, we could point to the foundational role that this set of signs played in divination recordkeeping and literacy more generally. If they were already fully literate, should we not be surprised to see them spending so much time on just twenty-two signs from a repertoire of many hundreds, perhaps several thousand, that they had supposedly already acquired? Why do trainees always write out the cycle of sixty in (full or partial) tabular form, and why do the presumed instructors always model it that way? Under the learning-to-engrave interpretation, it would be sufficient for a model simply to list the twenty-two signs and for the trainee to copy individual signs repeatedly to fluency. Under the learning-to-write interpretation, the trainees are learning the sequence of sign pairs for the cycle of sixty for the first time and so need to be repeatedly exposed to its combinatorial structure.

The most important questions that the learning-to-engrave interpretation struggles to answer satisfactorily are, Why did the trainees seem to make errors that a previously literate person would be unlikely to make, and why did the least competent among them seem to have so little sense of how to arrange a line of text on a surface?

Consider HJ: 38058. The group of graphs discussed below is highlighted in figure 5.1. The accompanying table contrasts these with the more conventional forms that appear in adjacent columns. At least two and perhaps three levels of competence appear on this scapula, each writing ten-day weeks from the cycle of sixty in vertical columns. The least competent are the columns on the left, where, poor motor skills aside, the

29. Olivier Venture, Étude d'un emploi rituel de l'écrit dans la Chine archaïque (XIIIe–VIIIe siècle avant notre ère): Réflexion sur les matériaux épigraphiques des Shang et des Zhou occidentaux (PhD diss., Université Paris 7, 2002), 308; Wang, "Writing and the State," 326.

30. The 156 date tables discussed by Matsumaru are by no means all the examples known. He was simply surveying the cases conveniently gathered together in the organizational scheme of *Heji*.

scribe has (1) produced an unrecognizable *chǒu* 丑, (2) omitted the horizontal stroke in *bǐng* 丙 on its first appearance, and (3) rotated *yǐn* 寅 by 180 degrees.

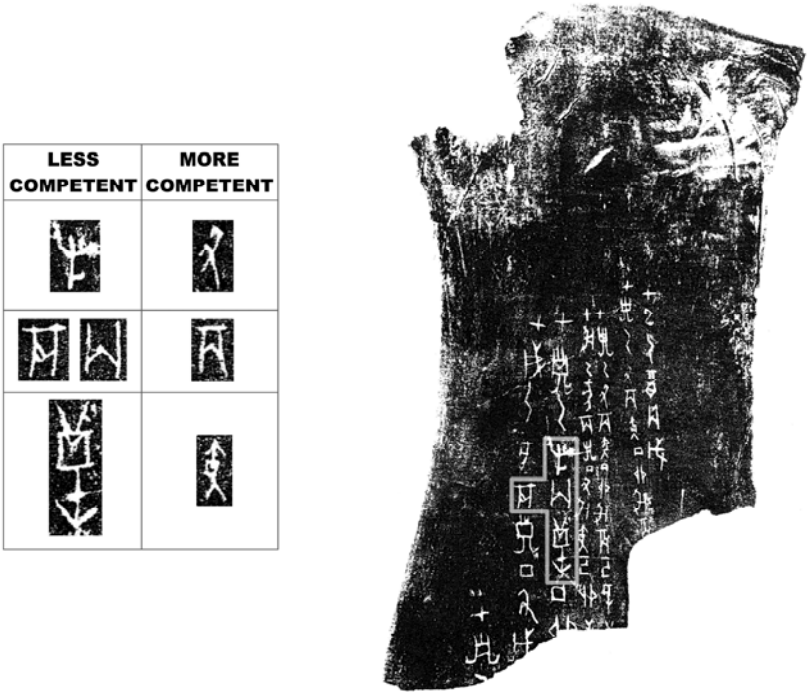


Figure 5.1 HJ: 38058, scapula fragment with date tables in trainee hands of varying competence. From *Heji*, 12:4736.

Some trainees who produced date tables also seem to have had great difficulty in keeping to the conventions for consistent graph size and placement that otherwise characterize the contemporary script, and with which any literate person could be presumed to be familiar. Their inscriptions often show no ability to anticipate the space required for an orderly arrangement of text.

HJ: 37995 (fig. 5.2b), for instance, besides being incompetently engraved, shows an uncontrolled variation in the space occupied by individual graphs, from the tiny fourth *gān*, *dīng* 丁, to the greatly elongated *zhī* signs *shēn* 申 and *yǒu* 酉. As a result, the tabular

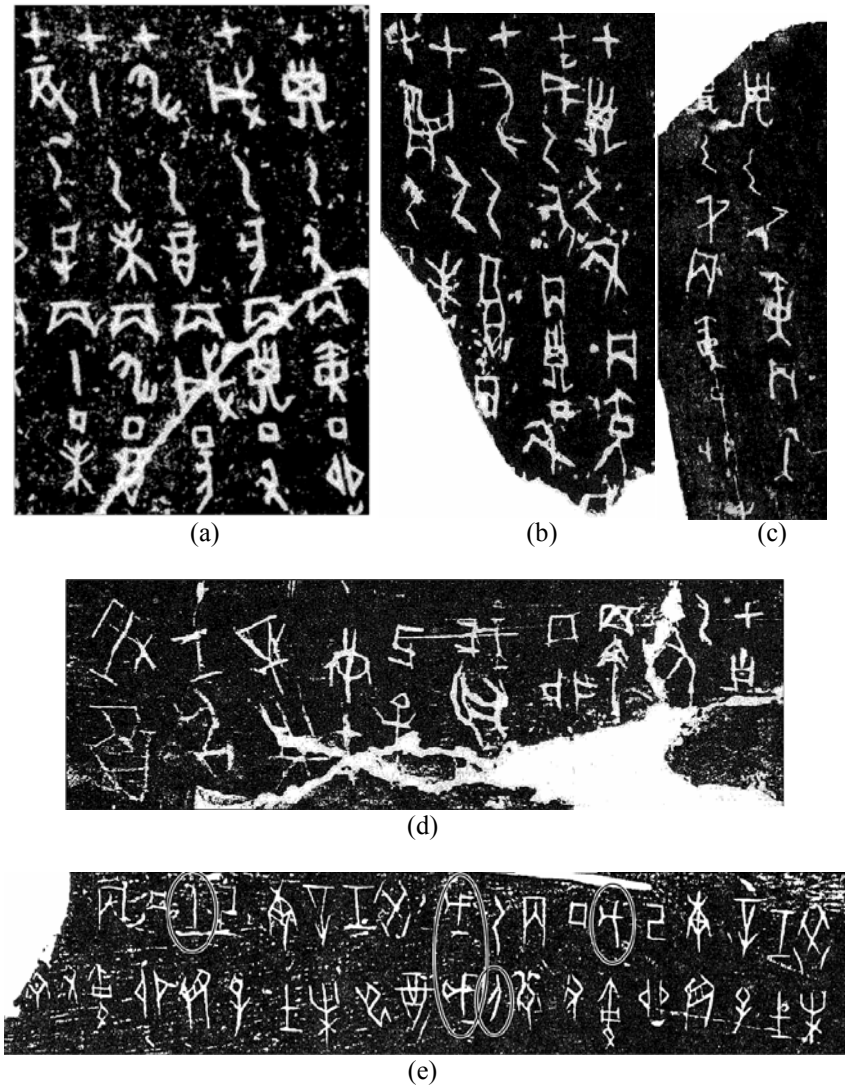


Figure 5.2 Date tables. Top row: model table on HJ: 37986 (a) contrasted with disorderly trainee tables on HJ: 37995 (b) and HJ: 38072 (c); middle row: egregiously incompetent graphs on TN: 2661 (d); bottom row: anomalies (circled in gray) on TN: 2630 (e). From *Heji*, 12:4718, 4720, 4739, and *Tunnan*, 541, 574.

arrangement departs from the orderly arrangement of its contemporary models in the Huang Group (黃組), in which graphs occupy similar mounts of space and matching *gān* signs are aligned in horizontal rows (cf. fig. 5.2a and other examples in the range HJ: 37986–38114).

In HJ: 38072, (fig. 5.2c), in what appears to be the first attempt to write out the first few terms in the cycle of sixty (the column of graphs on the right), the scribe has (1) written *yǐ* 乙 not as a three-stroke s-curve but as an extended wiggle, (2) omitted one of the fingers of *chǒu* 丑, (3) incorrectly permuted the order of *bǐng* 丙 and *yǐn* 寅, and (4) attempted to repeat the *yǐn* 寅 before giving up and starting again.

TN: 2661 (fig. 5.2d) is engraved with the *gānzhī* for the first ten-day week. It is executed in a dramatically incompetent hand with the exception of the first pair of signs, on the left, neatly written one above the other, presumably by an instructor or more competent student. The first pair of signs by the student, for day 2, is not properly aligned, and the subsequent *gānzhī* pairs grow in size as the inscription proceeds from left-right to left, producing an impression of considerable naïveté.

TN: 2630 (fig 5.2e) is an attempt by a scribe to write out the *gānzhī* terms for the first two ten-day weeks. Motor skills are fine, but (1) the first instance of *wù* 戊 is missing three strokes, appearing as  instead of  , (2) *hài* 亥 for day 12 is missing its horizontal strokes, appearing as  rather than the expected  , (3) day 11 (*jiǎxū* 甲戌) is written as day 35 (*wùxū* 戊戌), and (4) the *gan* for day 15 (*wù* 戊 again) is missing two strokes:  .[31]

The concentrated occurrence on *gānzhī* date tables of errors of this kind, which are not easily explained under the learning-to-engrave interpretation, implies that the date tables are associated with the lowest rung of the ladder toward literacy.

An additional feature of trainee date tables, also discussed by Guo Moruo (see CB: 1467=HJ: 38076), is the occasional systematic absence of horizontal strokes from graphs. In addition to disorderly attempts at the cycle of sixty, Guo's example also has the *gānzhī* for days 1 to 4 in a

31. For a survey of similar errors, see Li Minling 李旼姈, *Jiagu wenli yanjiu* 甲骨文例研究 (Taipei: Taiwan Guji Chuban Youxian Gongsi, 2002), 107–14, 117–21.

secure-looking hand but with all horizontal strokes systematically omitted. This phenomenon has been discussed many times, and a variety of interpretations proposed.[32] The simplest way of accounting for the omission of horizontal strokes, though, would be as an attempt by the instructor to demonstrate the stroke order — verticals before horizontals — that constituted the de facto standard for his or her writing style and which presumably helped to minimize the rotation of surface or knife. This interpretation of the missing horizontals is compatible with both the learning-to-write and the learning-to-engrave account of the practice inscriptions. Nevertheless, it is a good illustration of the intimate pedagogical interaction between trainees and their instructors.

To summarize, the density of errors and incompetent text arrangement in the *xíkè* date tables provides a first line of evidence for interpreting visibly incompetent engraving in this category as the work of marginally literate individuals.

Simple Formulae and Sight-Copying of Divination Records

By learning only a small number of signs in addition to those in the *gānzhī* set, a trainee developed the ability to write out complete divination records of a simple, formulaic kind. There are many examples of insecure hands writing out versions of the *bǔxún* 卜旬 'divining for the week ahead' formula, which requires only five signs, all of high frequency, in addition to the *gānzhī*. Often, these are syntactically incomplete or jumbled in ways that would seem bizarre if the scribe were fully literate and merely learning to engrave.

TN: 1034 is a largely intact scapula on which the *bǔxún* formula has been repeated many times in an orderly but not fully fluent hand. On the far right-hand edge of the published reproduction, the formula appears garbled as 癸卜未貞旬亡禍, with the *bǔ* 卜 sign intruding between the date signs. The same error is repeated verbatim in the middle of the

32. For a comprehensive overview, see Li Minling, *Jiagu wenli yanjiu*, 122–48. Li's proposal that omitted strokes are "produced by negligence on the part of the scribe," though perhaps adequate to explain isolated instances in otherwise normal inscriptions, seems implausible as an account of the systematic, visually salient omission of most horizontal strokes from an entire inscription. The most impressive instance is the date table HJ: 24440 (see fig. 1.3 in "Getting 'Right' with Heaven and the Origins of Writing in China," by David W. Pankenier, chapter 1 in this volume), which must surely be connected with scribal training.

scapula. Perhaps the trainee is sight-copying his or her own inscriptions. The scapula had been prepared for and used in divination, and at least some of the trainee inscriptions are likely to be records of divinations actually performed on the bone.

An excellent example of an instructor and a trainee writing a set of *bǔxún* records together is provided by HJ: 34945 (=JB: 760) (fig. 5.3). *Bǔxún* formulae for days 40, 50, 60, 10, and 20 run in orderly sequence up the edge of this scapula fragment. They are records of divinations actually performed on the bone, as the presence of crack-numbering indicates. The earliest record, for day 40, is in a fluent and fully competent hand, while the subsequent records are evidently inferior.

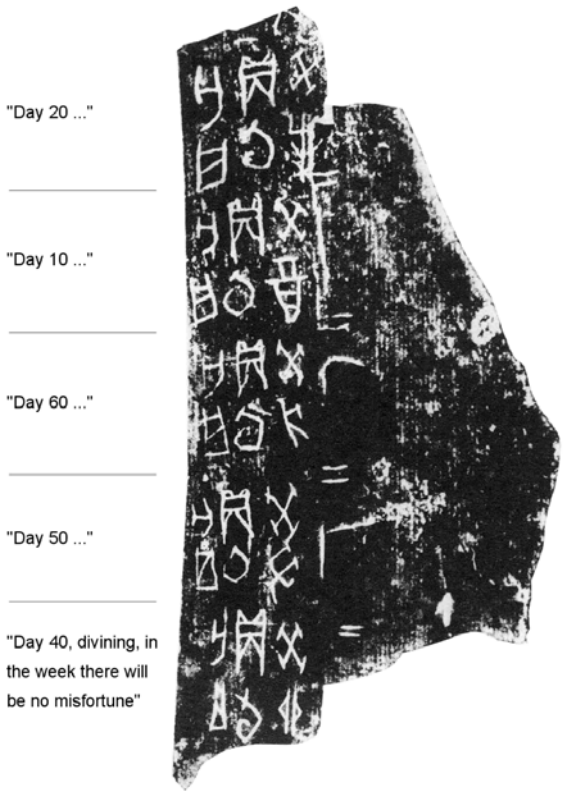


Figure 5.3 HJ: 34945, scapula with *bǔxún* 'divining for the week ahead' records, of which the earliest (day 40) is in a more competent hand than those that follow. From *Heji*, 11:4366.

Besides the *bǔxún* formula, simple and standardized hunting divinations were also features of the divination scribes' early training. The scapula HJ: 35261 appears not to have been used for actual divinations but is covered in more than a dozen repetitions of a simple hunting divination formula of which only the *gānzhī* date varies.

干支卜，逐麋，禽。

Day n cracking: If we pursue *mí*-deer, we will capture some.[33]

TN: 2693 has two versions of a hunting divination record, neither associated with any divinatory cracks on the scapula. The hand is far from secure. The naive arrangement of the graphs and the nonsensical anomalies (the "rain" 雨 sign is omitted in one case, and the "field" 田 sign, for "hunt," is omitted in the other) imply that this is less likely to be a previously literate individual learning to engrave than a novice scribe mechanically and inaccurately sight-copying a model.

辛未卜，王其[田?]，不雨。

Day 8 cracking: If the king [hunts?], it will not rain.

辛未卜，王其田，不[雨?]。

Day 8 cracking: If the king hunts, it will not [rain?].

The learning-to-engrave interpretation provides no explanation for why previously literate scribes would spend time concentrating on these formulaically trivial, high-frequency patterns, nor for their frequent errors.

Practice inscriptions often were not produced by individuals in isolation but involved interaction with more competent hands, presumably those of instructors. This visual dependence on an instructor's model, not just for engraving technique but also for sign forms and text content, is also hard to square with the learning-to-engrave interpretation. Trainees sight-copied models specially provided by instructors or simply copied actual divination records.

Consider, for example, the repeated attempts to get right the sign *yǎ* 亞, scattered with other practice graphs around the proximal end of scapula TN: 2174. The trainee was attempting to reproduce the sign that occurs in

33. Further fragments of a similar exercise, possibly in the same hand, are collected as HJ: 35262–35264.

a competently written divination record toward the distal end of this bone. A scribe who knew this sign would not need to practice it in this way and would not make such obvious errors in the geometry of the sign.

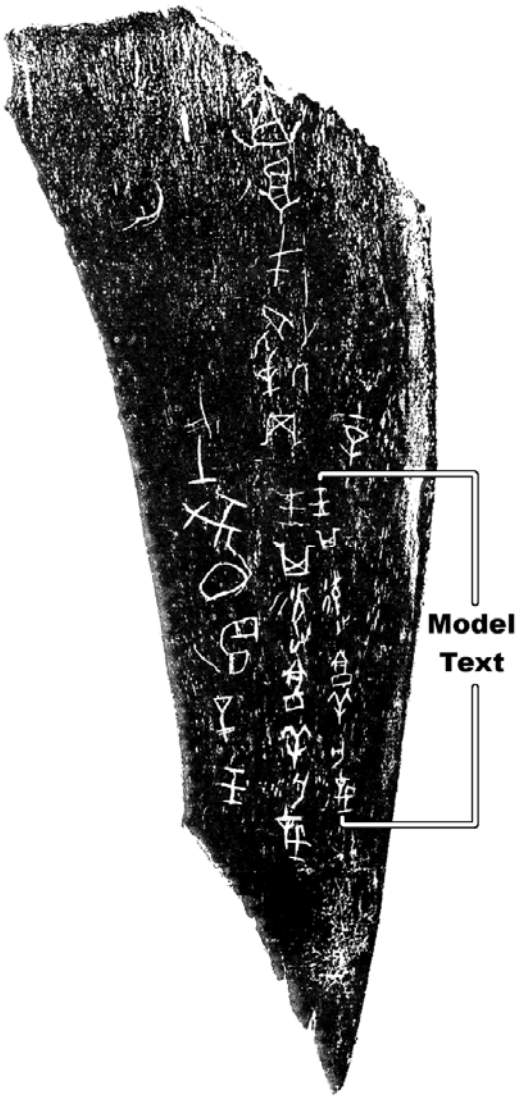


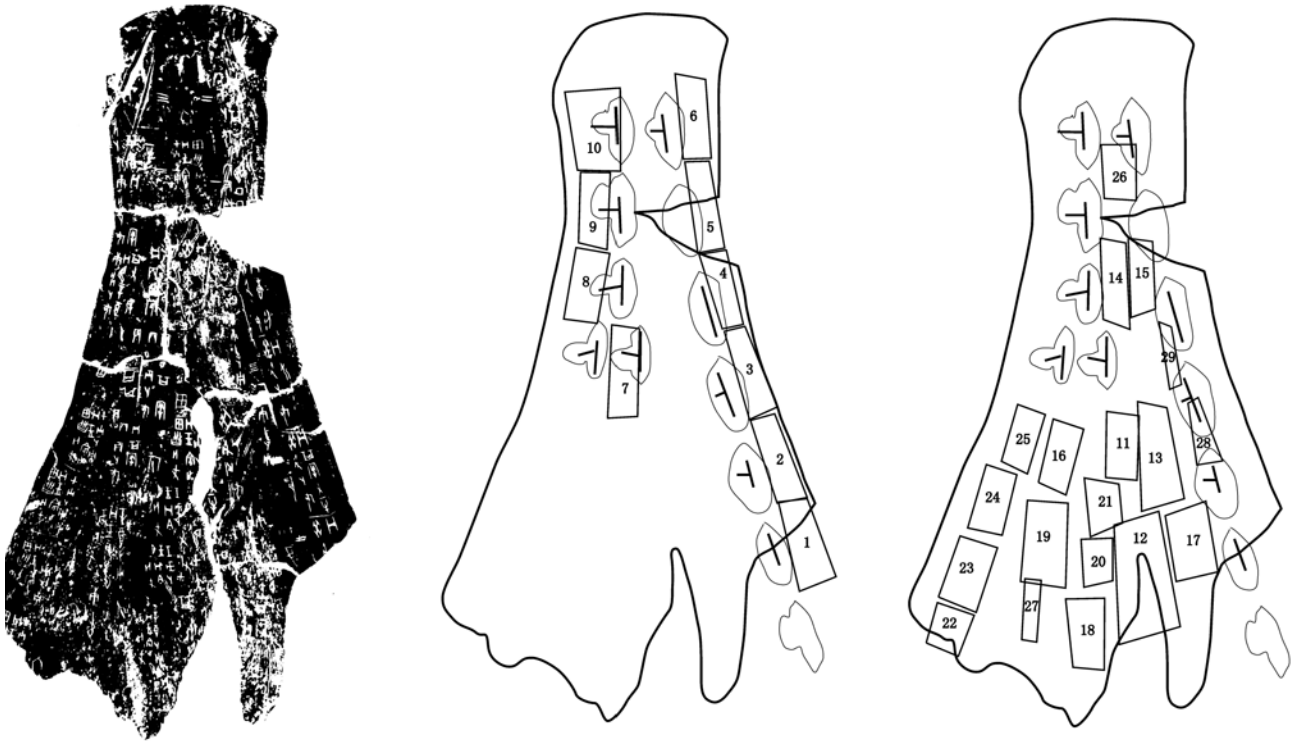
Figure 5.4 TN: 2731, competently written model text with multiple inferior copies. From *Tunnan*, 587.

TN: 2731 (fig. 5.4) shows a trainee attempting to reproduce a divinatory proposition, graph for graph. There are no signs of divinatory cracks or crack-numbers associated with the model, suggesting that it was deliberately written out for the purpose. Though evidently less competent, the trainee approximates the model with an adjacent column of text and then rotates the bone 180 degrees for a second attempt (curiously reusing the now-inverted "king" 王 of the first copy as the first graph of the second copy). Graphs grow in size and become increasingly disorderly as the trainee appears to tire of the effort. There are two errors in the copy that show the trainee to be reproducing visually unfamiliar symbols. The commonly occurring "foot" 止 component in the third sign of the sequence has not been recognized and appears in the copy as a visually misunderstood jumble of strokes.[34] The fourth graph 彙, has been misconstrued as two separate signs, 言 and 羊, or at least is written as though that were the case. The same trainee's copies of the model continue on TN: 2737, another fragment from the same pit.

HJ: 27042 — A Complex Example of Student Copying

HJ: 27042 (fig. 5.5A) is the most complex of all the scribal training objects from Anyang and allows us to reconstruct the copying practices of scribal trainees in considerable detail.[35] The item is an almost complete scapula, densely inscribed on both faces. It is a join of two fragments (JB: 2692/2693 and JB: 2880/2881), both excavated in 1929 from an excavation unit known as the *dàliánkēng* 大連坑 (large joined trenches). The divination records on this bone are in a typical He Group II (何組二類) writing style.[36] The dating of this style is confirmed by the appearance of the appellation Father Jia (父甲)[37] in one of the practice inscriptions on this item. The inscriptions were thus produced in a workshop serving one

34. The sign in question is GL: 2307. For a clearer instance of the same sign in a similar inscription, see HJ: 28915 (=JB: 907).
35. For a fuller treatment of the object than can be provided here, including transcriptions and translations, see Smith, "Writing at Anyang," 320–42.
36. Li Xueqin 李學勤 and Peng Yushang 彭裕商, *Yinxu jiagu fenqi yanjiu* 殷墟甲骨分期研究 (Shanghai: Shanghai Guji Chubanshe, 1996), 139–73.
37. See K23 in Keightley's table of the royal genealogy, in Keightley, *Sources of Shang* History, 185–87.



(a) (b) (c)

Figure 5.5 HJ: 27042, scapula (a) densely inscribed with a mixture of divination records (b) and trainee copies (c). From *Heji*, 9:3337.

of the royal patrons Kang Ding 康丁 or Lin Xin 廩辛.[38] The divinations actually carried out and recorded on the bone were performed by Diviner He 何. Some of the practice inscriptions are copies of records of divination performed by He's colleague, Diviner Zhu 宁, or the royal patron.

The scapula was first physically prepared for divination. The position of eleven hollows carved into the reverse can be clearly seen in the rubbing (HJ: 27042, obverse, not reproduced here). The six running along the left-hand side of the reverse are referred to here as Set 1, and the more centrally placed group of five as Set 2. The lowest hollow in Set 1 is only partially preserved, and it is almost certain from the crack-numbering that there was originally an additional seventh hollow below it that has been lost due to the break.

Figure 5.5b represents the positions of these hollows relative to the transcriptions, as if the bone were transparent. Superimposed over these are the positions of the divination cracks, to the extent to which they could be made out on the rubbing of the obverse. All eleven (originally twelve) hollows appear to have been cracked in divination events. These divinations are recorded on the obverse by inscriptions arranged in the standard manner adjacent to the resulting cracks. Figure 5.5b also shows the locations of the ten surviving records.

The inscriptions numbered 1–4 in figure 5.5b record a series of divinations performed by Diviner He on day 50 concerning sacrifice of livestock. The original first inscription in this set, like the corresponding hollow on the reverse, is missing. It would have specified the recipient of the sacrifice and was located below the surviving inscription 1. Inscription 17 (fig. 5.5c may be a trainee copy of this missing record, allowing us to identify this set of divinations as concerning sacrifice to Father Jia on day 51, his name day.

Inscriptions 5–7, corresponding to the remaining two hollows in Set 1, plus one or both of the pair of hollows at the bottom of Set 2, record a further bout of divination by He on day 53 concerning sacrifice on day 54. The recipient would have been specified in the broken section of inscription 5, the first in the series. It is likely that the recipient was Wu Ding 武丁, grandfather of the two kings, the candidate patrons for this divination bone, who was being sacrificed to on his name day.

38. See K23a and K24 in Keightley's table, in Keightley, *Sources of Shang History*, 185–87.

Inscriptions 8–10 record divinations by He on day 57 concerning sacrifice to Female Ancestor Xin 妣辛 on her name day, day 58. The recipient is probably Fu Hao 婦好, wife of the previous recipient. The day 57 series of divinations exhausts the supply of hollows on the bone.

At this point, the scapula ceased to be a divinatory instrument and became a resource for scribal training, providing model texts (inscriptions 1–10) for copying and a surface on which to copy them. All inscriptions on this object other than the ten just discussed — nineteen inscriptions or parts thereof on the obverse of the bon (shown in fig. 5.5c), thirteen more on the reverse, and sundry isolated graphs — are trainees' copies or instructors' models (inscriptions 11 and 21). The grounds for this interpretation are as follows.

That the bone was used for practice of some kind is clear from the presence of the stray, obviously incompetent graphs labeled xíkè by the Moshi editors. Inscriptions 27–29 (discussed more fully below) also clearly could not be adequate records of divination. Discounting the stray graphs, all inscriptions on the scapula formally resemble divination records to some degree, but since the intact bone probably had only twelve hollows, they cannot possibly all be records of divinations performed on this bone.

The three series of divination records that can be matched to hollows (inscriptions 1–10) are grouped and arranged in a conventional, orderly manner by date, moving up through the two sets of hollows. The relationship between the dates and the relative positions of the remainder is haphazard, the result of filling in whatever space remained available. Inscriptions 14 and 15, for example, belong in the same group as inscriptions 12 and 13; inscription 26 belongs in the same group as 22–25; inscription 27 belongs in the same group as 28 and 29 (see fig. 5.5c). Given their placement, it is unlikely that these inscriptions could have been made sequentially on the days of the divinations they seemingly record.

Furthermore, the three series of actual divination records presented above do not contain any verbatim repetition of content: the first divination in each series proposes the date, the sacrifice, and the recipient, and the subsequent ones propose alternative details. In contrast, there is substantial repetition of redundant information among the other inscriptions, including exact repetition of content from inscriptions 1–10.

Finally and most importantly, all of the ten divination records (inscriptions 1–10) are written in a thoroughly competent hand. The other inscriptions, though approximating the same style, belong to an evidently

less competent trainee hand. The only exceptions are inscriptions 11 and 21, which, as already mentioned, are likely to be instructor's models.

The training inscriptions on the obverse may be summarized as follows:

Inscriptions 11 and 21. These two adjacent inscriptions purport to be records of divinations carried out on day 59 and day 1 by He's colleague, Zhu. They are competently written in what appears to be the same hand as items 1–10. However, in neither case is an associated hollow present on the reverse of the bone, nor is any crack or crack-number visible on the obverse. They are not records of divinations performed on this scapula. Inscription 11 is copied verbatim five times in an inferior hand on the obverse (inscriptions 22–26) and three more times on the reverse. Inscription 21 is copied once immediately below (inscription 20) by an inferior hand.

Inscriptions 12–15. An inferior hand has produced verbatim copies from the set of records represented by inscriptions 1–4, including a probable copy of the missing first item in the set.

Inscription 16. This is a verbatim copy in an inferior hand of inscription 7.

Inscriptions 17–19. These appear to be student copies of records of divinations performed by Zhu on days 57 and 58. There is, however, no sign of the models, and it is possible that the trainee is copying from at least one other set of actual records besides those on HJ: 27042.

Inscription 20. As already noted, this is a copy of model 21.

Inscriptions 22–26. As already noted, these are verbatim copies of model 11.

Inscriptions 27–29. These fragmentary beginnings appear to be copies of a record for a divination by Zhu on day 7. The model is not present on HJ: 27042.

The thirteen more or less formulaically complete inscriptions on the reverse are almost all purported records of divinations by Zhu concerning the king's "hosting" (bīn 賓) of rituals to distant royal ancestors, and all are in a trainee hand. The models for these copies are not to be found on HJ: 27042, with the exception of inscription 11 on the obverse, discussed above. However, examples of records of precisely this kind of divination by Zhu, kept in the He Group II writing style, are plentiful among published corpora.[39] As with inscriptions 17–19 on the obverse, we can

39. Cf. HJ: 27086, 27177, 27508, 27645, 30548–30551, 30553–30558, 30572, and 30788.

assume that a suitable model would have been made available to the trainee.

Scribal Training within the He Group Divination Workshop

HJ: 27042 was discovered together with many other inscribed scapula and plastron fragments produced by the institution for which Diviners He and Zhu and the He Group II scribal hand(s) worked. The nature of these institutions remains rather obscure, but the term "divination workshop" reflects their best-attested sphere of activity. What we do know about these institutions comes primarily from the sophisticated typologies of divinatory inscriptions from Anyang that have been compiled by Chinese scholars.[40] These typologies and their supporting scholarship have shown that multiple such divination workshops could be in operation contemporaneously, each distinguished by its writing styles and documentary conventions, its set of named diviners, and its own locus of activity within the moated Xiaotun enclosure at the center of the Anyang site complex.

This is perhaps most readily illustrated by the divination workshops active during the reign of Wu Ding. For instance, during the latter half of that reign, the workshop responsible for the so-called Bin Group inscriptions (*Bīnzǔ bǔcí* 賓組卜辭) was active in the "palace area" north of Xiaotun village, the Li Group (*Lìzǔ* 歷組) workshop was active within and to the south of Xiaotun, and the recently excavated Huayuanzhuang East Group (*Huādōngzǔ* 花東組 or *Huādōng zǐzǔ* 花東子組) was being produced at a location on the very southern limit of the moated enclosure. The patron of the Li and Bin Group divinations was the Shang king, while one of his sons was the patron of the Huayuanzhuang East Group.[41]

The workshop that employed diviners He and Zhu, and the scribe(s) responsible for the He Group II style, whose respective roles in producing HJ: 27042 are discussed in the previous section, was active two generations later than Wu Ding.[42] As noted in the previous section, the

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HJ: 30542 (and perhaps 30384 also) was produced, I suggest, by the same trainee who produced the inscriptions on HJ: 27042 that we are discussing, by copying the same kind of model; the *bīn* 賓 graph is diagnostic.

40. Li Xueqin and Peng Yushang, *Yinxu jiagu fenqi yanjiu*.
41. See above, note 21.
42. Li Xueqin and Peng Yushang, *Yinxu jiagu fenqi yanjiu*, 139–73.

pieces of HJ: 27042 were excavated from the so-called *dàliánkēng*, a group of excavators' trenches covering an area of about one hundred square meters.[43] The same season of excavations recovered large numbers of bones and shells produced by the same workshop,[44] inscribed in the He Group styles with records of divinations performed by He and fellow diviners, most frequently Peng 彭, Kou 口, and Da (?) 犬. The majority of these are records of entirely routine *bǔxún* 'divining for the week ahead' or *bǔxī* 卜夕 'divining for the night', with a minority of more complex records of sacrifice or hunting divinations. The majority of these records are competently, regularly, and fluently written.

However, HJ: 27042 is by no means the only remains of He Group scribal training activities from the *dàliánkēng*. The following examples are some of the more interesting and informative examples.

HJ: 26907 resembles HJ: 27042 in many respects. The obverse bears a mixture of real records of divination performed using the scapula and practice inscriptions by a trainee filling up the left-over space.[45] The real records consist of a set of five divinations about sacrifice to the Yellow River (Hé 河 and five more (possibly related) about numbers of sheep. All are written in a very neat hand, with the exception of the preface to the first record in the first set. A trainee has been allowed to write out the beginning of the record — "Day 6 cracking, Peng divined . . . 己巳卜彭貞 . . ." — before returning the record to the more competent scribe for completion. For reasons that will become clear, it may be that in this and the following examples, Diviner Peng was the trainee learning to write (and perhaps also learning to perform divination).

The remaining inscriptions on the obverse of HJ: 26907 are complex, fragmented, and disorderly, and none is associated with cracks, crack-numbers, or anything else to suggest that they are records of divinations performed on this bone. It is hard to be confident that they are

43. For the *dàliánkēng* excavation report, see Shi Zhangru 石璋如 and Gao Quxun 高去尋, *Jiagu kengceng* zhi *yi — Yi ci zhi jiu ci chutu jiagu* 甲骨坑層之一 — 一次至九次出土甲骨 (Taipei: Zhongyang Yanjiuyuan Lishi Yuyan Yanjiusuo, 1985–86), 1:57–96.

44. The report states that 1,359 Period III inscribed fragments of bones and shells were recovered during the season that the *dàliánkēng* was excavated; the great majority of these were from the *dàliánkēng*, and for this context, "Period III" is equivalent to "He Group"; see Shi Zhangru and Gao Quxun, *Jiagu kengceng zhi yi*, 1:90.

45. HJ: 26907 is a complex join of multiple fragments, originally published as JB: 2471, 2491, 2492, 2501, 2605, and 2606.

all in a single hand, but the quality of the writing is consistently inferior to the neat calligraphy of the ten true divination records. Peng is named as diviner in two of these additional inscriptions.

The reverse of the scapula has a table of *gānzhī* in a student hand. Below that are what appear to be two records of "divining for the night" by the He Group diviner Da. Neither is a record of any divination performed on the bone, however, and scrutiny reveals that one is a model text and the other is an inferior sight-copy. The manner in which the two elements that make up the sign *jīn* 今 have been divorced from each other in the copy suggests that the copyist was not used to writing this everyday sign on any medium.

HJ: 26899 (=JB: 2695) is again similar. Five true divination records in a competent hand survive on the right side of the scapula, including one that names the He Group diviner Kou. Attempts at copying signs from these records are interspersed within them. A sixth true record runs down the left edge of the scapula. It has been carefully but imperfectly copied alongside.[46] The remainder of the surface is again covered with complex but disorderly fragments. Some of the content (including a few low-frequency graphs) overlaps with that of HJ: 26907 discussed above, suggesting that the two items were produced as part of the same course of instruction.[47]

HJ: 27543 (JB: 2698) is covered with a disorderly jumble of divination records, each of which is written in two different hands. Each begins with the smaller, neater hand writing the usual preface, but on reaching the diviner name (Peng once again, note), a large and clumsy student hand takes over. There is no sign of cracks, crack-numbers, or the orderly arrangement one would expect from a real set of records.

On HJ: 31420 (JB: 2694), a competent hand has written a couple of prefaces for records of divination by He. Contrasting with these is a *bǔxún* formula for day 30 naming Diviner Peng in an evidently incompetent hand. There are no signs to indicate that the latter is a true divination record.

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46. The copy is not dramatically incompetent, but there are revealing anomalies. Most obviously, the vertical column of text is disrupted, *jīn* 今 is written straddling a crack, and the final *yóu* 尤 is written incorrectly, to resemble *fù* 父. Perhaps responding to this error, one of the contributing scribes has written an otherwise out-of-context and difficult-to-explain *fù* 父 among the jumble of graphs up at the proximal end of the scapula.

47. Note in particular the large and pictographically rendered *shè* 射 'shoot' and deer signs that appear without meaningful context on both HJ: 26899 and HJ: 26907.

The following three items illustrate a single rather peculiar phenomenon. Each involves a *bǔxún* formula naming Peng as the diviner, written in an obviously immature hand and with the complete sequence of graphs permuted in bizarrely nonsensical ways. HJ: 27220 (JB: 2407) writes the *bǔxún* formula for day 40 precisely (and hence presumably deliberately) backward, that is, in ascending vertical columns. HJ: 27694 (JB: 2770) scrambles the formula for day 20 and writes *wèi* 未 incorrectly, to resemble 木. HJ: 28107 (JB: 2773) is another similar scrambling, though the date is not fully legible.

The evidence for scribal training from the *dàliánkēng*, of which the above is merely a selection, is interpreted here to indicate that the membership of the He Group included, alongside the diviners and scribes, at least one trainee who was learning to engrave and perhaps to divine but who was also certainly learning to write. Some of the more bizarrely anomalous (or perhaps playful?) behavior suggests a child. The repeated association of the diviner name Peng with these practice inscriptions suggests the possibility that Peng was the trainee.[48]

The many examples of records from the *dàliánkēng* that name Peng in the preface support that final contention. Unlike the examples we have just considered, the majority of these are cleanly and regularly written and appear to be records of divination actually carried out on the bone. In several instances, however, it seems that the single graph Peng 彭 is written in a different hand, inferior to the rest of the inscription, as though Peng were allowed to fill in his own name in a record made on his behalf by a more competent scribe. HJ: 31427 (JB: 2792) is one such example.

Model Texts and the Emergence of Textual Transmission

The examples of scribal training material discussed above include many instances of trainees copying texts written by competent scribes and several examples of competent scribes providing model texts for trainees. Recognizing the existence of these models and copies prompts several questions. Are there further examples of models or copies within the published corpus from Anyang that have gone unnoticed? Does the notion of an instructional model — a text deliberately composed for a student to copy — help explain features of inscriptions that hitherto have seemed

48. For Peng's career as a diviner, which spanned several reigns, see Li Xueqin and Peng Yushang, *Yinxu jiagu fenqi yanjiu*, 171–72.

puzzling? Did scribal training in the divination workshops at Anyang produce anything analogous to student texts from Uruk — such as the Professions List or Tribute/Word List C — which were faithfully copied over many generations for what became self-sustaining scholastic reasons, long after they had become obscure and their original function had been forgotten? This section tentatively offers affirmative answers to these three questions, drawing on a hypothesis put forward by Matsumaru Michio.

Figure 5.6 HJ: 33208, scapula with formulaically contrived practice text.

HJ: 33208 (JH: 622, fig. 5.6) is a largely intact scapula with what appear to be four divination records written on it. The writing is not obviously that of a novice hand. Nevertheless, the multiple, oddly oriented copies of the same quadruped pictogram that appear toward the distal end of the scapula are the first hint that this item is connected with scribal training. Four columns of text, ostensibly divination records, run down from the proximal end; however, their content is highly contrived. The prefaces date the records to days 1–4 of the sixty-day cycle, with one record for each day. The divinatory propositions all ask whether, if the king were to proceed in a particular direction, the Lord of Such-and-such would meet with a particular (probably violent) fate. The wording of the proposition is identical in the four versions, except for the direction of the king's motion, which cycles through the four cardinal directions: east, south, west, and north.

The permutation of preface dates and cardinal directions is entirely artificial, and the four records constitute a scribal exercise. The latter interpretation is supported by the fact that none of the four ostensible divination records has any associated cracks, crack-numbers, or hollows.[49]

A similarly artificial four-part text, cycling through the cardinal directions, appears on the well-known "Names of the Four Quarters and Winds" scapula, HJ: 14294. There are no signs of divination on the bone, and the columns of text are not even formally similar to divination records. They simply state what appear to be names for the four cardinal directions and their respective winds. The question of the purpose of this inscribed object naturally arises.

The names for the quarters and winds do appear embedded in actual divination records. There are eight examples, the most spectacular of which is the plastron HJ: 14295, excavated in 1936 from the Wu Ding period pit YH: 127 at Anyang.[50] Hu Houxuan pointed out that these

49. Wang Yuxin and Yang Shengnan interpret this as a *xíkè* inscription for similar reasons. See Wang Yuxin and Yang Shengnan, *Jiaguxue yibai nian*, 254–55. The absence of hollows from the reverse and from all the other relevant examples discussed here can be confirmed by consulting photographs of the previously undocumented reverse that have been made available online by the Institute of History and Philology, Academia Sinica; http://archeodata.sinica.edu.tw/ (accessed 7 April 2009).

50. For a recent Chinese-language study of the "Names of the Four Quarters and Winds" inscriptions, including a review of previous literature, see Zheng Huisheng 鄭慧生, "Shangdai buci sifang shenming fengming yu houshi chun xia qiu dong sishi zhi guanxi" 商代卜辭四方神名、風名與後世春夏秋冬四時之關係, *Shixue yuekan* 史學月刊 6 (1984): 7–12. For discussion, see Smith, "Writing at Anyang," 364–73.

names of the quarters and winds appear in later received literature, in obscure, textually corrupt contexts. The "Canon of Yao" (Yaodian 堯典) chapter of the *Book of Documents* preserves the names of the four quarters, in the guise of ethnonyms of peoples from the four cardinal directions. The *Shanhaijing* 山海經 preserves both quarter and wind names, sometimes using formulae reminiscent of HJ: 14294.[51] Although one is left with no doubt that these two texts do indeed preserve the same information as that contained in the text from Anyang, it is clear that a good number of "copying errors" had been introduced along the way and that the original role of the text had been entirely lost in transmission.

Matsumaru's contribution was to propose that HJ: 14294 had a function in scribal training. He was prompted toward this conclusion by a small, archaeologically unprovenanced scapula fragment that he also published.[52] The fragment bore partial remains of five inscriptions in a somewhat incompetent hand, three of which were ostensible divination records, one a *gānzhī* date table, and one a sequence of five graphs from the "Quarters and Winds" text. The latter, according to Matsumaru, was likely a reproduction of a model text like HJ: 14294. The evidence explored in this chapter, particularly the evidence for copying of model texts, suggests that Matsumaru is correct about the likely role of HJ: 14294 in scribal education and that the replication of the "Quarters and Winds" text into received literature goes some way toward satisfying the comparative expectations generated by the Late Uruk student texts.

Conclusion

The characterization of practice inscriptions from Anyang as involving "meaningless repetitions of a graph" is misleading.[53] Rather, they are a complex source of information about how scribes were trained at Anyang. Wang Haicheng notes that student exercises may be expected to be done "on the cheapest and most readily available stationery" and that, cross-culturally, "student scribes used the same writing tools and surfaces

51. Hu Houxuan 胡厚宣, "Jiaguwen sifang fengming kao" 甲骨文四方风名考, in *Jiagu wenxian jicheng* 甲骨文獻集成, ed. Song Zhenhao 宋鎮豪 and Duan Zhihong 段志洪 (Chengdu: Sichuan Daxue Chubanshe, 2001), 21:287–90.
52. Matsumaru, "Jieshao yipian sifang feng ming keci gu," 83–87.
53. Bagley, "Anyang Writing," 244 n. 57. See also Wang, "Writing and the State," 326.

as those used for everyday writing."[54] He also implies that divination bones would have been an unlikely medium on which to practice literacy. In the Anyang divination workshops, however, the surface of bones and plastrons was an everyday writing surface, quite literally.[55] The divination record is the only text genre from the Chinese Bronze Age that we *know* was produced on a daily basis. Moreover, the reverse of a used scapula, or the uninscribed portion of the obverse, are by-products of the divination workshops' activities — they cost nothing at all — unlike bamboo slips, hair brushes, and ink, which require skill, effort, and materials to produce.[56] Used scapulae are an entirely natural choice for scribal training, especially if the scribe is being trained to keep divination records on that medium.

At least some of the practice inscriptions were produced by trainees who had no prior experience writing the Chinese script. They allow us to begin sketching the outlines of a curriculum that probably began with *gānzhī* date tables, moved on to simple formulae like the *bǔxún* records, which trainees could put to immediate use, and extended to copying a variety of more complex model texts, including actual divination records produced by practicing scribes as well as specially composed models.

The training seems to have involved intimate interaction with practicing scribes responsible for keeping divination records and learning through informal imitation. Scribal trainees seem for the most part to have imitated the writing style of the models they were copying. What we perceive now as considerable diversity among the styles used in contemporary divination workshops at Anyang may be a reflection of this "in-house" training. If the locations where trainee texts have been found are any guide to where they were produced, training took place at or in close proximity to places where divination was performed and recorded.[57] The exercise texts examined in this chapter are focused on the acquisition

54. Wang, "Writing and the State," 326.

55. See Yao Xuan's tables of synchronies for the Huayuanzhuang East inscriptions for evidence of the remarkable rate at which divinations documented in writing were being produced; see *Yinxu Huayuanzhuang dongdi jiagu*, appendix II. I have offered some reasons for modifying the estimate downward slightly but agree with the overall high-frequency picture; see Smith, "Writing at Anyang," 285–300.

56. Li Junming 李均明 and Liu Jun 劉軍, *Jiandu wenshu xue* 簡牘文書學 (Nanning: Guangxi Jiaoyu Chubanshe, 1999), 1–27.

57. I have reviewed only the evidence from the *dàliánkēng*. Similar arguments could be built around the abundant *xíkè* materials from Xiaotun South 小屯南地; see Yao Xiaosui and Xiao Ding, *Xiaotun nandi jiagu*, 197–206.

of precisely the skills required to maintain divination records; there is no sign that the trainees were acquiring generalized literacy skills that could have been deployed to write a diversity of other genres.

What light is shed by the evidence for scribal training in the divination workshops on the choice to be made between the maximal and minimal hypotheses for late-second-millennium literacy? Most importantly, it weakens a prominent objection to the minimal hypothesis, an objection articulated best by Bagley,[58] that such a hypothesis would provide no mechanism for the intergenerational transmission of the script. The evidence presented in this chapter indicates that the divination workshops at Anyang would have been capable of sustaining transmission of the script between generations, whether or not there were any other frequent and routine uses of writing in the Late Shang world.

Nevertheless, the fact that *some* scribes seem to have been trained in the divination workshops does not by any means imply that *all* scribes were. The fact that they were trained to write divination records on bone does not mean that bone was the only text genre or medium they learned. We know that brush writing and some precursor to the "wood or bamboo documents" (*jiǎncè* 簡冊) of later periods existed, though we have little idea to what extent they were used. The best evidence for writing on *jiǎncè*, presumably with a brush, points toward their role in keeping track of livestock awaiting sacrifice.[59] The term "divination workshop" as used in this chapter is a convenient label for the institutions to which diviners and divination scribes belonged. However, it is likely that the institutions in question were the same ones that managed other aspects of the cult of sacrifice to the dead kings, and also perhaps ritual and ceremonial activities more generally, since that is what the written record of Shang divination is all about. To the extent that these other activities involved writing — livestock accounts, for instance, or labels on valuable objects — the same scribal trainees might be expected to have also been exposed to the relevant written genres.

58. Bagley, "Anyang Writing," 190–249.

59. Smith, "Writing at Anyang," 155–67. A second role for *jiǎncè* is attested by what could be called the "*chēngcè* 冓冊 inscriptions," divination records in which that particular two-character phrase occurs. This appears to involve the presentation or exchange of an important document of some kind between individuals of high status; Qi Wenxin 齊文心, "Shi du 'Zhi Jia cheng ce' xiangguan buci" 釋讀'沚戛冓冊'相關卜辭, in *2004 nian Anyang Yin-Shang wenming guoji xueshu yantaohui lunwenji*, ed. Wang Yuxin, Song Zhenhao, and Meng Xianwu, 251–60.

The minimal model for late-second-millennium Chinese literacy remains for the time being a creditable hypothesis, fully in keeping with what is known from existing evidence and what should be expected on comparative grounds about how writing may have functioned at its earliest period of attestation. The minimal hypothesis accounts well for the evidence of scribal training reviewed here and could comfortably accommodate the available evidence for writing on wood and bamboo as the product of activities by a handful of literate specialists supporting the ritual activities of the Shang king and his immediate family.