The Language of the Bronze Inscriptions

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It is well-known that the “antiquarian” study of bronze inscriptions (BI) in China was initiated during the Northern Song period,¹ bequeathing to subsequent dynasties a vessel terminology, rubbing layout, and transcription format still widely influential today. Since the great stimulus received from the imperial bronze cataloguing efforts during the Qianlong 乾隆 period (1736–1795),² many of the works situated within the “probing into antiquity” (*kaogu* 考古) tradition implicitly addressed not only graphemic, but also lexicographic, semasiological, syntactic and, more rarely, phonological issues in their respective analyses of the inscriptional texts. This becomes especially manifest in Republican-period studies by the more analytically inclined paleographers, such as Wang Guowei 王國維 (1877–1927), Yang Shuda 楊樹達 (1885–1965), Guo Moruo 郭沫若 (1892–1978), Yu Xingwu 于省吾 (1896–1984), Lin Yiguang 林義光 (?–1932)³ or Shang Chengzuo 商承祚 (1902–1991), to name but a few of the most important figures, or, conversely, in the works of the more paleographically inclined historians, such as He Dingsheng 何定生 (1911–1970), one of Gu Jiegang’s 顧頡剛 (1893–1980) favorite students. As an early member of Gu’s “disputes on ancient history” (*gushihbian* 古史辨) movement,⁴ He is now best remembered for his iconoclastic dating of the *Shangshu* 尚書 chapters, based on a book-length study of their divergent grammatical layers, in which he occasionally made use of comparative BI data⁵—to roughly the same degree, incidentally, as the most recent monograph on the same topic published in 2004.⁶ He was also the first scholar in China to point to the methodological necessity of including inscriptional data in any convincing study of pre-Han grammar, in a series of little-known essays published in 1928.⁷

Yet it was only through the methodological impetus from the West in this period, initiated by the establishment of the Harvard-Yenching Institute in 1928, and the scholarly format pursued in the *Yanijing xuebao* 燕京

學報, founded a year earlier,⁸ that specialized articles on BI grammar slowly started to appear. The first one, by the journal's editor-in-chief, the eminent paleographer, archaeologist and writing reformer Rong Geng 容庚 (1894–1983),⁹ dealt with personal pronouns; the second one, published half a decade later by Shen Chunhui 沈春暉, treated double object (ditransitive, especially “dative”) constructions¹⁰—two topics which were to remain very prominent in BI grammatical studies throughout the twentieth century. These articles aroused some peripheral interest among the leading general linguists of the period, such as Li Jinxi 黎錦熙 (1890–1978), the “godfather” of modern Chinese grammar, who proceeded to discuss BI grammar in an open letter to Rong Geng, published on the pages of the *Beijing World Daily* in 1936.¹¹ But the first complete monograph dedicated to the language of the BI, Guan Xiechu's 管燮初 (1914–2000) *Xi Zhou jinwen yufa yanjiu* 西周金文語法研究, although drafted already in the 1950s and 1960s, would appear only in 1981, that is, during the reestablishment phase of classical scholarship in the People's Republic, well after the end of the “Cultural Revolution.”

Guan's grammar, methodologically a much improved sequel to his study of oracle bone inscription (OBI) grammar,¹² based on a corpus of examples culled from 218 inscriptions and systematically incorporating a comparative perspective on 816 *Shangshu* 尚書 examples, remains still useful today for its inclusion of modern translations or paraphrases of the BI examples quoted and for its quantitative analysis of the data. Its drawbacks include an overly rigid and fairly unhistorical application of the now woefully outdated grammar model taken over from Ding Shengshu's 丁聲樹 (1909–1989) *Lectures on Modern Chinese Grammar*,¹³ as well as a somewhat disquieting tendency toward swiftheaded generalizations based on a far too limited corpus of examples, mostly inherited from Guo Moruo's *Liang Zhou jinwen ci daxi tu lu kaoshi* 兩周金文辭大系圖錄攷釋.¹⁴ At the time of Guan's writing in Beijing, Zhou Fagao 周法高 (1915–1994) produced his magisterial three-volume grammar of pre-Qin Chinese in Hong Kong and Taipei, which occasionally refers to BI examples,¹⁵ while William Arthur Charles Harvey Dobson (1913–1982) worked on his grammar of *Early Archaic Chinese* in Toronto.¹⁶ Dobson's study offered fourteen translations of inscriptions in systematic comparison with the six most archaic *Shangshu* chapters and tried to fit the peculiarities of BI grammar into a Firthian structuralist framework, including many idiosyncratic approaches to syntax and terminology which were not even part of the London school mainstream at the time of its publication.

It is interesting to note that Guan, Zhou, and Dobson concurred in viewing BI grammar not as a system *sui generis*,¹⁷ i.e. independent from other contemporary epigraphic writing materials or the (allegedly) contemporary edited literature, but simply as *one* instantiation of the overall diachrony of Chinese language development during the first centuries of the first millennium B.C. This view has been continued by many more recent monographs, such as Zhang Yujin's 張玉金 fine study of the Western Zhou (WZ) pronominal system and his comprehensive grammar of WZ Chinese,¹⁸ or by Shi Bing's 時兵 theoretically more sophisticated work on ditransitivity and differential object marking in Early Archaic Chinese, richly informed by both osteographic and BI data.¹⁹ Other contemporary scholars have, however, insisted on treating BI as a corpus to be studied in its own right, and argued, more or less implicitly, that the pragmatic setting and sociolinguistic peculiarities of the ritual language of investiture, ancestral dedication and communication, typically (though not exclusively) encountered in BI texts, would justify its descriptive separation from the grammars of the more argumentative, poetic or historiographical modes seen in the edited literature. Earlier studies in this mold include for instance Dai Lianzhang's 戴璉璋 book manuscript on the syntax of BI,²⁰ Fang Lina's 方麗娜 comprehensive (466 pages) M.A. thesis on 44 WZ function words in the BI,²¹ and Cui Yongdong's 崔永東 independent mainland counterpart to it, covering 60 WZ and 46 Eastern Zhou (EZ) “ceneric” (*xuci* 虛詞) entries.²² The most important study on the syntax of BI is now clearly Pan Yukun's 潘玉坤 recent monograph, which devotes chapters to passive formation, double object constructions, the structure of noun phrases and the relationship of parataxis and modification, prepositional objects, the syntactic behavior of negatives,²³ conjunctions, measure words, and the irregular extraposition of “moved” constituents, respectively.²⁴ It is nicely complemented by Zhu Qizhi's 朱其智 discourse linguistics approach to pronominalization, ellipsis and nominal reference in WZ BI.²⁵ Moreover, several recent Ph.D. dissertations espouse the same separation of inscripational Chinese from the language of the *Shangshu* and of the Early Archaic documents, and offer in-depth studies of “function words,” the inscripational WZ lexicon, word classes, and word formation,²⁶ the verbal system,²⁷ or even stylistics and metaphor²⁸ in the BI. For studies of the phonology of BI,²⁹ especially those interested in the pronunciation of simple and cluster initials³⁰ and thus heavily dependent on the analysis of homophonophoric (*xiesheng* 諧聲) series, phonetic loans, and variants, a separation of the BI data from the standardized writing in edited sources

was generally a methodological precondition to avoid circular arguments in reconstruction. Such studies have thus, with few exceptions, first looked at BI as a self-standing corpus, and only then proceeded to compare it to texts like the *Shangshu* or the *Shijing* 詩經.

On the one hand, then, the BI language is characterized by constraints imposed extralinguistically, i.e. by the “functional stylistics” of the Zhou ritual culture with its stock phrases, gift lists, and formulaic “blessing invocations” (*guci* 福辭) placed at the end of the inscriptions in more than two-thirds of the extant texts.³¹ On the other, it more faithfully reflects the underlying spoken language than do most transmitted sources, which have gone through long and complex processes of editorial tampering and standardization, usually rendering precise dating well-nigh impossible. This is true as a general tendency, even if one has to keep in mind that BI might not *always* be directly informed by an oral performance culture,³² and that the dating of their language does not *necessarily* coincide with the dating of the inscription, since the latter might have recycled nonextant written sources³³ as well as “orthopically” transmitted earlier materials.

Phonology

Phonologically, the language of BI is surprisingly little characterized by dialectal elements, such as the selection of a particular phonophoric to represent a local pronunciation of a phonosemantic character, or regionally clustered usages of loan graphs. This is so despite the very wide geographical distribution of BI texts, which is almost coextensive with the territorial range of the sinosphere at the eve of the Qin unification of China. To be sure, we do occasionally find regionally confined lexemes, mostly in Eastern Zhou bronze inscriptions. Examples include the Chu 楚 character for “mother, lady” *mi* 嬭 (? < OC *m-nej-ʔ),³⁴ possibly representing a Tai-Kadaic or Austroasiatic substrate word in this area,³⁵ the Chu graph for “one, once” written as 罷 (? < OC *mneŋ) in the *E jun qijie* 鄂君啟節 bronze tally and in Warring States bamboo inscriptions,³⁶ also representing a Kadaic areal word,³⁷ the Chu graph 𣎵 (? < OC *g(r)Ak), a suffix attached to the Chu month names and cognate to *xi* 夕 (OC *s-gak) “evening, night” in the standard language;³⁸ or the Northern Yan 燕 word for “container,” written as *qie* 契 (OC *khet).³⁹ There are also local tendencies, for instance in pronoun usage, as when the standard WZ inscriptional first person pronoun *la(-ʔ), typically written as *yu* 余 in the BI and as *yu* 予 in the edited literature when occurring in subject or object

position, starts to assume a “clitic” or “umlaut” form *(s-)le in the determiner position, represented by the orthographies 台, 𠄎, 𠄎, 𠄎, etc. in the states of Yan 燕, Qi 齊, Jin 晉, Zhu 邾 and Xu 徐 from the late seventh century.⁴⁰

What is far more striking, however, is the high degree of phonological, lexical, and, to a certain extent, even rhetorical standardization⁴¹ of Western and Eastern Zhou BI texts. Thus, while we do find some diachronic layering in the rhymed passages occurring in some 260 of the currently published inscriptions from the very early WZ beginnings down to the Qin period,⁴² regional characteristics are few and far between. The system of BI rhymes broadly agrees with the system established for the *Shijing*, itself not a diachronically monolithic block.⁴³ For probabilistic and other reasons, it is unlikely that this geographical uniformity is simply an artifact of the vicious epistemological circle, in which *Shijing*-based reconstructions are harnessed in the reconstruction of BI phonology, while both depend on the analysis of divergent, but diachronically cumulative phonophoric series, which, by default, provide only *a quo* dates for the usage of particular phonosemantic characters. None of the proposed rhyme-class mergers, allegedly “diagnostic” for the Eastern Zhou Chu⁴⁴ or Qi⁴⁵ dialects, for instance, is in fact confined to BI texts from these areas. Such phenomena are thus more readily explained as the reflex of either a looser rhyming standard than that found in *Shijing* poetry, licensing “assonances” and various categories of “slant” or “feature” and “subsequence” rhymes, or as diachronic features, shared widely as retentions across Sinitic “dialect” boundaries.⁴⁶

The observable broad phonological uniformity is in sharp contrast with the great regional diversity of writing during the EZ period,⁴⁷ and it clearly presupposes the early existence of a type of normative “elegant speech” (*uyan* 雅言), propagated fairly widely through an educational system among the small echelons of Western Zhou society capable of reading and writing. This would be echoed by statements, found in several Warring States and Qin-Han texts, to the effect that the male offspring of the nobility were trained in the “six scripts” (*liu shu* 六書), entering what would later be called the *artes minores* (*xiaoxue* 小學) curriculum at an age given in different sources between eight and thirteen years of age.⁴⁸ Or consider stories in the *Zuozhuan* 左傳 about non-Sinitic visitors at the Eastern Zhou courts during the Chunqiu period, conversing in flawless Chinese, including even witty self-mockery and the obligatory casual *Odes* quote.⁴⁹ When phonophoric elements get replaced throughout the

development of the BI script, occasionally resulting in the creation of characters with “doubled phonophorics” (*chongshengzi* 重聲字) such as *qi* 𠂔 (with phonetic 已 *N-k(r)a-ʔ and 元 *gə) or *fu* 𠂔 (with phonetic 𠂔 *pek and 北 *ppək),⁵⁰ the motivation seems to have been to maintain some kind of aural stability *diachronically*, rather than the faithful representation of a particular regional pronunciation.

Metrical Organization

Metrically, and with respect to the observance of Middle Chinese “tone classes” in rhyming, BI of all periods are considerably more irregular than the *Shijing* poetry. They only approach the strict tetrasyllabic preferences of the *shi* poets—or, indeed, their late preimperial editors—during the Chunqiu period,⁵¹ and they tolerate many more particle and penultimate rhymes, as well as certain mixed rhyme schemes, rarely found in the *Shijing*.⁵² A fairly late, i.e. EZ dating of a *Shijing*-style prosodic systematization is also borne out by parallels in the formulaic phraseology and poetic closure types occurring in BI only since the late WZ and early Chunqiu periods,⁵³ and the extraordinary proximity of the rhyming system of the *Shijing* to that of the Qin inscriptions.⁵⁴ The highly irregular line lengths of the earlier inscriptional materials, counting up to 14 syllables between rhyme-words, would seem to suggest that BI Chinese was not a syllable-counting language—an observation which lends some support to the reconstruction of a “sesquisyllabic” syllable typology, reminiscent of the Southeast Asian Austroasiatic languages, for at least the WZ stage of the language development in Early China.⁵⁵

Syntax

There are very few constructions in either Western or Eastern Zhou BI which are not encountered in some parts of the early edited literature as well. The differences are more a matter of frequency, triggered by the pragmatic context and the syntactic preferences it entails. Thus, interrogative phrases, along with a set of corresponding pronouns and final particles do exist, but they are fairly rare, because in an investiture setting or in a prayer-like communication with the ancestors, there is little room for questions. Passive, ditransitive and disposal constructions, verb serialization, and complex predicates with numeral, prepositional or nominal complements are all attested, but are more restricted in their occurrence

and in the syntactic means used to mark them. Many function words, known from the *Shangshu* and other early edited texts, do occur, but often in different orthographies (such as 𠂔 → ze 則, 𠂔 → yu 于, 𠂔 → cu 徂, 𠂔 → si 肆, 𠂔 → you 由, 𠂔/𠂔 → jiang 將, etc.), and usually with somewhat more confined functional ranges. Conversely, some high-frequency particles of the classical period in the edited literature, such as sentence-final *ye* 也 in indicative-declarative nominal predications, nominalizing 者 after VPs, or the resumptive quantifying adverb 𠂔 → jie 皆 marking plurality of its preceding nominal reference, only make their appearance late and sporadically in the EZ BI corpus.⁵⁶

As could be expected from a language developing within a time window of almost a millennium, many function word usages overlap to a considerable degree between the bronzes and the edited literature. But there are also some subtle differences. It can be observed, for instance, that the pronoun *jue* 𠂔~𠂔, which is almost exclusively attested with third person reference in the early edited literature, may be found quite commonly with first, and even second person reference in EZ bronzes.⁵⁷ With high-frequency particle words it is sometimes possible to document complicated grammaticalizations throughout the inscriptional record, as in the case of *yi* 𠂔~𠂔~𠂔: emerging from a full verb “to employ, command, lead,” and still used as a sacrificial verb in OBI, *yi* gradually acquired a good dozen prepositional (comitative, case and place marking, benefactive, purposive, instrumental, etc.) and conjunctive functions, which can be neatly differentiated within the BI diachrony. This prolonged grammaticalization process, however, remains entirely nontransparent from the viewpoint of the broad *post quem* synchronic variety of the edited literature.⁵⁸ Similarly, the word *wei* 𠂔~𠂔~𠂔, etymologically a non-indicative copula, which is used as an assertive modal auxiliary before verbs, as a negatable and schematically markable equative copula with descriptive functions, or as a focalizing device before recipients, locatives, and time expressions in oracle bone inscriptions,⁵⁹ generally assumes a position in the ubiquitous BI date and location formulas of the type “*wei* time X,” “*wei* event Y,” or “*wei* location Z,” typically encountered at the beginning of an inscription, apart from slowly developing peripheral optative-adhortative functions. These usages reanalyze the non-indicative semantics into a copula signaling narrative “self-distancing,” a kind of reportative or citational evidentiality, in which the event or location is located *in illo tempore*, i.e., within a space barred from the immediate experience of the inscriber.⁶⁰ While remnants of almost all of these usages

do appear in the *Shangshu* and other early texts, their systematic interconnections could hardly be reconstructed from the edited evidence alone.

Nevertheless, there are some peculiar syntactic structures especially in early to mid-WZ BI, which are only rarely encountered in the edited classical literature.⁶¹ These include, for instance, postposed noun phrase modifiers, be they “adjectives” or nouns, typically occurring as part of gift lists (examples 1–3), or postposed prepositions (examples 4–6) and verb phrases (examples 7–10), usually translated as relative clauses.

a. Postposed modifying noun phrases

- (1) 王易 (賜) 赤環市·玄衣黼屯 (純) ·縹 (鑾) 旂。⁶²

*waj lek-s (s-lek-s) t-q^h(r)Ak gɣ^wren pup, gɣ^win ʔej ti-ʔ tu[r] (tu[r]-ʔ), __?__ (Ca-tron) gɛj.

“The king awarded [him] red circlet knee pads, a **fine brocaded** dark robe, and a chariot bell pennant.”

- (2) 易 (賜) 女 (汝) (……) 玄衣黼 (黼) 屯 (純) ·縹 (鑾) 旂五日。⁶³

*lek-s (s-lek-s) nra-ʔ (na-ʔ) (...) gɣ^win ʔej ^ʔgg^{ra}ŋ-s (gg^{ra}ŋ) tu[r] (tu[r]-ʔ), Ca-tron gɛj ɲja-ʔ nit.

“I award you (...) a **glossy sable** dark robe, a chariot bell pennant **with five suns** [on it].”

- (3) 易 (賜) 鬯鬯一卣、玄衮衣、赤舄、金車、秬鬯 (鬯) ·朱號 (鬯) 斚、虎鬯 (鬯) 鬯 (鑾) 襄、秬較、畫鞶、金甬、馬四匹、攸 (鑾) 勒。⁶⁴

*lek-s (s-hlek-s) __?__ t^haŋ-s ʔit lu, gɣ^win kkon ʔej, t-q^h(r)A ssa-ʔ, kram Ca-q^h(r)a, qq^hut __?__ (N-k^waŋ), to k^wrak (k^wak) __?__, qq^hra-ʔ __?__ (mmek) q^hun (q^hun) ra-ʔ, qq^hut-rra^wk, gɣ^wrek-s bbak, kram loŋ-ʔ, mmra-ʔ-s-lj-s p^hi, liw (liw) rrek.

“I award [you; *scil.* 作冊吳] one bucket of black millet libation wine, a dark ceremonial robe, red slippers, a chariot with bronze fittings, a decorated leather kneeling bench, vermilion soft leather breast trappings, tiger skin chariot drapes **with deep crimson linings on the inside**, a decorated axle cover, painted attachment straps, bronze axle caps, a quadriga of horses with bits and bridles.”

b. Postposed modifying prepositional phrases

- (4) 懋父休 (賞) 御正衛馬匹自王。⁶⁵

*mus p(r)a-ʔ __?__ (s-taŋ-ʔ) ŋa-s teŋ g^wat-s m-rra-ʔ p^hi N-tsit-s g^waŋ.

“Father Mao bestowed upon Equerry Wei a quadriga of horses **from the king**.”

- (5) 毛公易 (賜) 朕文考臣自畢 (厥) 工。⁶⁶

*mmaw Ca-qgoŋ lek-s (s-hlek-s) lam-q man kkh^hu-q gin N-tsit-s kot (kot) kkon.

“Duke Mao awarded our cultivated ancestral father retainers **from among his workers**.”

- (6) 王姜易 (賜) 旗田三千待 𠂔 (勛) 。67

*g^waŋ Ca-qaj lek-s (s-hlek-s) __?__ lliŋ ssum g^w(r)a dda-ʔ __?__.

“Queen Jiang awarded 旗 (name) three fields [located] in Dai-X.”

c. Postposed verb phrases acting as modifiers (often translated as relative clauses)

- (7) 王乎 (呼) 內史駒冊命師奎父易 (賜) 截市 𠂔 (緡) 黃 (珩) ·玄衣黼屯 (純) ·文瑁戩、旂。⁶⁸

*g^waŋ cca (qq^ha) nap-s-ra-ʔ ko ts^hreak mriŋ-s __?__ (r)a-ʔ lek-s (s-hlek-s) ^ʔg^wa[r] ^ʔg^wej pup, k^weg N-k^waŋ (N-kkraŋ), gɣ^win ʔej ti-ʔ tu[r] (tu[r]-ʔ), kkoj tiw __?__ (nuk), gɛj.

“The king summoned the Inner Scribe Ju to record the mandation to Father Commander X, awarding him protective knee pads **with unlined straps, a finely brocaded** dark robe, a *ge*-battle ax engraved on the inside, a pennant.”

- (8) 易 (賜) 女 (汝) 井 (邢) 人奔于量。⁶⁹

*lek-s (s-hlek-s) nra-ʔ (na-ʔ) s-keŋ-ʔ (N-kkeŋ) nin pur g^w(r)a raŋ.

“I reward you with persons from Xing who have fled to Liang.”

- (9) 述乍 (作) 兄日乙寶隣 (尊) 彝臥。⁷⁰

*hut N-ttsrak-s (ttsak) hmraŋ nit g^wat __?__ (tsu[n]) li gram-s.

“Shu had made an honorable bronze vessel for his deceased forebear to give [him] to drink.”

- (10) 儗女 (汝) 十五易 (鏞) 登、盾生皇 (鳳) 壽內……
- ⁷¹

*sr-hlɿj nra-ʔ (na-ʔ) gip-ŋa-ʔ laŋ ttaŋ, hlu[n]-r sreŋ gɔʷaŋ
 Ca-gɔʷrek nnap, ...

“I bestow upon You fifteen sacrificial bronze containers, a shield
 with lively phoenixes drawn on the inside ...”

Such constructions are not entirely unknown from the edited literature and may sometimes even be repeated, as in the *Shangshu* phrase in example 11, possibly for purposes of rhetoric:

- (11) 予惟曰：「汝劼毖殷獻臣 (……) 矧惟若疇，圻父薄違，農夫若保，宏父定辟，矧汝，剛制於酒。」
- ⁷²

*la (ta-)wuj wat: na-ʔ kkhrit pit-s ʔrər s-ŋar gin (...) hli[n]-ʔ
 (ta-)wuj na-k dru, gəj b(r)a-ʔ Ca-bbak ɔʷəj, nnuŋp(r)a na-k
 ppu-ʔ, gʷraŋp(r)a N-tteŋ-s pek, hli[n]-ʔ na-ʔ, kkaŋ tet-s ʔa s(k)
 lu-ʔ.

“I tell you: ‘You should earnestly caution the wise servants of Yin (...) and still more those who serve you in your activities; and still more the *k’i-fu* (minister of war) who suppresses the transgressors, the *nung-fu* (master of the multitudes, the farmers) who (conforms himself to=) carefully attends to the territories, and the *hung-fu* (master of works) who carefully attends to the strongholds (sc. walled cities), (these three) who establish the laws; and still more you should restrict yourself in regard to wine.’”

However, we do not usually find prosodically heavy and syntactically complex post-head modifiers like those in example 12 in the edited literature:

- (12) 王乎 (呼) 史減冊易 (賜) 袁玄衣齊屯 (純) 、赤市朱黃 (紉) 、緇 (鑿) 旂、攸勒、戈瑁戠、欽 (縑) 必 (秘) 、彤沙 (縑) 。
- ⁷³

*gʷaŋ gga (qɕʰa) s-rə-ʔ N-k-wrak tsʰrek lek-s (s-hlek-s) ʔgʷa[r]
 gɔʷin ʔəj ti-ʔ tu[r] (tu[r]-ʔ), t-qʰ(r)Ak pup, to N-kkʷaŋ (N-kkraŋ),
 Ca-ron gəj, liw (liw) ɾrak, kkoj tiw ___? ___ (ʔnuk), ___? ___ (kko),
 pit (N-pit), llug ssraŋ (ʔnuj).

“The king summoned scribe Yu to reward Yuan in recorded investiture a fine brocade dark robe, red knee pads [with] crimson straps, a chariot bell pennant, bits and bridles, a ge-battle ax engraved on the inside, with a wrapped axe handle and vermillion tassels.”

Other such syntactic peculiarities, presumably originating from the same underlying typological profile, include the preposing of fully lexical noun phrases as objects of non-negated verbs (examples 13–14) in Western Zhou bronze inscriptions:

- (13) 天子明懋 (哲) , 覯孝于申。
- ⁷⁴

*hlin.tse-ʔ mraŋ ___? ___ (tet), ___? ___ (qɕʰru-s) ɔʷ(r)a hlin.

“The Son of Heaven is enlightened in knowledge, extending [His] manifest piety.”

- (14) 王親旨 (指) 齋駒易 (賜) 兩。
- ⁷⁵

*gʷaŋ tsʰin kij-ʔ (kij-ʔ) ʔon-s ko lek-s (s-lek-s) pa-raŋ-ʔ.

“The king ordered in person that ʔi be awarded two foals.”

In the edited literature, “object-inversion” rules are somewhat stricter, being typically limited to (i) interrogative pronouns occurring as direct objects in interrogative phrases, (ii) some, but by no means all, pronominal objects in negated predicates, (iii) the demonstrative *shi* 是, and (iv) direct objects occurring with *wei* 唯 and *shi* 是 as focus markers.⁷⁶ Moreover, WZ bronze inscriptions even allow “raised” adverbs (example 15) or modal verbs (example 16) in pre-nominal extraposition, two phenomena which practically never occur in the pre-Qin edited literature:

- (15) 永其萬年子孫寶用。
- ⁷⁷

*gʷraŋ-ʔ go mraŋ-s nmin tse-ʔ tse-ʔ ssu[r].ssu[r] ppu-ʔ loŋ-s.

“May son’s sons and grandson’s grandsons eternally treasure and use [this vessel].”

- (16) 裕 (欲) 我弗乍 (作) 先王憂。
- ⁷⁸

*s-gok (ɔ(r)ok) ŋjaŋ-ʔ pa-t N-ttsrak-s (tsak) ssar ɔʷaŋ ʔu.

“It is our desire to avoid causing sorrows to the former kings.”

Whether constituent reversals in compounding (*xiao da bang* 小大邦 “small and big states”) or exclamatives inserted between the subject NP and its verb (*er, you, sui xiaozhi* 爾有唯 [雖] 小子 “even if you, my dear, are still a little squirt”) also belong to the same “inversion syndrome,” is currently hard to say. While it is obvious that not all such variation may be accounted for simply by focalization requirements, rhetorical conditioning or *metri causa* in rhyming inscriptions, it is presently unclear how much of it reflects regional (dialectal) influences, or, for instance, the conflicting syntactic typology of an underlying SOV language diachronically or under

conditions of language contact. Finally, sociolinguistic, discourse pragmatic and text type specific factors may also have been at play, notwithstanding the conventionalized ritual setting of most inscriptional texts, and even scribal errors or casting inversions may never be fully ruled out as reasons for the observed syntactic peculiarities.⁷⁹

Lexicon

The WZ period, as reflected in bronze inscriptions, shows a great development if compared to the oracle bone inscriptions (OBI). The number of analytically transparent non-onomastic characters commonly agreed upon in the scholarly community almost doubled (1087 for OBI, 1753 for BI), and the ratio of particular character types is markedly different, with phonosemantic (*xingsheng* 形聲) formations rising from 29.3% to 59.9% between the OBI and WZ BI periods.⁸⁰ Needless to say, such statistics are to be taken with a big shaker of salt, since they presuppose particular, and sometimes debatable, analyses of character structures and a specific underlying reconstructed phonology. Thus, it is likely that given new models of Old Chinese syllable structure and new types of consonant clusters being reconstructed, the percentage of the traditional “syssemantic” (*huiyi* 會意), “pictographic” (*xiangxing* 象形) and “deictic” (*zhishi* 指事) characters in the OBI will steadily shrink. Moreover there are obviously many character formations which escape the traditional *Shuowen* 說文 categorizations, typically used to study such distribution frequencies.⁸¹ In any case, it is clear that already during the WZ period the phonosemantic principle had risen inexorably, such that more than 82% (> 900 tokens) of the innovated characters during this period belong to the traditional *xingsheng* 形聲 type.⁸²

Lexical compounding, a process barely begun in the OBI, developed very swiftly as well. Notwithstanding the major and still largely unresolved controversies about the criteria to differentiate compounds from word groups or phrases in the BI language—as, indeed, in all later diachronic periods of the Chinese language(s)⁸³—it is clear that the WZ BI lexicon included a considerable proportion of disyllabic word formations, ranging somewhere between 400 and 500 lexemes in recent counts.⁸⁴ More importantly, almost all word formation strategies found developed in the Classical lexicon ([Noun-Noun], [Verb-Verb], [Adjective-Adjective], [Particle-Particle] coordinations; [N.modifier-N.head], [N.head-N.modifier], [Verb-Object], [Adverb-Verb], [Numeral-Noun] subordinations; full

and partial reduplications; suffixed nouns; unanalyzable loan transcriptions, etc.) are well attested in the WZ and developed steadily throughout the EZ period. This disyllabification process is partly driven by language-internal factors, such as the loss of derivational morphology, the loss of final laryngeal gestures resulting in tonogenesis, the reorganization of the syllable structure eventually ushering in the Late Middle Chinese division (*deng* 等) distinctions, expressive reduplications, dimidiations, lento forms, etc. Probably even more important was the extension of lexical domains represented in writing, i.e. the general extralinguistic pressure to represent new objects and ideas, especially from technical, ritual, and philosophical semantic fields, as well as proper and geographic names and loanwords.⁸⁵

This “lexical explosion” coupled with the conceptual-semantic complexities of Zhou ritual and material culture are probably part of the reason why BI texts sometimes feel intricate, obscure, or even downright inscrutable to readers trained in “standard” Classical Chinese. Other factors include a fair amount of variability in word formation, indicative of a transitory phase in the development of the lexicon, and, above all, the instability of the writing system. Here, cases abound where one and the same word can be written with a range of different characters, including different or even combined phonophorics and rampant classifier variation, where one character is used to write many different words, or where even commonly encountered “autosemantic” content words (*shici* 實詞) are *exclusively* represented by phonetic loans.⁸⁶

Conclusion

These minor detractions aside, the overall impression of a fairly uniform language, comparable to contemporary and later edited texts, still dominates. Whether this standardized language is a linear continuation of the language known from the stylistically and thematically even more constrained corpus of Yin-Shang oracle, bronze and lithic inscriptions remains an open question, although most studies of Yin-Shang phonology and grammar would seem to tacitly assume this.⁸⁷ Notice, however, that only parts of the derivational morphology now posited for Old Chinese on the basis of the internal reconstruction and the comparison of external Tibeto-Burman data are reflected in the WZ BI,⁸⁸ or, for that matter, the oracle bone inscriptions already.⁸⁹ It remains to be studied whether this is due to the different ethnic and linguistic backgrounds of the Zhou people

adopting the Yin-Shang script or to the notorious underspecification of that script. Perhaps linguistic approaches to excavated texts simply have not yet looked hard enough behind the intricate veil of the early writing system.

Notes

- 1 For overviews of the works produced since Lü Dalin's 呂大臨 (fl. 1086–1093) pathbreaking *Kaogu tu* 考古圖, see Zhu Jianxin 朱劍心, *Jinshixue* 金石學, Guoxue xiao congshu 國學小叢書 (Changsha: Shangwu yinshuguan, 1940); and Ma Heng 馬衡, *Zhongguo jinshixue gailiao* 中國金石學概要 (Taipei: Yiwen yinshuguan, 1967; repr. in Fanjiangzhai jinshi congkao 凡將齋金石叢稿 [Beijing: Zhonghua shuju, 1977]). The history of Song paleography is exhaustively covered in Ye Guoliang's 葉國良 1983 Ph.D. dissertation, "Songdai jinshixue yanjiu" 宋代金石學研究 (Zhongguo wenxue yanjiusuo 中國文學研究所, Guoli Taiwan daxue 國立臺灣大學), which, however, only became accessible through publication in 2011 (Chutu sixiang wenwu yu wenxian yanjiu congshu 出土思想文物與文獻研究叢書 39 [Taipei: Taiwan shufang, 2011]). For the Song intellectual background, see also Wang Guowei 王國維, "Archaeology in the Sung Dynasty" (paper read before the Peking Historical Association; trans. by C. H. Liu 劉崇鉉), *The China Journal* 6.5 (1927): 222–30, and R. C. Rudolph, "Preliminary Notes on Sung Archaeology," *Journal of Asian Studies* 22 (1962–1963): 169–77. A good bibliography of modern studies on Song paleography is included in Wu Weihua 吳偉華, "Songdai jinshixue zhuzuo de xueshu jiazhi" 宋代金石學著作的學術價值, *Qi-Lu yiyuan* 齊魯藝苑 2007.1: 82–86. While less extensive than during the Song period, considerable scholarship on bronze and stone inscriptions was produced under the Jin 金 dynasty (1115–1234), neatly summarized in Zhou Feng 周峰, "Jindai jinshixue shuyao" 金代金石學述要, *Zhongguo lishi wenwu* 中國歷史文物 2007.4: 73–78.
- 2 For the intellectual history of epigraphy during the Qing period, see Shana J. Brown, "Pastimes: Scholars, Art Dealers, and the Making of Modern Chinese Historiography, 1870–1928" (Ph.D. diss.: University of California, Berkeley, 2002), and Guo Mingxun 郭名詢, "Qingdai jinshixue fazhan gaikuang yu tedian" 清代金石學發展概況與特點, *Xueshu luntan* 學術論壇 7 (2005): 150–54.
- 3 Lin Yiguang's year of birth is unknown. For a sketch of his life and work, see Ye Yuying 葉玉英, "Lun Lin Yiguang dui guwenzixue de gongxian" 論林義光對古文字學的貢獻, *Fujian shifan daxue xuebao* 福建師範大學學報 125.5 (2004): 90–95.
- 4 See Laurence A. Schneider, *Ku Chieh-kang and China's New History: Nationalism and the Quest for Alternative Traditions* (Berkeley: University of California Press, 1971), and Ursula Richter, *Zweifel am Altertum: Gu Jiegang und die Diskussion über Chinas alte Geschichte als Konsequenz der neuen Kulturbewegung ca. 1915–1923*, Münchener Ostasiatische Studien 60 (Stuttgart: F. Steiner, 1992).
- 5 He Dingsheng 何定生, "Shangshu de wenfa ji qi niandai" 《尚書》的文法及其年代, *Guoli Zhongshan daxue Yuyan lishi yanjiusuo zhouban* 國立中山大學語言歷史研究所周刊 5.49–51 (1928): 1–189. For a full biographical and scholarly appreciation, see the eight contributions to the special section on He Dingsheng in *Zhongguo wenzhe yanjiusuo tongxun* 中國文哲研究所通訊 20.2 (2010): 1–88.

- 6 Qian Zongwu 錢宗武, *Jinwen Shangshu yufa yanjiu* 金文尚書語法研究 (Beijing: Shangwu yinshuguan, 2004).
- 7 He Dingsheng 何定生, "Han yiqian de wenfa yanjiu" 漢以前的文法研究, *Guoli Zhongshan daxue Xuyan lishi yanjiusuo zhouban* 33.31 (1928): 1–12; 33.32 (1928): 1–9; 33.33 (1928): 1–18.
- 8 On the history of the journal, see Zhang Yue 張越, "Guanyu Yanjing xuebao" 關於《燕京學報》, *Shixueshi yanjiu* 史學史研究 1996.4: 70–78. The overall progress of BI grammar studies is neatly summarized by Wu Zhenyu 武振玉, "Liang Zhou jinwen cilei yanjiu (xuci pian)" 兩周金文詞類研究 (虛詞篇) (Ph.D. diss.: Jilin daxue Guji yanjiusuo, 2006), 1–14, and Li Xiaofeng 李曉峰, "Xi Zhou jinwen yuyan yanjiu de lishi yu xianzhuang" 西周金文語言研究的歷史與現狀, *Guji zhengli yanjiu xuekan* 古籍整理研究學刊 2008.6: 83–86. The history of Western Zhou (WZ) grammar studies is sketched by Zhang Yujin 張玉金, "Xi Zhou Hanyu yufa yanjiu de huigu ji zhanwang" 西周漢語語法研究的回顧暨展望, *Yuyan yanjiu* 語言研究 2003.3: 15–20, and in his *Xi Zhou Hanyu yufa yanjiu* 西周漢語語法研究 (Beijing: Shangwu yinshuguan, 2004), 16–30, both of which include extensive bibliographies. A nicely illustrated study of the overall importance of paleographical materials as a still largely untapped "database" for linguists interested in Early Chinese is Liu Zhao 劉釗, "Tan guwenzi ziliao zai gu Hanyu yanjiu de zhongyaoxing" 談古文字資料在古漢語研究的重要性, *Gu Hanyu yanjiu* 古漢語研究 2005.3: 54–58.
- 9 For appreciations of his scholarship, see, for example, Zeng Xiantong 曾憲通, "Rong Geng xiansheng de xueshu chengjiu he zhixue tedian" 容庚先生的學術成就和治學特點, *Guji zhengli yanjiu xuekan* 古籍整理研究學刊 1993.4: 38–41; Zhang Zhenlin 張振林, "Rong Geng xiansheng de xueshu chengjiu he zhixue fangfa" 容庚先生的學術成就和治學方法, *Xueshu yanjiu* 學術研究 1984.4: 88–93; and the memorial volume Dongguanshi Zhengxieliu, ed., *Rong Geng Rong Zhaozu xueji* 容庚容肇祖學記 (Guangdong: Guangdong renmin chubanshe, 2004). For a bibliography of his works, see Chen Xiuhong 陳修弘, "Rong Geng jiaoshou zhuzuo shulu ji lunshu nianbiao" 容庚教授著作書錄及論述年表, *Zhongshan daxue xuebao* 中山大學學報 1984.3: 137–46.
- 10 Rong Geng, "Zhou jinwen zhong suo jian daimingci shi li" 周金文中所見代名詞釋例, *Yanjiing xuebao* 燕京學報 6 (1929): 1041–46, and Shen Chunhui 沈春暉, "Zhou jinwen zhong zhi 'shuangbinyu jushi'" 周金文中之「雙賓語句式」, *Yanjiing xuebao* 燕京學報 20 (1936): 375–408.
- 11 Li Jinxi 黎錦熙, "Lun jinwen wenfa zhi Rong Geng shu" 論金文文法致容庚書, *Shijie ribao* 世界日報 226 (1.II.1936): 3. On this theoretical linguist, language reformer, Mao Zedong intimus, and poet, see the contributions to the memorial issue of *Hanzi wenhua* 漢字文化 2008.3.
- 12 Guan Xiechu 管燮初, *Yinxu jiagu keci de yufa yanjiu* 殷墟甲骨刻辭的語法研究 (Beijing: Shehui kexue chubanshe, 1953).
- 13 Ding Shengshu 丁聲樹 et al., eds., *Xiandai Hanyu yufa jianghua* 現代漢語語法講話 (Beijing: Shangwu yinshuguan, 1961). The book is a revised collection of lectures given by various prominent Chinese linguists right after the founding of the PRC, which were originally serialized in *Zhongguo yuwen* 中國語文 (1952–1953).
- 14 Guo Moruo 郭沫若, *Liang Zhou jinwen ci daxi* 兩周金文辭大系圖錄攷釋 (Tokyo: Monkyūdō shoten, 1935; rev. ed., *Zhongguo shehui kexueyuan Kaogu yanjiusuo Kaoguxue zhuankan* 中國社會科學院考古研究所考古學專刊 1.3 [Beijing: Kexue chubanshe, 1957]). For detailed criticisms of this work, see the reviews by Wang Haifan 王海芬, "Xi Zhou jinwen yufa yanjiu du hou" 《西周金文語法研究》讀後, *Zhongguo yuwen* 中國語文 1982.6: 469–71; Chen Chusheng 陳初生, "Xi Zhou jinwen yufa yanjiu (Guan Xiechu) jian ping" 《西周金文語法研究》(管燮初) 簡評, *Zhongguo yuwen yanjiu* 中國語文研究 5 (1984): 35–36; and the extensive list of corrigenda in Zhang Qingsong 張青松, "Shi ping Xi Zhou jinwen yufa yanjiu" 試評《西周金文語法研究》, *Huinan ligong daxue xuebao* 華南理工大學學報 2002.1: 79–83.
- 15 Zhou Fagao 周法高, *Zhongguo gudai yufa* 中國古代語法, 3 vols., *Bulletin of the Institute of History and Philology*, zhuan kan 專刊 39 (Taipei: Zhongyang yanjiuyuan, 1971).
- 16 W. A. C. H. Dobson, *Early Archaic Chinese: A Descriptive Grammar* (Toronto: University of Toronto Press, 1962).
- 17 Zhou, incidentally, offered a most skeptical and detailed review of Dobson's *Early Archaic Chinese* in the *Harvard Journal of Asiatic Studies* 24 (1962–1963): 252–60.
- 18 Zhang Yujin, *Xi Zhou Hanyu yufa yanjiu*, complemented by his *Xi Zhou Hanyu daici yanjiu* 西周漢語代詞研究 (Beijing: Zhonghua shuju, 2006).
- 19 Shi Bing 時兵, *Shanggu Hanyu shuangjiwu tiegou yanjiu* 上古漢語雙及物結構研究 (Hefei: Anhui daxue chubanshe, 2007). For a sustained justification of this "integral" approach to BI grammar, including rich bibliographic documentation, see for example Zhang Yujin, *Xi Zhou Hanyu yufa yanjiu*, pp. 1–20.
- 20 Dai Lianzhang 戴連璋, "Liang Zhou jinwen yufa yanjiu" 兩周金文語法研究 (Taipei: Xingzhengyuan Guojia kexue weiyuanhui, 1970).
- 21 Fang Lina 方麗娜, "Xi Zhou jinwen xuci yanjiu" 西周金文虛詞研究 (M.A. thesis: Taiwan shifan daxue, 1985).
- 22 Cui Yongdong 崔永東, *Xi Zhou jinwen xuci yanjiu* 西周金文虛詞研究 (Beijing: Zhonghua shuju, 1994).
- 23 See also the very fine earlier study by Redouane Diamouri, "Particules de négation dans les inscriptions sur bronze de la dynastie des Zhou," *Cahiers de Linguistique Asie Orientale* 20.1 (1991): 5–76.
- 24 Pan Yukun 潘玉坤, *Xi Zhou jinwen yuxu yanjiu* 西周金文語序研究 (Shanghai: Huadong shifan daxue chubanshe, 2005).
- 25 Zhu Qizhi 朱其智, *Xi Zhou mingwen pianzhang zhitong ji qi xiangguan yufa yanjiu* 西周銘文篇章指同及其相關語法研究 (Shijiazhuang: Hebei daxue chubanshe, 2007).
- 26 Cf. Yang Huiyuan 楊懷源, "Xi Zhou jinwen cihui yanjiu" 西周金文詞匯研究 (Ph.D. diss.: Sichuan daxue Lishi wenhua xueyuan, 2006); Zhu Gangxun 朱剛燾, "Xi Zhou qingtongqi mingwen fuyinci yanjiu" 西周青銅器銘文復音詞研

- 究 (Ph.D. diss.: Shandong daxue, 2006); and Wu Zhenyu, "Liang Zhou jinwen cilei yanjiu (xuci pian)." 27
- Kou Zhanmin 寇占民, "Xi Zhou jinwen dongci yanjiu" 西周金文動詞研究 (Ph.D. diss.: Shoudu shifan daxue, 2009).
- 28 Li Yihai 李義海, "Liang Zhou jinwen xuci yanjiu" 兩周金文修辭研究 (Ph.D. diss.: Huadong shifan daxue, 2009).
- 29 For comprehensive studies see Yu Naiyong 余迺永 [Yu Nae-wing], "Liang Zhou jinwen yinxi kao" 兩周金文音系考 (Ph.D. diss.: Taiwan shifan daxue, 1980); Wolfgang Behr, "Reimende Bronzenschriften und die Entstehung der chinesischen Endreimichtung" (Ph.D. diss.: University of Frankfurt/Main, 1997); and Shi Yumei 師玉梅, "Xi Zhou jinwen yinyun kaocha" 西周金文音韻考察 (Ph.D. diss.: Zhongshan daxue, 2004).
- 30 See for example Guo Xiliang 郭錫良, "Xi Zhou jinwen yinxi chutan" 西周金文音系初探, in Yuan Xingpei 袁行霈 et al., eds., *Guoxue yanjiu* 國學研究 (Beijing: Beijing daxue chubanshe, 1994), n.s., vol. II, pp. 227–76 and Liu Zhicheng 劉志成, "Liang Zhou jinwen yinxi de shengmu xitong" 兩周金文音系的聲母系統, *Chuandong xuekan* 川東學刊 1995.3: 71–76.
- 31 On the constrained variability of these *guci* 韻辭, see Xu Zhongshu 徐中舒 now classic article "Jinwen guci shili" 金文韻辭釋例, *Bulletin of the Institute of History and Philology* 6.1 (1936): 1–44. The layered variation of such formulas might potentially be useful even for dating purposes; cf. Cao Jianguo 曹建國, "Jinwen guci yu Shi pian duandai" 金文韻詞與《詩》篇斷代, *Zhongguo wenhua yanjiusuo xuebao* 中國文化研究所學報 49 (2009): 1–33.
- 32 On this aspect, see for example Lothar von Falkenhausen, "The Royal Audience and Its Reflections in Western Zhou Bronze Inscriptions," in Li Feng and David Prager Branner, eds., *Writing and Literacy in Early China* (Seattle: University of Washington Press, 2011), pp. 239–79; Martin Kern, "The Performance of Writing in Western Zhou China," in Sergio La Porta and David Shulman, eds., *The Poetics of Grammar and the Metaphysics of Sound and Sign* (Leiden: E.J. Brill, 2007), pp. 109–76; and "Bronze Inscriptions, the *Shijing* and the *Shangshu*: The Evolution of the Ancestral Sacrifice during the Western Zhou," in John Lagerwey and Marc Kalinowski, eds., *Early Chinese Religion, Part One: Shang through Han (1250 BC to 220 AD)* (Leiden: E.J. Brill, 2009), pp. 143–200, at pp. 179–82.
- 33 Cf. Edward L. Shaughnessy, "The Writing of a Late Western Zhou Bronze Inscription," *Asiatische Studien/Études Asiatiques* 61.3 (2007): 845–77.
- 34 Guo Bizhi 郭必之 [Kwok Bit Chee], "Jinwen zhong de Chuxi fangyanci (san ze)" 金文中的楚系方言詞 (三則), *Journal of Oriental Studies* (Hong Kong) 34.1–2 (1998): 102–16; Cao Zhaolan 曹兆蘭, "Jinwen zhong fangyan 'mi' yu yayan 'mu' de xiangyin shengyi" 金文中方言「彌」與雅言「母」的相因生義, *Fangyan* 方言 2002.2: 177–82. Old Chinese reconstructions throughout this paper are reconstructed according to the "Baxter-Sagart system," version 1.0 (<http://crllao.ehess.fr/docannexe.php?id=1203>, accessed 4 May 2011), noting type-A ("pharyngealized") syllables by a doubling of the initial.
- 35 I.e. Proto-Tai *mɛɛʰ, Proto-Kam-Sui *mɛɛʰ, Proto-Hlai *mɔiʰ or Proto-Austroasiatic *me-ʔ, Proto-Monic *meʔ, Proto-Katuić *me(ʔ) for "mother." For the backgrounds and sources of these reconstructions, see Li Fang Kuei, *A Handbook of Comparative Tai* (Honolulu: The University Press of Hawai'i, 1977); Graham Thurgood, "Notes on the Reconstruction of Kam-Sui," in Jerold A. Edmondson and David B. Solnit, eds., *Comparative Kadai: Linguistic Studies Beyond Tai* (Dallas: Summer Institute of Linguistics, 1988), pp. 179–218; B.M. Itozma, *Историческая фонетика майяских языков* [Historical phonetics of the Tai languages] (Москва: Hayka, 1992); and Ila Petros, *Comparative Linguistics in Southeast Asia* (Canberra: Pacific Linguistics, Research School of Pacific and Asian Studies, National University of Australia, 1998), respectively.
- 36 Lin Hongying 林虹英, Murase Nozomu 村瀬望 and Furuya Akihira 古屋昭弘, "Sengoku moji 'tsu' ni tsuite" 戰國文字「罷」について, *Kaipian* 開篇 23 (2004): 71–75; Zheng Wei 鄭偉, "Gudai Chu fangyan 'yi' zi de lai yuan" 古代楚方言「罷」字的來源, *Zhongguo yuwen* 中國語文 2007.4: 378–81. The alternative "indigenous" explanation proffered in Wang Zhiping 王志平, "罷" zi de duyin ji xiangguan wenti" 「罷」字的讀音及相關問題, *Guwenzi yanjiu* 古文字研究 27 (2008): 394–99, is phonologically unconvincing.
- 37 Proto-Tai *hm̥ (Thai ʰm̥, Dai ʰm̥, Lungchow ʰnaɐŋ, etc.) "one, once," etc.; cf. Li Fang Kuei, *A Handbook*, pp. 115–16, and Pittayawat Pittayaporn, "The Phonology of Proto-Tai" (Ph.D. diss.: Cornell University, 2009), p. 218.
- 38 Zhu Dexi 朱德熙, "Xing li qu xi jie" 暫寓屈秦解, *Fangyan* 方言 1989.4: 303; Mei Zulín 梅祖麟, "Gudai Chu fangyan zhong 'xi' (xi) zi de ciyi he yuyan" 古代楚方言中「夕(蔡)」字的詞義和語源, *Fangyan* 方言 1981.3: 215–18; Rao Zongyi 饒宗頤, "Qinjian rishu zhong 'xi' (xi) zi hanyi de shangque" 秦簡日書中「夕」(蔡)字含義的商榷, *Zhongguo yuyan xuebao* 中國語言學報 1982.1: 167–72.
- 39 This appears in the *Dishi hu* 狄氏壺 (in *Zhongguo shehui kexueyan* Kaogu yanjiusuo, ed., *Yin Zhou jinwen jicheng* 殷周金文集成 [hereafter abbreviated as *jicheng*], 18 vols. [Beijing: Zhonghua shuju, 1984–1994; 2nd ed., 2007], #9715); cf. Ma Chengyuan 馬承源, *Jiang Dayi* 將大沂, Chen Peifen 陳佩芬, Pan Jianming 潘建明, Chen Jianmin 陳建敏 and Pu Maozuo 濮茅左, *Shang-Zhou qinglongqi mingwen xuan* 商周青銅器銘文選 (Beijing: Wenwu chubanshe, 1986–1990), vol. IV, p. 564. This might, again, be a substrate word, related to Proto-Japanese *ke (< *ka-Ci) > Old Japanese *ke* "vessel, container" or Middle Korean *kali* 釭 "fish pot, container" (< Old Korean *kal[ʰ]).
- 40 Cf. Han Yaolong 韓耀隆, "Jinwen zhong chengdaici yongfa zhi yanjiu" 金文中稱代詞用法之研究, *Zhongguo wenzi* 中國文字 23 (1967): 1–12; 24 (1967): 1–11; 25 (1967): 1–8, at 3–4; Jiang Baochang 姜寶昌, "Zhou dai jinwen daici shixi" 周代金文代詞試析, in *Shandongsheng yuyan xuehui*, ed., *Yuhai xintan* 語海新探 (Jinan: Shandong jiaoyu chubanshe, 1984), vol. 1, pp. 352–64; Redouane Djamouri, "The Development of the Writing System in Early China: Between Phonographic Necessity and Semiographic Efficiency," in F. Bottéro and R. Djamouri, eds., *Écriture chinoise: Données, usages et représentations*,

- Collection des Cahiers de Linguistique Asie Orientale 6 (Paris: CRLAO/EHESS, 2006), pp. 7-34; and Wu Zhenyu, "Liang Zhou jinwen cilei yanjiu," pp. 26-41.
- 41 On the latter problem, see the case study in Constance Anne Cook, "Auspicious Metals and Southern Spirits: An Analysis of the Chu Bronze Inscriptions" (Ph.D. diss.: University of California, Berkeley, 1991). For some noteworthy rhetorical innovations in EZ inscriptions, see also Gilbert L. Matos, "Eastern Zhou Bronze Inscriptions," in Edward L. Shaughnessy, ed., *New Sources of Early Chinese History: An Introduction to the Reading of Inscriptions and Manuscripts*, Early China Special Monographs 3 (Berkeley: The Society for the Study of Early China, and Institute of East Asian Studies, University of California, Berkeley, 1997), pp. 86-92.
- 42 This is the combined number of the rhyming inscriptions studied in Behr, *Reimende Bronzinschriften*, plus the number of rhyming inscriptions which have meanwhile been published in Liu Yu 劉雨 and Lu Yan 盧岩, eds., *Jin chu Yin Zhou jinwen jilu* 近出殷周金文集錄, 4 vols. (Beijing: Zhonghua shuju, 2002), and in its sequel *erbian* 二編, edited by Liu Yu and Yan Zhibin 嚴志斌, 4 vols. (Beijing: Zhonghua shuju, 2010). Other studies (Liu Zhicheng, "Liang Zhou jinwen yinxi de shengmu xitong", several articles by Luo Jiaqwen 羅江文, including "Liang Zhou jinwen yunli" 兩周金文韻例, *Yuxi shizhuan xuebao* 玉溪師專學報 1994.1/2: 61-66, "Cong jinwen yongyun he wenzi de tongyixing kan liang Zhou yayan shumianyu" 從金文用韻和文字的统一性看兩周雅言音面語, *Yuxi shizhuan xuebao* 玉溪師專學報 1995.1: 21-23, and "Cong jinwen kan shanggu jinwen yun de fenli" 從金文上看古辭近韻的分立, *Gu Han yu yanjiu* 古漢語研究 1996.3: 27-29, 14; and Chen Shiyi 陳仕益, "Guo Moruo liang Zhou jinwen yundou bulun" 郭沫若兩周金文韻讀補論, *Guo Moruo xuekan* 郭沫若學刊 76.2 [2006]: 53-60) count up to 300 rhyming inscriptions, but they contain many spurious rhyme identifications or line-internal rhymes.
- 43 See, for example, Jin Yingruo 金穎若, "Shijing yunxi de shidai fenye" 詩經韻系的時代分野, *Gu Han yu yanjiu* 1993.4: 53-55, and William H. Baxter, "Zhōu and Hàn Phonology in the Shījīng," in W. Boltz and M. Shapiro, eds., *Studies in the Historical Phonology of Asian Languages*, Amsterdam Studies in the Theory and History of Linguistic Science, ser. 4, Current Issues in Linguistic Theory 77 (Amsterdam and Philadelphia: J. Benjamins, 1991), pp. 1-34.
- 44 Dong Tonghe 董同龢, "Yu Gao Benhan xiansheng shangque: 'ziyou yayan' shuo, jian lun shanggu Chu fangyin tese" 與高本漢先生商榷:「自由押韻」說:兼論上古楚方言特色, *Bulletin of the Institute of History and Philology* 7.4 (1938): 533-43; Liu Baojun 劉寶俊, "Dong bu guixiang de shidai he diyu tedian yu shanggu Chu fangyin" 冬部歸向的時代和地域特點與上古楚方言, *Zhongnan minzu xueyuan xuebao* 中南民族學院學報 44.5 (1990): 79-86; and Huang Qi 黃琦, "Zhi, yu bu fen, yu du ru zhi" 之·魚不分, 魚讀入之, *Hebei xuekan* 河北學刊 1992.2: 34-40.
- 45 See Wang Qiming 汪啟明, *Xian Qin liang Han Qiyu yanjiu* 先秦兩漢齊語研究 (Chengdu: Ba-Shu shushe, 1998) on the merger of the traditional rhyme classes *zhi* 之, *zhi* 支, and *zhi* 脂 in Qi and Xu 徐 BI, and in the edited literature.
- 46 Yu Suisheng 喻遂生, "Liang Zhou jinwen yunwen he xian Qin 'Chu yin'" 兩周金文韻文和先秦「楚音」, *Xinan shifan daxue xuebao* 西南師範大學學報 1993.2: 105-9; Luo Jiaqwen 羅江文, "Tan liang Zhou jinwen heyun de xingzhi—jian ji shanggu 'Chu yin'" 談兩周金文合韻的性質——兼及上古「楚音」, *Chuxiong shizhuan xuebao* 楚雄師專學報 14.4 (1999): 73-77; Behr, *Reimende Bronzinschriften*, passim; and Jin Yingruo 金穎若, "Ji jin zou ya—Cong Dong Zhou lieguo jinwen yunwen lice yayan de cunzai" 吉金奏雅——從東周列國金文韻文蠡測雅言的存在, *Yuyan yanjiu* 語言研究 1998, zengkan 增刊.
- 47 For systematic studies of the regional and diachronic diversity of the script, see He Linyi 何琳儀, *Zhangguo wenzi tonglun (dingbu)* 戰國文字通論 (訂補) (Beijing: Zhonghua shuju, 2003), chap. 3; Zhao Xueqing 趙學清, *Zhangguo dongfang wu guo wenzi gouxing xitong yanjiu* 戰國東方五國文字構形系統研究 (Shanghai: Shanghai jiaoyu chubanshe, 2005); Zhang Xiaoming 張曉明, *Chunqiu Zhangguo jinwen ziti yanbian yanjiu* 春秋戰國金文字體演變研究, *Wenzi xungu yu shufa wenhua yanjiu* 文字訓詁與書法文化研究叢書 (Ji'nan: Qi-Lu shushe, 2006); and, on a more general plane, Olivier Venture, "La question de «écritures chinoises» à l'époque des Royaumes combattants," *Arts Asiatiques* 61 (2006): 30-44.
- 48 Cf. Shi Yumei, "Xi Zhou jinwen yinyun kaocha," p. 2.
- 49 See *Zuozhuan* 左傳 (Xiang 襄 14), and Yuri Pines, "Beasts or Humans: Pre-Imperial Origins of the Sino-Barbarian Dichotomy," in R. Amintai and M. Biran, eds., *Mongols, Turks and Others: Eurasian Nomads and the Sedentary World* (Leiden: E.J. Brill, 2004), pp. 59-102, at p. 70.
- 50 For a good study of this phenomenon, see Ye Yuying 葉玉英, *Guwenzi gouxing yu shanggu yin yanjiu* 古文字構形與上古音研究, Xiamen daxue Guoxue yanjiuyuan zizhu chubanshe 廈門大學國學研究院資助出版叢書 (Xiamen: Xiamen daxue chubanshe, 2009), pp. 378-420. See also Meng Guangdao 孟廣道, "Shengfu leizheng xianxiang chutan" 聲符疊增現象初探, *Gu Han yu yanjiu* 古漢語研究 47.2 (2000): 10-13, and Liu Zhao 劉釗, *Guwenzi gouxingxue* 古文字構形學 (Fuzhou: Fujian renmin chubanshe, 2006), pp. 79-90.
- 51 See Wolfgang Behr, "The Extent of Tonal Irregularity in Pre-Qin Inscriptions: A Rhyming," in Anne O. Yue, Ting Pang-hsin and Hoh Dah-an, eds., *Hanyu shi yanjiu—jinian Li Fanggui xiansheng bainian mingdan lunwenji* 漢語史研究——紀念李方桂先生百年冥誕論文集 [Studies in the History of the Chinese Language—Memorial Collection on the Occasion of Mr. Li Fang-kuei's 100th Birthday] (Taipei: Academia Sinica, 2004), pp. 111-46.
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- 54 Martin Kern, *The Sile Inscriptions of Ch'in Shih-huang: Text and Ritual in Early Chinese Imperial Representation*, American Oriental Series 85 (New Haven: American Oriental Society, 2000).
- 55 Cf. Laurent Sagart, *The Roots of Old Chinese*, Current Issues in Linguistic Theory 184 (Amsterdam: J. Benjamins, 1999), pp. 12–23; and Pan Wuyun 潘悟雲, “Han-Zangyu de ciyao yinjie” 漢藏語的次要音節, in Pan Wuyun and Shi Feng 石峰, eds., *Zhongguo yuyanxue de xin tuozhan* 中國語言學的新拓展 (Hong Kong: City University of Hong Kong Press, 1998), pp. 126–47.
- 56 See Zhao Cheng 趙誠, “Jinwen de ‘zhe’” 金文的「者」, *Zhongguo yuwen* 中國語文 2001.3: 267–68, and Wu Zhenyu, “Liang Zhou jinwen cilei yanjiu,” pp. 119–20, 264–65.
- 57 Takashima Kenichi 高嶋謙一, “Jinwen he Shangshu zhong de zhishici jue/jue zi yanjiu” 金文和《尚書》中的指示詞手/厥字研究, in *Collected Essays in Ancient Chinese Grammar*, Collection des Cahiers de Linguistique Asie Orientale 6 (Paris: CRLAO/EHESS, 2001), pp. 130–60.
- 58 See Redouane Diamouri [Luo Duan 羅端], “Cong jia, jinwen kan ‘yi’ zi yutahua de guocheng” 從甲·金文看「以」字語法化的過程, *Zhongguo yuwen* 中國語文 2009.1: 3–9; Pan Yukun, *Xi Zhou jinwen yuxu yanjiu*, pp. 234–52; and the respective *yi*-entries in Wu Zhenyu, “Liang Zhou jinwen cilei yanjiu.”
- 59 Redouane Diamouri, “Markers of Predication in Shang Bone Inscriptions,” in Hilary Chappell, ed., *Sinitic Grammar: Synchronic and Diachronic Perspectives* (Oxford: Oxford University Press, 2001), pp. 143–71.
- 60 See Wolfgang Behr, “Morphological Notes on the Old Chinese Counterfactual,” *Bochumer Jahrbuch zur Ostasienforschung* 30 (2006): 55–88.
- 61 Most examples are taken from Pan Yukun, *Xi Zhou jinwen yuxu yanjiu*, chap. 8, and Li Shiyuan 李世淵, “Yin-Zhou jinwen wenli yanjiu” 殷周金文例研究 (M.A. thesis: Guoli zhengzhi daxue, 2005), chaps. 4–6.
- 62 *Geng ji ding* 庚季鼎 (*Jicheng* #2781).
- 63 *Hu guigai* 虎盞蓋 (*Jinchu* #491).
- 64 *Wu fangyi gai* 吳方彝蓋 (*Jicheng* #9898).
- 65 *Yu zheng wei ding* 御正衛鼎 (*Jicheng* #4044).
- 66 *Meng gui* 孟盞 (*Jicheng* #4162).
- 67 *Xi ding* 犧鼎 (*Jicheng* #2704). Notice that the phrase cannot be construed as *“(The king [located] in Dai-Xi awarded 犧 (name) three fields.”
- 68 *Shi X fu ding* 師季父鼎 (*Jicheng* #2813).
- 69 *Da Ke ding* 大克鼎 (*Jicheng* #2836).
- 70 *Shu you* 述卣 (*Jicheng* #5336).
- 71 *Wu mian shi-Xi gui* 五年師旋簋 (*Jicheng* #4182).
- 72 *Shangshu* (Shisanjing zhu shu ed.), 25 (“Jiu gao” 酒告), as translated by Bernhard Karlgren, *The Book of Documents* (Göteborg: Elanders Boktryckeri Aktiebolag, 1950; repr. from the *Bulletin of the Museum of Far Eastern Antiquities*), pp. 45–46.
- 73 *Yuan pan* 袁盞 (*Jicheng* #10172).
- 74 *Da Ke ding* 大克鼎 (*Jicheng* #2836).
- 75 *‘Ii ju zun* 盞駒尊 (*Jicheng* #6011).
- 76 See Hilary Chappell, Li Ming and Alain Peyraube, “Chinese Linguistics and Typology: The State of the Art,” *Linguistic Typology* 11.1 (2007): 187–211, at p. 190.
- 77 *Bai xiao-X xu* 白孝□盞 (*Jicheng* #4407.1).
- 78 *Mao gong ding* 毛公鼎 (*Jicheng* #2841).
- 79 For a fascinating first compilation of such “errors,” see Li Shiyuan, “Yin-Zhou jinwen wenli yanjiu.”
- 80 These figures are taken from Jiang Xuewang 江學旺, “Cong Xi Zhou jinwen kan Hanzhi gouxing fangshi de yanhua” 從西周金文看漢字構形方式的演化, *Gujizhengli yanjiu xuekan* 古籍整理研究學刊 2003.2: 30–33.
- 81 For a catalog of such exceptional character structures, see Wolfgang Behr, “In the Interstices of Representation: Lude Writing and the Locus of Polysemy in the Chinese Sign,” in A. de Voogt and I. Finkel, eds., *The Idea of Writing: Play and Complexity* (Leiden: E.J. Brill, 2009), pp. 281–314.
- 82 Jiang Xuewang, “Cong Xi Zhou jinwen,” pp. 32–33.
- 83 For extensive discussion of syntactic, semantic, prosodic, statistic and other criteria, see Yang Huaiyuan, “Xi Zhou jinwen cihui yanjiu,” pp. 33–38, 49–75, and Zhu Gangxun, “Xi Zhou qingtongqi mingwen fuyinci yanjiu,” pp. 109–300. For a good theoretical perspective on wordhood in Chinese, see Duannu San [端木三], “Wordhood in Chinese,” in Jerome L. Packard, ed., *New Approaches to Chinese Word Formation: Morphology, Phonology and the Lexicon in Modern and Ancient Chinese* (Berlin: Mouton de Gruyter, 1998), pp. 135–96.
- 84 For different counts, cf. Yang Huaiyuan, “Xi Zhou jinwen cihui yanjiu,” appendix I, which has 385 disyllabic, 22 trisyllabic, and 5 tetrasyllabic entries, and Zhu Gangxun, “Xi Zhou qingtongqi mingwen fuyinci yanjiu,” who counts 448 compounds, using basically the same corpus.
- 85 For a good argument why intralinguistic motivations are insufficient to explain the disyllabification explosion, see Tang Yunning 唐鉅明, “Jinwen fuyinci jianlun—jianlun Hanyu fuyinhua de qiyuan” 金文復音詞簡論——兼論漢語復音化的起源, repr. in *Zhuning Zhongguo yuyan xuejia zixuan ji: Tang Yunning* 著名中國語言學家自選集·唐鉅明 (Hefei: Anhui jiaoyu chubanshe, 2002), pp. 117–35.
- 86 For a long list of pertinent examples, see Yang Huaiyuan, “Xi Zhou jinwen cihui yanjiu,” pp. 42–48. The best BI specific sources on phonetic loans are Jeon Kwang-jie 全廣鎮 [Chōn Kwangjin, Quan Guangzhen], *Liang Zhou jinwen tongjiazai yanjiu* 兩周金文通假字研究, *Zhongguo yuwen congkan* 中國語

- 文叢刊 11 (Taibei: Xuesheng shuju, 1989); Yang Huaiyuan, "Xi Zhou jinwen cihui yanjiu," pp. 185–212; and Wang Hui 王輝, *Guwenzi tongjia zidian* 古文通假字典 (Beijing: Zhonghua shuju, 2008), s.vv.
- 87 For bibliographical overviews of inscriptional phonology, including the OBI period, see Hong Yang 洪飏 and Chen Yingbao 陳英寶, "Ershi shiji liyong chutu wenxian yanjiu shanggu yin jinzhuan shuping" 二十世紀利用出土文獻研究上古音推展述評, *Bohai daxue xuebao* 渤海大學學報 2004.3: 92–95, and Liu Zhao 劉釗 and Ye Xuying 葉玉英, "Liyong guwenzi ziliao de shanggu yin fenqi fenyu yanjiu shuping" 利用古文字資料的上古音分期域研究述評, *Gu Hanyu yanjiu* 古漢語研究 2008.2: 10–18. For inscription-based OBI syntax, see Tang Yuming 唐鈺明, "Guwenzi ziliao de yufa yanjiu shuping" 古文字資料的語法研究述評, *Zhongshan daxue xuebao* 中山大學學報 1998.4: 57–64. Apart from Dong Kun's sketch of the phonology of the Zhouyuan 周原 bone inscriptions (Dong Kun 董琨, "Zhouyuan jiaguwen yinxi tedian chutan" 周原甲骨文音系特點初探, in Wang Yuxin 王宇信 and Song Zhenhao 宋鎮豪, eds., *Jinian Yinxi jiaguwen faxian yibai zhou nian guoji xueshu yantaohui* 紀念殷墟甲骨文發現一百週年國際學術研討會 [Beijing: Shehui kexue chubanshe, 2003]), there exists, as far as I am aware, no other linguistic attempt to compare this important body of evidence to the BI.
- 88 For competing models, cf. Sagart, *Roots*, Jin Lixin 金理新, *Shanggu Hanyu xingtai yanjiu* 上古漢語形態研究 (Hefei: Huangshan chubanshe, 2006), and Axel C. Schuessler, *ABC Etymological Dictionary of Old Chinese* (Honolulu: University of Hawai'i Press, 2007), pp. 1–130.
- 89 On this point, see Diamouri, "The Development of the Writing System."

Shang Emblems in Their Archaeological Context

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Shang bronze inscriptions are usually short, containing signs with a strong figurative aspect.¹ Their contents can be categorized into three elements: emblems, the names of the people to whom the bronzes are dedicated ("the dedicatees"), and *other elements*. Emblems correspond to those signs with strong figurative aspects. Dedicatees' names usually correspond to posthumous titles, such as Father Ding (Fu Ding 父丁) or Ancestor Jia (Zu Jia 祖甲), etc.² What I term *other elements* are different kinds of expressions, mostly related to the use of the bronze vessel: the position of the vessel within a set,³ the specific kind of sacrificial animal to be cooked in the vessel,⁴ the place where the vessel was to be used,⁵ etc. Of these three types, emblems represent the largest category, followed by dedicatees' names, with only a few inscriptions clearly belonging to the last category.⁶ The present study will focus only on the category of emblems. An emblem consists of a single sign or group of signs that refers either to a single person or to a group of persons (such as European coats of arms or monograms). Even if some components are identical to signs used in the writing system of that time, emblems and writing have two different functions and should not be confused.

The earliest inscriptions contain either one or a combination of these three elements. By Yinxiu Phase IV, which is to say, the reigns of the last two kings of the Shang dynasty (around 1100 to 1050 B.C.), most inscriptions still followed this early model, but a few longer inscriptions with more complex content began to appear at Anyang, announcing the kind of inscription that would develop during the Western Zhou period. Although a few earlier examples exist, inscriptions that can be categorized as emblems mainly developed during the time of Wu Ding 武丁, i.e., Yinxiu Phase II (around 1200 to 1150 B.C.). Among these emblems, it is possible to distinguish between collective emblems and individual emblems. In

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