TOWARDS A MORE RIGOROUS METHODOLOGY OF
DECIPHERING ORACLE-BONE INSCRIPTIONS

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This is a review article of Several Collections of Oracular Inscriptions in Germany, Switzerland, the Netherlands, [and] Belgium by Fr. Jean A. Lefeuvre. The present volume forms a companion volume to the Collections of Oracular Inscriptions in France (Taipei, Paris, San Francisco: Ricci Institute, 1985; hereafter “French Collections”), also authored by Fr. Lefeuvre. He deserves a great deal of credit for making the major European collections of Shang oracle-bone inscriptions available to scholars.

Since the book—hereafter “European Collections”—is divided into two parts, Catalogue and Commentary, I will divide this review in the same manner. In the first part I begin by providing a review of the Catalogue, and then address what ought to be a more important topic in the field, the methodology of reading the inscriptions. In the second part, I will attempt to establish some

1 Jean A. Lefeuvre (Chinese name: Lei Huanzhang 雷煥章), Several Collections of Oracular Inscriptions in Germany, Switzerland, the Netherlands, Belgium [sic]. Taipei, Paris, San Francisco: Ricci Institute, 1997. Pp. xvi +509. US $62. I would like to thank Professors David N. Keightley and William G. Boltz for their comments and criticisms on earlier versions of the present review article.

2 With the sole exception of the collection mentioned by Lefeuvre on p. xv, at least 711 fragments that originally belonged to a private collector who in 1912 donated his collection to the Museum für Völkerkunde in Berlin. I have a copy of “The Collection of Oracle Bones in the Museum für Völkerkunde, Berlin, West Germany” (25 pp.) which however lacks any bibliographical information. If my memory serves me rightly, I obtained it at the 31st International Congress of Human Sciences in Asia and North Africa (Tokyo, September, 1983), where Huang Ranwei 黃然偉 (?) introduced 36 fairly good-sized pieces (at least one of which is a fake) that belong to that same museum.

3 In addition to the two major parts, European Collections has a List of Abbreviations and Preface at the beginning and four appendices: Appendix I “Diviner groups and periodization,” Appendix II “Abbreviations for the Collections cited,” Appendix III “Abbreviations for the Studies cited,” and Appendix IV “Index of characters.”

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criteria or evaluative techniques to correctly assess the merits of several of the interpretations proposed by the author. The inclusion in the present review of some ideas found in French Collections, even though it appeared a dozen years ago, is necessitated by the references Fr. Lefeuvre makes to that work.

Part I

The first part of European Collections gives a description of six collections in Europe: the Köln (Cologne) Collection in Germany with 140 pieces, the Basel Collection in Switzerland with 68 pieces, the Leiden Collection in Holland with 10 pieces, the Brussels Collection in Belgium with 2 pieces, the Mariemont Collection, also in Belgium, with 5 pieces, and the Amsterdam Collection in Holland with 3 pieces (decorated spatulae without inscriptions), totalling 228 pieces. Of the 225 inscribed pieces, 144 appear in European Collections for the first time (according to the “Concordance Table” Lefeuvre provides on pp. 5-9). Due to the repetitive phraseology often seen in the oracle-bone inscriptions, the rationale for which is not entirely clear, the 144 pieces do not seem to offer any strikingly new data. However, there is always the potential for new discoveries in these pieces as we try, for example, to reconstruct what constituted the original oracle bones during the historical Shang dynasty. We need as full a body of data as possible to explore Shang divination practices; and the more examples of Shang language we can consult, the easier it will be to test linguistic

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4 The British collections, Oracle Bone Collections in Great Britain, containing a total of 2,674 pieces, were published in 1985 by Sarah Allan (Chinese name: Ai Lan 艾蘭), Li Xueqin 李學勤, and Qi Wenxin 裴文心. Beijing: Zhonghua Shuju 中華書局. Part One, 2 vols. Part Two, also 2 vols, containing transcriptions by Qi Wenxin (ed. by Li Xueqin) and other commentaries, charts, additions and corrections to Part One (Plates), Drawings, Supplementary Photographs, and Index of oracle-bone characters and expressions were published in 1991, also by Zhonghua Shuju.

5 At least one reason for repetitive phraseology is that the Shang divined a single topic not just once but several times: up to five times in a chengtao 成套 '(inscriptions) in a set', for example. Moreover, we know that typically in Period I each of the inscriptions was phrased in both positive and negative in a duizhen 對貞 'paired divination (test)', adding to the number of similar expressions. For more on the nature of chengtao, the reader is referred to Zhang Bingquan (1960) and Peng Yushang (1995).
hypotheses, even though the examples are sometimes tediously repetitive.

The 81 pieces that have previously been published but are also included in *European Collections* due to their physical presence in these collections provide a basis for Lefeuvre to explore how these bones have been treated by antiquarians, art dealers, and scholars since their discovery at the end of the 19th century. As he does throughout the work, Lefeuvre describes in both Chinese and English the origins of each collection, and the historical circumstances under which it took shape. He gives a detailed account of how the bone pieces changed hands by sale, donation, or gift. Lefeuvre’s accounts are both interesting and important. A couple of passages dealing with the Köln Collection will indicate the kind of information he provides:

The foregoing identifications [showing the correspondence between the Köln Collection pieces and those published by Liu E 劉鄂 in his *Tieyun Canggui* 鐘雲藏龜, 1903] would seem to indicate strongly that the origin of the fragments kept in Köln is the old collection of Liu E. Furthermore as most of the inscriptions in the Köln collection are somewhat homogeneous in content, it is very likely that they ... were not selected for publication in *Tieyun* [because] they were too small. During the process of investigation into background details of this kind it became increasingly interesting, albeit complex, to observe the way in which collections of oracle bones were assembled, disposed of, and again formed into collections. (pp. 301-302)

It seems that the fragment *Tieyun* 151.2 (= *Tiexin* 鐘新 [sic for 鐘新] 531 = *Heji* 合集 6692) was in the hands of Luo Zhenyu (Guoxue 國學 13.8.3 = Qianbian 前編 1.46.4). Later on the fragment was broken in two pieces. The lower part (*Ueno* 上野 488 = *Jimbun* 人文 734) was sold by Luo Zhenyu in 1926 to Kishi Yasaburo 岡西雅三郎 (sic). The upper part (*Fanjiang* 凡將 17.1 = *Xubian* 繼編 3.16.1) was acquired by Ma Heng 馬衡, most probably from Luo Zhenyu. Another fragment (*Fanjiang* 29.4 = Qianbian 6.21.4 = *Xubian* 6.11.2 = *Tieyun* 272.1 = *Tiexin* 鐘新 470 = *Heji* 1090) was probably obtained from Luo Zhenyu by Ma Heng. (p. 303)

These accounts make it much clearer why duplicate pieces appear in different collections of inscribed bones, and provide an invaluable context for the early history of the collections.6 The Concordance

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6 I have noticed quite a number of typos and errors in the “Origin and Description of the Collection” section. Many Japanese names are written wrongly and spelled incorrectly or very dubiously. I cite here several such cases for correction:

- p. 303 Gotô Asatero 与田朝太郎 should be Gotô Asatarô. The 有竹齋 is dubiously spelled as “Aritake sai.” (“Sai” being the Sino-Japanese reading, one would expect the first two characters should also be read in Sino-Japanese as “Yuchiku.”)
Table on pp. 5-9 shows at a glance which piece has already been published from which collection.7

Before taking up some of the more substantive issues in the Commentaries, we should comment on the quality of the reproductions in Part One. In general, it is good, and quite serviceable for the object of reading the inscriptions. Like its companion volume, the French Collections, European Collections reproduces in black and white photographs both the obverse and reverse sides of the original piece in real size (actual height shown in millimeters). With very rare exceptions, Lefeuvre does not reproduce rubbings. The advantage of photographs over rubbings is that one can see other things besides the inscriptions, such as, for example, the crack marks, which are too thin to be captured by a rubbing. But there are also some disadvantages: depending on the skill of the photographer, the quality varies significantly.8 Thus, the 140

7 The most comprehensive, though probably not exhaustive, source on duplication of published inscriptions is Shima Kunio’s *Inkyo bokuji sorui* (Tokyo: Kyūko Shoin &t:SR, 1971), abbreviated hereafter as Sorui. This provides, where applicable, the name of the collection with the inscription number under each entry. For example, under the bei entry in Sorui 24.1 Shima found the identical rubbing appearing in Xubian 5.2.10 and Fuyin, Ren A, 79. If a list of all the duplicates were made, it would be quite extensive. For the list of abbreviations used in the present review, see “Abbreviations” in the Bibliography at the end. For the abbreviations of the oracle-bone collections, I generally follow Keightley (1978: 229-231), as does Lefeuvre (pp. 473-484). I have converted the Wade-Giles romanization system used by both Keightley and Lefeuvre to *pinyin*.

8 For that matter it also applies to the skill of rubbing takers. However, the existing rubbings of various collections are on the whole good and serviceable. This was made possible by the fact that mastering the art of rubbing was essential for a man of letters in East Asia until recently. Good-quality paper, referred to as *mianzhi* 絹紙 ‘cotton paper’ (fuller name: 棉紬紙) and the tools used for
pieces of the Köln collection, reproduced by the photographic service of the museum (vid. p. xiii), are on the whole not as well done as those from the other collections. For example, GSNB S22 on p. 25, GSNB S43 on p. 36, and GSNB B118 on p. 75 are completely illegible; GSNB S39 on p. 34, B135 on p. 86, and B136 on p. 87 are very difficult to make out; and the photograph of GSNB 38 on p. 33 is simply omitted. Had Lefeuvre not provided his hand-copy (moxie 半寫) of the inscriptions alongside each photograph, we would have no way of knowing what the original of these inscriptions looked like. The fact that he was able to make these copies suggests that he examined the inscriptions personally, and he deserves great praise for having made such an elegant job of his copies. As a palaeographer, it is a joy to look at the Shang graphs so dexterously and, on the whole, accurately written. I have noticed only a few that require correction, and will mention one of these later.

There is one feature that I found quite useful but which is unfortunately not maintained throughout the Catalogue. For GSNB S72 on p. 51 Lefeuvre provides a Tieyun 187.2 rubbing which is slightly more complete than S72.11 Although it does not add all that much new information, it helps us appreciate how the original fragment was later split into two, one piece of which ended up as GSNB S72. For GSNB S113, Lefeuvre gives a hand copy of Tieyun 14.2 and Yicun 454, which were originally one piece, and which together provide a fuller context.12 We also find a clear reproduction

the art were within arm’s reach. However, it has now become a rather esoteric art. In contrast, printing technology seems to have improved appreciably over time. Those who contributed to the field of oracle-bone studies by producing many thousands of rubbings never put their signatures on their work. This reminds us of the Shang scribes themselves, who never left their names. Nevertheless, modern scholars owe a great deal to the work and workmanship of the nameless Shang scribes and their successors, the rubbing takers of more recent times.

9 “GSNB” is the abbreviation Lefeuvre uses for the European Collections. “S” before the piece number is the abbreviation for “Shell” and “B” for “Bone.”

10 Since illegible and poor-quality photographs are almost entirely limited to the Köln pieces, the photographic service of the museum has done a disservice to both Lefeuvre and the reader.

11 We find two additional graphs, one of which is yi 追, ‘second in the heavenly branch’, and another which is possibly Si 立, standing for the name of a place.

12 GSNB S113 lacks the name of a diviner, and the direct object of the verb you 又 (令) ‘to offer’ in a complete sentence in the rejoined pieces, as well as having a total of five other graphs which unfortunately do not form complete sentences.
of the graphs, one of which was erroneously represented in both
Moshi and Leizuan.\textsuperscript{13} Except in these two instances, though, he
does not give the rubbings or drawings for the 81 pieces that have
been previously published. Presumably, and understandably, this
was to save space. However, considerable comparative and
palaeographic benefits would have become apparent if he had
continued to include this material. For example, on comparing
GSNB S49 on p. 39 with the rubbing in $HJ$ 4035, one notices that
the bottom graph on the right-hand side (Lu [?] 畢) is different
from the one in Lefeuvre’s hand copy. (In fact, in $HJ$ 4034,
immediately preceding $HJ$ 4035, there is exactly the same graph,
very clearly inscribed.) Another example is the photograph of GSNB
B55 on p. 43 and the rubbing in $HJ$ 8006 or, better yet, another
rubbing of the same piece in Tiexin 363. In the latter one can clearly
see a graph which can be transcribed as jia 戟, the name of the
military leader Zhi Jia 卓亞, “Jia of Zhi”, active during King Wu
Ding’s 武丁 reign. Now Yan Yiping 戲一萍, the compiler of Tiexin,
gives his hand copy of the same piece, which is radically different
from Lefeuvre’s: the foot element of the graph which Lefeuvre
takes as part of the graph 慈 (fa 發?) is the foot element of another
completely different graph, 寅, transcribed as zhi 惡 by Yan Yiping!
I do not know if the person who did the rubbing of Tiexin 363
was more skilled (cf. n. 8) and printing technology improved over
time, or if the actual plastron fragment of GSNB B55 now kept in
Kölン has been damaged. If the foot element on the top left of 慈
is present, then 發 is the right interpretation, but I cannot recognize
it in the photograph. Also, the graph 鬼 (鬼) is clearly visible in
Tiexin 363 but not at all in GSNB B55. According to Yan Yiping’s
preface to Tiexin (p. 2), different rubbings were available for many
pieces in Tiyun—about 400 in all according to him—and he
presumably selected the best when compiling it.\textsuperscript{14} Therefore, if
Tiexin 363 can be trusted, Lefeuvre’s palaeographical interpretation
is incorrect. Since he was aware of another rubbing of GSNB B55
in Tiexin 363, a comment or two would certainly have been expected
here. Unfortunately he has none. I have not checked every one
of the 81 pieces in European Collections that have been previously
published, but the two examples mentioned above would indicate

\textsuperscript{13} Lefeuvre, p. 364. For a review of the Moshi and Leizuan, as well as the Sìràn,
the reader is referred to Keightley (1997).

\textsuperscript{14} The original reads as follows: 後出書書無增重印者一一選換拓本則刷印不滑之弊
可一掃。
we must still maintain a certain amount of caution when using this source.

Part II

The second part, the Commentary, constitutes the scholarly component of European Collections, while the first part was more technological and artistic in content. Provided here is Lefeuvre’s view of the dating, transcription, and translation of each inscription. A total of about 270 different graphs are used in European Collections, and we find Lefeuvre’s interpretations of them in varying degrees of fullness or minuteness. A rough estimate of the total number of oracle-bone graphs on the basis of JGWB and Sōran is about 5,000, so that European Collections contain about 1/20 of the total. This is impressive when compared with the total number of different graphs in Bingbian, for example, which even given its large size has only about 720 out of 5,000, or about 1/7 of the total. However, there is an enormous difference between the two, and indeed between the Bingbian and any other single collection, in the nature and amount of information one can potentially extract from the materials they introduce. As Lefeuvre acknowledges, the pieces in European Collections are frustratingly fragmentary, while those in the Bingbian are much fuller. Consequently, apart from the fact that the inscriptions in the Bingbian are only from Period I, of the Diviner Bin and Diviner Zi groups, those in European Collections suffer from a general lack of context in which to test our hypotheses about various aspects of their contents, particularly philological and linguistic.

In spite of the fragmentary nature of European Collections, I should say that on the whole Lefeuvre has done a commendable job of interpreting his corpus by making reference, sometimes implicitly,
to related inscriptions in other collections, and, with great care, to the scholarship of other specialists. However, as interesting and worthwhile as Lefeuvre’s interpretations are, I feel nevertheless that we need to go further and debate the methodology used to interpret Shang OBI. Surprisingly, this has never been done to any useful extent. In terms of both theory and practice, interpretations and theories can proliferate endlessly. If there are, say, ten specialists working on a particular inscription, ten different interpretations can potentially appear. This kind of problem exists even if we limit ourselves to individual graphs and words as a glance at Sōran confirms. For example, more than thirty specialists have their own views of the graph \( x \) (JGWB #4418), and there are at least a dozen different transcriptions for it (Sōran: 490-491). It is, of course, impossible that all of them be right. When interpreting units larger than the lexical, such as phrases and sentences, the number of divergent interpretations naturally becomes even greater.

I do not mean to suggest that a rich variety of interpretations is necessarily undesirable. In fact, in the last ninety years or so of oracle-bone scholarship, we have witnessed an increasing number of competing theories about graphs, words, and sentences, as well as in related fields such as history and religion. At the same time, however, it would be useful to have evaluative techniques which can be applied to competing interpretations or theories at the most basic level of analysis: graphs and words. In the remainder of this review, I would like to propose a few such criteria and procedures to be followed in reading the inscriptions. These form a “meta-theoretical” framework one can apply to individual interpretations and theories.

In going through European Collections I have classified all the graphs and words upon which Lefeuvre comments under one of the four following basic criteria:

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18 Li Xueqin (1981) and Qiu Xigui (1985) are useful, but at the same time too general to be applicable here.

19 In his commentary on GSNB S2, Lefeuvre adopts yet another interpretation proposed by Wu Kuang 吳匡 and Cai Zhemao 蔡哲茂 in their joint paper, “Shi Ji 謝極,” According to Lefeuvre, the paper was presented at the Yinxu jiaqiuwen faxian 90 zhounian guoji xueshu taolunhui (Anyang 安陽, Sept. 1989). There is still another interpretation by Lian Shaoming (1992: 62) who has proposed that the bone graph stood for the word cong 鬆 ‘thicket; collected, collective’ as in congshen 複神 ‘collective gods (of agriculture)’.
Criterion/Analysis 1: When the modern character transcribing a palaeograph is a historically continuous character (HCC), all other things being equal, that character must take precedence over other candidates, provided that its reading has been properly assigned.

With regards to HCC and the historically discontinuous characters (HDC) mentioned below, we follow the two-step procedure adopted by Barnard (1973: 32):

The first step in achieving accuracy and acceptability in the translation of pre-Han archaeological documents is necessarily that directed towards a clear and dependable definition of the individual archaic graphs—their structures in terms of individual strokes, as well as the elements of which they are composed. The next step is the transcription of the graph into modern character form. As may be observed in the transcriptions presented [in this work], it is a two-stage process involving first of all the preparation of a direct transcription of the archaic text, then the rendition of this into modern character form wherein the individual modern characters may be termed modern character parallels, equivalents, or replacements [i.e., graphic reanalyses] ....

Barnard (1996: xx) explains that “Direct Transcription (DT) ... is essentially a ‘modernized’ element-by-element rendering of the original combinations of elements in the archaic graphs. This disciplinary practice keeps us in direct contact with the archaic character structure, and is a necessary exercise to avoid the unwitting use of erroneous or unacceptable transcriptions of problematic graphs which occurs rather too frequently throughout Chinese commentaries.”

Criterion/Analysis 2: When the transcribed modern character of a palaeograph is a historically discontinuous character (HDC), one must first determine the sound value of the character, and thereby the word represented by it.

Criterion/Analysis 3: When the transcribed modern character of a palaeograph is an HDC (sometimes even when it is an HCC) whose sound value is difficult to establish, one may proceed with

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20 I will later suggest a convention which will help us choose one of several possible readings. Thus, even if the transcribed modern character of a palaeograph is an HDC, it has the potential to be identified with some known or related word on the basis of its assumed pronunciation. I have therefore set up Criterion/Analysis 3 independently of the following Criterion/Analysis 4.
an analysis based on the syntactic function and the semantic range of a putative word represented by the palaeograph. However, at this level analysis will not lead to complete decipherment, as it is no longer dealing with language in the fullest sense.

Criterion/Analysis 4: When a palaeograph cannot be transcribed, or gives no hint of the sound value even when it could be transcribed stroke by stroke into an HDC, it is possible to attempt analysis based on the syntactic function and, if applicable, the rough semantic range suggested by the palaeograph.21 Again, such analysis will stop far short of decipherment in the full sense.

In European Collections, I have uncovered 75 examples where Criterion/Analysis 1 is relevant, 26 examples for Criterion/Analysis 2, 24 examples for Criterion/Analysis 3, and 17 examples for Criterion/Analysis 4, or 142 examples in all.22 Since the total number of different graphs in European Collections is about 270, Lefeuvre comments in one way or another on about one-half of the entire corpus, sometimes giving his own views, sometimes quoting with approval those of other scholars. This leaves about one-half of the corpus which is simply transcribed without analysis, giving the impression that the transcription represents a standard interpretation. After having checked all the examples, I can confirm that this is generally the case. However, there are a few exceptions, the nature of which has to do with another condition we must satisfy for optimal decipherment, which will be explained below.

Criterion/Analysis 1 above, which involves an HCC with a proper reading to be specified, stipulates that palaeographical considerations, including the two-step procedure cited from Barnard, be given priority. This is based on the fundamental and necessary

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21 I will comment below on the inadvisable practice of allowing a great deal of significance to the depictive quality of a given palaeograph. It should also be pointed out that the distinction between Criterion/Analysis 3 above and Criterion/Analysis 4 here is not as clear as that between Criterion/Analysis 1 and Criterion/Analysis 2. In terms of actual practice, however, the latter criterion/analysis is frequently realized by not transcribing the given palaeograph at all, leaving it unchanged amidst other transcribed characters. Thus, we are often left with a hybrid expression combining elements which are susceptible to linguistic analysis and others which are not.

22 Instead of giving the whole list, below I will discuss a few examples from those I have classified as pertinent to each analysis.
assumption of a scribal continuity from the Shang to the Zhou and eventually to the Han. Nevertheless, for this assumption to be fruitful we must find the proper assignment for the reading of a given character. This is essential because the character represents a word and sometimes several words. As I have mentioned, about one-half of the graphs in European Collections have relatively uncontroversial interpretations. These include such graphs as those used for the numeral system, the negatives (though what they mean and how they function are subject to varying interpretations), the heavenly stems (tiangan 天干), the earthly branches (dizhi 地支), the animals (though some of these remain uncertain), and so on. They are, in general, graphs which have left descendants on such materials as bronze, bamboo, silk, and wood through the successive stages of the development of Chinese characters. They can be identified with either small-seal (xiaozhuan 小篆) forms, or other ancient styles such as the “guwen 古文” or “zhouden 篆文” graphs in the Shuowen jiezi (SW). These other styles can be those used during the Warring States period (403-221 B.C.) in various states, assuming we can pin down their identity with known and historically attested words. However, we still need to specify a reading as close as possible to the original. Discussed below are the kinds of problems we face in this endeavor, seen in two examples, meng (?) 蒙 and shi 氐.

In GSNB B28 (p. 335) Lefeuvre says:

The graph 蒙 seems to represent a spider on its web (see Cidian 詞典, p. 286) and indicates a kind of unwanted or unsuspected mischief. It can be transcribed as 蒙 or 蒙. (p. 33; italics mine)

How could the graph that "represents a spider on its web" indicate “a kind of unwanted or unsuspected mischief”? Here, the basic function of a graph—to stand for a word—is flagrantly ignored. Moreover, if the bone graph can be transcribed as zhu 蒙, where is the top element in the original, and how does he know that it is zhu, rather than meng or something else? In French Collections (p. 318), Lefeuvre fluctuates between transcribing this graph as ming 命 ‘charge’, originally an idea of Rao Zongyi (1957: 18-20),

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23 Rao’s interpretation (which also allows the graph 蒙 to have stood for the word ming 命 meaning “life”) is rather forced. The biggest obstacle is that if the graph meng 蒙 stands for the word ming 命 meaning “charge,” why didn’t the Shang instead use the palaeograph for ming or ling 令? As is well known, there are many examples of ling in the bone inscriptions that may be read as ming. Another obstacle
or as zhu 鼻 which he renders “obstacle.” No rationale is given for the latter interpretation other than an oblique reference to Xu Jinxiong’s work (1977: 45, 69), where Xu says simply that zuai 阻礙 ‘obstacle’ is what is meant. All these suggestions are possible, but they rest on no solid palaeographical or philological foundation.

I am myself unsure of what word the graph in question stands for. However, from the standpoint of graphic evolution the bone graph can indeed be transcribed as 既. The bronze graphs listed under the entry 鼻 (complete with the top element) in such works as Gao Ming (1980: 210) and Xu Zhongshu (1980: 511) seem unmistakably to be later forms of 既, if one subtracts the exomorphic phonetic zhu.24 What is not clear about 既 is its reading—whether it should be read as meng, mian, min, zhu 鼻 ‘spider’, yuan 鼻 ‘a kind of turtle’, ao 鼻 ‘a sea turtle’, tuo 鼻 ‘alligator’, or something else (commonly crawling creatures). These latter characters are explained in the SW as having the phonetic yuan, ao, tuo, respectively, and 既 as signific; thus, the first hypothesis for the reading of 既 must be meng. However, 既 has two more readings that have a reliable historical basis: mian and min. The problem is that none of the meanings associated with these readings—“a kind of frog,” “place name,” and “strive” (sc. loan for mian 勉), respectively—seems to fit the bone context, for which we can provide three representative examples. The first of these is the following:

(1) 王已曰既勿余考. Bingbian 523(7)

The king, having prognosticated, said, “The numen (of the bone)—do not curse me!”

Judging from this sentence, which is a prognostication (zhouci 周誓), one can be fairly certain that meng, or whatever word is represented by the bone graph, is used as a noun representing a supernatural being believed by the Shang to have resided in the divining media, either plastron or scapula. Li Yan (1970: 263) interprets it as the name of a person or place, but the subject of the verb tuo 既 ‘to curse, impede; impediment, trouble’ is usually

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24 The term “exomorphic” is contrasted with “endomorphic,” the latter referring to an element which is “woven into” and inseparable from a graphic unit. For instance, the two horizontal lines = in 鼻 are endomorphic, rather than exomorphic.
a spirit, not a living person. There is the phrase duo meng (?), which is found in a fragmentary piece (Yinxu 1515), and this could refer to some living functionary, as it does, for instance, in duo she 多射 ‘many archers’ or duo gong 多公 ‘many lords’. But there are also such expressions as duo fu 多父 ‘many fathers’, duo mu 多母 ‘many mothers’, duo xiong 多兄 ‘many brothers’, and duo hou 多后 ‘many descendants (kings)’ which unmistakably refer to deceased or ancestral spirits.

The second example, which will also involve Criterion/Analysis 2, is as follows:

(2) 不 告 (悟, 許) 鬼 (鬼). GSNB B28, B29, B30, B142
“We will not encounter any mischief.”

My translation of this would be:

“[This crack] did not go against the numen (of the bone).”

The second graph (which I will discuss fully later) frequently occurs between the negative bu 不 (isseur) and the noun meng (?), constituting a three-graph phrase which appears only in the Diviner Bin 賢 group inscriptions. This is transcribed and translated by Lefeuvre as in (2) above. However, the phrase is neither a charge (mingci 命辭), a prognostication as in (1), nor a verification (yanci 驗辭). It is a crack notation (zhaoci 質辭). This casts doubt on Lefeuvre’s translation, which can be characterized as a prediction that the Shang will not encounter any harm or damage. The prediction, along with the statement of intent or wish, is a typical characteristic of the charge (Keightley 1972, 1984, 1988) which is normally introduced by the word zhen 贰 ‘to test (for the purpose of divination), to divine’; but the phrase in question is never introduced this way. The exclusive use of the non-modal, stative, eventive negative bu (Takashima 1988; Itô and Takashima 1996: 364-382), in this case, in the past tense, as well as the placement of the phrase adjacent to the cracks, all speak against Lefeuvre’s translation. The interpretation that 鬼 is used as a noun meaning “numen” applies to both (1) and (2), and is thus more economical than Lefeuvre’s “mischief,” which in any event has no basis.

The third example I would like to consider is as follows:

(3) 丙午卜 貞乎 自 (= 師)往見 有 (= 有)自 (= 師). 王[ ]曰佳老佳人;

To cite just one example out of literally hundreds, we have wei duo fu tuo 倍多父老 (Yinxu 488) ‘It is Many Fathers that are cursing’, where “Many Fathers” refer to the dead, the spirits.
Bingwu day cracking, Nan tested: Call upon Leader Shi to go observe the (great) troop. The king, having prognosticated, said, "(He) is an old (man); (he) is a ren-man [sc. not of a zhong status?]. On his way (he) will encounter an approval; [however, this] crack spells that it might do (some) harm. After twenty-eight days, it was [meaning unknown] and on the renshen day Leader Shi died.

There are two interpretations for the last two graphs: one combines the two into one, a kind of xingsheng character, and another reads them separately, a kind of hewen 合文. The way in which (3) is inscribed, with a uniform size for each graph, inclines us to the two-graph interpretation, even though the last two graphs are inscribed side by side. Those arguing for the xingsheng interpretation consider that si somehow served as signific, combining m andXL into one which expressed the word zhu ‘to die; to kill’ (later replaced by zhu or shu 殊). But it is not certain that m and死 constitute exomorphically one graph as a xingsheng character; what is certain is the side-by-side placement of the two graphs that can be interpreted differently, and in my view, better. In (3) the meaning "die" is compelling, but we can still take m死 as a binomial expression later written zhu si 或 shu si 殊 (in Zhuangzi and Shiji), originally meaning “to die (as a result of) being cut/struck (by something/someone).” If this is right, the graph m here should stand for the word zhu 殊, followed by another word si 死;

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26 It is possible that it stands for a word such as mai ‘dust storm’, as Rao Zongyi (1959: 32, 354) has argued. There are, however, problems with this interpretation; for instance, Rao’s equating this bone graph, which has the bazi tou 八字頭, with another bone graph that has the “rain radical” (yuzi tou 雨字頭; this and other problems have already been pointed out by Li Yan [1970: 262]). Whatever the exact word represented by the bone graph, one can at least say that it has an undesirable meaning.

27 Though more work is needed, I think that the word zhu 諧 had the etymological meaning of “strike; peck (sc. zhuo 捕).” The SW (3a) defines it as “tao ye 封也” (to strike, punish) which still retains such a meaning. If applied to example (3) above, Leader Shi died as a result of a crack which spelled harm and the “undesirable meaning” word discussed in n. 26 above.

As for the side-by-side (or top-bottom) placement of graphic components written together but still representing distinct components, a term like “configurational” might be considered. Thus, in terms of character structure, we have elements that are “endomorphic,” “exomorphic,” and “configurational” (this latter includes the normal hewen with one graphic unit generally written smaller than, and frequently “subordinate” to, another).
that is, it is a binomial expression in which zhu functions as adverb and si as verb.28

After these three examples, we can say with some confidence that the 龟 in (3) is read zhu 龟, but in (1) and (2) we remain in the dark. It is all but impossible to decide its reading here: it could be meng, mian, min, zhu, yuan, ao, or something else. The reason for this is the complete absence in these words of any meaning related to “spiritual being” in early traditional sources. On the palaeographical ground that the bone graph depicted a spider on its web, one might imagine that the word was zhu 龟 (= 蜘) ‘spider’ and somehow this also meant “numen” to the Shang, a meaning that was later entirely lost. However, the word could also have been the zhi 齁 (= 蟹) of zhizhu 蜘蛛 ‘spider’. Possibilities multiply, and the conditions mentioned under Criterion/Analysis 1 cannot be satisfied. What all this means is that even when scribal continuity exists for a “primitive” graph, from Shang to Zhou and to pre-Han, a lack of appropriate semantic data can sometimes make it impossible to assign the proper reading to a given word. When we have this situation, as we do with the 龟 discussed above, Criterion/Analysis 1 is no longer applicable, and we must lower our expectations to the level of Criterion/Analysis 3.

Let us now turn to the problem of shi 氐. In GSNB S8 on p. 326 (and in two other cases) Lefeuvre transcribes the bone graph 錠 as shi 氐, which he goes on to translate “bring on, bring along,” as in the following example:

(4) 佳酉氏羌 ... 勿用...

"It is the Yu (captives) [that should (sic) be immolated] ... (as for) the Ch’iang (captives) we brought on ... we should not use (them)."

I would offer a translation slightly different from Lefeuvre’s:

It is the Qiang brought by You (?) [that we should use]./Don’t use (them).

Quite apart from the question of syntax, how could Lefeuvre translate shi in this way when no such meaning or usage is known elsewhere? Should a lexicographer compiling a new and complete dictionary of pre-Classical Chinese list this meaning and pronun-

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28 There are several other cases of the side-by-side placement of the two graphs such as you zai 又 在 (有灾) ‘there will be disaster’, wu zai 亡 在 ‘there will be no disaster’, shou you 受 友 (受佑) ‘receive aid’, and so on; but none of these configurational cases can be interpreted as representing a single word. These examples would speak against the xingsheng interpretation of 龟灾, presumably read as one word.
sation out of faith in Lefeuvre? While such a faith is sometimes justified, I would say that in this case the answer is no. Why? Sōran (p. 342-3; JGWB #1501) lists about ten different and competing transcriptions for this graph. Palaeographically, shi, along with di 彞, are most likely to be correct. The graph is identical with ₤ (= ren 人) except for the presence of a small diamond-shaped object at the tip of the hand, like ₤. This, I think, is the key. Lefeuvre, like many other specialists, must have interpreted this element as representing an object held in the hand. The depictive quality of this graph does indeed suggest a meaning such as “to bring,” but it cannot rule out other equally possible meanings such as “to hold,” “to suspend,” “a dangled object,” and so on. Clearly, what is needed here is to determine what word the graph represents.

It is quite clear that shi 氏 in the known sense of “lineage” does not fit the verbal function the graph fills in example (4). One proposed solution is to transcribe the bone graph as di 彖 and follow the SW’s (12b) paronomastic gloss “zhì ye 至也” (to reach). The bone graph can then be further interpreted as a morphologically related word zhì 致 ‘to cause to reach > bring’. Five specialists or so have interpreted the graph more or less along these lines (Sōran: 342). While this presumed word seems a good grammatical and semantic fit for example (4), palaeographically it leaves something to be desired. Comparing the bone graph with the small-seal form 6 (= 彖), one is forced to equate the diamond-shaped object (or lozenge) with the horizontal line at the bottom. This is impossible, for we know that the line in question represents the “ground” on which a man is standing. These considerations lead me to reject the transcription of the original bone graph as di 彖 and, instead, accept the shi 氏 transcription on the basis of its being a HCC (see further below). However, the word represented by it is not shi ‘lineage’, but rather 㕣 提 ‘to take,

29 For example, Lefeuvre’s identification of the graph 8 (JGWB 1149) with the word si 象 ‘water buffalo’ is based on solid grounds (Lefeuvre 1983). Hayashi Minao (1953: 216) predates Lefeuvre in identifying the bone graph in question with this animal, but Lefeuvre has consolidated the argument.

30 I reject another commonly seen transcription, yi 彻 (= 同) ‘to use, employ; to lead’, on the basis of the existence of palaeographic predecessors of yi in the bones and bronzes. See further Gao Ming (1980: 503, 53; cf. also the palaeographs for si 似, op. cit.: 11).

31 Cf. SW (12b), where it is entered 从氏下著一，一地也 ‘(the graph) is derived from 氏; at the bottom there is attached — which is the ground’.
Phonologically, there is no great difficulty in such an interpretation: shi is something like *skjig(x) and ti is *dig in Old Chinese (OC). This phonetic-loan hypothesis is supported in part by the fact that shi/*skjig(x) 某 is consistently used to stand for shi/*djigx 是 ‘this’ in the Zhongshan 中山 bronze inscriptions of the 4th century B.C. (Marc 1993: 154-155; 367, n. 2378; etc.), as well as in some transmitted Classical Chinese (CC) texts (Zhu Junsheng 1834: 460).

The raison d’être of the present hypothesis is that the word ti/*dig 提33 has the phonetic 提, which could have been expressed by the graph 某. Furthermore, the lozenge—the only element that distinguishes it from ren 人 on the bones—could have served as quasi-phonetic, a signal perhaps to indicate the bone graph in question is to be read as ti 提. The grapheme  (used in its own right as the name of a diviner) is also part of the graph 人, Qi/*dzid(h) 齊 ‘place name’ (cf. Sörn: 211-212). Thus, although the rhymes are different, the initials and the vowels might be close enough to suggest reading  as ti, not ren 人. This hypothesis, designated *DIG for now, might be summarized as follows:

*DIG:  + 某 (DT:  or  ) →  →  → 某→ 是 + 手 = 提

[Note: A solid arrow indicates a historical development, while a dotted arrow indicates the same but with more emphasis on the process of transformation. DT stands for “direct transcription.”]

Nevertheless, there is a simpler solution to the problem of word identification than the *DIG hypothesis. If  is the phonetic34 and  is the signific, one might take a more direct path and arrive at the word ji/*tsid ‘to bring, carry’, in which bei 貝 ‘cowry’ serves as the signific indicating the object, instead of  serving as the agent of bringing. This hypothesis, designated *TSID for now, has

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32 The OC reconstructions are based on Li Fanggui (1971).
33 This word is explained in the SW as qie/*khit 齊 ‘to take … danglingly along’, which is another popular interpretation adopted by several specialists (Sörn: 342). There is, however, no palaeographical support for it.
34 The suggestion that  may have served as a phonetic was first made by Professor W.G. Boltz in my seminar on the oracle-bone inscriptions at the University of Washington in the fall of 1997.
the advantage of being simpler than the *DIG hypothesis. The assumed progression would have gone as follows:

*TSID: [Diagram]

| phonetic signfic | graphic reanalysis |

The real question is which of the two competing hypotheses, *DIG or *TSID, is correct. Although we cannot make an absolutely certain judgment, the *DIG hypothesis is phonetically more difficult than the *TSID. This is motivated not by any qualitative judgment that “graphic reanalysis” (assumed to have taken place from the bone to the next attested case) is more credible than the “phonetic-loan” assumption in the *DIG hypothesis, since both were commonplace in the history of Chinese writing. Instead, it is motivated simply by the number of assumptions made to arrive at a particular interpretation: in accord with Occam’s razor, the fewer the assumptions the better. In the assumed progressions given above, I have indicated each assumption underneath the appropriate entity. For the *DIG hypothesis there are four of these, while for the *TSID there are three. To sum up, then, we can now state a further principle to be adopted:

**When proposing an HCC as the best interpretation of a particular paleograph, it is desirable that as few assumptions as possible be made.**

This principle applies not only to Criterion/Analysis 1, but to the other criteria as well.

Before proceeding to an exposition of Criterion/Analysis 2, let us briefly apply the above principle to a hypothesis I have already rejected on the grounds of historical palaeography: to transcribe the bone graph as di and follow the SW’s paronomastic gloss “zhi ye 至也是” (to reach), further taking it as a morphologically related word zhi ‘to cause to reach > bring’. The reason for reconsideration is that although we have judged that the palaeographical

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55 While the term “phonetic loan” is straightforward, “graphic reanalysis” is more complex and worth further investigation. As with phonetic change, graphic reanalysis involves split, merger, simplification, and elaboration. For the purpose of this paper, I will use it to refer to cases in which the phonetic element in a graph is maintained, or at least recognizable, before and after reanalysis. Sometimes, however, the phonetic element itself may be subject to graphic reanalysis due to sound change.
development from $\mathfrak{d}$ (a bronze form) to $\mathfrak{q}$ (the small-seal form of 氓) is natural and from the same to $\mathfrak{f}$ (the small-seal form of 氓) is impossible, we may have been too strict and idealistic in our analysis. Moreover, the reading of di 氓, *tjid/*tid in OC, might not be totally unrelated to shi/*skjig(x) 氓 (though the latter phonetically develops more naturally to ji/*tsid 爲 ‘to bring, carry’, the reading we have adopted). Moreover, the small-seal forms of shi and di share the same graphemic element, which is no doubt the reason why Xu Shen listed them in succession in his SW (di after shi). Thus, if we show this hypothesis, designated as *TID, in a similar diagram to display the assumed progression, we get the following:

\[
\text{MTID: } \mathfrak{d} + \mathfrak{q} = \mathfrak{f} \quad \text{DT: } \mathfrak{d} \text{ or } \mathfrak{f} \rightarrow \mathfrak{f} \rightarrow \mathfrak{q} \rightarrow \mathfrak{f} \rightarrow \text{ 至/致也}
\]

The number of assumptions involved for the *TID hypothesis is four, the same as for the *DIG hypothesis. However, the *TID hypothesis contains two different assumptions, graphic-reanalysis (or graphic reinterpretation) processes and phonetic-loan (or graphic substitution) processes. This is even riskier than the *DIG hypothesis, which allows for one assumption of a phonetic loan that is attested elsewhere. I therefore think that the principle of parsimony is best served by the *TSID hypothesis. The *DIG hypothesis comes next and the *TID hypothesis brings up the rear; but it might be worth reiterating at this point that none of them can really be proved to have actually happened. This limitation is intrinsic to the nature of Criterion/Analysis 1, and indeed marks the extreme point of what one can reasonably hope to do in reading the inscriptional language.

**Criterion/Analysis 2**, which assumes that an HDC could still represent a known word, will now be examined. The example chosen is an HDC transcribed by Lefeuvre as $\mathfrak{h}$ (§), regarding which he writes:

The upper part of the graph $\mathfrak{h}$ is $\mathfrak{g} = \text{ wu 午 }$ (phonetic?) and the lower part $\mathfrak{y}$ (signific?), very similar to $\mathfrak{y}$, seems to mean ‘to come upon something’, ‘to encounter’. Recently, several authors transcribe this graph as $\mathfrak{s}$ or 憲. Li Hsüeh-ch’in transcribes it as 許. (p. 335; italics added).

How can Lefeuvre possibly know what $\mathfrak{h}$ means when he is unable
to associate it clearly with a particular word? The meanings *wu 惹 ‘to go against’ and *xu 試 ‘to permit’ are completely different. Although they both belong to the same OC rhyme group, *yubu 魚部, they are different words, reconstructed as OC *Nagh and *hNjagxj, respectively. It is clear that Lefeuvre, like many specialists in the field, is not committed to any principle resembling Criterion/Analysis 2.

I would first propose that the bone graph \( \text{①} \) should really be transcribed as \( \text{歴} \), \( \text{刺} \), or \( \text{軋} \), rather than \( \text{苛} \). There is no problem in the transcription of the top element as \( \text{歴} \), but the bottom half is an acute triangle which has to be distinguished from \( \text{口} \) ‘mouth’. I know of no cases in which a triangle, acute or not, becomes a rectangular or squarish \( \text{口} \). This suggests that it is a simplified form of \( \text{xin} \). \( \text{①} \) It thus yields a HDC \( \text{歴} \), \( \text{刺} \), or \( \text{軋} \), in which the best candidate for the phonetic is still \( *wu \) with the signific \( \text{歹} \) perhaps in an extended sense of “violate” from the original “chisel (used, e.g., in punishing); prickly.”\( \text{①} \)

Now, if the HDC 靳 (I will choose

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36 If one looks at the variant graphs listed under JGWB #3230 or Sōran: 427, in the second row of the 骨文 USED column, one will see that the triangle is sometimes inscribed with a vertical line extending downwards from the bottom: \( \text{_lineno} \). This is an abbreviated grapheme shared with the graph for \( \text{xin} \), and I would interpret it as a variant of the latter. The basis for this interpretation is the existence of such abbreviated graphemes as the bone graph for \( \text{bi} \) 腹 ‘punish; ruler’ in Jiabian 3238, for \( \text{yan} \) 上 (\( \text{_lineno} \)) in Yibian 766, for the word \( \text{xin} \) 靥 ‘the eighth heavenly stem’ itself in Kikkō 2.27.14, and the graph for an unknown word in Nanbei, Ming 613 (consisting of this abbreviated graphem and \( \text{nai} \) 奈). Cf. also JGWD, p. 1564. In contrast to this, the transcription of \( \text{①} \) as \( \text{xu} \) 試 must be based on the graphic interpretation that \( \text{口} \) is the abbreviation of \( \text{口} \) or \( \text{口} \) (= \( \text{言} \)). While this is not impossible, abbreviating the mouth element in \( \text{口} \) more naturally yields \( \text{口} \) (\( \text{言} \))—the significance of the mouth element in \( \text{yan} \) 上 (\( \text{言} \)) is such that its employment is what distinguishes \( \text{yan} \) from \( \text{xin} \). For the possible phonetic significance of \( \text{yan} \), see Boltz (1994: 148-149).

37 In the majority of characters that have the \( \text{xin} \) 靥 element as a component, it generally functions as signific, “prickly, painful” or “punishment” (related to the former meanings). This is widely considered to have come from the pictographic interpretation of \( \text{xin} \) as a kind of chisel or needle (used, e.g., in punishing, tattooing). However, the bone graph clearly depicts an upside-down man; that is, the reverse of the character \( \text{立} \) 立 ‘stand’, as first pointed out by Nakajima (1934: 2.93) and elaborated by Wang Ningsheng (1997). The graphic significance of “violate” can just as equally, if not more cogently, be derived from it. Since the use of this graph for \( *wu \) 惹 ‘to go against’ is in reference to “cracks” in example (2) and to the scheduled event of the rong 形 ritual in (3a, b), where a sense of “violation” is prominent, it is possible that the supposed signific 靥 had such a sense. In several other modern graphs, such as \( \text{xin} \) 靥 ‘cut wood; new’,
this from the three equally possible HDCs) has the phonetic *wu*午, what particular word could have been represented by it? In my view, the best candidate still remains *wu*悟, ‘to go against, resist’, as it is defined in the SW (14b 逆), rather than *xu* 試 ‘to permit’. Such an interpretation is supported by yet another context in which悟 is found, used quite clearly as a verb:

(5a) 丁巳卜王余勿ሄ (悟)形. *Bingbian* 90(1)

Dingsi day cracking, the king [tested]: I should not resist (the performance of) the *rong* ritual.38

(5b) 丁巳卜王余ểu (悟)形. *Bingbian* 90(2)

Dingsi day cracking, the king [tested]: I should resist (the performance of) the *rong* ritual.

In the above, the verb is controllable and is thus negated in (5a) by the modal, non-stative, non-eventive (mutative) negative *wu*勿 ‘don’t, should not’. In (2) the same verb is non-controllable and thus negated by the non-modal, stative, eventive negative *bu*不 ‘did not’. The nature of a verb changes according to context, and this change governs other linguistic participants such as the negative, agent, patient, etc. To be sure, *xu* ‘to permit’ also seems applicable to (5a) and (5b), but in (2) it would be difficult to make sense of *“[This crack] did not permit the numen (of the bone).”* As I have tried to show in Takashima (1989: 15-19), the cracks, *bu*卜, were believed to have the power to exert influence on various events in both the human and supernatural realms. Therefore, my translation for (2) means that cracks with that notation (‘[This crack] did not go against the numen [of the bone]’) were judged by the diviner to have been either neutral or auspicious, most probably the latter. This is something which many specialists, such as Rao Zongyi (1957: 19), Xu Jinxiong (1977: 45), Lefeuvre (Euro-

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38 We do not understand the exact nature of the *rong* ritual. Usually, *rong* is followed by *ri*日 ‘day’ in what appears to be a verb-object construction. It is worth noting that before this *rong* 日 expression there frequently appears the name of an ancestor acting as the recipient of this ritual. In this example, however, the *rong* ritual is presented as a scheduled event, and the oracle is sought to determine the appropriateness of the king performing it.
pean Collections, p. 335), and others, have already noted in their research.

The assumed historical development of wu 惟 might be reconstructed as follows:

\[ \begin{align*}
\begin{array}{c}
\text{phonetic}\text{signifier} \\
\end{array}
\end{align*} \rightarrow \begin{align*}
\begin{array}{c}
\text{graphic reanalysis}
\end{array}
\end{align*} \]

Let us now move on to **Criterion/Analysis 3**, which involves more uncertainties than the previous criterion/analysis. Our example, together with another HCC, constitutes a binomial expression inscribed in GSNB B132 视 块. Lefeuvre transcribes it as 视 块 without indicating the readings, and gives the translation quoted below:

(6) 视 块 . GSNB B132, 133. 39 134

“There will be a lasting happiness.”

For more detail, he refers to the French Collections (pp. 356-357) where he gives the following note:

The second graph, ordinarily transcribed 视 = 視 = 視, is interpreted, most of the time, as meaning ‘happiness, felicity’. For the first graph, different transcriptions have been proposed: 视 = 视, but, as Jao Tsung-yi points out, the interpretation is more or less the same: ‘lasting, durable, prolonged’. These two characters appear quite frequently, both together, in inscriptions dating from the reign of K’ang Ting .... At the time of Ti Yi and Ti Hsin, a new saying appears: 造 视 (see Ch’en-pien 前編 2.28.4 [sic; should be 2.28.3]). As 视, here, means ‘prolonged’, it seems to confirm the admitted interpretation: “it will be a lasting happiness.”

The second graph in this binomial expression is an HCC, 块 or 块 ‘to govern’. But according to the Guangyun (Shang ping) it has another reading, 易, which means “split” and can be traced to the SW (3b). There, 视 is explained as meaning “che 块.” It gives the following definition for 易 造: 家福也; 从理视 視 (happiness in family; [the graph] consists of 造 and the 易 as phonetic [SW 13b]). In his commentary on this entry, Duan Yucai 段玉裁 (1735-1815) concurs with Yan Shigu’s 顏師古 (581-645) opinion that 造 is a loan for 易 福 ‘blessing’. It is clear that this is the meaning Lefeuvre has chosen,

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39 I disagree with Lefeuvre’s judgment that GSNB B133 has this binomial expression. There are only three graphs recognizable in the original, 视, 块, and 视.
to the exclusion of other possibilities. For instance, there is another reading for 篪, viz. lai, otherwise written 賆 ‘to give’ (nearly homophonous with taskId in OC). As pointed out by Duan Yucai, this use is attested in the Shijing (#247): 其優維何, 奪爾女士 “What are those flowers? (Heaven) gives you young ladies and young gentlemen” (Karlgren 1950: 204). Thus, the meaning differs greatly depending on which reading we choose for 篪—taskId, xi, or lai. The overall context, of which (4) can form but one example, will be the deciding factor.

Before looking at that, let us consider the first graph in this binomial expression, which is an HDC. Lefeuvre follows Li Xueqin and Peng Yushang’s (1990: 41) direct transcription, which he says better conforms to the original. I agree that in terms of the evolution from the bone to the quasi-kaishu form (“quasi-” because there is no such character as 聳), it is a better rendition than 敛 or 攮. However, the small vertical strokes, two in GSNB B132 and sometimes three or more in other examples, normally inscribed between the left and right elements of the graph, are not represented in 敦. Moreover, many of the other graphic variants found in JGWB (#390), Sòrui (202.3), or Leizuan (553-554) have a little tassel-like grapheme at the foot of the human figure with its head turned back—for example, 敧 (Yicun 147). It is quite possible that the forms that lack this grapheme and the small vertical strokes are abbreviated, so that direct transcription (DT) of the original into something like 聳 better preserves its original palaeographical structure. This DT, being a “modernized element-by-element rendering of the original combinations of elements in the archaic graph” (Barnard 1996: xx), could serve for comparison with the small-seal graph 敥, since both the DT and the small-seal form share the “turned head,” “hand,” “tassel-like element,” and “dots.” It is also plain that the Maogong ding graph 敥 developed to yi 聳, the guwen form of which is given in the SW (3b) as 敹. It is interesting that instead of Xu Shen giving the small-seal forms first, as was his usual practice, here he puts this guwen form first, and then provides a small-seal version, 敹. The left side of this combined with the right side of the guwen form gives yi 聳 ‘practise; toil; surplus; sprout, sucker’. The following diagram summarizes what I have said to this point:
Five characterizations and processes have been assumed in the evolutionary scheme above, two graphic reanalyses presumed to have taken place on two different occasions (and, possibly, different places as well) for reasons now difficult to reconstruct. The two graphic reanalyses are the reason why \( \text{or} \) is considered an HDC. Sometimes even one graphic reanalysis would be enough for the discontinuation of graphic tradition.

If, on the other hand, the guwen tradition had been kept alive throughout the graphic development, we would get the following:

\[
\text{or } \begin{array}{c}
\text{or }
\end{array} + \begin{array}{c}
\text{or }
\end{array} + \begin{array}{c}
\text{or }
\end{array} = \begin{array}{c}
\text{or }
\end{array} \quad \text{possible optional signific graphic reanalysis graphic reanalysis}
\]

The above scheme does not require that we assume any processes to have taken place, and only three assumed characterizations are involved (possible phonetic, optional signific, and signific). This might give the impression that it is simpler and thus “preferable” to the former scheme. However, it is not a question of which interpretation should be adopted in order to understand the inscriptive language; yi 骨 and yi 聚 are graphic variants of the same word. The real problem is the assignment of a meaning. I have uncovered three possibilities here: “practise” (SW) “toil, hardship” (Shijing), and “surplus” (Zuozhuan) (ap. Daikanwa 9.239).

We now move on to the next stage of the work of decipherment: which, if any, of these meanings and words—yi 骨 ‘practise’, ‘toil, hardship’, ‘surplus’ on the one hand and li 聚 / 聚 ‘to govern’, xi 聚 ‘split’ (sc. che 拆), xi 聚 ‘blessing’, or lai 聚 ‘to give’ on the other—should be chosen for the inscriptions? Let me state at the outset that I myself have no perfect answer to this question. Lefeuvre’s view that 聚 聚, which we would write yi li/xi/lai 聚 聚 聚, should

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40 Though it would be interesting to pursue, a detailed analysis of these is not given in this essay. For the present, it will be sufficient to characterize them as assumptions.
be interpreted “There will be a lasting happiness” has no basis, except for the possibility, as we have pointed out, of the second graph being loaned for the word xi 福 ‘blessing’. Indeed, how could such a claim as “the interpretation [of 福] is more or less the same: ‘lasting, durable, prolonged’” (French Collections, p. 357) have any merit when no reference is made to any word?

While the word yi 篇 has no such meaning as “lasting, durable, prolonged,” Lefeuvre does refer to an actual inscription, Qianbian 2.28.3, which provides a fuller context. This is worth examining:

(7) 戊申卜貞壬田于西 (?) 鼐, 往來亡災. 茲禦. 獲兕一 猶 四. 其祫(= 延) 福,
   (or 鼐) ....
   Wushen day cracking, [X] tested: The king will hunt in the western (?) foothills; there shall be no disaster going there and back. This [divination] was lustrated. (He) caught buffalo numbering one, and mang-animals, four. (We) will continue to govern (split, bless, or give ?) ....

The above example may be considered a divination concerned with both the success of hunting and safely carrying out this activity. Whichever word—li, xi, or lai—is chosen, it has something to do with what went before. In this connection, I think it is important to pay attention to a methodological rule which Keightley (1997a: 44) has put forward:

- Coherence counts as much as context. I assume that there was a logic to the narrative that the Shang diviners and engravers recorded. Where the actions of the Shang ritualists were concerned, for example, the rule of coherence proposes that a verification has to refer back to the charge; the Shang diviner did not divine about one ritual and record a verification about an entirely different ritual.

In a way this is common sense, but if one is cognizant of the fact that coherence depends on culturally determined factors, one can exploit it as a rule of decipherment. In example (7) the putative word 福 (or 彼) is preceded by a verb yan 徑 (= 延) normally understood as “to continue, proceed.” The rule of coherence would seem to render such otherwise possible meanings as “continue to govern,” “continue to bless or to be happy” (sc. Lefeuvre, “lasting happiness”), and “continue to give” wholly bizarre. The only possibility that has some connection to the antecedents is “continue to split”; that is, the word is read as xi 福. At this point, however, it is unclear whether the “split” refers to disposing of the game caught or to cracking the bones in divination.41

41 Some evidence, though indirect and much later in time, exists. The Zhouli
An examination of several dozen inscriptions in which xi and yi—the meaning of which is yet to be determined, either “practise,” “toil, hardship” or “surplus”—occur as a binomial expression suggests that the rule of coherence is best satisfied by hunting and sacrificial activities (as in [7]), as well as some weather condition, typically, rain and wind, related to hunting and sacrifice.

I will give just two representative examples:

(8) 
庚戌卜何貞匕 (= 偽)辛剺, 其肆. *Zhuihe 52*
Gengxu day cracking, He tested: As for the gui-cutting sacrificial (meat) for Ancestral Mother Xin, (we) will practise the splitting (service).

(9) 
貞孜, 其雨. / 王其 從至於 艇, 亡 / 艇 (= 勿) 至 艇, 其悔. / 
貞貞芳鷄, 甲 (= 茶). *Cuibian 1003*
If (we) practise the splitting (service), it might rain. / If the king proceeds to reach to Fang (?), there shall be no disaster. / Don’t [try] reaching to Fang (?), for he will regret. / Tested: (The king will) snare the deer of Fang (?); (they were) caught.

Note: The above inscriptions constitute a series of divination conducted sequentially from left to right, as indicated in the transcription by slashes. Judging from the rubbing, the piece is still fragmentary and may not contain all the information of the original series. From the last divination, the king did, in fact, go to Fang (?).

These examples suggest that the best choice for the meaning of yi is a verb, “to practise.” The use of the word yi as a noun meaning “toil, hardship” or “surplus” does not seem coherent in (8) or (9). Furthermore, the great majority of later binomial phrases which contain this word in the initial position also convey the meaning of “practise,” as in yi yi 耘儀 ‘practise ritual’, yi ye 耘業 ‘practise skill’, and yi wu 耘武 ‘practise martial arts’, which all constitute VO (verb-object) compounds.42

Before proceeding to Criterion/Analysis 4, I would like to introduce a convention by which we can choose one out of several possible readings; it may be stated as follows:

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42 Later binomial phrases which contain this word in the final position convey the related meaning of “learn,” as in jiaoyi 教頑 ‘to teach (someone) to learn’, cunyi 存彝 ‘to keep (something) to learn’, and xiyi 言彝 ‘to learn’.

(Chunguan, Zhanren) has a phrase which reads 卜人占壞 'the diviner divines the crack', where che has to mean “crack.”
When two or more readings can be posited for an HDC due to its different constituents, each with a different pronunciation, the overall weight of the phonetic and semantic role played by the modern-character equivalent of each constituent should be decisive in making a choice.

To illustrate this convention, let us look at the graph \( \text{gfi} \), whose two constituent elements can be rendered 彊. No one would disagree with this transcription, but what is its correct reading? I have earlier proposed that it should be read as \( \text{you}/*\text{r@gw} \), etymologically related to the word \( \text{diao}/*\text{tj@gw} \) 彊 ‘carve; injure’, meaning something like “to perform the you-cutting sacrifice.” I have also proposed that \( \text{f} \) is not phonetic but semantic, with a meaning like “shining light; bright, patterned, beautiful” (Takashima 1988: 681; 1996: 2.110-11). In European Collections (pp. 322-323), Lefeuvre takes issue with this hypothesis:

As means the performance of a sacrifice including the immolation of victims, some authors conclude that \( \text{f} \) can only be phonetic: \( \text{f} = \text{f} = \text{yu} \). But many scholars are reluctant to accept this opinion. The reason is that in the oracular inscriptions there is a big family of graphs including \( \text{f} \) as signific. [How does Lefeuvre know that \( \text{f} \) is signific in the oracular inscriptions?] … It is possible that sometimes victims were killed primarily to obtain the blood and to collect it in big jars for the performance of a special preparatory ritual, a libation not of wine but of blood. To show that the offering was generous and plentiful, the blood was poured out gushing strongly with a gurgling noise: \( \text{yung} \). If that is the case, the phonetic is not \( \text{f} \) but \( \text{z} \) and this graph should not be read \( \text{yu} \) but \( \text{yung} \) (sglaong/aung).

Apart from the dubious claim that many scholars are reluctant to accept the \( \text{you} \) as phonetic in 彊 (besides Lefeuvre, who?) and that there is an onomatopoetic significance to \( \text{yong} \) reconstructed as sglao^ng (whose reconstruction is this?), the issue here is how to resolve differences in the reading of 彊. As with the principle of parsimony discussed earlier, the above convention does not necessarily ensure a right answer, which is really too much to ask from any general rule. But it does give our methodology some rigor, and may bring us closer to the truth.

At first sight, one gets the impression that the 彊 in the modern characters often functions as signific, while on the other hand the \( \text{z} \) also functions as signific in the great majority of cases. Since the use of graphic elements for either phonetic or semantic purposes appears to change with time (and place), we need examples from a reliable source. At present, the \( \text{SW} \) is the only source that can supply usable information. If we limit ourselves to the youbu
The SW recognizes that 酉 serves as phonetic in jiu 酉 ‘wine’ and chou 豫 ‘hate’. One uncertain case is qiu 酉 ‘chief’ where it might very well be phonetic, even though the SW does not say so. As for 𢑠, its modern reflex is not yong as Lefèuvre has it, nor rong (sc. 彤), but shan (sc. 畔 or 畏; the final -n going back to -m). Out of eighteen characters with the 𢑠 element, the SW has no examples in which 𢑠 is designated as phonetic, no matter how its pronunciation is reconstructed. Although Xu Shen 許慎 arranged his bushou 部首 ‘section heads’ with chief consideration to the structure of the graphs and their meanings (Serruys 1884; Bottero 1996: 65-77), it must be significant that under you 酉 he has at least two characters with it as phonetic, while under shan 𢑠 there are none. Given this, I would maintain that 酉 is to be read as you, and the overall weight of this particular graphic element in phonetic use in the SW has been the decisive factor in choosing this reading. It is only after this has been taken into account that one can go on to consider other things such as word-family connections, etymology, morphology, syntax, coherence, and context.

Finally, we come to Criterion/Analysis 4 which involves the greatest uncertainties in a decipherment work. As can be expected, the level of analysis attainable under the conditions outlined above is very limited. This is because the palaeographs we are dealing with are not easily transcribed. Moreover, even if we do succeed

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43 In addition, there are a few other characters such as zhou 𢑠 and chou 𢑠 which may be suspected to have some phonetic significance. However, the SW does not say so either. This is a bit strange for 豫 even after it is analyzed as “从酉射差聲” (derived from you and zhou as abbreviated phonetic); that is, both 豫 and 豫 belong to the same youbu 部首 rhyme group with dental initials. For a more detailed analysis of the phonetic role of 占 in 酉, 豫, and a few other words, see Boltz (1994: 120-121).

44 However, neither 畔 ‘cedar’ nor 豫 ‘garment’ is given in the SW.
in transcribing them stroke by stroke into an HDC, this type of palaeograph often fails to provide any substantial clues to pronunciation. Thus, there remain a number of examples which must be approached through the use of the fourth criterion. Scholars frequently leave such specimens as they appear on the bones, mixing the palaeographs with the modern characters in their citations. In terms of lexicology, philology, or linguistics proper, there is not much we can do about such cases until further advances in the field are made.

The thing that we need to avoid is an inadvisable practice referred to by the Chinese phrase wang wen shengyi 望文生義 'to generate a meaning by looking at the graph' or, simply, "speculative lexicology" or "speculative etymology." One example is 金, appearing in GSNB S6, on which Lefeuvre (p. 325) has the following comment:

... this graph is sometimes used as the name of a land or of a person. But it is also used as a verb (after 其) and, in that case, is often accompanied by 未 [sic] [sic] may have the meaning of offering the blood of the immolated human victims in ritual vessels. (Emphasis added.)

While it is quite possible that the depictive quality of a graph reflects the meaning of a word represented by it, there are also cases in which the depictive quality—no matter how vivid it might be—has nothing to do with either the meaning or the function. Typical of these cases is the use of a graph for phonetic loans, such as 且 其 ‘a modal and aspectual particle’ (Takashima 1994, 1996a), 未 ‘a copula’ (idem 1990), 本 我 ‘we, our’, and so on. On the original bones, these graphs offer a depiction of “basket,” “bird,” and “froe,” respectively, but these depictions have nothing to do with the meanings of the words they stand for, nor with the functions they served in the actual inscriptions.

If we transcribe 金 directly or stroke-by-stroke, we will get an HDC looking something like 孤, 剃, or 剃. However, such a DT does not seem to provide a clue to any known character or sound, except, perhaps, 也 for the first HDC. Sōran (p. 156; JGWB #632) gives four different renditions of this bone graph: 亷 皿 ‘bathe’, 亷 皿 ‘warm’, 也 仏 ‘to increase’, and 也 益 ‘to overflow’. But in terms of historical palaeography none of them is a good candidate for the correct transcription. One might apply some of the meanings associated with them to the bone context, but that would be

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45 Since this inscription is too fragmentary, I will not quote it here.
methodologically unsound, particularly in view of the supremacy we have given to palaeographic considerations (cf. Criterion/Analysis 1). Furthermore, no graphic reanalysis can be demonstrated.

In spite of the difficulties mentioned above, Lefeuvre (ibid.) has gone even further and suggested—wang wen sheng yi—a new interpretation with the following remarks:

In the Chou-li (ti-kuan 地官, niu-jen 牛人) there is a text indicating that the pieces of the victim’s flesh were displayed in baskets and their blood offered in vessels. The word used for these vessels is p’en 盤. If 盤 [sic] is not wen 湛, it may be the original graph for p’en 盤, graphically nearer (with two dots), even if the central element went through some modifications.

Unfortunately this is not the breakthrough it seems. It is difficult to accept such palaeographical analysis, with its “two dots” and “some modifications [transformations],” presumably from the human figure in the original to the knife element in the character pen 盤. The fuller forms of the bone graph in question, found in JGWB #632 (e.g., 盤), clearly show “four short vertical strokes” inscribed on both sides of a human figure. This is normally interpreted as jie 介 ‘to interpose; armor’; yielding the composite HDT 盤. Moreover, the bronze graphs for pen are 盤 or 盘 (Gao Ming 1980: 314) in which the two top elements are clearly the grapheme and etymonic ba 八. Flanked by this element is the grapheme dao 刀 ‘knife’ which is used as a semantic determinative for the word fen 分 ‘to divide’. At the bottom there is the grapheme min 盘 ‘basin’ which is used as the semantic determinative for pen 盤. Although the graph for pen has not yet been identified in the bone inscriptions, the bone graph 盤 cannot be considered a possible candidate.

Lefeuvre has noted that this bone graph, which we transcribe 盤 for the time being, is used as a proper noun standing for the name of a person or place, and as a verb. It is methodologically interesting that Lefeuvre connected its use with the word sui 歲,

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46 He also transcribes the same bone graph as xian 習 ‘to fall in; trap in a pit’, but provides no supporting discussion. This is another example of wang wen sheng yi, and a particularly problematic one at that, because the pit 盘 is confused with the basin 盘.

47 It is possible, and perhaps more promising, to search for a solution by assuming the phonetic in this graph was jie 介. However, the graph appears only as the name of a place, making it extremely difficult to find the right solution.
defined as meaning “a special way of killing and cutting the victims,” which, along with his graphic analysis of the incomplete graph sui, led him to interpret “offering human victim’s blood in the pen vessel.” First of all, the word is not sui, but gui 割 with the meaning he has given. There is certainly an etymological connection between sui and gui in that both share an underlying meaning of “cut” in a certain specific manner, but sui has no such meaning in and of itself. It is used as a word meaning “year,” no doubt related to the later attested usage of the same word in the sense of “Jupiter.”

In any event, let us consider the two examples Lefeuvre (1997: 325) refers to, which I would translate as follows:

(10) 甲申卜即貞匕 ( = 姬)髥其 盆 (this is to be read mi 盆; see below). Xucun 1.1592
    jiashen day cracking, Ji tested: As for the gui-cutting sacrificial (meat) for
    Ancestral Mother, it might be sufficient. (Emphasis added.)

(11) 辛未卜尹貞 盆 (to be read mi 盆; see below). Jim bun 1339
    Xinwei day cracking, Yin tested: As for the gui-cutting sacrificial (meat), it is
    sufficient. (Emphasis added.)

An examination of the originals of the above shows that the last graphs are not inscribed as 帰 or 廸, but as 割 and 盆, respectively. The latter two should yield an HCC mi 盆, as Qiu Xigui (1980: 16; 1992: 23) has already pointed out. So the collocation upon which Lefeuvre based himself in proposing the theory that this graph meant “to offer human victim’s blood in the pen vessel” never existed at all.

Qiu Xigui (op. cit.) has proposed that mi 盆 stands for the word mi 聞 ‘tranquil’. He was led to this interpretation by the following inscription in which bu mi 不 盆 “not tranquil” is followed by the expression you qian 有(q = 錫) ‘have fault, blame’:

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48 As the phrase “the Jovian cycle” indicates, it coincides with Jupiter’s visibility of about 365 days. That is, the flow of time is, so to speak, “cut” in such a way as to correspond with the planet’s visibility, from one dawn appearance in the east before the sun to the next, at intervals of about one year, hence referred to as “year-star.” I am grateful to David Pankenier for information related to astronomy (private correspondence, March 17, 1998).

49 Earlier I have indicated how dexterously Lefeuvre hand-copied the bone graphs, but I should point out that in Part II, the Commentary, they are written with much less skill, suggesting that at least two different hands were involved in writing the palaeographs in the book. However Lefeuvre does not make any mention of it.
According to Qiu Xigui’s interpretation, the first portion of (12) is to be rendered as “it is X that is not tranquil.” He saw the rule of coherence applying to the expression “bu mi” (not tranquil) and “you qian” (have blame) in such a way as somehow corresponding to each other (“義正相應,” in Qiu’s words). This is not impossible, but if we are correct in understanding the expression “Bi gui 屋 (= 姬) 屋” as it is translated in (10) (cf. also [8]), then what the Shang were concerned about was more likely the quality or amount of the offering in (12). That is, the rule of coherence applying to the expressions “bu mi” and “you qian” could have been contrastive (perhaps “義正對照”). Thus, the word represented by mi 羽 seems to be better taken as mi 密 ‘densely arrayed, sufficient’, than mi 密 ‘tranquil’. The only other approach that might be of some use with the graph 羽 is not palaeographical, lexical, morphological, or philological in a broader sense, but syntactic. I find only one good example that is of any value, supporting the place-name use of it, quoted below:

(13) 貞□ (= 倖) 于雄丁。/ 貞于 羽 用。/ 貞在 □ 茲用。/ 貞于 羽 用。/ 亡災。/

Tested: Make an offering to Ancestor Ding. / Tested: At Jie (?) use (it). / Tested: (We) are in Jie; this was used. / There shall be no disaster. / Dingsi 夭 cracking, Bin tested: Make a burnt offering to the Mountain God.50

Since the graph in question is used as a proper noun, it is difficult to know how the semantic features that might be suggested by its graphic components—“armor” and “basin” or “water,” “human,” and “basin”—contribute to its “meaning.”

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50 The above inscriptions constitute a series of divinations conducted sequentially from left to right, as indicated by slashes. Judging from the actual rubbing, the piece is still fragmentary and, therefore, does not convey the full content of the original series.
Closing Remarks

In what precedes, I have concentrated on trying to establish a few basic procedures to make the task of reading the oracle-bone inscriptions as explicit as possible. The basic assumption is that, though arcane, difficult, and idiosyncratic in their graphic appearance, the inscriptions are, after all, the representation of a real language used in the Shang ritual and geopolitical centre during the latter half of the second millennium B.C. This language must have been the predecessor of pre-Classical and Classical Chinese as found in contemporary bronze inscriptions and reliable transmitted texts from the Western and Eastern Zhou epochs, including the Warring States period. Accordingly, one general condition under which decipherment work is performed is the presence or absence of continuity in all levels of analysis. If continuity is maintained throughout these periods, the task generally becomes easier. But, of course, this is not always the case.

In this essay I have based myself on the analysis of palaeographs, regardless of whether or not graphic continuity can be observed. If not, the assumption of substitutions—graphic reanalysis (or graphic reinterpretation) and phonetic-loan (or graphic substitution) processes—has to be made. This is additional to the very basic hypotheses we have to make regarding the structure of each individual palaeograph, the phonetic or semantic element in its composition.

Reviewing the Commentary section of the book provided an opportunity to address the methodology of reading the inscriptional language. Although a distinctly critical evaluation of Lefeuvre’s interpretations of individual graphs and words was put forward, my main aim here has been first of all to establish and articulate evaluative techniques which can be applied to the interpretation of graphs and words in general. This is because what Lefeuvre has done is very typical of current practice, and I cannot be sure I have not done the same in the past.

I have come up with four such criteria and analytical procedures as a meta-theoretical framework of reference applicable to any interpretation or theory, with a principle—that of parsimony—applicable to all four. I have also adopted a rule of coherence in decipherment from Keightley (1997a: 44), and elaborated on it. Finally, I have proposed a convention whereby we can choose one reading from multiple phonetic possibilities. To conclude, I have
argued that we should be careful not to indulge in any of the many variations of "speculative lexicology," or "speculative etymology." All the new interpretations or theories proposed above are the results of applying the criteria, the principle, the rule, and the convention discussed in this paper. I thus hope that they will contribute to the establishment of the concrete evaluative techniques necessary for the study of oracle-bone inscriptions in particular and of texts in ancient scripts in general.

**Bibliography**

**Abbreviations**

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<tr>
<td>Daikanwa</td>
<td><em>Daikanwa jiten</em> 大漢和辞典. (See Morohashi Tetsuji 諸橋徹次 1959.)</td>
</tr>
<tr>
<td>JGWZD</td>
<td><em>Jiaguwen zidian</em> 甲骨文字典. (See Xu Zhongshu 徐中舒 1988.)</td>
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<tr>
<td>Leizuan</td>
<td><em>Yinxu jiagu keci leizuan</em>殷墟甲骨刻辭類纂. (See Yao Xiaosui 姚孝遂 and Xiao Ding 肖丁 1988.)</td>
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<td>Moshi</td>
<td><em>Yinxu jiagu keci moshi zongji</em> 殷墟甲骨刻辭摹釋總集. (See Yao Xiaosui 姚孝遂 and Xiao Ding 肖丁 1988a.)</td>
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<tr>
<td>Sōrui</td>
<td><em>Inkyo bokujī sōrui</em> 殷墟卜辭綜類. (See Shima Kunio 松丸道雄 and Takashima Ken’ichi 高嶋健一 1994.)</td>
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<td>Sōran</td>
<td><em>Kōkotsumoji jishaku sōran</em> 甲骨文字字釋綜覽. (See Matsumaru Michio 松丸道雄 and Takashima Ken’ichi 高嶋健一 1994.)</td>
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