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A METHODOLOGICAL PROCEDURE FOR THE ANALYSIS OF THE WENXIAN COVENANT TEXTS

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Abstract

This article introduces a systematic methodological procedure for the analysis of Chinese palaeographic materials, constructed in this instance for the analysis of the Wenxian covenant texts (*Wēnxiàn méngshū* 溫縣盟書). The covenant texts have been dated to the early fifth century BC and were produced in the state of Jin 晉; both the script and language of the covenants present problems of interpretation. The article first briefly introduces the tablets, on which the texts were written, and gives an example of the most commonly found type of covenant. A number of key palaeographic terms used in the description of the methodological procedure are then defined and discussed. These include terms related to characters, their non-standard forms and the components of which they are constructed, as well as terminology associated with transcription. Following this, the methodological procedure adopted for the analysis of the Wenxian texts is set out. The article concludes with the observation that the procedure has proven generally successful in the analysis of the texts under consideration. It also suggests that such a procedure is transferable to the analysis of other palaeographic materials and that an understanding of this methodology can aid the appraisal of transcriptions and annotations of previously published excavated texts.

1. Introduction

This article introduces a methodological procedure constructed for the analysis of the Wenxian covenant texts (*Wēnxiàn méngshū* 溫縣盟書), a set of excavated texts currently being prepared for publication.¹ Dated to the early fifth century, the texts are usually categorized as examples of Warring States script. Much of

1 I would like to thank the two main excavators of the Wenxian tablets, Hao Benxing 郝本性 and Zhao Shigang 趙世綱, for their support for my use of the Wenxian materials in my Ph.D. research (Williams 2004), part of which is the basis for this paper. I would also like to thank Susan Roosevelt Weld who invited me to join the project that she initiated with the excavators to process and publish the Wenxian texts. The Henan Provincial Institute of Cultural Relics and Archaeology in Zhengzhou, where the tablets are housed, has provided ongoing support for the project, as has the Cultural Relics Bureau at both the provincial and national level.

their language is highly formulaic. Their analysis presents problems at the level of the individual graphs as well as at the level of more general interpretation.²

In order to bring a methodical approach to the analysis of these texts, I found it necessary to construct a systematic methodological procedure to adopt in their interpretation. While a number of standard techniques for the palaeographic analysis of Chinese texts have been described in print, detailed explanations of how they are combined to give a logical, scientific approach to the identification of a graph are not found.³ The procedure described below aims to provide such an approach, from the basic identification, where possible, of a graph's component parts, to the systematic application of methods which can lead to the identification of the word it denotes and an understanding of the word's usage in the particular context in which it is found. While specifically constructed for the analysis of the Wenxian materials, the procedure should, in large part, be applicable to other excavated texts.

In order to describe this procedure and the analysis accurately it is necessary to clearly define certain terminology. This includes terms related to characters, their non-standard forms and the components of which they are constructed, as well as terminology associated with transcriptions. Following a brief introduction to the Wenxian texts, these terms are discussed, after which the methodological procedure is described.

2. The Wenxian Covenant Tablets

The Wenxian tablets, dated to the early fifth century BC, were excavated between 1980 and 1981 in Wenxian 溫縣 (Wen county), Henan.⁴ The main excavators were Hao Benxing 郝本性和 Zhao Shigang 趙世綱. The tablets had been buried in pits dug into a raised earthen terrace. The original size of the

2 The words "graph" and "character" are both used in the article. The two words are sometimes used interchangeably but, where a distinction is made, "graph" is used to refer to the characters as they appear in their original form on excavated material while "character" is used to refer to transcribed or corresponding modern-form characters.

3 For an introduction to the literature on palaeographic methodology, see Williams 2004: Appendix 1.

4 Henan 1983. A date found in one of the covenants has been calculated to correspond to 497 BC, see Li Xueqin 1998. The description of the site and tablets given here is based on; Henan 1983; Hao Benxing forthcoming; Zhao Shigang 2001; Williams 2004: Chapter One, section 1.3.2.

terrace was approximately 135 metres north to south by 50 metres east to west. The terrace had originally risen about two metres above the surrounding land but had been levelled and the earth used in the building of the Qin river 沁河 dyke, situated about 200 metres north of the site. The site is about 20 metres from the north-east corner of the remains of a wall of a city-site thought to be that of the Spring and Autumn city of Zhou 州. A total of 124 pits were excavated, of which sixteen contained covenant tablets. Among the other pits, 35 contained sheep skeletons, others had a single jade object, generally located in a floor-level niche in the northern wall. The number of covenant tablets found in each pit varied from a few dozen to several thousand. The total number of excavated tablets and tablet-fragments was about 12000.

The tablets themselves are found in various shapes and stone-types. The majority have a square base and sides tapering to a point and are described as *gui* (圭)-shaped given their similarity to the shape traditionally associated with the *gui* ritual object. There are also tablets described as *zhang*-shaped (a trapezium with a square base) and others described as slips (narrow strips with straight ends).⁵ The most common stone-type is phyllite slate, and quartz sandstone is also seen. A small number are of lighter-coloured carbonatite or schist stone.

Brush-written texts, in black ink, are still legible on many of the tablets. They are covenants between a leader and those under his authority, demanding loyalty and making specific demands and prohibitions, sanctioned by a spirit (or possibly spirits) called on to wipe out the clan of any who violates the oath. A single covenant text is repeated on many tablets, each example individually identified with the name of a covenantor. The covenant lord of the Wenxian tablets has the clan name Han 韓 in the texts and is conjectured to be the head of the Han lineage, one of the ministerial families in the state of Jin 晉. The covenants are between this Han leader and members of his and other clans. All the texts follow the same basic formula of four clauses: name; stipulations; submission; imprecation.⁶ In most cases there are two stipulations, the first demanding loyalty to the lord, the second prohibiting or requiring some specific action, often related to enemies who are sometimes named. An example of the most

5 Among each tablet type there are examples self-named as *gui* (圭) suggesting all these tablets were considered, at least by those overseeing the production of the texts, to be *gui*. See Williams 2004: Chapter Three, section 3.1.1.2.1.

6 For this analysis of the basic structure of the Houma and Wenxian covenants see Weld 1990: 353–354; Weld 1997: 142–143.

common Wenxian covenant is given here, using an interpretative transcription and laid out according to the four-clause structure described above:⁷

Wenxian covenant texts: Tablet 1:3802 ⁸

- | | |
|-------|----------------------|
| I. | 十五年十二月乙未朔辛酉. 自今以往, 喬 |
| II.A. | 敢不□焉中心事其主 |
| II.B. | 而敢與賊爲徒者, |
| III. | 丕顯□公大塚 |
| IV. | 諦殛視汝, 靡夷彼氏. |
-
- | | |
|-------|--|
| I. | Fifteenth year, twelfth month, <i>yǐwèi</i> was the first day of the month, <i>xīnyǒu</i> day [i.e. the 27 th day of that month]. From this day onward, [if] Qiao |
| II.A. | dares not ____ly [?] and loyally serve his ruler, |
| II.B. | and dares to join with the enemy as a follower, |
| III. | the great, resplendent Duke ⁹ _____, [in his] great tomb [?] |
| IV. | [May he] observe and immediately detect you, and wipe out that [i.e. your] clan. |

The Wenxian tablets share many features with the Houma 侯馬 covenant texts that were excavated in 1965.¹⁰ Houma is about 150 kilometres northwest of Wenxian. The archaeological context is similar to that at Wenxian, with a raised terrace forming part of a complex associated with the city site at Houma, which is generally accepted to be the city of Xintian 新田, Jin capital from 585 BC to 369 BC. As is the case at Wenxian, the Houma covenant site is close to a river, just north of the Kuai 澮. The Houma texts are also written with brush and ink but, apart from a handful written in black, the ink used is red. The same script style is used in both the Houma and Wenxian texts. The basic formula of the Houma texts is identical to that used at Wenxian and they share many, although not all, of the same formulaic phrases. The specific stipulations are different.

7 The term “interpretative transcription” is discussed and defined below, section 3.3.

8 Henan 1983: 85 and plate 7. The symbol “□” here indicates uninterpreted graphs. A question mark indicates that the interpretation of the previous word or phrase is tentative.

9 The translation here gives “duke” in the singular in this phrase but note that it could be plural, “dukes”.

10 Shanxi sheng wenwu gongzuo weiyuanhui 1976. The main work on the Houma tablets in English is Weld 1990 (see also Weld 1997).

The Wenxian texts are relatively short, from around 35 to 60 characters in length, each consisting of one four-clause covenant. The Houma texts, in contrast, are up to about 200 characters long, and, in some cases, the basic four-clause structure is used more than once on a single tablet. The Houma covenant lord is a Zhao 趙 leader, presumably the head of the Zhao lineage at that time. There is a single Houma tablet with a date and this has been matched with the year 495 BC.¹¹

In 1999 a project set up by the excavators of the Wenxian tablets, Hao Benxing and Zhao Shigang at the Henan Provincial Institute of Cultural Relics and Archaeology, and Susan Roosevelt Weld of the East Asian Legal Studies program at the Harvard Law School, with funding from the Luce foundation, began to process and photograph the tablets in preparation for publication.¹² Once fully published, the Wenxian covenant texts will provide scholars with materials significant for our understanding of many aspects of early China, from script development to religious belief and political organization.

3. Terminology

In this section a number of key terms used in the analysis of Chinese palaeographic materials are defined and discussed. These terms are used in the description of the methodological procedure given in the next section. A clear understanding of these concepts is essential when discussing the palaeographic analysis of Chinese texts. Terms are introduced here under the following headings: 1. “word” and “character”, 2. terms related to “character”, 3. transcription terminology, 4. “editing”.

3.1 *Word and character*

The distinction between “word” (*cí* 詞) and “character” (*zì* 字) is of fundamental importance in Chinese palaeography. If this distinction is not completely clear when dealing with excavated texts, and early texts in general, then confusion will ensue: The key distinction between “word” and “character” with respect to Chinese palaeography relates to the distinction between spoken and written

11 Li Xueqin 1998.

12 For a more detailed introduction to the project see Weld forthcoming; Williams 2004: Preface.

language. Chinese characters are written symbols created to represent spoken words. A spoken word has a recognizable sound and meaning (or function) and a character is a symbol created to represent that word in writing. It is essential to be aware that the process of creating a character or borrowing a pre-existing character to represent a spoken word could occur more than once for the same word. Thus, one word might be denoted by different characters in different periods and/or regions. Such a process results in a single word denoted by several formally different characters. It must also be understood that, once a character was created, it immediately became liable to be employed as a phonetic loan. That is to say, it could be used, not only to denote the original word it was created to represent, but also phonetically, making use of its phonetic value only, to represent other words with the same, or very similar, pronunciation.¹³

A single word, it follows, may be denoted by several different characters, while a single character may denote more than one word. Due to the adoption of a single Chinese dialect as standard and the standardization of the Chinese script in which it is written, the modern student of Chinese is not frequently made aware of such possibilities. However, at an earlier stage in the development of the script, links between words and characters were less constrained by a rigid orthography and more liable to change and evolve. This is particularly true for the pre-Qin era, before the empire-wide standardization of writing, when there was a period of more than one thousand years of gradual but continuous development of the script, influenced by language change as well as political events, such as the loss of influence of the Zhou court over the feudal lords which led to regional development of the script in different states. The fluid relationship between words and characters must be taken into account in the analysis of excavated texts.

3.2 *Character: related terms*

3.2.1 *Analogous character set*

I use the term “analogous character set” to describe those characters created, or developed, to represent a single word. For example, the characters, [慇] and [慎] were both created to represent the word *shèn* {慎} “to be careful/ cautious, to be

13 This is referred to as the “rebus method”. An equivalent and familiar example in English is the use, in games or puzzles, of a pictographic symbol of one word used to represent a homophone of that word, e.g., a symbol like “≈” is drawn to represent “sea” and used to denote “see”. Cf. Boltz 1994: 60–61.

scrupulous and conscientious”.¹⁴ Thus, one can say that [慇] and [慎] are members of the same analogous character set. Loangraphs (defined below) are not members of the analogous character set. Members of the set are, however, all variant characters (defined below). The currently used standard character (defined below) can be used to represent the analogous set; so one would say that [慇] and [慎] are members of the *shèn* [慎] analogous character set.

Use of this term can sometimes help clarify discussion of variant characters. In Chinese palaeographic scholarship the term *zì* 字 is used to refer to both an individual character and the analogous character set. Thus one finds statements like: “Character A and character B are the same character”, meaning: “Character A and character B both belong to the same analogous character set.” Or the statement: “These two characters are, in fact, the same character”, meaning: “These two characters both belong to the same analogous character set.” I will use “character” to refer to a single character with a distinct form and “analogous character set” for the set of variant characters created or developed to denote a single word.

3.2.2 *Standard Character*

The “standard character” is the character that, at a particular time and place, is the standard character used to denote a particular word. For example, the standard character for the word *tí* {題} “topic” is [題] *tí*.¹⁵ In China, an abbreviated form, that I have seen used by students when taking notes, is [題], i.e. the right-hand component [頁] *yè* has been replaced by the English letter [T]: the [T] acts as a phonetic signifier, its pronunciation being similar to that of *tí* {題}, and, with only two strokes, it is quicker to write than the component it replaces. The form [題] is, then, a non-standard character (in this case a variant character) for the word *tí* {題}.

It is important to realize that what was a standard character at one time may now be considered a non-standard character. For example, in the Wenxian texts

14 The first variant form is discussed in Williams 2004, Chapter Three, section 3.2.1.1, graph 2. Note that in this article, when it is necessary to distinguish between characters and words, a character is placed in square brackets, [], with its *pinyin* pronunciation following and a word is placed in curly brackets, { }, with its *pinyin* pronunciation preceding. Use of brackets in this way follows the Chinese edition of Qiu Xigui’s *Chinese Writing*, see Qiu Xigui 2000.

15 The simplified form, [题], is a formalized “calligraphic variation” (defined below) of the traditional form.

the standard character for the word *wǎng* {往} “to go toward” is [隍] *wǎng*, while the standard character for this word is now [往] *wǎng*, a form which did not exist at the time the Wenxian tablets were written. Today [往] *wǎng* would be classified as the standard character for *wǎng* {往} and [隍] *wǎng* as a variant character in the [往] *wǎng* analogous character set.

3.2.3 Non-standard character

A non-standard character is a character used to denote a word which is more commonly denoted with another character (i.e., the standard character). As with the term “standard character”, the term is time and place specific. There are two types of non-standard character: variant characters and loangraphs. These are defined here:

1. Variant Character

“Variant characters” are the characters which make up the analogous character set, i.e., they are different characters created or developed to denote a single word. A variant character varies at the component level (defined below) and the replaced or additional component (or components) adds semantic or phonetic value to the character.

For example, [往] *wǎng* and [隍] *wǎng* are variant characters belonging to the [往] *wǎng* analogous character set. In this particular case, [往] *wǎng* is a development of the earlier form [隍] *wǎng*. The character [往] *wǎng* results from corruption of the original character into the form [主] *zhǔ*, and the addition of the [彳] *chì* component.

In the discussion of variants one will often hear statements like: “Character A is a variant of character B.” This is acceptable so long one does not assume that character A developed *from* character B: the nature of the connection between the two characters, A and B, must be determined by their developmental relationship. For example, the statement: “The character [隍] *wǎng* is a variant of the character [往] *wǎng*”, means that [隍] *wǎng* is a graphic form that was once used to denote the word that is now denoted by [往] *wǎng*. It must not be understood to mean that [隍] *wǎng* developed from [往] *wǎng*; which is the opposite of what actually happened.

2. Loangraph

A “loangraph” is a character which is used to denote a word which has the same, or very similar pronunciation to the word usually or originally denoted by that

character.¹⁶ When a character is used to denote the word it was created to represent, it has both semantic and phonetic value. If the character is then borrowed as a loangraph it uses only its phonetic value, its original semantic value becomes irrelevant.¹⁷ For example, in the Wenxian texts the character [各] *gè*, which was originally created to denote the word *gé* {格} “to arrive at”, is used as a loangraph for the word *kè* {恪} “to be prudent, to be respectful, to be reverent”. It is possible that, at this stage, there was no character which had specifically been created to denote the spoken word *kè* {恪}: the character [各] *gè* was borrowed to denote this word in writing. It is helpful, then, to remember that characters are loaned for words, not for other characters. Note that loangraphs are not the same as variant characters in an analogous character set, which were all created or developed to represent the same word: loangraphs do not belong in the analogous character set for a particular word.

The observation can be made that, in the analysis of palaeographic materials, it is uncommon, less well attested, and temporary loangraph usage that tends to cause problems in interpretation. Loangraphs that have become standard characters and well attested loangraph usage will rarely present major obstacles to the analysis. Examples are: [我] *wǒ*, which originally denoted a type of weapon but became the standard character for *wǒ* {我}, the first-person pronoun; and the common use of [女] *nǚ* as a loangraph denoting the word *rǔ* {汝}, the second person pronoun. Examples of the type of loans which do cause difficulties are found in a phrase common in the imprecation clause of the Houma and Wenxian texts. Many attempts have been made to match the characters found in this phrase with a suitable set of corresponding words. The characters that make up this phrase are, in most examples: 麻夷非是 *má yí fēi shì*. The interpretation I adopt is *mí yí bǐ shì* 靡夷彼氏 (“Wipe out that clan”), in which

16 The relationship between a character, the original word it was created to represent, and the word it loans for, can be complicated. See Qiu Xigui 2000: Chapter 9.

17 There are exceptions where the standard meaning of the loangraph is similar to that of the word it is loaned to represent. In many cases this was coincidental, but in some examples the two words are cognate and the link was probably intentional, see Qiu Xigui 2000: 273–277. There are also cases like the use of [好] *hǎo* to denote the two words: *hǎo* [好] “good” and *hào* [好] “to like”. In this case the words are clearly cognate, one is derived from the other. In such an example it is possible that the graph [好] *hǎo* was created to represent both these words with the assumption that context would make the required pronunciation clear. If this was the case, then this is not a loaning relationship. If the graph was created with just one of these words in mind and then loaned for the other, then this is an intentional loan based on the cognate relationship between the words. On loangraphs and word derivation see Pulleyblank 1999.

the first, third and fourth characters are all treated as loangraphs (the second character is a variant form).¹⁸

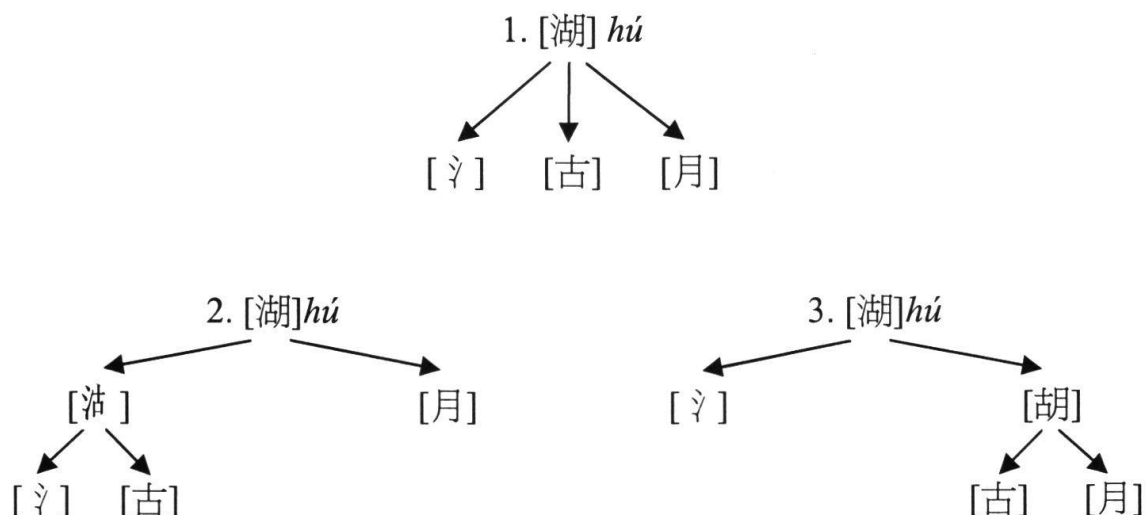
3.2.4 *Component, composite component and base component*

The word “component” is used to refer to the basic units of the Chinese writing system, from which characters are composed. In this regard, two types of Chinese character need to be distinguished: those which cannot be broken down into constituent components, called “non-composite characters”, and those which can be analysed as being formed of separate components, called “composite characters”.¹⁹ For example, [肉] *ròu* is a non-composite character while [胡] *hú* is a composite character composed of [月] (= [肉]) *ròu* (originally indicating semantic category) and [古] *gǔ* (originally indicating phonetic value). Note that when characters are themselves used in composite characters, as [古] *gǔ* and [月] *ròu* are in [胡] *hú*, they are described as “components”.

Some composite characters have more than two components and when analysing the structure of a composite graph one needs to be aware of the relationship between the components in that graph. For example, take the character [湖] *hú*, standard for the word *hú* {湖} “lake”. This character is made up of three components: [水] *shuǐ* (= [氵]), [月] *ròu* and [古] *gǔ*. There are, then, three different analyses possible for the structure of this graph:

18 For this interpretation see Zhu Dexi 1973: 1–2.

19 This terminology is adopted from Qiu Xigui 2000: 13–14.



Since we are interested in how the components signify phonetic and semantic value for the word the character denotes, it is the third option that is considered to be an accurate analysis of the structure of the graph: the character [湖] *hú* is composed of the components [氵] *shuǐ* “water”, used as a semantic signifier (“water” is semantically related to “lake”) and [胡] *hú* as the phonetic signifier.²⁰ In order to distinguish between a component which itself has more than one component, e.g. the [胡] *hú* in [湖] *hú*, and a non-composite component, such as [氵] *shuǐ*, the former can be referred to as a “composite component” and the latter as a “base component”.

A “base component” cannot be further divided into meaningful elements, only into strokes which have no phonetic or semantic meaning.²¹ Thus “base components” are the lowest level of meaningful unit in the Chinese writing system. Apart from during the initial period of development of the writing system, and perhaps during short periods of upheaval in the script at later periods, we would, at other times, expect to find a limited number of relatively stable base components with which all the characters of the script were composed. Thus, for any particular stage of the script, for example the Jin script of the Wenxian texts, we would expect, given sufficient materials, to be able to isolate the full set of base components.

20 For further discussion of the division of Chinese characters into components see Wang Ning 2002: Chapters Four, Five and *passim*.

21 However, note that a single stroke is sometimes added to a component to distinguish it from a graphically similar component. This is seen, for example, in Warring States forms of [肉] *ròu* and [月] *yuè*, see He Linyi 1989: 227.

When considering palaeographic problems, it can help to remember that, when a character is created to represent a word, the phonetic value of that word can, potentially, be represented by any base component or composite component with the same, or similar, phonetic value. This is why variant forms of a single analogous character set often vary in their use of phonetic component. In the same way, some components have similar semantic meanings and this allows for selection and variation of the semantic signifier during the creation of characters and variant forms.

3.2.5 *Calligraphic and component-level variation*

Variant characters should be distinguished from variation that is the result of different calligraphic styles, which can be referred to as “calligraphic variation”. Variant characters show variation at the level of their constituent components, while calligraphic variation is, generally, variation in the style of stroke, or simplification or complication of a component. Calligraphic variation is either due to corruption of a form or purposefully done for aesthetic or practical reasons. An example of calligraphic variation is the use of the form [問] *wèn* for [問] *wèn*, now standardized in the simplified script. The two characters, [問] *wèn* and [問] *wèn*, are not variant characters since the [門] *mén* is just a formalized calligraphic variation of the [門] *mén*: they are the same component. Thus [問] *wèn* and [問] *wèn* are the same character but [問] *wèn* is a calligraphic variation of [問] *wèn* (now formalized in the set of simplified characters). It is important to distinguish between variant characters and calligraphic variation since calligraphic variation does not affect the component-level structure of a character while a variant character must have some variation at the component level.²²

3.3 *Transcription terminology*

The following section first considers the English term “transcription”. It then looks at Chinese terms used for transcriptions and gives equivalent English terms: “formal transcription”; “direct transcription” and “interpretative transcription”.

22 In some cases, however, a calligraphic variation can develop into a component-level variation, for example the top-left part of the character [龔] *gōng* transforms into the component [言] *yán* in some Warring States examples of the graph. For the analysis of the graph [龔] *gōng* in the Wenxian texts, see Williams 2004: 305–313.

3.3.1 Transcription

The relevant definition of the verb “to transcribe” in the *Oxford English Dictionary* is: “To write out in other characters, [...]”.²³ The English term is loosely used, when discussing excavated Chinese texts, to include a variety of different types of transcription. There are no generally accepted, clearly defined, English terms for these different types of transcription which, no doubt, leads to some of the confusion over the nature and aims of published transcriptions of excavated texts. The Chinese terms for the various types of transcription are also not rigidly defined and, in practice, usage varies somewhat between scholars. I will discuss the Chinese terms, give definitions corresponding to my understanding and usage of the terms, and suggest English equivalents.

3.3.2 Chinese terminology and English equivalents

Chinese scholars distinguish several types of transcription, the two main categories being *lìdìng* 隸定 and *shìwén* 釋文:

3.3.2.1 *lìdìng* 隸定

The term *lìdìng* is an abbreviation of the phrase *lìgǔdìng* 隸古定 found in the spurious Kong Anguo 孔安國 introduction to the spurious “ancient script (*gǔwén* 古文)” *Shang shu* 尚書, in reference to the process by which the “*gǔwén*” *Shang shu*, that is the copy of the *Shang shu* written in the “ancient script” and supposedly found in the wall of Confucius’s ancestral home, was re-written in the standard script of the time, that is the *lìshū* 隸書 “clerical script”. The term *lìdìng* is generally used in modern Chinese palaeography to refer to a transcription in which the components of a graph written in an early script are replaced with the equivalent components of the *kǎishū* 隸書 script. For example, in the Wenxian tablets we find the following graph (two examples given): 𠄎 (WT1K17-142) 𠄎 (WT1K17-152). The graph is made up of the two components, [示] *shì* and [交] *jiāo*, so we can produce a *lìdìng*-type transcription [校], a graph which is not found in lexicons.

3.3.2.2 *shìwén* 釋文

The term *shìwén*, is used in Chinese palaeography for a transcription which identifies the words represented by the graphs in the original text and gives the standard characters now used to denote those words. In traditional Chinese

23 Simpson 1989.

philology the term *shì* 釋 refers to the explanation of the meaning of individual words and/or their pronunciation. The *wén* 文 of *shìwén* 釋文 means “[Chinese] characters”, so the whole phrase means “explanation of characters”. As employed by modern scholars of Chinese palaeography, the term is generally used as a noun to describe a transcription in which words that are denoted in the excavated text using non-standard characters are given using the standard character now used to denote that word. For example, the graph [𠄎] is frequently used in excavated texts to denote the pronoun *qí* {其}, so in a *shìwén* these graphs would be written with the character [其] *qí*. In the same way, the graph discussed above, for which the *lìdìng*-type transcription was [校], is interpreted in the Wenxian tablets as being used to denote the word *jiǎo* {徼} “to seek”, which, in the *kǎishū* script, is denoted with the character [徼] *jiǎo*. So, in a *shìwén*-type transcription this graph would be written as [徼] *jiǎo*.

These are basic definitions of the terms *lìdìng* and *shìwén*. However, these categories are often sub-divided using the qualifying terms *kuānshì* 寬式 “broad style” and *yánshì* 嚴式 “strict style”. The full terms are given here with the English translation I will adopt for them:

- a. Formal transcription: *kuānshì lìdìng* 寬式隸定
- b. Direct transcription: *yánshì lìdìng* 嚴式隸定
- c. Interpretative transcription: *shìwén* 釋文:
 - i. Broad-style interpretative transcription: *kuānshì shìwén* 寬式釋文 (also described as a transcription using “current characters”, that is: *jīn zì* 今字 or *tōngxíng zì* 通行字)
 - ii. Strict-style interpretative transcription: *yánshì shìwén* 嚴式釋文

3.3.2.3 Formal and direct transcription

Here the terms ‘formal transcription’ and ‘direct transcription’ are first defined and discussed, after which the problem of representing unidentified components in such transcriptions is considered.

a. Definitions and examples

The definition above for *lìdìng* said that “the components in the original graph are replaced with the equivalent components of the *kǎishū* script”. It follows, then, that transcription into the *kǎishū* script can only be done when the components from which the ancient graph is composed can be identified. I gave the example of the 𠄎 (WT1K17-142), transcribed as [校], above. Another example

is the Houma graph : the components of this form can be recognized and transcribed as the attested character [羣] *qún*.²⁴ A Wenxian example is  (WT4K6-149): the components can be recognized and the form transcribed to give [羸], a form unattested in the *kǎishū* script.²⁵

One aspect of *lìdìng* transcriptions that arouses debate amongst palaeographers is the treatment of composite components, which, as discussed above, are those components which function as a single unit in a graph (e.g., as a phonetic signifier), but are themselves composed of more than one base component. For example, the Houma graph  has two base components on the right.²⁶ The top one is [之] *zhī*, the bottom component is [寸] *cùn*.²⁷ However, they are clearly acting together here as the composite component for which the *kǎishū* form is [寺] *sì* and functioning as a phonetic signifier. Therefore, there are two possible *lìdìng* transcriptions for the right-hand side of this graph: [寺] and [寺] *sì*. In Chinese terminology these two transcriptions would be distinguished using the terms mentioned above, *yánshì* (“strict style”) and *kuānshì* (“broad style”). A transcription which gives the *kǎishū* form for composite components, e.g. [寺] *sì*, is a “broad-style *lìdìng* transcription” (*kuānshì lìdìng*); a transcription which treats each base component separately, e.g. [寺], is a “strict-style *lìdìng* transcription” (*yánshì lìdìng* 嚴式隸定). I will use the term “formal transcription” for “broad-style *lìdìng* transcription” and the term “direct transcription” for “strict-style *lìdìng* transcription”.²⁸

The difference between formal and direct transcriptions can be further illustrated with a related example. In the Houma texts we find the following variant form  of the graph  discussed above.²⁹ Here, the right-hand composite component is still clearly [寺] *sì*, but its lower base component is not [寸]

24 Shanxi sheng wenwu gongzuo weiyuanhui 1976: 341, 3:2

25 The character is being used in the Wenxian text to denote the word *jiē* {皆} “all”.

26 Shanxi sheng wenwu gongzuo weiyuanhui 1976: 322, 156:1.

27 Note that the Zhou-period form of the graph [之] *zhī* “to go to” is almost identical to the *kǎishū* form for the character [止] *zhǐ* “foot”. These two forms need to be clearly distinguished: early examples of the [止] *zhǐ* “foot” form do not have a straight horizontal base but consist of only three strokes, the lower one of which curves up to the left; early forms of [之] *zhī* “to go to”, on the other hand, do have the horizontal base and are made up of four strokes. Examples taken from the Wenxian tablets are:  ([之] *zhī* from the variant form of the character [往] *wǎng* in tablet WT4K9-148) and  ([止] *zhǐ* from the variant form of the character [後] *hòu* in tablet WT1K2-112).

28 I use “formal” in the sense of outward form: the formal transcription does not give the more fundamental structure that is seen in the direct transcription.

29 Shanxi sheng wenwu gongzuo weiyuanhui 1976: 322, 3:2.

cùn but [又] *yòu*. These could interchange when used as components in graphs so the formal transcription, i.e. the corresponding *kǎishū* form of the composite component, is still [寺] *sì*. A direct transcription, on the other hand, would give: [𪛗].

During the initial stages of analysis of a graph, it is important to consider both its formal and direct transcriptions, analysing the graph at the level of base components as well as that of composite components. For example, ancient graphs with the component [彳] *chì* to the left of the form and [止] *zhǐ* at the base of the form are commonly seen. These components frequently occur together acting as a semantic signifier for words related to walking and movement. In most cases the *kǎishū* form of such graphs fuses these components into the form [𨔵] *chuò*. In a formal transcription one might, then, tend to give [𨔵] *chuò* whenever the two components [彳] *chì* and [止] *zhǐ* occur in the same graph. However, in some cases this could lead to confusion. Consider the Houma graphs 從 and 徒.³⁰ If it is assumed that the [彳] *chì* and [止] *zhǐ* are a composite component then the formal transcriptions are [𨔵] and [𨔵]. But, the two graphs are, of course, [從] *cóng* and [徒] *tú* for which the *kǎishū* forms do not fuse the [彳] *chì* and [止] *zhǐ*. Thus it would have been helpful, in these cases, to make a direct transcription of the forms, for example, [𨔵] for 從, which would have made the connection with the standard form [從] *cóng* immediately apparent.

Discussion of these examples and their components [寺] *sì* and [𨔵] *chuò* allows the following observation to be made: formal transcriptions will tend to aid the identification of composite components functioning as phonetic signifiers while direct transcriptions will alert one to the possibility that base components are functioning independently. The formal transcription of [寺] *sì* allows the component to be seen as a likely candidate for the phonetic in the graph 𨔵 discussed above (particularly given the [𨔵] *fù* component which usually functions as a semantic signifier); the direct transcription of [寺] *sì*, i.e. [𪛗], would create an obstacle to this train of thought. Note that a direct transcription of the whole graph would give the even more unfamiliar [𪛗]: such a transcription is valid during the very first stages of an analysis, but in other contexts is more likely to cause confusion than elucidation. In the case of the 從 and 徒, the direct transcriptions, separating the [彳] *chì* and [止] *zhǐ*, assist in the analysis, making clear the connection to the standard *kǎishū* characters, [從] *cóng* and [徒] *tú*.

30 Shanxi sheng wenwu gongzuo weiyuanhui 1976: 329, 3:2 and 323, 1:84.

Direct transcriptions also allow one to differentiate between the structures of what were originally different combinations of base components but which developed into a single *kǎishū*-script component. A formal transcription, because it uses the *kǎishū* equivalent of such structures, may not give a clear reflection of the original form of a graph. Thus, in some cases, the formal transcription may distort and mask that original form. Take, for example, the component [𠂔]: although in the *kǎishū* script the characters [秦] *qín*, [奉] *fèng*, [奏] *zòu*, [泰] *tài*, and [春] *chūn*, all include this component, in earlier forms the corresponding part of the graph is, in fact, different:³¹

Table 1: Sources of the component [𠂔]

𠂔	𠂔	from which “秦” and “春” were derived:	𠂔 — 秦
	𠂔	from which “奉” was derived:	𠂔 — 奉
	𠂔	from which “奏” was derived:	𠂔 — 奏
	𠂔	from which “泰” was derived:	𠂔 — 泰
	𠂔	from which “春” was derived:	𠂔 — 春

A formal transcription would not make the distinctions, all the different types would be transcribed with a [𠂔].

Direct transcriptions are, then, often vital during the very first stages of analysis in order to determine a graph's original structure and consider possible functions for each base component. In publications, a direct transcription is often used for a previously unidentified graph or to draw the reader's attention to a particularity in a graph's structure. For example, the Wenxian covenant tablets have interesting variant forms of the character [復] *fù*, such as 𠂔 (WT4K5-63). A discussion of this variation would require a direct transcription: [𠂔].

Calligraphic variants can cause problems when producing transcriptions since they may hinder identification of components or even be mistaken for a component themselves. For example, the form [𠂔] *kǒu* is sometimes used in a graph as a decorative addition with no meaning. This is a calligraphic variant and can be omitted in a direct transcription. One must be extremely careful however when making such decisions: what appears to be a calligraphic variation

31 For this example see Qiu Xigui 2000: 130. Table 1 is reproduced from this book with the kind permission of the Society for the Study of Early China

may turn out to be functioning to distinguish the graph from a formally similar character.³² Such judgements are best made by comparing the original forms of the graphs in the different contexts in which they appear to determine whether such a symbol is being used.

b. Dealing with unidentified components in formal and direct transcriptions

One often meets graphs in an excavated text in which one or more of the components cannot be confidently identified, thus making it impossible to match the component with its corresponding *kǎishū* form. For example, in both the Houma and Wenxian covenant tablets there is a graph denoting, it appears, the name of a spirit called upon to sanction the covenant. This name is found in the submission clause and consists of two graphs. The second of these graphs is clearly a [公] *gōng*, but the first has, as yet, no generally accepted interpretation. There is not even agreement as to the correct direct or formal transcription for the graph. The most common form of the graph as it occurs in the tablets is: .³³ Several direct transcriptions have been suggested for the graph, for example: [𠂔]; [𠂔]; [出]; and [𠂔].³⁴ However, there is no consensus among scholars as to which of these transcriptions, if any, is correct.³⁵

This example of the Houma and Wenxian graph , highlights the point that formal and direct transcriptions can only be done meaningfully at the level of the components which make up graphs, for it is the components that signify phonetic and semantic meaning related to the word the graph denotes. Transcription at the level below that, i.e. individual strokes, is, in almost all cases, meaningless. This Houma and Wenxian graph, , appears to be composed of two components, one top, one bottom, and, in making a formal transcription, the challenge is to match these with known *kǎishū* components. Nothing is gained from simply squaring off the strokes to get something that superficially resembles a *kǎishū* character, for example [𠂔] for the graph in question. The interpretation of a graph depends on successful interpretation at the component level, since these are the basic meaningful elements of Chinese characters.

32 The example of an additional stroke used to differentiate [肉] *ròu* and [月] *yuè* was mentioned above.

33 Shanxi sheng wenwu gongzuo weiyuanhui 1976: 324, 67:4.

34 For [𠂔] see Chen Mengjia 1966: 277; for [𠂔] see Tang Lan 1972: 31; for [出] see Gao Ming 1979: 108 – 111; for [𠂔] see Wu Zhenwu 1992.

35 Recent articles demonstrate this: Li Xueqin, for example, believes Wu Zhenwu's transcription of [𠂔], interpreted as *qǐng* {頃}, is correct, while Hao Benxing uses the reading *jìn* {晉} based on the transcription [𠂔]. See Li Xueqin 1998: 166; Hao Benxing forthcoming.

Annotators use different methods to indicate, reproduce, or transcribe problematic graphs, such as 𠂔, in their transcriptions. Some transcriptions use a symbol, such as “□”, to indicate that there is a graph in this position but that no confident transcription is possible. An alternative is to make a copy of the graph, by hand (a *móběn* 摹本 “copy” or *tàběn* 拓本 “rubbing”) or with a scanned photograph, and place it directly in the transcription. If the annotator is confident about a particular interpretation, even one disputed by other scholars, he or she may simply give the direct or formal transcriptions and/or an interpretative transcription conforming to his or her interpretation and provide the argument for this analysis in an annotation. Whatever the method, it is essential that a copy of the original graph should be provided somewhere in the analysis for reference purposes.

In some instances, one will come across a graph in which there are components that can be matched with *kǎishū* components but also one or more components that cannot be identified. This may occur simply because the correct match has not yet been made, or because the Chinese script at different stages of its development had slightly differing sets of base components, some of which do not have a matching component in the *kǎishū* script. In such a case it is not possible to give a precisely corresponding *kǎishū* form of this component, because it does not exist.

Let us look at a graph found in the Wenxian and Houma tablets with one unidentified component. The graph 𠂔 (WT5K1-23) appears to be made up of three base components: two of the components can be recognized: [斤] *jīn* and [心] *xīn*, but the top-left component, [𠂔], is not found in Xu Shen's 540 components (*bùshǒu* 部首) in the *Shuo wen jie zi*, nor as a component in the *kǎishū* script. The question, then, is how to make a transcription of this graph. In such cases, it is legitimate to transcribe the recognizable components and directly copy the unknown component/s. Thus, for this graph, the transcription becomes: [𠂔]. The form [𠂔] may have been a recognized base component of the Jin script or the top two components of the graph, i.e. [𠂔], may have been a recognized composite component. Whatever the case, it cannot immediately be matched with a component in the *kǎishū* script so the direct transcription is initially given as [𠂔]. This graph has, in fact, been identified as a variant form of [慎] *shèn*.³⁶ This interpretation argues that the top composite component, i.e. the [𠂔], is a composite component and comes to be represented by the com-

36 See Chen Jian 2001. For a discussion of this graph as it occurs in the Wenxian and Houma texts, see Williams 2004: Chapter Three, section 3.2.1.1, graph 2.

ponent [𠂔] *zhì* in the small-seal and later scripts. On this basis, a formal transcription of the graph is [𠂔].

It is important to note that equating [𠂔] and the *kǎishū* [𠂔] *zhì* does not necessarily imply that the form [𠂔] developed directly into [𠂔] *zhì*. In fact, it appears that the composite component that became [𠂔] *zhì* in the *kǎishū* script followed two lines of development, after a split in its original form resulting from corruptions in its left-hand component. One of these two branches eventually died out and the Wenxian form [𠂔] was a stage on that branch. The other line eventually evolved, by way of further corruption of its form, into the [𠂔] *zhì* found in the *kǎishū* script. This being the case, it follows that the base component [𠂔] cannot be treated as an early form of [斤] *jīn*. Thus, when [𠂔] is transcribed as [𠂔] *zhì* it should be taken to mean only that [𠂔] *zhì* became the standard form for the component that at earlier stages was represented by several different forms, one of which was [𠂔].

The definitions of formal and direct transcriptions may be summarized as follows: A “formal transcription” is the representation of an ancient graph in the *kǎishū* script, created by replacing the base and composite components of the ancient graph with the corresponding base and composite components of the *kǎishū* script. It is important to note that a corresponding component in the *kǎishū* script may, due to changes that took place during the development of the script, be formally different to the equivalent component, or components, in the ancient graph. A “direct transcription” is a representation, in the *kǎishū* script, of the structure of the ancient graph at the level of base components, created by matching base components of the ancient graph with base components of the *kǎishū* script. In cases where a component cannot be matched it may be directly copied. If no component in a graph can be matched, no formal or direct transcription is possible. The graph should be represented in some other way in a transcription, e.g., using a copy of its original form.

3.3.2.4 Interpretative transcriptions

Whilst the formal transcription aims only to represent the graphic form of an ancient graph in an equivalent form in the *kǎishū* script, the “interpretative transcription” (*shìwén* 釋文) aims to present the word that the character denotes. In other words, the formal transcription deals with characters, the interpretative transcription with words. The aim, in an interpretative transcription, is to give, for each character, the word which it is denoting, using the standard character now used to denote that word.

For some graphs, the formal transcription itself will be an attested character denoting a word which fits the context in which the graph is found. The interpretative transcription will then use the same character as the formal one. In other cases the formal transcription may give an attested variant form of a character, in which case the interpretative transcription would use the standard character rather than the variant. In other cases the formal transcription of a graph may be an attested character but the word this character commonly denotes will not fit the context of the transcription, in which case it is most likely that it is being used as a loangraph and the interpretative transcription will give the standard character for the word it is loaning for. The formal or direct transcriptions of other graphs will give characters that are not attested in lexicons, in which case analysis will be done to determine what word they do denote, and the standard character for that word will be given in the interpretative transcription. Below are examples, all found in the Wenxian covenants, to illustrate the different types of relationship between formal and interpretative transcriptions. The original graph is given, followed by the formal transcription and then the interpretative transcription.

- a.  (WT5K14-11) → 自 → 自

This is an example where the formal transcription gives an attested character [自] *zì* which is the standard character for the word *zì* {自} “from” which fits the context perfectly. So, this is a case where the interpretative transcription will be the same as the formal transcription.

- b.  (WT4K9-48) → 𠂔 → 往
 (WT4K6-178) → 𠂔 → 往
 (WT4K9-570) → 𠂔 → 往
 (WT4K9-92) → 𠂔 → 往

These four variant characters interchange at a single position in the text. Analysis reveals that they belong to the same analogous character set and all denote the word *wǎng* {往} “to go forward”, for which the standard character is [往] *wǎng*.

- c.  (HM 195:7)³⁷ → 𡩺 → 主

In this case, the formal transcription is an attested graph, [𡩺] *zhǔ*, the standard graph for the word *zhǔ* {主}, denoting the stone casket, in an ancestral temple, in

37 Scan from Shanxi sheng wenwu gongzuo weiyuanhui 1976: 314.

which the memorial tablet of a dead lord would be kept. In the Wenxian covenant tablets the context in which the graph is used indicates that it should be interpreted as denoting the word *zhǔ* {主} “lord”. The Old Chinese pronunciations of the two words *zhǔ* {室} and *zhǔ* {主} were identical, the character [室] *zhǔ* is being used as a loangraph for the word *zhǔ* {主}.

d.  (WT1K17-142) → 校 → 徼

The graph that the formal transcription gives is unattested. Analysis suggests that the graph denotes the word *jiǎo* {徼} “to seek”. The form [校] is, it is conjectured, a variant character created to denote this word: the [交] *jiāo* component acts as the phonetic component, the [示] *shì* as the semantic component (the word is used in the Wenxian texts to refer to the seeking of blessings).

These are examples of the main types of character-to-word relationship seen when going from a formal to an interpretative transcription. There will also be characters for which a formal or direct transcription can be provided, but the word they originally represented cannot be determined. In such a case, a convention on how to present such characters is needed, for example, by giving the character a square border. Thus, if the graph discussed above, transcribed formally as [校], had not been interpreted, it would, following such a convention, be given as  in an interpretative transcription of the text.

In the same way that a broad-style and strict-style of *lǐdìng* transcription are recognized, so a “broad-style interpretative transcription” (*kuānshì shìwén* 寬式釋文) and “strict-style interpretative transcription” (*yánshì shìwén* 嚴式釋文) are also distinguished. The terms can be used to differentiate between transcriptions which include both formal and interpretative transcriptions together and those which use an interpretative transcription throughout. A broad-style interpretative transcription is one in which every word that has been identified is represented with the standard character used to denote it and without any other form of transcription. A strict-style interpretative transcription is one in which the interpretative transcription is given in brackets after the formal (or direct) transcription in cases where these two forms are different. For example, if an ancient text uses [女] *nǚ* to denote the word *rǔ* [汝] “you”, a broad-style interpretative transcription would give only “汝” while the strict-style interpretative transcription would give “女(汝)” – the interpretative transcription placed in brackets after the formal.

In practice, the term *shìwén* “interpretative transcription” is often used alone to refer to a strict-style interpretative transcription. The broad-style inter-

pretative transcription is sometimes described by saying the transcription will use “current characters” (*jīn zì* 今字 or *tōngxíng zì* 通行字). In any interpretative transcription, unidentified graphs will have to be reproduced either as formal or direct transcriptions, copies or scans, or omitted and replaced with a symbol (with the nature of the omission it indicates given in a key).

Some excavated texts have what appear to be punctuation marks of various types. There are very few such marks in the Wenxian covenants but in the Guodian bamboo slips, for example, they are common.³⁸ In a formal transcription one should include all such marks as they may turn out to provide important clues as to the way in which the text was originally divided or read. In the interpretative transcription these are often omitted and modern punctuation added to indicate how the annotator believes the text should be read.

In sum, the interpretative transcription aims to be a representation, in standard characters, of the words that the original scribe wrote down. If the interpretations are correct and it were possible to read the transcription to the scribe who wrote or copied the text (reading in his or her pronunciation), then the scribe would recognize what was said as that which he or she had written down. Note that this would include any mistakes the scribe had made in the writing process as well as any lacunae in our text; producing an interpretative transcription does not usually include significant editing of the text with emendations, additions and so on. Editing is briefly discussed below.

3.4 Editing

Editing of an excavated text is concerned with the presentation of the text for publication, the format used, the type of critical apparatus provided and the degree to which problematic passages, e.g. those with corruptions and lacunae, are emended for the sake of readability. For example, in the Wenxian texts, an interpretative transcription of an individual tablet will reflect only what is legible on that tablet. However, if that tablet had illegible graphs but a conjecture was made as to the words that had been there and these then added to the presentation of the text, without indicating in the main body of the text that they were emendations, then this becomes an edited text. During the analysis of an excavated text, a full interpretative transcription should be produced prior to any attempt to create an edited version. In the publication of the text, particularly the first publication, if an edited version is to be given, it is essential that inter-

38 Cf. Allan and Williams 2000: 34–36; 134–137.

pretative and formal transcriptions are also given in some form, so that the reader can see what effect the editing process has had on the original.

4. The methodological procedure adopted in the analysis of the Wenxian graphs

The procedural methodology I constructed for the analysis of the Wenxian materials has the following steps:

1. Identification of variant forms of a graph
2. Breakdown of the variant forms into components
3. Matching of components with attested components
4. Reconstruction of the graph using *kǎishū* components
5. Matching the transcribed graph with characters in dictionaries and/or collections of ancient forms
6. Determining the word denoted by an attested character
7. Identification of a loangraph
8. Determining the word denoted by an unattested graph
 - A. Analysis of suspected phonograms
 - B. Analysis of suspected semantographs
9. Discussion and explication of the phrase

These will be discussed individually below. Examples of the practical application of the procedure are not given in this article but can be found in Williams 2004: Chapter Three.

Step 1: Identification of variant forms of a graph

The Wenxian materials repeat a small number of covenants on many different tablets. As a result, there are many examples, thousands in some cases, of most of the graphs that make up the covenant texts. Due to the repetition of the content and formulaic nature of the covenants, one can be confident that graphs found in the same position in a repeated text are always, apart from a few examples of synonyms and mistakes, denoting exactly the same word. Furthermore, these are texts from a single, regional, script tradition, all written over a relatively short period of time. Thus the Wenxian tablets provide a snapshot of this local script, that is the Jin-state script, at a discrete period. Although the

Wenxian covenant tablets are all written in the same script, there is, nevertheless, a significant amount of component-level variation among the graphs. That is to say, variants in which individual components are added, omitted, interchanged or corrupted. It follows that these component-level variants, as well as the loangraphs commonly used in the texts, were considered legitimate in the script at this time, or at least when used in the writing of the formulaic covenant genre.

Component-level variants can give important clues to the identity of a graph. For example, a variant in which a phonetic component is added to a semantograph would give a phonetic value for the graph, greatly narrowing the number of words that could be considered a match. For this reason, the first stage in the analysis of a particular Wenxian graph was to identify and categorize these variant forms. This was done by looking through the images of the tablets to examine the form of the graph used in each occurrence of the word being dealt with. Basic transcriptions of the covenant type, or types, found in each pit, had been produced using the more complete and legible tablets. With these transcriptions as a guide, it was possible to identify which covenant types had examples of the particular graph being analysed. The images of the tablets were then examined and each legible example of the graph (many tablets were just fragments and characters were often illegible or only partly legible) was considered. When an example with a component-level variation was discovered, a hand copy was made of its form. Several examples would be copied for each variant, and notes made on legibility, for use when selecting representative examples to be scanned and included in the written analysis.

Having collected the component-level variants, they were categorized and representative examples selected for each variant. Categorization was based on component-level features, so graphs with different combinations of components would be in separate categories. Before analysis, it was not always clear whether a variant was a true component-level variation or, in fact, a semantically and phonetically meaningless calligraphic variation. At this initial stage such ambiguous examples were categorized separately.

Step 2: Breakdown of the variant forms into components

A Chinese character is composed of one or more components. The successful interpretation of a graph hinges on accurate identification of these components. Thus the first stage in the analysis of a graph is to determine how many components it is composed of and, if the number is more than one, to separate the

graph into its individual components. This can be difficult since a single component may be composed of two separate forms while two separate components can sometimes be in such close proximity that they appear to be one component. In such cases one must consider the range of possibilities and test each one using the steps below. A hand copy is made of each potential component. At this stage, one should produce both direct and formal transcriptions, i.e., base components are considered as well as composite components. This allows full consideration of the possible function of each component in the graph.

Step 3: Matching of components with attested components

The next task is to determine the identity of each component. This is done by comparing the separated components with tables of ancient-form components. This is similar to looking up an unknown character in modern Chinese: one selects a component and looks it up in a radical list in a dictionary.

Tables of components do not exist for each of the early scripts. However, a number of useful materials are available:

1. The table of 540 components (*bùshǒu* 部首) in the *Shuo wen jie zi*.³⁹
2. The component list in the *Han jian*.⁴⁰
3. The component charts in Gao Ming's *Zhongguo guwenzixue tonglun*.⁴¹
4. The component chart in Chen Chusheng's *Jinwen changyong zidian*.⁴²

These are lists of components written in small-seal or earlier styles of script, each component matched with its *kǎishū* equivalent. The forms to be identified are compared with the components in these tables in order to determine the equivalent *kǎishū* components.

If all the components in a graph can be identified using these lists, one can continue to step 4 below, the reconstruction of the graph using *kǎishū* components. If this is not the case, but the graph has more than one component and at least one of those components can be identified, then one can look up the ancient forms of graphs which have that component. If the graph being analysed has been previously identified, the form may be found in this way. A list of dictionaries which give ancient forms can be found under step 5 below. Note,

39 Xu Shen 1992: 316–318 (15a: 4b–9b).

40 Guo Zhongshu 1983: 2–8 (3a–15b)

41 Gao Ming 1996: 57–129.

42 Chen Chusheng 1989: Appendix.

however, that with only one component identified, some of these works are difficult to consult; even those with graphs categorized under single components will only be useful if the single component one has identified is also the component under which the graph in question is classified in these dictionaries. If this approach is not successful, or if none of the components in a graph can be identified, the following procedure is adopted.

To identify a component not found in the component tables given above, one turns to modern collections of examples of excavated ancient graphs. Ideally one should look for the component in graphs of the same, or a closely related, script. So, for the Wenxian graphs, if a component could not be identified from the above tables, one would turn to the character table in the *Houma mengshu* volume since the Houma and Wenxian tablets use the same script.⁴³ The script of the Zhongshan 中山 bronze inscriptions is also quite similar to the Wenxian and Houma script and a character table, *Zhongshan wang Cuo qi wenzi bian* is available for these inscriptions.⁴⁴ To find a matching component among the Houma or Zhongshan graphs, one examines all the examples given in these tables. One needs to be careful not to be misled by what appears to be a matching component but which is, in fact, part of a more complicated single component and not an independently occurring form.

If a matching component is found in a graph in such tables, the transcription supplied will usually identify the component. However, these tables do not always give direct transcriptions and a formal or interpretative transcription might not include all the components. In this case, one has to investigate the relationship between the ancient form of the graph and its transcribed form in order to identify the relevant component. The annotation for the graph in question should give this information. If not, the graph may be found in reference books which discuss the development of characters. For example, simple summaries of graph development are given in the *Jinwen changyong zidian* and *Zhanguo guwen zidian*, and there are detailed discussions in the *Jinwen gulin*.⁴⁵ If searching for the form among graphs from similar scripts fails to produce matching components, one can search larger collections of graphs, e.g. the *Zhanguo guwen zidian* and *Jinwen bian*.⁴⁶ Sometimes, what appears to be a matching component may only be formally similar and not, in fact, the same component.

43 Shanxi sheng wenwu gongzuo weiyuanhui 1976.

44 Zhang Shouzhong 1981.

45 Chen Chusheng 1989, He Linyi 1998, Zhou Fagao 1974.

46 Rong Geng 1992.

This type of confusion occurs less as one becomes more familiar with the script being dealt with.

When analysing components, one must be aware of the large number of calligraphic variants found in Warring States graphs since these can potentially obscure the basic form of a component and make identification difficult. Calligraphic variants affect only the graphic form of a component, not the component's function. They include simplification and complication of forms, changes in certain strokes and so on. An awareness of the range of possible variations is essential when identifying components. A survey of these variants is given by He Linyi in his *Zhanguo wenzi tonglun*.⁴⁷

In some cases, the identification of a particular component may be accurate, but the use of that component in the graph being analysed may, in fact, be the result of a corruption of another component, or components, that were originally in that position in the graph. This can easily lead to misinterpretation. If there are several examples of the same graph, the corruption may be found to be less complete in certain forms, alerting one to the possibility that corruption is indeed occurring. If it turns out to be impossible to identify all the components in a graph, the only remaining option is to search for the character itself by paging through collections of graphs, for example the *Jinwen bian*. If the graph is attested, it may be found in this way; if it is not attested, one may come across forms that will aid the analysis.

Step 4: Reconstruction of the graph using kāishū components

Once the components of a graph have been identified, the graph is reconstructed using the *kāishū* forms of these components, giving a direct transcription of the graph. If there are base components which may be forming a composite component, a formal transcription is also given with these elements depicted in their composite-component form. One must be flexible with the layout of the components in the reconstruction, considering possible re-arrangements of the components based on an understanding of how component position was somewhat fluid before standardization. The initial transcription may, in this way, lead to a number of different transcriptions to be considered in the following steps.

47 He Linyi 1989: 184–242.

Step 5: Matching the transcribed graph with characters in dictionaries and/or collections of ancient forms

By this stage, one has a reconstructed graph composed of *kǎishū* components. The next step is to discover whether or not this reconstructed graph is an attested character. To do this, one looks up the form in dictionaries and other collections of graphs. Dictionaries are used which include a large number of early and variant forms, given in either *kǎishū* equivalents, ancient forms, or both.⁴⁸ If the graph is found, one then considers its standard uses, see step 6 below. If it is found in the *Shuo wen jie zi*, the *Shuo wen jie zi gulin* should be consulted to determine if there are any known problems with the form given by the *Shuo wen jie zi*.⁴⁹ This will avoid the danger of basing an identification on an erroneous form.

If the graph is not found, one should consider whether it could be an un-attested stage in the development of an attested form. During the search through dictionaries and collections of ancient forms, attention should be paid to any forms, particularly ancient forms, that may be related to the graph being analysed. Bearing in mind the various ways in which a character can develop, one considers if the graph could be an earlier or later stage of any of these attested forms. It may be possible, in this way, to link the graph with an attested character or ancient form, even if their structures are not identical. Such a link would need to be supported by evidence that such development could occur. If, after such consideration, the graph is still not found, one goes to step 8 below, which deals with unattested graphs.

Step 6: Determining the word denoted by an attested character

If the graph does have a matching attested character, the next step is to find out what word or words it is usually used to denote in early Chinese, and whether any of these definitions fit the context in which the graph is found. Standard dictionaries of classical Chinese, as well as dictionaries of palaeographic

48 Such works include: *Shuo wen jie zi* (Xu Shen 1992); *Han jian* (Guo Zhongshu 1983); *Guwen sisheng yun* (Xia Song 1983); *Shike zhuanwen bian* (Shang Chengzuo 1976; includes the *San ti shijing* 三體石經); *Yu pian* (Gu Yewang 1987); *Jinwen bian* (Rong Geng 1992); *Jinwen xu bian* (Rong Geng 2000); *Guwenzi lei bian* (Gao Ming 1991); *Zhanguo guwen zidian* (He Linyi 1998); *Jinwen changyong zidian* (Chen Chusheng 1989); *Hanyu da zidian*; *Qin Han Wei Jin zhuan-li zixing biao* (Hanyu da zidian zixing zu 1985).

49 *Shuo wen jie zi gulin* (Ding Fubao 1988).

materials and dictionaries that include classical definitions should be used.⁵⁰ Consulting such lexicons, one determines whether the character is recorded as denoting a word that would fit the context in which the graph is found in the excavated material. This, however, assumes that the general context is already clear. When this is not the case, several alternate readings may have to be considered for the passage. When consulting dictionaries, a basic principle to adhere to is that suitable usages found in works written much later than the excavated text should not be considered unless there is further good evidence to suggest the usage was already found at that time, e.g. from examples in other dictionaries, or through a concordance search (see step 9 below).⁵¹

If a suitable word is found, particularly one for which there are recorded usages similar and contemporary with that found in the excavated text, then one can be reasonably confident that this is the word denoted by the graph. If there are no such examples of similar and contemporary usage, but the word makes good sense in the context, then other possible interpretations should be considered before a final conclusion is made. It may be that it is a phonetic loan usage of the character which is found to fit the context of the excavated text. In this case, one should confirm that this phonetic loan usage is seen in texts of a similar period to that of the excavated text. If not, one must assess the phonetic

50 These include: *Ci yuan* (Guangdong [...] 1990); *Hanyu da cidian* (Hanyu da cidian [...] 1994); *Dai Kan-Wa jiten* (Morohashi 1989); *Zhongwen da cidian* (Zhongwen da cidian [...] 1962); *Zhanguo guwen zidian* (He Linyi 1998); *Jinwen changyong zidian* (Chen Chusheng 1989); *Jianming jinwen cidian* (Wang Wenyao 1998); *Jinwen xing yi tong jie* (Zhang Shichao 1996); *Gudai Hanyu cidian* (Gudai Hanyu cidian [...] 1999); *Hanyu da zidian* (Hanyu da zidian [...] 1993); *Zhonghua gu Hanyu zidian* (Jin Wenming 1997); *Wang Li gu Hanyu zidian* (Wang Li 2000); *Gu Hanyu changyongzi zidian* (Gu Hanyu changyongzi [...] 2000); *Jianming gu Hanyu zidian* (Jing Benzhi 1993); *Jingji zuan gu* (Ruan Yuan 1989); *Ci hai* (Ci hai [...] 2000); *Dictionnaire Classique de la Langue Chinoise* (Couvreur 1966); *A Dictionary of Early Zhou Chinese* (Schuessler 1987); *Mathews' Chinese-English Dictionary* (Mathews 1996). Note that the *Shuo wen jie zi* is not included among these dictionaries: it is a dictionary of character etymology and Xu Shen gives what he believed to be the original meaning of the character, not its standard usage. As Christoph Harbsmeier says: "[...] it would be totally misguided to treat the definitions of the *Shuo Wên Chieh Tzu* as a reflection of Han dynasty usage or even of the usage in the Classical literature Hsü Shen was familiar with. Hsü Shen was only interested in such usages in so far as these serve his purpose, which is that of explaining graphs." See Harbsmeier 1998: 72–73.

51 One needs to know the dates of the works quoted in dictionaries to be able to make this judgement. Post-Han works should be easily identifiable as they will tend to be given with the author's name. The dating of pre-Qin texts is problematic, see step 9 below.

similarity of the two words to determine whether the loan was possible in Old Chinese (see step 7 below).

If the attested character that matches the form of the graph being analysed is a character not recorded until a later period, and the word or words it denotes does not fit the context of the excavated text, then, in rare cases, the attested character may be a homograph of the excavated form, that is they share exactly the same form but were created to denote completely different words. If such a case is suspected, then the excavated form must be analysed as if it had no attested form (see step 8 below).

If no suitable word is found, then there are two possible explanations: 1. the transcription of the graph was wrong and the identification of components should be reconsidered, or 2. the graph is acting as a loangraph, i.e., the identification for the character is correct but it is being used to denote a word related to this character only by virtue of their identical, or close, pronunciation. The next step considers identification of loangraphs.

Step 7: Identification of a loangraph

If an attested character does not appear to fit the context in which it is found, it may well be acting as a loangraph. This section deals with identifying the word a loangraph is denoting.

Firstly, reference works are consulted to see if a suitable loan usage is already known for the character. Standard works are the *Guzi tongjia huidian* and *Shuo wen tong xun ding sheng*.⁵² If a suitable word is found, concordances are checked to see if this loan usage is contemporary with the excavated text being examined. If there are further examples of the loan and similar usage of the word in texts of the same period, this is good evidence that the character is being loaned for this word.

If no suitable loangraph usage is attested, one considers other words the graph could denote. The most likely candidates, that is words in the same *xié-shēng* series as the character, are considered first. These are listed in the *Grammata Serica Recensa*.⁵³ If this is unsuccessful, then one considers words denoted by characters with phonetic components which commonly interchange with the phonetic component of the character one is dealing with: certain components frequently interchange with each other as phonetic signifiers. To find out whether this is the case for the attested character one is concerned with,

52 Gao Heng 1997, Zhu Junsheng 1984.

53 Karlgren 1996.

and to identify the commonly interchanged components, one looks up the character (or other characters with the same phonetic component) in the *Guzi tongjia huidian*, mentioned above.⁵⁴ Here one can see whether the character, and others with the same phonetic, frequently interchange as loans with characters which share another phonetic, i.e., characters in another *xiéshēng* series. If so, that *xiéshēng* series is consulted in the *Grammata Serica Recensa* to determine whether any of the definitions given for words in the series fits the context in which the graph being analysed is found. If such a word is identified, one can hypothesize that the attested character is being used as a loan for that word and consider what further evidence there is to support the match (see the section “Judging the phonetic similarity between two words”, below).

If a suitable word is not found for the attested character in a phonetically close *xiéshēng* series in this way, then one considers words belonging to the same rhyme group as the character. This is done using reference works which classify by rhyme group.⁵⁵ The attested character is found and graphs in the same rhyme group considered to determine whether any denote a word fitting for the context in which the character is found in the excavated text. If a suitable word is found, one considers further the degree of phonetic similarity, using the guidelines given below under “Judging the phonetic similarity between two words”. If the match is close, one looks at the word’s usage in more detail (using dictionaries and concordances) to establish whether or not it makes good sense in this context. If so, then one has a good candidate for the word denoted by the loangraph.

In some cases, the above procedure may not be successful, but the semantic context in which the attested character appears may suggest that the graph is denoting a particular word. If this is the case then one must assess what evidence there is to support the use of this character as a loangraph for this word by using the guidelines given below.

Judging the phonetic similarity between two words:

The table below gives factors which should be considered when assessing whether a character commonly used to denote one word could have been used as a loangraph for another word. Some of these factors are more significant than

54 If the character is not a phonogram then one looks up characters in which it functions as a phonetic component.

55 Works in this category include: *Guzi tongjia huidian*; *Shuo wen tong xun ding sheng*; *Zhanguo guwen zidian* (He Linyi 1998); *Shanggu yinyun biao gao* (Dong Tonghe 1975); *Zhou Fagao shanggu yinyun biao* (Zhou Fagao et al. 1973).

others. Given the unreliability of Old Chinese reconstructions and lack of understanding of the level of phonetic similarity that was expected when making phonetic loans, it is difficult to judge precisely the relative importance of each of the factors listed. However, in an initial attempt to give some guidance in this respect, a scale of zero to four (indicated by asterisks), signifying relative importance, has been included for each factor. These are based on the assumption that the ideal for a phonetic loan was homophony, as argued by Serruys.⁵⁶

- 56 Serruys 1959: 55. There are a number of different theories about what determined the degree of phonetic dissimilarity considered acceptable between a loangraph and the word loaned for. The standard adopted by many palaeographers is the view, advocated by Bernhard Karlgren (1889–1978), that the same range of phonetic dissimilarity found within a *xiéshēng* series would also have been permissible between a loangraph and the word it denoted (Karlgren 1963: 4–6). The table given here is largely a reflection of this traditional view. However, it should be noted that this theory can be challenged on various counts. An example is its apparent disregard for dissimilarity in pronunciation within a *xiéshēng* series that is due to the different periods and regions in which its characters were created. Edwin Pulleyblank proposes a different theory, suggesting that the degree of phonetic dissimilarity acceptable between a loangraph and the word it denotes was based on the difference in pronunciation found between cognate words, which shared “partial identity of sound” but were differentiated by their various derivational affixes (Pulleyblank 1999). Some scholars would even go so far as to say that, when selecting a loangraph there would, in fact, have been a preference for those denoting cognate words, sharing the same lexical root, that would have taken precedence over homophony as the main criteria for selecting a phonetic loan (Wolfgang Behr, personal communication, 13th December, 2004). A revised version of the table given here would take account of these different theories. Issues of historical phonology as they pertain to palaeographic analysis are briefly discussed in: Williams 2004: Literature Survey, Appendix 1, section 5.3.4.

Table 2: Assessment of evidence for phonetic similarity between a suspected loangraph and a word

			Relative importance:
Syllable	Initials	identical	***
		matching place of articulation, no nasal/obstruent clash	***
		matching place of articulation, nasal/obstruent clash	**
		different place of articulation	
	Medials	both closed (<i>hékǒu</i> 合口) or both open (<i>kāikǒu</i> 開口)	*
		one closed, one open	
	Rhyme groups	identical main vowel and coda	***
		identical main vowel, different coda (<i>duìzhuǎn</i> 對轉)	**
		main vowels different (coda same), but there is textual evidence for contacts between the rhyme groups (see below)	**
		main vowel and coda both different	
Textual evidence		The suggested loan is commonly seen.	****
		The suggested loan is occasionally seen.	***
		The phonetic component of the loangraph and that of the standard character for the word are often paired in other commonly seen loans.	**
		The two rhyme groups do not match, but there is textual evidence for contacts (e.g. rhymes seen in the <i>Shi jing</i> 詩經 and/or textual evidence for phonetic interchange).	**
		no textual evidence for phonetic similarity	
Issues of period and/or provenance	Period	There is persuasive evidence that, at the period of the suggested loan, the two pronunciations were closer than the reconstructions suggest	**
	Place	There is persuasive evidence that, due to dialect influence, the two pronunciations were closer than the reconstructions suggest.	**

Having compared two words in this way, a judgement can be made as to the degree of their phonetic similarity and the possibility that one could have loaned for the other.

In general, when considering possible loangraph usage, one should be conservative and aim to have very convincing supporting evidence, ideally textual evidence as well as close phonetic similarity based on reconstructions. In the annotation for an interpretation suggesting loangraph usage, the strength of the

evidence must be clearly stated. If no convincing loangraph is identified in this way, the graph must be reanalysed or put aside.

Step 8: Determining the word denoted by an unattested graph

This step is needed when the direct or formal transcription of a graph (produced in step 4) is, in step 5, not found to be an attested character, or a link in the historical development of an attested character. In such a case, the form of the graph is directly analysed to discover what attested word it denotes. One can only assume that the graph is denoting an attested word: if the word is unattested there is no possibility of identifying it unless the excavated text itself defines it, or one conjectures the meaning of the word from its context, and the pronunciation of the word from the assumed phonetic component, if there is one.

The analysis of an unattested graph requires an understanding of how Chinese characters denote sound and meaning. At the level of the relationship between a character and the word it is used to denote, the character can be one of two things: 1. an orthograph, or descendant of the orthograph, of the word it denotes (or at least an orthograph for the etymon of the word), i.e., the graph was created specifically to denote the word (or its etymon); or 2. a loangraph for the word it denotes. Analysis of a graph may not allow one to conclusively decide which of these categories it belongs to but may, nevertheless, lead to identification of the word it is denoting.

In terms of structure, Warring States graphs (the category to which the Wenxian graphs are usually ascribed) are, statistically speaking, more likely to be phonograms (*xíngshēngzì* 形聲字) than semantographs (*biǎoyìzì* 表意字).⁵⁷ A phonogram is a character made up of two or more components, at least one of which gives some indication of the phonetic value of the word, while another gives some indication of the meaning of the word the character is used to denote. If the graph is not a phonogram then it is a semantograph of some kind (e.g. a pictorial graph or syssemantograph *huìyìzì* 會意字) and has no phonetic com-

57 Qiu Xigui (2000: 52) discusses how the proportion of phonograms to semantographs changed as characters developed, suggesting: "It is possible that in the Spring and Autumn period the number of phonograms already exceeded that of semantographs." He goes on to cite the Qing scholar, Zhu Junsheng (1788-1858), who calculated that phonograms make up 82% of the 9300 small-seal script characters in the *Shuo wen jie zi*. Note that the terminology used here for character classification follows that of Qiu Xigui 2000.

ponent.⁵⁸ If the graph clearly consists of only a single component then it must be a semantograph (but note that it could still be being used as a loan) and one should have been able to identify it in the previous step since such characters are reasonably rare.⁵⁹

Assuming a graph has two or more components, one would generally first conjecture, on the basis of the statistical evidence mentioned above, that it is a phonogram. However, in some cases the graphic relationship between the components may suggest a syssemantograph, for example two components may be attached, suggesting they are to be considered together as depicting the meaning of the word denoted. In such a case, one would first analyse the graph as a semantograph. Below, the procedure for the analysis of a suspected phonogram is first introduced, followed by that for the analysis of semantographs.

A. Analysis of suspected phonograms

The phonetic component of a phonogram is the best key to the identification of the word the graph denotes, since it functions to signify the sound of that word. This allows one to consider which words with an Old Chinese pronunciation identical or similar to that of this phonetic component would make sense in the semantic context in which the graph appears. An informed guess must first be made as to which component is the phonetic. If there are any variant forms of the graph, they should also be examined for different phonetic components. Variant phonetic components in graphs denoting the same word should have the same, or very similar, Old Chinese pronunciations.

Having selected a candidate for the phonetic component, one considers what attested words have the same, or very similar phonetic value in Old Chi-

58 William G. Boltz has argued that characters constructed of two or more components none of which is a phonetic are “occasional anomalies” and that, on closer analysis, almost all such characters will turn out to have a phonetic component (Boltz 1994: 72 and *passim*). This view is controversial (Bottéro 1996: 576), but its stress on the clear functional advantage provided by the use of phonetic components does remind one of the need, when analysing unidentified graphs, to be fully alert to the possibility that a graph has a phonetic signifier, even if it is not apparent. Even graphs which appear to have been constructed on syssemantographic principles (i.e. by combining two or more components to indicate the meaning of the word the graph denotes) should be carefully examined in case one of the components may also have a phonetic function (see also section B. below, “Analysis of suspected semantographs”, and footnote 68).

59 Graphs which truly have just one component need to be distinguished from a graph which has two or more components very closely linked or intertwined, potentially giving the impression they are a single component.

nese reconstructions. The aim is to determine which words have a phonetic value which could be denoted by this component. The reference works mentioned above as useful when identifying loangraphs (step 7) can also be used in this situation.⁶⁰ They are searched using the component one has identified as the probable phonetic. Its *xiéshēng* series should be examined first for suitable words. If none is found, then one looks at the *xiéshēng* series of components that are frequently seen to interchange with this phonetic in variant character forms. If this is unsuccessful, characters with similar phonetic values that might fit the context in which the graph occurs are considered.

To assess the degree of phonetic similarity between a component and a word, Table 2, given in step 7, can be used. However, be aware that the degree of phonetic similarity demanded between a phonetic component and the word denoted by the character in which it occurred, and that between a loangraph and the word loaned for, may not have been the same. There is Warring States evidence that suggests that the phonetic dissimilarity between the phonetic component and the word denoted could be quite large.⁶¹ However, one also needs to consider the extent to which this phenomenon reflects problems with the reconstruction system rather than a loose set of standards for the selection of phonetic components at that time.

When using the conjectured phonetic component to identify words the unknown graph may be denoting, one should keep in mind the other components of the graph. If the graph is indeed a phonogram then the other component (or one of the other components) must be the semantic, signifying some meaning related to the original word denoted by the graph. The semantic range of that component should be considered to see how it matches with words that may fit the context. Definitions of the individual components and tables categorizing the components under general semantic categories are useful for this purpose, for example: Serruys' "On the System of the Pu Shou (部首) in the *Shuo-wen chieh-*

60 They are, along with a few other titles: *Grammata Serica Recensa* (Karlgren 1996); *Shuo wen tong xun ding sheng* (Zhu Junsheng 1984); *Zhanguo guwen zidian* (He Linyi 1998); *Guzi tongjia huidian* (Gao Heng 1997); *Shanggu yinyun biao gao* (Dong Tonghe 1975); *Zhou Fagao shanggu yinyun biao* (Zhou Fagao; Zhang Risheng; Lin Jieming 1973). There are also various tables which classify characters or components together by rhyme group, e.g.: *Xiesheng biao* (Jiang Yougao 1962); the "Xiesheng biao" in Wang Li 1986: 21–30; "Shuo wen jie zi bushou guyun gui bu biao" 《說文解字》部首古韻歸部表 in Zou Xiaoli 1990: Appendix 4.

61 See examples in He Linyi 1989: 200–203 and 210–213.

tzu (說文解字)”, and “‘Shuo wen jie zi’ bushou guilei mulu” 《說文解字》部首歸類目錄.⁶²

Once one or more candidates for the word denoted by the unattested graph have been identified, the next step is to decide which of these is the most suitable choice (or, if only one word was identified, to confirm that it is the right choice). The best evidence to support the selection of a particular word is examples of similar usage in received texts from the same period as the excavated text. To search for such examples, dictionaries, such as those listed in step 6, and concordances are used (see step 9). One must bear in mind that the corpus of Han and pre-Han received texts is limited, and excavated texts may include language rarely seen in the works that make up that corpus. This is especially true of genres uncommon among received texts, e.g. administrative, legal and medical works. So, when dealing with such texts, comparison with other excavated texts of the same or a related genre may also be useful. When using definitions of words from excavated texts, one should be aware that the interpretations of the graphs in those texts may themselves be problematic.

Ideally, there will be one word among the possible candidates that is strongly supported both by its phonetic similarity to the assumed phonetic of the graph being interpreted, its semantic similarity to the semantic component of that graph, and very similar usage in received (and/or excavated) texts from the same period. This would be considered strong evidence to support interpreting the unknown graph as denoting this word and would be the end of the analysis stage for this graph. One should note that, if the semantic component does not accord with the meaning of the word, it may be that the graph is functioning as a loangraph, so this is not a reason to automatically reject the analysis. It may, however, turn out that there is more than one suitable word that the unknown graph could be denoting. In such a case, one can simply give both words in the annotation and note that future excavations or research may allow a final decision to be made. One should also consider whether or not the two or more words that appear to fit the context could be etymologically related, or, indeed, be the same word denoted by more than one graphic form. Various works are available which list and discuss such relationships.⁶³ If these, or other works,

62 Serruys 1984; Zou Xiaoli 1990: Appendix 1.

63 These include: *Tongyuan zidian* (Wang Li 1991); *Tongyuan zidian bu* (Liu Junjie 1999); *Hanyu cizu congkao* (Zhang Xifeng 1999); *Hanyu cizu xu kao* (Zhang Xifeng 2000); *Hanyu biandiao gouci yanjiu* (Sun Yuwen 2000); *The Roots of Old Chinese* (Sagart 1999); *Hanyu lishi yinyunxue* 漢語歷史音韻學 (Pan Wuyun 2000); “Reimende Bronzeinschriften und die Entstehung der chinesischen Endreimichtung” (Behr 1997).

suggest that there was an etymological link between the words, this can be noted in the annotations.

If one does not find similar usage in received and excavated texts for any of the words selected, it could be that one of the words is correct but the usage in the received texts is not seen in extant texts. This should be considered and noted, but one should also reconsider the analysis of the graph to see if there are paths of inquiry that were overlooked. For example, is there another component that could be acting as the phonetic? Or is it possible that the graph does not have a phonetic component and is a semantograph of some kind? If a semantograph is suspected, the analysis in the next section is used. If reanalysis is unsuccessful, then the graph is put aside. It may be that this is an unattested word or the components were not successfully identified. Successful analysis of other graphs in the text may also give clues as to the meaning of this graph.

B. Analysis of suspected semantographs

Semantographs do not have a component which functions to indicate the phonetic value of the graph.⁶⁴ They graphically depict the meaning of the word denoted by the graph. Without any indication of the phonetic value of the word being denoted by the graph, the analysis of unknown graphs of this type attempts to match an interpretation of the meaning of the graphic form with known words. The context in which the graph is found may assist the analysis by indicating the general meaning of the graph. However, there is also the possibility that the semantograph is being used as a loangraph, in which case the meaning depicted by the graph will be irrelevant to the meaning of the word it is being used to denote in this context. This would further complicate the analysis, since one would first need to identify the word being denoted by the graph and then identify the word loaned for in this particular context.

An unidentified semantograph is most likely to be a syssemantograph, i.e. a character comprising of two or more components which are used as semantic symbols and combined to depict the meaning of the word to be denoted by the graph.⁶⁵ A procedure for analysis of a suspected syssemantograph is described here.

The object or the meaning depicted by each component is identified. A number of reference works discuss what components are thought to have origi-

64 For a detailed discussion on semantographs see Qiu Xigui 2000: 174–220.

65 Qiu Xigui 2000: 185.

nally depicted and the meanings they came to denote.⁶⁶ The possible meaning of the combination of these components in the graph is then considered. The context in which the graph appears is used for further clues as to the possible meaning represented by the graph (aware that if it is a loangraph no correspondence would exist).

Once the meaning depicted by the graph has been conjectured, one considers what known words have this or a related meaning, or what known syssemantographs have a similar construction. To find a range of words which have the meaning apparently depicted by the graph, synonym dictionaries, of which there are many, can be used. Examples include the *Gu ci bian* and the *Gudai wenhua ci yi ji lei bian kao*.⁶⁷ Considering whether there are syssemantographs which have a similar construction may identify the graph as a variant of an attested character.

Dictionaries and concordances are then consulted to see if any of the words possibly depicted by the graph is a good match for the context in which it is found in the excavated text. If concordances give examples of one of these words used in an identical or very similar phrase to that in the excavated material, this is good evidence that the graph should be identified with this word. If there is no good match, one may have to settle for several words that the graph could be denoting and list them all in the annotation.

In the case that the suggested meanings of the graph clearly have nothing to do with the context in which it is found, then one assumes it is being used as a phonetic loan. In this case, the word the graph originally denoted must first be determined, and the Old Chinese reconstruction of that word then used to search for phonetically close words that fit the context in which the graph is found. If the context clearly suggests a word, this analysis has a much greater chance of success. Otherwise, the large number of variables in this process make the task difficult.

If the above process is unsuccessful, a concordance search is made for phrases identical or similar to the relevant phrase in the excavated text. If the phrase is found this will give a word, or words, corresponding to the unknown graph. The analysis can then be reconsidered to see if the word, or one of the

66 Such works include: *Shuo wen jie zi* (Xu Shen 1992); *Shuo wen jie zi zhu* (Duan Yucai 1993); *Shuo wen jie zi gulin* (Ding Fubao 1988); "On the System of the Pu Shou (部首) in the *Shuo-wen chieh-tzu* (說文解字)" (Serruys 1984); *Jiaguwenzi gulin* (Yu Xingwu 1996); *Jinwen gulin* (Zhou Fagao 1974); *Jinwen gulin fulu* (Zhou Fagao 1977); *Jinwen gulin bu* (Zhou Fagao 1982); *Jichu hanzi xing yi shi yuan* (Zou Xiaoli 1990).

67 Wang Fengyang 1993; Huang Jingui 1995.

words, might be denoted by the graph. If the above procedure fails to identify a suitable word for the unknown graph, the analysis is abandoned. In general, as noted above, it is statistically more likely that an unattested Warring States graph will be a phonogram, not a semantograph. Furthermore, it is sometimes the case that a graph which is clearly constructed with the syssemantograph principle in mind, i.e., its components function together to depict the meaning of the word denoted, does, in fact, use one of the components to double as a phonetic. Thus, even when one appears to be dealing with a syssemantograph, the possibility that a component could be functioning phonetically should always be considered.⁶⁸

Step 9: Discussion and explication of the phrase

Once the basic analysis of the graphs making up a particular phrase is finished, one can begin a more involved examination into the meaning of the complete phrase.

The Wenxian texts, belonging to the specialized genre of covenant texts, are short and formulaic. The language is not always easy to understand. The interpretation of any text, particularly a difficult text, is greatly facilitated by examples of similar language from other texts. To make reliable use of such materials, comparison of anachronistic texts must be avoided. However, in the case of the formulaic covenant texts it was also important to look at examples of similar language from other periods in an attempt to trace the development of such language. The following steps allow one to identify and make use of relevant comparative materials.

a. Initial reading

The phrase or passage is read using the interpretative transcription (of the graphs) resulting from the palaeographic analysis. By this stage, one will have at least a tentative understanding of the passage. The following process determines whether the transcriptions and initial interpretation of the meaning of the passage are supported by similar language found elsewhere, or whether the analysis should be reassessed.

68 See, for example, my analysis of the graph used to depict the word *xuán* 懸 “to hang” in the Wenxian covenant texts: Williams 2004: part 3.2.2.1, graph 1.

b. Comparison with similar phrases in other texts

The phrase is placed in the context of similar passages from Han and pre-Han materials, both received and excavated. This is done with concordances, the use of which is now introduced.

i. Concordance search: For the analysis of the Wenxian texts, searches for comparative materials used texts, received and excavated, from the Han and pre-Han period, that might reasonably be expected to contain material similar to that found in the covenant texts. Sixty-seven received texts were selected. The excavated texts searched included oracle bones, bronzes and Warring States and Han materials. Where available, the search was conducted using online searchable-corpora.⁶⁹ For received texts not available at such sites, a searchable corpus was created.⁷⁰ A small number of received texts were searched using paper concordances.⁷¹ For oracle bones and bronze inscriptions paper concordances were used.⁷²

For the Wenxian texts, each of the key words in a particular phrase was searched for, using these concordances. When using electronic concordances, search criteria can include several characters and be refined with Boolean operators (“or”, “and”, etc.); this allows one to look, for example, for a passage where two or more characters appear in close proximity to each other. Any possibly useful results from the search are recorded. Difficult, but possibly relevant, passages should be copied to be looked over carefully at a later stage.

ii. The passages identified by the concordance search are found in published editions of the original texts: Having selected examples from concordances, one can begin the process of analysis and translation. This requires a reliable annotated edition of each text. Oracle-bone inscriptions are found using the *Yinxu*

69 These were: “Shanggu Hanyu yuliaoku – zhai yao” (Yuyan suo [...]); “Ren Wen Ziliaoku Shi Sheng Ban 1.1” (Academia [...]); “Gu gong ‘Han quan’ gudian wenxian quanwen jiansuo ziliaoku” (Chen Yufu); “Jian bo jin shi ziliaoku” (Wenwu tuxiang [...]) (for excavated texts). Note that new electronic searchable-corpora of early texts frequently become available online or in the market place.

70 Various sites have full-text databases of early texts that can be used for this purpose, e.g. “Zhonghua wenhua wang” (Zhonghua wenhua wang).

71 “The Institute of Chinese Studies Ancient Chinese Texts Concordance Series” (Lau, D.C.; Chen Fong Ching: 1992 to date).

72 *Yinxu jiagu keci lei zuan* (Yao Xiaosui and Xiao Ding 1989); *Yin Zhou jinwen jicheng yinde* (Zhang Yachu 2001); *Qingtongqi mingwen jiansuo* (Zhou He 1995).

jiagu keci lei zuan.⁷³ For each inscription in which a character occurs the catalogue number from the collection in which it is published is given. To see the original piece one can go to that particular collection. To see a hand-copy and transcription of the piece one can use the *Yinxu jiagu keci mo shi zongji*, in which the inscriptions are arranged by collection and in numerical order.⁷⁴

For bronze inscriptions two concordances were used. The *Qingtongqi mingwen jiansuo* is designed to be used in conjunction with the collection of bronze inscriptions entitled *Jinwen zongji*, a work which does not include transcriptions or annotations.⁷⁵ A more recently published concordance is the *Yin Zhou jinwen jicheng yinde*.⁷⁶ This is designed to be used with the *Yin zhou jinwen jicheng shiwen*, which has reproductions of rubbings of all the bronzes it includes as well as transcriptions (without annotations).⁷⁷ The *Yin zhou jinwen jicheng shiwen* is based on the *Yin Zhou jinwen jicheng*.⁷⁸ Note that the *Yin Zhou jinwen jicheng* was published in 1984, so more recently published bronzes are not included in this work.⁷⁹ The *Qingtongqi mingwen jiansuo* was published in 1995 so includes more recent examples. To find annotations for these bronzes, one can use the *Jinwen zhulu jian mu*, in which references are given for published discussions of bronzes.⁸⁰ However, this book, published in 1981, is now out of date. A Taiwan-based website, “Digital Archives of Bronze Images and Inscriptions”, has more recent references for a number of bronzes, but key sections of the site are not publicly accessible at present.⁸¹

Bamboo and silk excavated texts have the advantage that the slips and lines of text were usually numbered at the time of initial publication and these numbers continue to be used, facilitating a search for a specific strip in different editions.

Once the comparative materials have been located in reliable editions they should be analysed and translated making full use of annotated editions and commentaries. Passages that turn out to be irrelevant to the analysis can then be rejected.

73 Yao Xiaosui and Xiao Ding 1989.

74 Yao Xiaosui and Xiao Ding 1988.

75 Zhou He 1995; Yan Yiping 1983.

76 Zhang Yachu 2001.

77 Zhongguo shehui kexue yuan kaogu yanjiusuo 2001.

78 Zhongguo shehui kexue yuan kaogu yanjiusuo 1984.

79 For inscriptions published after 1984, see Liu Yu and Lu Yan 2002.

80 Sun Zhichu 1981.

81 Jinwen ziliaoku gongzuo xiaozu.

iii. *Chronological arrangement of comparative material*: When analysing an excavated text, it is essential to consider the language of the text in its temporal context. It is thus necessary, as far as possible, to date the comparative material one has gathered. Once one has selected and translated this material, the passages should be dated and arranged in chronological order. Excavated and received materials should be considered separately.

The dating of texts, both excavated and received, is complex and dates are often disputed. Although, ideally, one would fully research the date of each passage to be used as comparative material, this may not be possible in practice. When this is the case, one should adopt conventionally accepted dates for texts (or their parts). Dates for bronze inscriptions are given in the *Yin Zhou jinwen jicheng*. For other excavated texts, one should refer to the excavation reports. For received works, dates are given in *Early Chinese Texts*, although it is not fully comprehensive.⁸² For received texts which are compilations of shorter texts, e.g. the *Shang shu*, *Shi jing*, *Yi Zhou shu* 逸周書, and so on, it is necessary to consider the dates of individual sections. In some cases, *Early Chinese Texts* gives this information, but otherwise individual editions of the texts or specialized works on this question must be consulted.⁸³

Texts of a historical nature record events which happened before, sometimes hundreds of years before, the text itself was compiled or written. One should take into account the possibility that material in such texts was based on sources earlier than the date of the compilation of the text itself. To do this, one can give the historical date, if possible, of the event described in the text. So, for example, although the *Zuo zhuan* 左傳 was probably not compiled until the fourth century BC or later, it quotes covenants from throughout the historical period it covers, i.e., the end of the eighth to the fifth century BC.⁸⁴ Dating the year of the event allows one to consider whether a comparative passage could be based on materials earlier than the text in which it occurs, and thus perhaps closer in time to the Wenxian materials. As well as an awareness of the dates of the comparative materials, one must bear in mind possible regional factors that might affect one's understanding of the phrase under analysis. This is easier to do with those scientifically excavated texts for which provenance is clear.

82 Loewe 1993.

83 For one attempt to give more accurate dates to early Chinese received texts, and the sections of which they are composed, see the work of "The Warring States Project" (Brooks); a number of individual texts are discussed in the section:
<http://www.umass.edu/wsp/wst/index.html>

84 For a summary of theories about the date of the *Zuo zhuan* see Loewe 1993: 70–71.

iv. Interpretation of the phrase: The phrase is interpreted in the light of the comparative materials. These materials may support one's initial understanding of the phrase or suggest a different interpretation. They may lead one to a reinterpretation of graphs within the phrase. In the context of the chronologically-organized comparative materials, the use of formulaic or archaic language may become apparent.

When making use of comparative examples found through the concordance search, one should consider not only the support they give to the basic interpretation of the phrase under analysis, but whether or not their content provides other context, e.g., of a historical, social, political, or other nature, that leads to a greater understanding of the texts being analysed.

For a deeper understanding of a text, it is necessary to be aware of its historical and cultural context. It will often be necessary to consult other primary sources and secondary works on relevant topics. In the case of the Wenxian covenants, these included works on archaeology, history, law and thought, amongst others. They allowed a basic understanding of the probable nature of the situation to which the oaths were addressed.

5. Concluding remarks

The methodological procedure described was generally successful when applied to a selection of graphs and phrases from the Wenxian covenant texts.⁸⁵ This demonstrates the benefit of having such a procedural tool available for analysis. While the approach given here was designed for the analysis of the Wenxian texts, the basic procedure should, allowing for necessary revisions, be transferable to the analysis of other excavated texts. The type of revisions needed would depend on the nature of the text to be dealt with. The Wenxian texts, for example, were particular in having many variant forms of characters that one could be certain were denoting the same word and the methodology made full use of this feature. Such repetition is rare in other texts, although variant forms of what appear to be characters denoting a single word should always be compared to determine what light they shed on component-level structure and on any idiosyncrasies of the script. In some cases, comparison of matching components may also be relevant in this regard.

85 Williams 2004: Chapter Three.

An understanding of the terminology and procedure discussed here may also assist in making an informed assessment of the transcriptions and annotations given for graphs in publications of excavated texts. Over the last one-hundred years these texts have revolutionized our understanding of early Chinese history and our interpretation of the traditional corpus of transmitted texts. However, the essential requirement for such research is an accurate understanding of the language of the texts. A definitive edition has not been produced for many of these texts, interpretations of many graphs and passages are tentative and open to discussion. As Donald Wagner has pointed out: "One cannot in general rely uncritically on the conclusions of epigraphers; it is necessary to study carefully the possible alternate interpretations and the grounds on which these have been rejected."⁸⁶ This is only possible with a firm grasp of palaeographic and related methodology.

Recently there has been an increased interest in problems of methodology in palaeographic analysis; the convening of the workshop at which this paper was presented is an example of this, given its focus on methodological issues. It is hoped that the present article will make some contribution to this debate.

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86 Wagner 1990: online version (n.pag.)

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