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by
Matthew Anderson

Victor H. Mair, Editor
Sino-Platonic Papers
Department of East Asian Languages and Civilizations
University of Pennsylvania
Philadelphia, PA 19104-6305 USA
vmair@sas.upenn.edu
www.sino-platonic.org

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An Investigation of Orthographic Variance in Shang Writing

By Matthew Anderson
University of Pennsylvania

Compared to relatively standardized post-Han dynasty Chinese script, the graphs used in Shang oracle-bone inscriptions display a high degree of graphic variability. A number of distinct kinds of variability become immediately evident to anyone who tries to engage with Shang script, or who even browses through the *Jiǎgǔwén biān* 甲骨文編, a work that collects together instances of the same graph (or, in some cases, the same word—the distinction is not carefully made) from many different inscriptions.[1] Some of these variations develop over time; for example, the form  is used to write the word *wáng* 王 'king' through the first four periods (of a total of five) of oracle-bone inscriptions.[2] A new form,  , comes into use in the third and fourth periods, and coexists with the first form. Finally, in the fifth period, a third form,  , becomes the only one used.[3] Other words are written with forms distinguished not by changing shape, but through the addition of new components to the graph. The word *qiāng* 羌 'the name of an enemy tribe or state' is written with several different forms, including  ,  , and . The first graph is the basic one, equivalent to the modern 羌. The second and third have added elements—it is unclear exactly what has been added in the second form, but the third form has combined with a 'silk' element to become a graph which could be written as 羚. Among the numerous other forms of variability to be found in the oracle-bone inscriptions is the somewhat muddled distinction between the graphs used to write the words *yuè* 月 'month' and *xī* 夕 'evening, night'—the two oracle-bone forms  and  are used. While patterns of usage can be distinguished, either form

[1] Two quite different versions of *Jiǎgǔwén biān* were consulted for this paper; see Sun Haibo 1963 and Zhongguo Shehui Kexueyuan Kaogu Yanjiusuo 1965.

[2] I use a modified version of Dǒng Zuòbīn's 董作賓 five-stage periodization here and throughout this paper. It is problematic for a number of reasons (see, for example, Keightley 1978, p. 93, Chen Mengjia 1956, p. 135 ff., and Takashima 2010, p. 3 ff.), but it remains the most convenient to use, especially as the collection *Jiǎgǔwén héjí* 甲骨文合集 is organized following a (slightly) modified version of it.

[3] Keightley 1978, p. 217.

can be used to write either word. But if one form is used to write one word, the other form must be used to write the other if it appears within the same inscription.

Some scholars have discussed the different patterns of graphic variation in Shang writing, but, to my knowledge, no one has attempted a systematic survey. The information in the first paragraph above about the different graphs used for the word *wáng* 王 'king' in different periods comes from a table included in David N. Keightley's *Sources of Shang History*, but its usefulness is necessarily limited by its only detailing the historical usage of slightly over forty words.[4] Qiú Xīguī's 裘錫圭 and Chén Mèngjiā's 陳夢家 discussions are also very helpful in this endeavor, but, as in Keightley's work, it is not their main focus, and only certain aspects of character variation are discussed.[5] Zhào Chéng's 趙誠 *Jiǎgǔ wénzìxué gāngyào* 甲骨文字學綱要 gives a full and useful account of the different kinds of orthographic variation evident in Shang inscriptions (covering everything from structural to handwriting differences), dividing the variation into nine different categories, but it only presents a detailed description of the kinds of variation, not of the distribution of this variation in the corpus of oracle-bone inscriptions.[6] Ken-ichi Takashima similarly identifies five different classes of orthographic variance in the "Introduction" to his *Studies of Fascicle Three of Inscriptions from the Yin Ruins*.[7] The work of William G. Boltz, Lǐ Pǔ 李圃, Françoise Bottéro, Chu Ki-cheung (Zhū Qíxiáng 朱歧祥), and Adam Smith has also been useful in the study.[8]

Imre Galambos's *Orthography of Early Chinese Writing* does attempt a kind of systematic survey of orthographic variability, but it does so for Warring States writing, not Shang writing. That said, that work provided the impetus for this paper. Galambos's book provides strong evidence that there was no one standard of character form in the Warring States period and makes a powerful argument that scholars should not approach Warring States writing by looking backwards from the perspective of the "correct" modern character; these texts should

[4] *Ibid.*, pp. 216–220.

[5] See, among others, Qiu Xigui 2000 and Chen Mengjia 1956.

[6] Zhao Cheng 2005, especially the discussion of graphs with multiple forms (*yīzì duōtǐ* 一字多體) on pp. 79–89 and the discussion of manners of writing (*xiěfǎ* 寫法) on p. 133 ff.

[7] Takashima 2010, pp. 77–89.

[8] See, especially, Boltz 2001 and 2003, Li Pu 1995, Bottéro 2001, Chu Ki-cheung 2001 and 2002, and Smith 2008, particularly the section "Synchronic variation, and selection among variants," pp. 61–71.

instead be approached on their own terms. Expanding upon this, he suggests that the same is true of Shang and Western Zhou script, and, taken generally, I think this is almost certainly correct. He goes on to write, however, that the "orthography of Shang and Western Zhou inscriptions was similarly inconsistent."[9] Galambos has documented a very high level of structural variability in Warring States scripts, and my (unconfirmed) impression of the Shang script was that, while it was certainly not strongly standardized, it displays much less graphic diversity than Warring States writing. While it is beyond the scope of this paper to conclusively address this issue, it represents a first attempt at determining just how inconsistent the Shang writing system was.

Galambos's methods can be applied to this undertaking. Early on in his book, he makes it clear that, as many have previously written, the so-called radicals (*bùshǒu* 部首) are not the basic building blocks from which Chinese characters are made. Galambos breaks down the graphs into what he calls "components"[10]; each of these components, as Xǔ Shèn 許慎 also stated, was originally its own simple character, containing both semantic and phonetic information. These can then be combined to form new characters. The traditional viewpoint holds that there were standard forms of these characters, and that any forms that differ from these forms are variants (so-called *yìtǐzì* 異體字). One of Galambos's most important contributions lies in his opposition to this view. As he writes, "The structural variability of character forms in excavated texts implies that in Warring States times the concept of a standard form did not exist."[11] In order to attempt to prove this argument, Galambos first must define "variation." For the purposes of his study, he considers "two character forms to be different if they differ in at least one component. . . . If the part that graphically distinguishes two forms is not an entire component"—that is, if the difference is that what Galambos identifies as the same component is visually different or if the components are arranged in a different order—he considers "the two forms to be structurally identical."[12] The first stage of this paper will be a (necessarily abbreviated) attempt to apply Galambos's techniques to the Shang oracle-bone inscriptions.

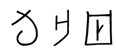
[9] Galambos 2006, p. 147.

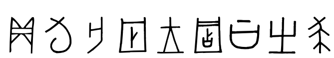
[10] *Ibid.*, p. 67.

[11] *Ibid.*, p. 90.

[12] *Ibid.*, p. 115.

Many multiple-character phrases appear repeatedly in the oracle-bone inscriptions. For a first step, I decided to pick several of these formulae more or less at random, with the only requirements being that they appear a significant number of times in the *Jiǎgǔwén héjí* 甲骨文合集 ("Heji") corpus (from which all the following examples are drawn) and that "structural variants," as defined by Galambos, are attested in some of the graphs in each formula.[13] I located the individual inscriptions by a combined process of searches in the online Chinese Ancient Texts (CHANT) Database, maintained by the Chinese University of Hong Kong's Research Centre for Chinese Ancient Texts,[14] consultation of two major concordances (Shima Kunio's 島邦男 *Inkyo bokuji sōrui* 殷墟卜辞綜類 and Yáo Xiàosuì's 姚孝遂 *Yīnxū jiǎgǔ kècí lèizuǎn* 殷墟甲骨刻辭類纂), and reading through the relevant sections of *Jiǎgǔwén héjí*. Beginning the project, I expected to find a significant amount of structural variation in character form, but not as much as Galambos discovered in Warring States writing.

As many of the most common repeated inscriptions are divinations about whether the Shang will meet with some kind of disaster in the near future, I began with such an inscription. The most common formula of this kind is almost certainly *xún wáng huò*  (旬亡囚)[15] 'in the next ten-day week there will be no disaster,' but, as this phrase appears, by my rough count, at least six thousand times in the Heji corpus, it would be too large a project to include it in this study. I instead begin this survey with a longer formula that includes this common phrase as one of its components:

> 
>
> 貞旬亡囚 (禍)王固(占)曰㞢(有)希(祟)
>
> Divined: In the next ten days there will be no disaster. The King prognosticated and said: There is an evil omen.[16]

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[13] The *Jiǎgǔwén biān* 甲骨文編, while quite outdated (its compilation precedes that of *Jiǎgǔwén héjí* and several other major oracle bone corpora), is a convenient reference for quickly checking what kinds of variants are attested.

[14] Last accessed December 21, 2010 at www.chant.org.

[15] In this case and all that follow, unless I am specifically discussing variant forms, I will only give OBI transcriptions in this kind of standardized form. Ideally, I would not use these standardized forms at all, but in each case use images of original rubbings, but that would be beyond the scope of this paper.

[16] The lowest numbered occurrence of this string in Heji can be found in Heji 137f. A complete list of the hundreds of inscriptions consulted for this paper will be made available upon request.

This formula only appears 18 times in the corpus, so it seemed an ideal starting point for this survey, before continuing on to higher frequency examples. It also seemed promising, as it contains three words in which a high degree of structural variation is attested. I read the word written with the graph  as equivalent to *huò* 禍 'disaster,' but some scholars read it as *jiù* 咎 'disaster'; its basic meaning is clear regardless.[17] In the phrase *xún wáng huò*, while it is most commonly written with the form , it is also frequently written with the distinct form  (), though this usage seems restricted to Period V.[18] It is clear from context that this different graph is used to write the same word, and I expected to find some occurrences of this graph in the longer string. *Huò* is also attested in a number of other forms, including  ,  , and  , all of which are conventionally transcribed  . It is unclear to me whether these should be treated as structural variants or as different kinds of graphical variants. I tentatively treat the form as a structural variant (treating the diagonal line element either as a distinct component from the  () component in or treating it, as I treat the top elements of and , as simply part of the box surrounding that component) and to treat the forms and as graphic variations made up of the same components as . It would, however, be reasonable to have a different interpretation. I thought I might find at least one of these forms in this sample.

The graph  is conventionally transcribed and is understood as equivalent to *zhān* 占 'to prognosticate.' As is the case with , in Period V this form is replaced by a different form,  (sometimes transcribed ), a clear structural variant. Additionally, in Period I, it was sometimes written with the graph , that is, with the same graph used to write the different word *huò* 禍 'disaster.'

A number of words are written with the graph  (), including *yǒu* 有 'to have,' *yòu* 祐 'blessing,' *yòu* 侑 'to offer sacrifice,' and *yòu* 又 'again.' All of these words can also be written with the graph  (), which can additionally be used to write the word *yòu* 右 'the right side'; both of these forms are quite common for the word meaning 'to have' throughout Periods I

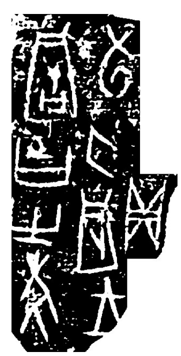
[17] See Yu Xingwu 1996, v. 3, pp. 2158–2172.

[18] Keightley 1978, p. 217.

through IV (though only  seems to be used in Period V).[19] I thought it likely that the word *yǒu* 'to have' would appear in this sample in more than one form.

A significant amount of variation can also be seen in the writing of the rest of the words in this string, but it does not seem to be essentially structural in nature. The word *zhēn* 貞 'to divine,' is almost always written in a form essentially identical to  , but the form  also exists ( appears to be a simplification of the form  , which is also used to write the word *dǐng* 鼎 'a kind of bronze vessel'). As mentioned above, *wáng* 王 'king' is written with three primary forms,  ,  , and  , but I do not treat the added horizontal line here as an added component (for the purposes of this study, I treat it simply as a different graphical representation of the same graph, though a different view would be possible). Variation in the writing of the other words in this sample is mostly restricted to reversed left–right orientation, variation in the number of strokes used to write what is clearly the same element, and what can be viewed as essentially handwriting differences.

As mentioned above, I expected to find significant structural differences in this sample. This particular string only appeared in Period I inscriptions, so some variations were temporally excluded, but a number of others remained possible. Instead, I found only left–right reversal and minor graphical differences.



(a representative inscription)

[19] *Ibid.*, p. 216.

 xún 'ten-day week' appears as:  and other similar forms.[20]

 wáng 'not have' appears as:  and other similar forms.

 huò 'disaster' appears as:  and other similar forms.

 zhān 'to prognosticate' appears as  and other similar forms.

 suì 'evil omen, harm, curse' appears as  and other similar forms.

 zhēn 'to divine,' *wáng* 'king,' *yuē* 'to say,' and *yǒu* 'to have' all display no significant variation. only differs in its left–right orientation and the amount of curl seen at the bottom of the graph, and only differs in its left–right orientation. Both and differ in their orientation and in whether there is an added horizontal line at the top of the graph. is written in several different forms, with differing orientations and number of strokes, but in each case it is clearly a representation of the same thing (exactly what that is, though, is unclear—from my perspective, they are all simply different representations of the graph ''). The structural variation I expected was not in evidence in this set of inscriptions, but the sample size was quite small, so this was not especially surprising.

Not having found any structural variation in the first sample, I selected the second formula, which also dealt with the coming of hardship in the near future:


其𠂤(有)來嬉(艱)

There may come a calamity.[21]

[20] These images should be reproduced at actual size, but time limitations make that impossible at present.

[21] The lowest-numbered instance of this formula in Heji can be found in Heji 137b.

I found sixty-five legible instances of this string in Heji; as with the first selection, all are from Period I. In addition to the previously discussed graph 𠂤, structurally different graphs are attested for the words *lái* 來 'to come' and *jiān* (?) 嬛 (艱?) 'calamity, distressing news.' Also as with the first example, very little variation is in evidence. 𠙵 *qí*, 𠂤, and 𠂇 are written structurally identically in each inscription and display very little of any other kind of variation (aside from what can be attributed simply to different handwriting).

(a representative inscription)

The only significant differences are to be found in the writing of the word *jiān* (?) 嬛 (艱?) 'calamity, distressing news,' which differs in its left–right orientation and in the presence or absence of a horizontal line in the center of the component *zhù* 壴 'a musical instrument (?)':

嬛 (艱?) *jiān* (?) appears as:  , among other similar forms.

In no case does *jiān* appear in its structurally different forms 𡚵 or 𡚶, with the *nǚ* 女 'woman' component replaced by the *jié* 卩 component or the *rén* 亻 'man' component. As with the first sample, no structural variability is shown in this one, even though the sample size was significantly larger.

I chose the third string to represent another common topic of Shang divination, rituals performed to deities and ancestors:

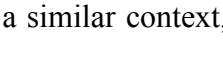
燎于河

Perform the *liáo* ritual to Hé.[22]

There were fifty-seven legible instances of this phrase, dating to Periods I, III, and IV. Other than left–right mirroring, there were no significant distinctions between the forms used for *yú* 于 'to, at' and *hé* 河 'river; the name of a predynastic ancestor or deity,' although structural variants of each are attested in the corpus; I will return to these two words later in this paper. There was significant graphic variation in the forms used to write *liáo* 燎 'the name of a ceremony,' but I do not take any of them to be structural variation.

(a representative inscription)

 *liáo* 燎 'the name of a ritual' appears as: , among other similar forms.

The number of strokes and the arrangement of dots differ significantly, but they are all structurally the same form (perhaps a burning bundle of sticks?). A structural variant,  , is known to exist, with the addition of a *huǒ* 火 'fire' component at the bottom,[23] but it is not in evidence in this sample, though it does appear in a similar context,  (*liáo yú sāng* 燎于喪 'Perform the *liáo* ritual to Sāng'), in Heji 30781.

The fourth formula that I searched for, and the last of the first stage of this study, was the only one to contain a word that was conclusively written with structural variants:

[22] The lowest-numbered instance of this phrase can be seen in Heji 177.

[23] See Yu Xingwu 1996, v. 2, p. 1466.

貞我受黍年

貞我受黍年

Divined: We will receive the millet harvest.[24]

I found thirty-one legible instances of this string in the corpus. Minor graphic variance was in evidence in the writing of *zhēn* 貞 'to divine' and *wǒ* 我 'we,' and there were minor graphic differences and variance in left–right orientation in the graphs used to write *shòu* 受 'to receive' and *nián* 年 'harvest,' but there were no structural differences to be seen. The different forms used to write *shǔ* 黍 'millet,' though, did contain significant structural differences.

(a representative inscription)

/ / *shǔ* 'millet' appears as:  , among other similar forms.

Some of the instances of this word were not entirely clear, but it was evident that, while most contain the *shuǐ* 水 'water' component, not all did. Of the 31 instances, 3 were unclear, 4 were surrounded by dots (which could possibly represent an abbreviation of the water component, but may not), 18 clearly contain the water component, and 6 clearly do not contain the water element.

[24] The lowest-numbered example of this formula can be found in Heji 303.

This selection contains the only unmistakable example of structural variation found in the first stage of this study. After comparing over 700 combined instances of 20 words, I found one word with more than one structural form (with only six clear instances of the less common of the two forms). Structural difference is the most salient kind of variation found by Galambos in Warring States writing, but, at this preliminary stage of this investigation, it does not seem to be one of the most essential differences in evidence in Shang writing. But Shang writing very evidently displays significant variation in graphic form—perhaps a different method is required in trying to understand it.

For the next stage of this project, I decided to take two shorter strings of significantly higher frequency and to study them more closely, taking into account aspects of their variation that I overlooked in the first stage, especially orientation and graphic form.

For a first attempt, I selected the name of the predynastic ancestor Wáng Hài 王亥. As expected, I found one instance of structural variability. The *hài* 亥 element of Wáng Hài's name, while primarily written in forms similar to  or  (equivalent to 亥), can also be written with the addition of a *zhuī*  (隹) or *niǎo*  (鳥) 'bird' component, equivalent to 隻. One iteration of this in Shang script is  , but it can be written in any combination of the above four Shang graphs (though, in practice, it is difficult to discern whether the *zhuī* or *niǎo* element is being used). In addition to this structural difference, *hài* 亥 can be written with either of the two forms above (as well as variations on them) and can face either left or right, and *wáng* 王 can be written with any of the three forms mentioned earlier in this paper ( , , and ).

I found 99 instances of the full name Wáng Hài, as well as an additional 3 instances of Hài written with the graph 隻 (making clear that it is being used to write Wáng Hài's name and not the earthly branch *hài* 亥), for a total of 99 instances of *wáng* 王 and 102 instances of *hài* 亥/隻.[25] There are examples from Periods I through IV. Only one piece dates to Period II and only three to Period III, but the other two periods each include examples of every form of *hài*.

Except for the three pieces from Period III, *wáng* 王 'king' is written in every case as . All three examples from Period III write *wáng* as .

[25] The lowest-numbered example can be found in Heji 357.

In the one example from Period II, *hài* 亥 is written  (facing to the left). The Period III instances of *hài* include one each of (facing left),  (facing right), and the form  , consisting of underneath (facing to the left).

Overall, there is a strong preference for the form (facing, as this graph does, to the right), with 54 out of 102 written in this manner. facing left occurs 21 times, (including the similar forms and) appears facing left 21 times and facing right 2 times. in all its forms appears 5 times, once with the 亥 component written and facing right, twice written and facing left, and once each written with facing in each direction.

Other than the different form of *wáng* 王 used in Period III (), no apparent pattern was evident, other than that one form of *hài* 亥 () was used slightly over fifty percent of the time. The next step of this study would need to expand upon the previous steps, with a larger sample, which would allow a more careful consideration of the effect of the writing conventions of the period on the form chosen.

For this step, I selected the last two words from the phrase *liáo yú hé*  (燎于河) 'perform the *liáo* ritual to Hé,' discussed earlier in this paper. *Yú hé* 于河 'to Hé' appears 280 times in the Heji corpus.[26] Periods I through IV are all represented, with all but Period II represented by a substantial number of inscriptions (the corpus includes 199 inscriptions from Period I, 2 from Period II, 22 from Period III, and 57 from Period IV).

Yú 于 is always written in essentially the same form (either  or), with the exception of one inscription from Period I in which it is written with the structurally different form (transcribed by the editors of the *Jiǎgǔwén héjí shìwén* 甲骨文合集釋文 as). This form is, in my experience, quite rare, though it became the standard form in Western Zhou bronze inscriptions; it is, however, attested through almost all periods of Shang inscriptions.[27]

The patterns of appearance of the various forms of *hé* 河 are both more complicated and more interesting than the almost uniform appearance of *yú* 于. In all periods, in addition to forms similar to  , *hé* appears in structurally different forms, similar to , with the addition of a *shuǐ*

[26] The lowest-numbered appearance of this phrase can be found in Heji 177.

[27] Keightley 1978, p. 216.

 'water' component. Beyond this, though, and I think most interestingly, changing patterns of right–left orientation become evident from period to period (other than the underrepresented Period II).

The form  , facing to the left (that is, to the opposite direction of the example given here) is slightly more common in Period I than the same form facing to the right, with 93 left-facing examples to 84 right-facing ones. There is additionally one example of a form similar to  , with the same orientation but a slightly simplified right-hand component.

In Period III, there are only 3 examples of forms similar to , with all of them facing to the right (as does the example here). Instead, the form , with the water component, contra this example, on the right, is most common, with 16 occurrences. The remaining two examples are of the form , with the water component on the left.

Period IV returns to variations of as the most common forms, but with a change in orientation: facing to the right (as in this example) now strongly predominates, with 50 appearances in 57 total Period IV inscriptions. The remainder consists of 6 left-facing occurrences of and 1 example of , with the water component on the right.

Though this one example is not enough to build a strong theory on, it is notable that there appears to be a trend toward standardization, with Period I not having a strong preference for a particular form but Periods III and IV each having one (though the preference is different in each case). It certainly could not be said that there appears to be a strong standard, but, from this brief survey of a few inscriptions, it does seem to be the case that there is a much higher level of standardization than Galambos found in Warring States writing. While it certainly does happen, it seems to have been quite rare for the Shang to write the same word with completely different forms (an observation borne out by my subjective impression that it tends to be easier to determine which word is meant in an oracle-bone inscription—which is not to say that it is necessarily easier to understand or to interpret that word—than it is in non-transmitted Warring States texts).

Additionally, while, again, it certainly does happen, it seems to be much less common for Shang words to be written with added, subtracted, or replaced components than it is for texts in Warring States script. This is probably not a function of greater standardization in the Shang, though—the most likely reason for this particular lack of structural variation is the fact that Shang graphs are much simpler (structurally speaking) than Warring States graphs, with, for

example, far fewer semantic-phonetic compounds. Of the 21 words and slightly larger number of graphs discussed in this paper, only one (*nián* 年) is certainly a semantic-phonetic compound,[28] with one other graph (*hé* 河) possibly a semantic-phonetic compound, though this is not certain.[29] A smaller number of semantic-phonetic compounds seems likely to lead naturally to a smaller number of structural variants, and would provide a more likely explanation for the seeming decrease in standardization from the late Shang to the Warring States than, for example, Xǔ Shèn's explanation in the "Postface" to the *Shuō wén jiě zì* 說文解字序—that it was due to the chaos caused by "the many lords governing by force and not being under the control of the (Zhou) Kings" (諸侯力政不統於王).[30] I would argue instead that Galambos and others have satisfactorily shown that sinographs did not develop "along a single line from the Shang 商 oracle-bone inscriptions to Zhou 周 bronze inscriptions, all the way to the Qin small seal 秦小篆 and Han clerical 漢隸 scripts,"[31] and that this seeming inconsistency simply demonstrates that the Shang script was in a relatively early stage of development.

[28] *Nián* 年 'harvest' is *nîn in Axel Schuessler's reconstruction of Old Chinese. The OBI form of this graph contains *hé* 禾 'millet, grain' as its semantic element and *rén* 人 (Old Chinese *nin) as its phonetic. (Schuessler 2009).

[29] Chu Ki-cheung 朱歧祥, in his classification of OBI graphs, places *hé* 河 in his semantic-phonetic (*xíngshēng* 形聲) category, based on his acceptance of Xǔ Shèn's 許慎 explanation of the structure of the graph (从水可聲 "(semantically) from water with *kě* 可 as phonetic") (Chu Ki-cheung 2001, p. 219.) This is possibly problematic, as the OBI graph for *hé* 河 (Old Chinese *gâi) does not contain the full form of the OBI graph for *kě* 可 (Old Chinese *khâiʔ) ( ). It is quite possible, though, that the OBI form of *hé* ( ) is a combination of a simplified water component with a simplified *kě* component. If this is the case, then the added water component discussed above (in the discussion of the written forms of the phrase *yú hé* 于河), would actually be a second water component, not a first water component—but the structural difference would still remain. After I presented a version of this paper, Jonathan Smith suggested the perhaps more likely possibility that the OBI graph of *kě* is actually the semantic-phonetic graph, consisting of a simplified form of *hé* as its phonetic element combined with the *kǒu* 口 'mouth' element.

[30] Duan Yucai 1815, *juan* 15 a, p. 9 [p. 757 of 2006 printing].

[31] Galambos 2006, p. 1.

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