

Section concerning Material).⁴⁰ Although he used a different *qi* (器) which was more appropriate referring to technological and scientific studies, the dualistic division of *li* and *qi* suggestively revealed the sub-conscious working of a Neo-Confucian mind, even though Li himself denounced Neo-Confucianism.

Conclusion

From the outset Li Zhizao's attempt at a synthesis of Confucian and Christian cultures could not have been a successful experiment, judging from the fact that anti-Christian movements which culminated in the expulsion of Western missionaries, continued to prevail in the early Qing dynasty. Political and social leaders did not like members of the society develop a double identity, as they tended to interpret it as double loyalty, hence a threat to social and political stability. However, Li Zhizao's internalized cultural synthesis could be called a success because he achieved a balance within himself. He did not have to live with the stigma of a traitor to the Confucian culture, and at the same time he acquired a new faith which provided him with psychological solace and inner satisfaction. It is most remarkable that he seemed not to be torn by inner tensions nor living in agony. The Confucian-Christian synthesis actually occurred within him, if not outwardly in society. His case shows us that the hybridization and hyphenation of two cultures, to a certain degree, is not totally unattainable.

40) The original pair *li* (理) and *qi* (氣) were popular concepts used by the Neo-Confucianists in the Song-Ming period. Li used a different *qi* (器) referring to technology and science, but was still thinking in terms of a dualism of *li*. See Li's preface to *Tianxue chuhan*, Gernet, *op. cit.*, p. 58 and Fang Huo, *op. cit.*, pp. 134-135.


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RHINOCEROS AND WILD BUFFALOES NORTH OF THE YELLOW RIVER AT THE END OF THE SHANG DYNASTY:


Some Remarks on the Graph  and the Character 兕*

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The graph  in the Shang oracle inscriptions, transcribed 兕 or 兕, until now, among the best authors, remains the object of different interpretations. Some of the most common translations are: a rhinoceros, a unicornered *si* having the appearance of an ox, an ox of the *si* species, a *si* (without explanation), a coveted special hunting game, a wild animal of the central plain, etc. The aim of this article is to try to determine to what extent some clarification of the issue can be obtained.

Main Authors' Opinions

Luo Zhenyu 羅振玉 explained the graph  as meaning a "horse."¹

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Abbreviations:

- Menzies* 明 Hsu Chin-hsiung, *The Menzies Collection of Shang Dynasty Oracle Bones*, vol. I: *A Catalogue*. Toronto, 1972; vol. II: *The Text*. Toronto, 1977.
Sōrui Shima Kunko 島邦男, *Inkyo bokuji sōrui 殷墟卜辭類*. Tokyo, 1967.
Zongshu Chen Mengjia 陳夢家, *Yinxu buzi zongshu 殷墟卜辭綜述*. Beijing, 1956.

Other abbreviations of the titles of oracle-bone collections follow those given in David N. Keightley, *Sources of Shang History: The Oracle-Bone Inscriptions of Bronze Age China* (Berkeley: University of California Press, 1978).

1) Luo Zhenyu, *Zengding Yinxu shuqi kaoshi 增訂殷墟書契考釋* (Taipei, 1969), p. 29.

Wang Xiang 王襄² and Shang Chengzuo 商承祚³ considered the animal to be of the horse species. Ye Yusen 葉玉森, at first, explained it as a "rhinoceros."⁴ But a new discovery became the occasion of a vehement controversy. On November 28, 1929, during the third excavation of the Academia Sinica, in the North-East of the Xiaotun village, in the land of Zhang Xuexian 張學獻, inside the great connective pit 大連坑 (Trench latitudinal digging 13, Bing North section, Second North branch 橫十三, 西北支, 二北支), the head bone of a big animal was discovered. It is a big piece, including the frontal bones, from the top of the front to the tip of the nose, of a big animal's head. Two vertical lines of characters are inscribed on it, but the bone was not prepared, nor used for divination. The Shang sometimes used to keep specially famous trophies with a record inscribed on them. Some of them were war trophies with an inscription on a piece of bone taken from the head of a vanquished enemy (see *Qianbian*, fig. 3 = *Zongshu* fig. 圖版 13-4; *Jingjin* 5281 = *Zongshu* 13-1). Others were hunting trophies with an inscription on the head bone of a famous hunting game.

When the big animal's head-bone was discovered, another hunting trophy was unearthed just a few meters away. It was the head of a deer, with a recorded inscription (*Jiabin* 3941). During the fourth excavation, in pit 乙 21 (according to a letter of Qu Wanli 屈萬里, dated April 19, 1976), at a distance of approximately 100 meters, another hunting trophy was discovered. It was the head of a deer with antlers having also a recorded inscription (*Jiabin* 3940).

In early 1930, Dong Zuobin 董作賓 showed this big animal's head to Teilhard de Chardin who, on discovering that on the interior side of the bone there was a whole line of teeth, declared that they are bovine teeth.

Dong Zuobin noticed that, in the text of the inscription, there was the saying 隻白 𧇧 "We caught a white 𧇧." He thought it was a wild animal, white, with one big horn on its head, and concluded that it was

2) Wang Xiang, *Fushi Yinqi leizuan* 籒書殷契類編 (Tianjin, 1920).

3) Shang Chengzuo, *Yinxu wenzi leibian* 殷墟文字類編 (1923).

4) Ye Yusen, *Yinqi gouchen* 殷契鈎沈 (Beiping, 1929), p. 8.

an unicorn. To conform his opinion with the declaration of Teilhard de Chardin, he tried to prove that the unicorn belonged to the species of the bovidae. He then collected a whole documentation about the unicorn in the Middle East, Persia, Central Asia and North China.⁵ Very soon Fang Guoyu 方國瑜 in the periodical *Shida guoxue congkan* 師大國學叢刊 (1-2, 1931) published an article "Huo bailin jie zhi yi" 獲白麟解質疑, indicating that the 𧇧 of the Shang oracle inscriptions was different from the occidental *Rimu* and from the Chinese unicorn (麟). In the Shang oracle inscriptions, the 𧇧 and the horse have the same kind of tail. As for the unicorn, maybe it is only a graphic simplification. Fang concluded that we can only say that it is a wild animal native to the Chinese central plain.

In the *Shixue nianbao* 史學年報 (vol. 4, 1932, pp. 119-121), Tang Lan 唐蘭 published his article "Huo baisi kao" 獲白兕考. For him, the graph 𧇧, the character 𧇧 of the *Shuowen* 說文 and the *zhuan* 篆 form 𧇧, can be interpreted as being the character 𧇧 or 兕 of the *Erya* 爾雅. According to the commentary of Guo Pu 郭璞 on the *Erya* and the *Jiaozhou ji* 交州記 of Liu Xinqi 劉欣期, it was a wild animal with only one horn, of grayish (*qing* 青) colour, having a big size and heavy weight. Tang Lan also quotes Han Ying 韓嬰 (*Han Shi waizhuan* 韓詩外傳, "Shijing Juan er" 詩經卷耳) who says: "(If) one uses a *si* horn for making it (a wine cup), it contains five *sheng*." From this statement he concludes that the horn of the *si* is of a specially big size which fully conforms with the graph of the oracle inscriptions.

Ye Yusen, in his *Yinxu shuqi qianbian jishi* 殷虛書契前編集釋 (Shanghai, 1934), commenting on *Qianbian* 2-5-7, does not maintain any more that *si* means a rhinoceros (see *Yinqi gouchen*). As the graph 𧇧 has the same graphic element for the tail as the graph of the horse, he is of the opinion that it is a wild horse with a single horn of a specially big size. Maybe it is similar to the *bo* 駝, described in the *Erya* as a horse with curved teeth, eating tigers and leopards. On the other hand, it is possible that the only one horn of the graph is a graphic simplification using one horn as a characteristic representation for two of them.

5) Dong Zuobin, "Huo bailin jie" 獲白麟解. *Anyang fajue baogao* 安陽發掘報告 2 (Beiping, 1930).

As for the bovine teeth of the interior side of the Big Animal's Head Bone, he thinks that the inscription was not necessarily inscribed on the bone of the animal referred to.

Guo Moruo 郭沫若, commenting on fragment 577, in his *Buci tongzuan kaoshi* 卜辭通纂考釋 (Tokyo, 1933), accepts the opinion of Tang Lan and identifies 𠩺 with 𠩺. Normally, the *si* is of a grayish (*qing*) colour, but some of them are white and, if it is the case, it is worth recording.

Shang Chengzuo, in his *Fushi suocang jiagu wenzi kaoshi* 福氏所藏甲骨文字考釋 (Nanjing, April 1933), using an element of some bronze graphs, identifies 𠩺 with 𠩺, but in his Preface of *Yinqi yicun* 殷契佚存 (Nanjing, 1933) he transcribes 𠩺.

Many scholars did not notice the opinion of the preeminent Chinese paleontologist Pei Wenzhong 裴文中. On March 18 and 25, 1934, in the *Shijie ribao* 世界日報, he published his "Ba Dong Zuobin 'Huo bailin jie'" 跋董作賓「獲白麟解」. He discarded the mythological unicorn and *bo*, and according to the teeth and the shape of the bones, determined that the Big Animal's Head Bone belonged to a wild animal of the bovid species.

Dong Zuobin, in the *Yin lipu* 殷曆譜 (vol. 2, sec. 2, 1945), adopts the position of Tan Lan and transcribes 𠩺.

Ding Su 丁騷, in his "Qiwen shoulei ji shouxingzi shi" transcribes 𠩺 as 𠩺.⁶ For him, it is not a rhinoceros: the horn/s of the rhinoceros stand/s up on the nose, whereas, in the graph 𠩺 and its variants, the horn starts at the top of the front and berds backwards. On the Shang graphs, the horn is of a big size. This fits quite well with the descriptions in some ancient texts of people using an animal horn for drinking wine. But to be suitable for a drinking vessel, a horn has to be hollow. It should not be a solid rhinoceros horn, but rather a bovine horn. Ding Su is of the opinion that it is a horn of the *Bos exiguus* Matsumoto, one of the

6) Ding Su, "Qiwen shoulei ji shouxingzi shi" 契文獸類及獸形字釋, *Zhongguo wenzi* 中國文字 21 (Sept. 1966), p. 28; 22 (Dec. 1966), p. 31; see no. 21.

species discovered at Xiaotun. According to him, the buffalo was a domestic animal, while the ox was a wild animal used only for food and for sacrificial offerings.

Li Xiaoding 李倅定, in his *Jiagu wenzi jishi* 甲骨文字集釋 (Taipei, 1965, p. 3021), more or less adopts the position of Tang Lan, but he adds the graph 𠩺 (*Jingjin* 1913) so similar to the *zhuang* form 𠩺 of the *Shuowen*. He considers that the animal has two horns, "a big and long one in front, another one, short and small, behind." With this description he seems to suggest that the animal is a rhinoceros, but he avoids to make a clear statement about it. Finally, according to the *Shuowen* text, he transcribes 𠩺, with the explanation "name of an animal."

Most of the scholars eventually adopted the position of Tang Lan and for the graph 𠩺 transcribed 兕 or 𠩺 (the Kangxi Dictionary considers that the character 𠩺 is the result of a copyist's mistake writing 𠩺 instead of 𠩺 and that the forms 兕 or 𠩺 are the correct ones). When Tang Lan exposes his position, he uses mainly two arguments. The first one is the similarity between the graph 𠩺 and the *zhuang* form 𠩺. The second argument is based on the meaning of the character 兕 which according to some ancient texts is the name of a wild animal having only one horn of a big size.

As a result, there is now a consensus in using 兕 or 𠩺 as a transcription for 𠩺, but, for the interpretation, no agreement has been reached. Some consider that it is an animal with a single horn and translate it "rhinoceros." Others, paying attention to the opinion of the paleontologists, think that it is a wild bovine. Now we shall examine the Shang inscriptions, the paleontologists' reports, and the later usage of the character 兕 to see if it is possible to clarify the question.

Jiabian 3939 Bone

The reading of the text inscribed on the Big Animal's Head Bone has been improved through the efforts of several scholars. Qu Wanli, according to *Jiabian* 2416, adds 𠩺 at the end of the text. It is the name of the *Bo* (Elder) of the Yufang 盪方 tribe. After a comparison with *Jiabian* 3940, 3941, and other texts, we think that the character 田 "to go hunting," has to be added at the beginning of the text. For the whole text,

we propose the following translation:

[Hunting] at the 𠄎 foothill, we caught a white *si* (and) made the tree branches offering at x.

In the second month, (as) it was the king's tenth ritual cycle, we made the day performed *yong* ritual; the king came to attack the Yu country Elder [𠄎].

This head bone has not been prepared for divination and the inscription is just a record. It can easily be dated as belonging to the reign of Di Xing 帝辛, when the King went out to attack the Elder of the Yufang. During that military expedition, the King went hunting and offered some sacrifices, hoping that everything would be successful. During a hunt, they caught a white *si* and it seems that, for them, it was an auspicious event.

兕 and Its Qualifiers

In *Yicun* 427, there is also a recorded text with the saying, "We caught a white *si*." In *Yicun* 518, there is another recorded text with 豨商𧣾𧣾. The interpretation of this text is subject to discussion. Shang Chengzuo explains 商 as 賞 and 𧣾 as "yellow colour."⁷ Chen Mengjia 陳夢家 quotes that text and explains 𧣾 as a loan for 𧣾, being a specific term to indicate a special colour for oxen (*Zongshu*, p. 240). Hsu Chin-hsiung (許進雄), in his *The Menzies Collection of Shang Dynasty Oracle Bones* (vol. II: *The Text*), twice explains 𧣾 in the saying 𧣾牛. First he proposes the meaning of a gray black colour (Fragment 1784), but afterwards speaks of a reddish (赤色) colour (Fragment 2539). Shima Kunio 島邦男 thinks that there is no question of colour and explains 𧣾 as 𧣾, 大𧣾, meaning the cutting of ox meat for ritual offering.⁸ According to this interpretation, 豨商𧣾𧣾 could be translated: "We caught a *si* (suitable for) meat-cutting on Shang territory" or "we caught an enjoyable *si* (suitable for) meat-cutting." Anyhow, it is connected with an ox

7) Shang Chengzuo, *Yinqi yicun kaoshi* 殷契佚存考釋 in *Yinqi yicun* (Nanjing, 1933), no. 518.

8) Shima Kunio, *Inkyo bokujū kenkyū* 殷墟卜辭研究, Japanese ed. (1958), p. 271; Chinese ed., p. 269.

and, in the Shang oracle texts, when after 𧣾 there is the name of an animal, it is always an ox. If 𧣾 is an animal of the bovid species, it does not constitute an exception.

In *Qianbian* 2-5-7, there is the question of a big *si* 大𧣾. At least we know that sometimes the *si* is an animal of a big size, but it is not very helpful as we do not know how big it was.

Text about Hunting

In the Shang oracle texts, most of the time, 𧣾 appears in divinations about hunting. Hu Houxuan 胡厚宣 paid attention to the different verbs used in the texts about *si* hunting.⁹ If we know the different terms used for the *si* hunting, we can learn a little bit about the kind of game it was. With the help of Shima Kunio (*Sōrui* 81-1 and 222-1 to 223-3), we can make a more complete survey (even if it remains incomplete as new material was published afterwards). Here is a list of occurrences:

To catch (𧣾), 44 times; to catch with a net (𧣾, 𧣾), 21 times; to pursue (逐), 15 times; to shoot at with a bow (射), 13 times; to drive into a river (涉), 4 times; to drive into an enclosure (𧣾, 𧣾), 4 times; to hunt (狩), 3 times; to make fall into a trap (?) (𧣾), twice (Chen Mengjia notices that 𧣾 often has the meaning of tamping the earth, but points out that at the period of Di Yi and Di Xin, it means a way of hunting, see *Zongshu*, p. 538); to seize (執), once; to surround (?) (𧣾, 𧣾), once.

Many of these hunting terms can be used for different kinds of game, and these texts are so short that they do not help very much. However, one of them requires our attention. In it, 13 times a bow is used to shoot the game. If the 𧣾 was a rhinoceros, how could it be possible, as even now a hunter cannot shoot a rhinoceros with an ordinary firearm? On the other hand, if the animal was a white bovine, shooting it

9) Hu Houxuan, "Bucizhong suojian zhi Yindai nongye" 卜辭中所見之殷代農業, pp. 44-47 in his *Jiaguxue Shangshi luncong* 甲骨學商史論叢, vol. 2, sec. 1 (Chengdu, 1945).

with a bow would be very appropriate. Four times, there is a question of driving the animal into the river (涉). These four texts are inscribed on the same plastron (*Jiabian* 3916). Qu Wanli considers that 涉 means "to ford, to wade across a river," and that 畋 is a verb, "to hunt the *si*." But in the Shang oracle texts, there is no other case of 畋 functioning as a verb. More probably, 涉 describes a technique used sometimes for the hunting of the *si*. The wild *si* is a dangerous animal, but after forcing it into the water, it is much easier to catch. If the game is a wild buffalo, this seems a very suitable technique.

It may be useful not only to analyse the different ways of hunting but also to pay attention to the numbers of game caught. Once, during one hunting expedition, they were able to catch 40 *si* (*Xubian* 3-44-8), and at some other times they got 12 (*Yicun* 350), or 11 (*Bingbian* 102-1; *Menzies* 明 20). The rhinoceros do not live in big herds and it would be hardly possible to catch so many of them. On the contrary, if the game was a wild bovine, it would seem quite plausible.

Sacrifices

Several times, in the divinations about sacrifices, the victim referred to is a 犀; 4 times it is for a 鹿 sacrifice (*Sōrui* 223-1), 3 times for a 麋 sacrifice (*Sōrui* 223-1), twice for an 兕 offering (*Sōrui* 222-4, 223-2). The 犀 is a precious victim which can be offered to the ancestors. Sometimes the name of the ancestor is given, e.g. Zu Ding 祖丁 or Fu Ding 父丁 (*Ninghu* 1-193).

The Graph Form

Many graphs with quite substantial variations are transcribed 犀 because most of them have a single big horn. On the following pages is a selection of some of them, arranged according to the different reign periods.

Some of the graph variations represent different degrees of abstraction, for instance, the whole body may be represented in profile or reduced to a curved line. But there are some constant elements. It is important to notice that the horn never starts from the top of the nose but always from the back of the head; furthermore, it does not stand vertically but stretches out in a curved way. Besides, very often some

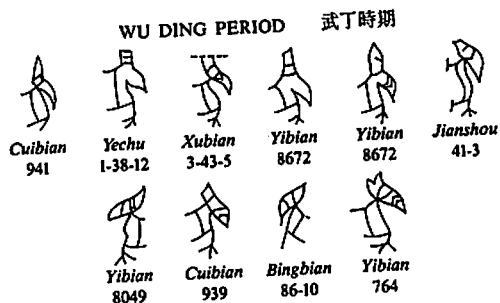
veins are indicated on the horn. If the graph means a wild buffalo, these features fit especially well. In the *Cuibian* 941 inscription there is a graph which is not a representation completely in profile; two horns protrude from the front in a curved manner without standing up. Ding Su recognizes that in this case it must mean a buffalo.¹⁰

The Shang people were not only impressed by the big size of the horns of that animal but also by its muzzle. In most of the cases, the top of the graph represents a big square muzzle. Sometimes, a line indicates clearly the separation between the upper and the lower jaw. In a few cases, the mouth is open and the two jaws should not be taken for two horns, because one horn is added, starting as always at the back of the head (see *Jiabian* 3916-10 犀). Maybe it is an indication of a beast bellowing furiously and, for the character (word), acting as a specifier: a "fierce" animal. On the *Jingjin* 1913 fragment, there is the graph 犀. The upper part of the graph is similar to the variant of *Jiabian* 3916-10 and may well represent the two open jaws, but in that case there is no horn indication. It is not sure that it is the same word, meaning the same animal.

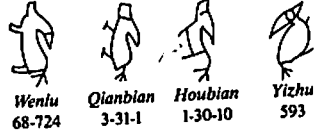
In the majority of the cases, at the end of the tail, there is an indication of a tuft. The rhinoceros, however, has no tuft at the end of its tail. On the contrary, such a tail would be a fitting addition for the bovines.

In the oracle inscriptions 犀 and 犀 are two different graphs. It seems that at that time there were domesticated bovines but also wild ones. Maybe, for the game they had to catch during the hunt, they were using a pictograph of the whole animal, whereas, for certain livestock, they were using only a pictograph of the head. As 犀 or 犀 ordinarily appear after a number, it could be the first appearance of words which later on functioned as classifiers.

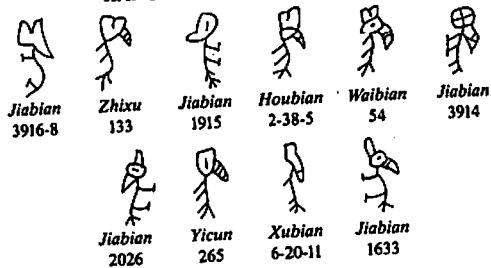
10) Ding Su, *op. cit.* (note 6), *Zhongguo wenzi* 21.



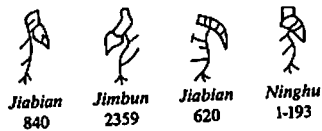
ZU GENG, ZU JIA PERIOD 祖庚, 祖甲時期



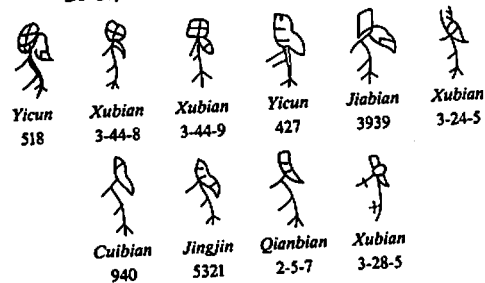
KANG DING PERIOD 康丁時期



WU YI, WEN WU DING PERIOD 武乙, 文武丁時期



DI YI, DI XIN PERIOD 帝乙, 帝辛時期



Shi niu 石牛 (stone bovine), discovered in Tomb No. Five, drawn after photographic reproduction in Kaogu 1977.3 (p. 152).



The Décor and Intaglio Graph on the Niu Fangding 牛方鼎 (Courtesy Noel Barnard)



Jiabian
3916-10

Phonetic Analysis

According to Bernhard Karlgren,¹¹ the pronunciations of 牛, 犀, and 兕, in Archaic and Ancient Chinese are as follows:

牛	*ngjüg	ngjau	(998a)
犀	*sjar	sici	(596a)
兕	*dzjar	zi:	(556a)

Phonetically, 兕 has no connection with 牛, but it is, on the contrary, quite similar to 犀. The two graphs 兕 and 犀 have no similarity either. Ancient people did not classify the animals according to the orders and the families of modern zoology, but according to their concrete experience when they were confronting the outside world. For them, the 兕 was a fierce wild animal just like the rhinoceros: both of them were different kinds of *ye niu* 野牛. At the end of the Shang, if some rhinoceros were roaming in the Xiaotun area, they were certainly very few (see *infra* Paleontology) and we do not know if there is a special word in the Shang oracle inscriptions meaning "rhinoceros." The phonetic analysis just helps us to know that at a later time the 兕 and the 犀 were not domesticated animals but, both of them, beasts of the wilderness.

The Niu Fangding

During the excavations conducted, from September 1934 to December 1936, in Xiaotun, at Tomb HPKM 1004, a vessel called Niu Fangding 牛方鼎 was unearthed. On the outside, on the four sides and on the four feet, there is a bovine head as a décor. Inside the vessel, a single intaglio graph has been cast into the bottom. The pictograph looks like a bovine. Probably, in this vessel, it is used as a clan-sign.

The character is a pictograph showing a profile view of the animal. At the back of the head there is a single horn of a big size, curved backwards. The basis of the horn is very wide and strong veins are indicated on the horn. It might be quite well the horn of a buffalo.

The muzzle is rather big and the mouth is open. There are many similarities with the graphs of *Jiabian* 3916-8 and 3916-10. Another

11) Bernhard Karlgren, *Grammata Serica Recensa* (repr. from *BMFEA* 29 (1957)).

graph appearing in *Jiabian* 2026 has to be compared with the character of the Niu Fangding. The pictographs of both of them not only show a single big horn but also a very big eye. If the graph of the bottom of the Niu Fangding is a clan-sign, it is a name, a "word," and should not be looked at horizontally as at a drawing; most probably it has to be looked at vertically and then the similarity with the graph of *Jiabian* 3916-10 is striking. (Here I want to express my thanks to Professor Noel Barnard for giving excellent reproductions of photographs and rubbings of the Niu Fangding.)

During the spring of 1976, at Xiaotun, in Tomb Number Five, a small stone bovine (石牛, length 25 mm) was discovered.¹² According to the curve and the veins of the horns, it is clearly a buffalo. The muzzle is quite big and prominent. Some of the graphs of the *si*, in the oracle inscriptions, with their curved horn going backwards without standing up, and their big square muzzle, have similar characteristics.

The Big Animal's Head Bone

Mr. Sauveur d'Assignies has been working for years in Paris under the direction of Léonard Ginsburg, director of the "Section de Paléontologie" at the Musée National d'Histoire Naturelle, doing research work in the field of paleontology. In 1979 Mr. d'Assignies accompanied me to the Academia Sinica at Nangang and was able to closely examine the Big Animal's Head Bone. He made some drawings and took measurements. At the beginning of July 1980, Mr. d'Assignies, Prof. Ginsburg, and I had a meeting in Paris, at the Musée National d'Histoire Naturelle, for a discussion about the identification of the Big Animal's Head Bone. The two specialists were in complete agreement with Teilhard de Chardin and Pei Wenzhong: The teeth (whose photograph is in my possession) and drawings, they made comparisons with all the other head bones of oxen and buffaloes in the museum. The result was that the Big Animal's Head Bone is a buffalo's head bone. The bases (in French, *pédicule*) of horns of the ox are very high on the front bone; this contrasts with the buffalo

12) "Yinxu kaogu fajue de you yi zhongyao xin shouhuo" 殷墟考古發掘的又一重要新收穫, *Kaogu* 考古 1977.3 (May), pp. 151-153.

where they are somewhat lower. Besides, the two bases of the ox horns are far apart, while those of the buffalo are closer. For the Big Animal's Head Bone, the bases of the horns are rather low and the small salient in the middle of the horn base is 5.5 cm from the central suture line of the front. For the paleontologists, the Big Animal's Head Bone is the head of a buffalo. All the buffalo bones unearthed at Xiaotun belong to the *Bubalus mephistopheles* Hopwood species, but in Paris, there are no bones from that kind of buffalo, therefore, it was not possible to say more.

Paleontology

In this short paper it is not possible to make a detailed exposition of what paleontology tells us about the rhinoceros, the ox, and the buffalo in China. We shall just make a short report of what we know about those animals in North China, according to the *Acta Palaeontologica Sinica* and the *Vertebrata Palasiatica*, during the Holocene and the beginning of the historical period. Some remains of rhinoceros were discovered in Zhejiang province and the middle course of the Changjiang, but north of the Changjiang, besides Xiaotun, only one find has been made. It is in Henan province, at the site Xiawanggang 下王崗 of Xichuan 淅川. In the lower stratum of Early Yangshao culture, some bones of *dicerorhinus sumatrensis* were discovered.¹³ The presence of a few rhinoceros in Henan is thus attested, but 2,500 or 3,000 years before the late Shang. As for Xiaotun, at first, the rhinoceros was not listed by Teilhard de Chardin and Yang Zhongjian 楊鍾健, in their "Anyang Yinxi zhi buru dongwuqun" 安陽殷墟之哺乳動物群 [On the Mammalian Remains from the Archaeological Site of Anyang], *Zhongguo gushengwu zhi* 中國古生物誌, *Palaeontologica Sinica*, ser. C, vol. XII, fasc. 1 (June 1936). Later on, Yang Zhongjian and Liu Dongsheng 劉東生 made a more complete new report, in their "Anyang Yinxi zhi buru dongwuqun bui" 安陽殷墟之哺乳動物群補遺, *Zhongguo kaogu xuebao* 中國考古學報 4.12 (1949, pp. 149-150) and indicated the presence of two phalanxes of rhinoceros. The first one is a complete third phalanx of the left metatarsus,

13) See Zhou Benxiong 周本雄, "The Fossil Rhinocerotides of Locality 1, Choukoutien," *Vertebrata Palasiatica* 17.3 (July 1979), p. 254.

the other one is a phalanx of metatarsus with the lower extremity broken, maybe the second phalanx of the metatarsus. Unfortunately, no tooth nor head bone were discovered and it is not possible to determine the species. Shi Zhangru 石璋如, in his "Henan Anyang Xiaotun Yinmuzhong de dongwu yihai" 河南安陽小屯殷墟中的動物遺骸, *Wen shi zhe xuebao* 文史哲學報 5.12 (Taipei, 1945, pp. 1-14), says that "when the rhinoceros (bones) were discovered, no attention was paid to the site" (p. 5). As a result, we are not able to ascertain if these bones come from a Yangshao, Longshan or Xiaotun culture stratum.

Anyway, only two phalanxes of rhinoceros were discovered against more than a thousand remains of buffalo. After two or three thousand years, were the Southern Henan rhinoceros still living north of the Yellow River? Were these rhinoceros feet brought from the south as precious gifts? There is no way to know. But the Shang people were able to hunt the 𧇧 in large numbers (even as many as forty). This could not be the case for rhinoceros.

At the beginning of the Holocene, in North China, the *Bos primigenius Bojanus* disappeared with some other species. But, in the whole territory of China, bovines of undetermined species were native everywhere (*Bovinae indet.*). The places are too numerous to be listed. It should be noticed, however, that the domestication of oxen seems to have started during the Yangshao period.¹⁴ All the remains of oxen discovered at Xiaotun belong to the *Bos exiguus Matsumoto* species, now extinct. They are not so numerous, only a few more than a hundred. Most probably some of them were penned oxen kept in enclosures, but there were surely wild oxen roaming the forests. It is important to know that in the burial pits and pits with oxen bones, when the skeletons are complete, they are always the remains of oxen and not of buffaloes.¹⁵ For certain sacrifices, when the victims were whole animals later on buried, the Shang people always used oxen.

14) Chang Kwang-chih (張光直), *The Archaeology of Ancient China* (3rd ed., New Haven, 1977), p. 95.

15) See Shi Zhangru, "Henan Anyang Xiaotun Yinmuzhong de dongwu yihai," pp. 7-9.

At the beginning of the Holocene the *Bubalus Wansjocki* (王氏水牛) disappeared but new species of buffalo developed, for instance the *Bubalus mephistopheles Hopwood* (聖水牛). During the moist climatic conditions in North China, at the beginning of the Holocene, a thick vegetational cover developed. At Sanhe 三河 in Hebei province, the remains of *Bubalus mephistopheles* pertaining to that period have been discovered.¹⁶ At the site of Lantien 藍田 in Shaanxi province, remains of buffaloes (*Bubalus sp.*) have been found in the Holocene stratum.¹⁷ In Shaanxi province, near Xi'an, at the site Kexingzhuang 客省莊, remains of buffaloes (*Bubalus sp.*) have been discovered in a stratum of Longshan culture. Chang Kwang-chih thinks that there were already domesticated animals.¹⁸ At Xiaotun the remains of buffaloes were specially numerous, more than one thousand, and all of them belonged to the *Bubalus mephistopheles Hopwood* species, now extinct. As we already know, this species was present in North China from the beginning of the Holocene. In the burial pits with complete skeletons, there are not buffaloes, but, for some other sacrifices, victims were cut in pieces before cooking or roasting and, in these cases, buffalo meat could well have been used.¹⁹ As the buffaloes were so numerous in Xiaotun, many of them were probably domesticated animals, but in the forests, near the rivers and the marshes, wild buffaloes should have been still roaming. Hsu Chin-hsiung considers that these were wild buffaloes and that some of them were already domesticated.²⁰ The wild buffalo is an irascible and dangerous animal; it is difficult to catch and the feats of hunting it are specially rewarding.

From the oracle texts we know that the Shang people very often used to hunt the *si*. If the *si* was a wild buffalo, the remains of that animal should be quite numerous, which is the case. It would not be difficult



16) See Chang Kwang-chih, *The Archaeology of Ancient China*, p. 33.

17) See Huang Wanbo 黃萬波 and Zhang Yuping 張玉萍, "Shaanxi Lantian diqu di-si ji buru dongwu huashi didian" 陝西藍田地區第四紀哺乳動物化石地點, *Vertebrata Palasiatica* 10.1 (Feb. 1966), p. 42.




18) See Chang Kwang-chih, *The Archaeology of Ancient China*, pp. 174-75.

19) See Keightley, *Sources of Shang History*, p. 11, n. 37.

20) Hsu Chin-hsiung, *The Menzies Collection*, vol. II: *The Text*, commentary of fragment 2025.

to use a bow to shoot it and, during one hunting expedition, it would not be impossible to kill forty of them. Their meat could be used for certain sacrifices. What is of the utmost importance, however, is that the paleontologists consider that the Big Animal's Head Bone is the head of a buffalo. The head bone was not prepared for divination and the inscription was a recorded text. Just like the deer heads found nearby, it was a hunting trophy. Most of the buffaloes have a grayish colour. But sometimes a buffalo comes into the world with hair and skin colourless, and appears to be completely white. Even now, the case is not so infrequent. It is what we call an albino. During a hunt, to catch a wild albino buffalo was quite possible but unusual. The Shang people thought such a feat was worthwhile recording, and seemingly considered it an auspicious event. For the graph of the hunting game they used as a rule a pictograph in profile of the whole animal , whereas, for the graph of the sacrificial victim, they were using as a pictograph a face view of the head .

The Character 兕 or 𧢲 and the Graph

Everybody now uses the character 兕 or 𧢲 to transcribe the graph . This is the interpretation of Tang Lan who saw a strong graphic similarity between these graphs. It is basically correct, but a point has to be made clear. For the oracle text graphs, the upper part protruding vertically is the square muzzle or the two opening jaws, whereas the horn starts from the back of the head and goes downward (*Jiabian* 3916-10: ). Graphically, the character 兕 or 𧢲 is the result of an evolution. People of later times may have considered the top of the character as the pictograph of two horns, but at the origin of the evolutionary process, it may well have been an opening muzzle like the top of the graph  in the oracle inscriptions.

No matter what may have happened in that evolution, it is important to examine how the character 兕 or 𧢲 has been used later on in the ancient texts, and see to what extent it remains similar to the way it was used in the oracle texts.

兕 or 象 in Ancient Texts of the Pre-Qin Period

The character 兕 figures in two or three bronze vessel names, for example the Si Fu Gui Ding 兕父癸鼎. But, unfortunately, the character itself does not appear in the inscription. There is only the pictograph of an animal and 兕 is the character used by authors of bronze inscription catalogues to represent it.²¹ It is interesting to note, though, that in each case a man holding a bow is standing in front of the animal.

The most important thing is to examine how the character itself was used in the texts. To better follow the evolution through the ages, a clear distinction has to be made between the text itself and the commentaries. Each commentary should belong to the period of its author.

Shijing 詩經

"Xiaoya" 小雅, "Jiri" 吉日 (180): "We drew our bows, we grasped our arrows, ... we killed this big rhinoceros [si], in order to serve up to our visitors and guests ..."²²

It would not be possible to shoot a rhinoceros with a bow. On the contrary, it is not an impossibility if the game is a wild bovine, and its meat would be delightful for the guests.

"Xiaoya, He cao bu huang" 何草不黃 (234): "We are not rhinoceroses [si], we are not tigers ..."²³

The *si* and the tigers are mentioned together because they are equally dangerous. The experienced hunter knows well that the wild bovines, especially the wild buffaloes, are irascible and fierce animals.

"Guofeng" 國風, "Juan er" 卷耳 (3) and "Qiyue" 七月 (154); "Xiaoya, Sanghu" 桑扈 (215); "Lusong" 魯頌, "Siyi" 絲衣 (292), mention the *si* horn wine vase (兕觥). The rhinoceros horn is not hollow as are the bovine horns²⁴ and cannot be used as a wine vase. The buffalo horn is

21) See Ruan Yuan 阮元, *Jiguzhai zhong ding yiqi kuanzhi* 積古齋鐘鼎彝器款識, vol. 1, p. 5.

22) Bernhard Karlgren, *The Book of Odes* (Stockholm, 1950), p. 124.

23) *Ibid.*, p. 185.

24) Ding Su, *op. cit.* (note 6), *Zhongguo wenzi* 21.

long, elegantly curved, with a specially big capacity. It fits quite well the description of the "Sanghu": The *si* horn wine vase "is long and curved, ..."²⁵

Lunyu 論語

"Ji shi" 季氏 (16.1): "(When) a tiger (or) a *si* comes out from his cage ..."

The *si* is considered a wild beast, as fierce as the tiger.

Mozi 墨子

Juan 8: "Minggui" 明鬼, *xia*, 31: "He could tear apart *si* and tigers alive."

The *si* and the tigers are animals equally dangerous to confront.

Juan 13: "Gongshu" 公輸, 50: "Jing 荆 possesses Yunmeng 雲夢 which is full of rhinoceros, *si*, hydropotes (and) deer."

In this description of the animals of Yunmeng, the *si* is clearly distinguished from the rhinoceros and different kinds of deer. Maybe it is a kind of wild bovine.

Daode jing 道德經

"Guisheng" 貴生, (50): The text joins the tigers and the *si*, but adds "the *si* finds no place into which to thrust its horns," making it clear that the *si* attacks with its horns.

Zhuangzi 莊子 ("Qiyue pian" 秋水篇), Xunzi 荀子 (Juan 13: "Lilun pian" 禮論篇), Han Feizi 韓非子 (Juan 6: "Jielao" 解老), allude, at the same time to the tiger and the *si*. In the Xunzi, Juan 10: "Yibing pian" 議兵篇, indicates that the hide of the rhinoceros and of the *si* are used for making cuirasses.

Zhou Li 周禮

"Dongguan" 冬官, "Kaogong ji" 考工記, "Hanren" 函人: "The cuirasses of rhinoceros have seven joints, the cuirasses of *si* six joints ... the cuirasses of rhinoceros last one hundred years, the cuirasses of *si* two hundred years."

25) Karlgren, *The Book of Odes*, p. 168.

It is clear that the cuirasses of rhinoceros and of *si* are different.

"Diguan" 地官, "Situ" 司徒, "Zushi" 族師: "For all the service duties, he is in charge of the supervision and of the punishment with the wine vase or with the rod."

"Chunguan" 春官, "Zongbo" 宗伯, "Xiaoxu" 小胥: "They punish with the horn vase those who are guilty of misdemeanors."

Most scholars consider that 觥 is a loan for 觥, as the archaic pronunciation of both characters is *kwāng*. In the *Shijing*, the *si* horn wine vase (兕觥) is always used during joyful banquets or happy circumstances, but here the horn wine vase (觥) is an instrument of punishment. If this instrument is a solid rhinoceros horn, the capacity is artificially fixed by the way it is hollowed out. On the contrary, as a bovine horn is naturally hollow, the capacity is fixed by nature, which means by heaven and it is much more meaningful for a punishment. As the capacity of a buffalo horn is bigger than that of an ox horn, it seems specially fit for punishment.

Yi Li 儀禮

In "Xiangshi li" 鄉射禮 (juan 5), mention is made of the *sizhong* 兕中. It is a counter container having the form of a *si*.

Zuozhuan 左傳

In Xuangong 宣公, the 2d year, there is question of using the hide of oxen, rhinoceros and *si* to make cuirasses. These three animals are different. In Chenggong 成公, the 14th year, allusion is made to the *si* horn wine vase (quotation of *Shijing*, "Xiaoya, Sanghu"). In Zhaogong 昭公, the 1st year, the guests raise the *si* horn cup (兕爵) and enjoy drinking together.

Guoyu 國語

Juan 14: *Jin yu* 晉語: "Once our ancestor Tang Shu 唐叔 shot with his bow a *si* in the Tu 徒 forest, killed and used it to make a cuirass."

Again, it is indicated that the *si* can be killed with an arrow, but, on the other hand, it is said very clearly that the hide is strong enough to make a cuirass.

Juan 17: *Chu yu* 楚語: "At Ba 巴 and Pu 蒲, the rhinoceros, the yack, the *si* (and) the elephants are unlimited."

This enumeration, again, makes a distinction between the *si* and the rhinoceros. The character before the *si* is the *li* 離, the Tibetan yack (*Bos grunniens*) which was breeding in the Ba jun 巴郡 of Sichuan and, maybe, the *si* is another kind of wild bovine.

Zhanguo ce 戰國策

"Chu ce" 楚策 (*Sibu congkan* 5): *Si* and tigers are mentioned together, and it is recorded that, when an angry *si* charged against the chariot of the king, "the king drew the bow himself and killed it with a single shaft." Such a feat would not be possible with a rhinoceros.

In the "Song ce" 宋策 (*Sibu congkan* 10), in a description of the animals multiplying in Yunmeng 雲夢, the rhinoceros, the *si*, the hydropotes and the deer, are listed as different animals.

Chu ci 楚辭

"Zhaohun" 招魂: "The king himself shoots (with a bow); he is afraid of the grayish *si*."

The colour of the *si* is a kind of gray (*qing* 青); the animal can be shot with a bow and is quite dangerous. In the "Jiushi" 九思, an allusion is made to the *si* together with the tigers, as symbols of bad people.

Liezi 列子

"Zhongni" 仲尼 (juan 4): "(My strength) is able to shred apart the skin of rhinoceros and *si*."

The *si* are compared with the rhinoceros for the thickness of their skin. It would rather be buffaloes than oxen.

Shanhai jing 山海經

In "Nanshan jing" 南山經 (juan 1), "Daoguo zhi shan" 罔過之山; "Xishan jing" 西山經 (juan 2), "Bozhong zhi shan" 博中冢之山, "Nuzhuang zhi shan" 女牀之山, "Zhiyang zhi shan" 支陽之山, "Zhongshou zhi shan" 衆獸之山; "Beishan jing" 北山經 (juan 3), "Dunhong zhi shan" 敦紅之山; "Zhongshan jing" 中山經 (juan 5), "Meishan" 美山, "Jushan" 嵯山, the *si* appear together with rhinoceros, bears, tigers, leopards, oxen, yacks, deer, and elephants. One text requires special attention: "Hainei nanjing" 海內南經 (juan 10): "There are *si* East of the Shun 舜 tomb, South of the river Xiang 湘; they look like oxen, with a gray-black (蒼黑) colour and a single horn."

In the pre-Qin texts, many allusions have been made about the *si*, but it is in the *Shanghai jing* that, for the first time, it is said to have a single horn. From now on, several authors repeat that the *si* has only one horn. Most probably they are under the influence of the *Shanghai jing*. But many descriptions of the *Shanghai jing* are very fanciful and come from popular stories of that time. For example, when the *Shanghai jing* describes the rhinoceros it says:

“Zhongshan jing” 中山經 (juan 5), “Li shan” 離山: “There is an animal which looks like an ox with a gray body; its cry is like that of a child; it devours men; it is called the rhinoceros.”

It is not possible to refer to the *Shanghai jing* for an accurate and reliable description.

Zhushu jinian 竹書紀年

Zhou Zhao wang 周昭王, 16th year: “As (the king) attacked Chu Jing 楚荆, he crossed the Han 漢 (river) (and) came upon a large *si*.”

From that text we see that the *si* can be found near the water.

Yenzi chungiu 晏子春秋

In the *Neipian* 內篇, *jian shang* 諫上 (juan 1), the *si* is named together with the tiger.

Lüshi chungiu 呂氏春秋

In *juan 11*, allusion is made to “shoot with a bow and kill the *si* pursuing you.” It is definitely impossible to kill a wounded rhinoceros, which is raging and charging, with an arrow. On the contrary, the whole thing is understandable if the beast is a wild bovine. It is useful to note that this event happened in Yunmeng.

Characteristics of the *si* according to the pre-Qin texts:

1. The *si* is a wild animal.
2. It is different from the rhinoceros.
3. It can be shot and killed with a bow and its meat can be used to make a delicious dish for distinguished guests.
4. It is as dangerous as the tiger and easily aroused.
5. When attacking, it mainly uses its horns.

6. Its horns are hollow, elongated, curved; they can be used as wine vessels and their capacity is very great.
7. Its colour is grayish (*qing*).
8. Its hide, just like the one of the rhinoceros, can be used to make cuirasses.

All these characteristics fit rather well with the wild buffalo. The only difference is coming from the *Shanghai jing*, saying that the *si* has only one horn. It may be a fanciful description, responsible for later false conceptions.

Han Dynasty Texts

For this period, we shall avoid to repeat what appeared in the texts of the preceding period. Allusions to the *si* can be found in the *Han Shi waizhuan*, the *Huainanzi* 淮南子, the *Shiji* 史記, the *Jijiu pian* 急就篇, the “Shudu fu” 蜀都賦 of Yang Xiong 揚雄, the *Qian Hanshu* 前漢書, the *Chuci buzhu* 楚辭補注 of Wang I 王逸, the commentary of Ma Rong 馬融 on the *Lunyü*, the commentary of Kao You 高誘 on the *Zhan-guo ce*, and others. The connotations are the same as during the pre-Qin period. The following opinions can be found in the main dictionaries of the time:

Erya, “Shi shou” 釋獸 (juan 18): “The *si* seems like an ox.”

Shuowen jiezi 說文解字, 馬部: “*si* is like a wild ox and gray (青).”

These definitions quite clearly consider that the *si* is a bovine like the ox, but somehow different.

Zheng Xuan 鄭玄 is one of the few having another opinion:

Commentary on *Yi Li*, “Xiangshi li”: “*Si*: name of an animal, like an ox with a single horn.”

He clearly seems to be influenced by the *Shanghai jing* (“Hainei nanjing,” see *supra*).

The character 兕 is used in a special way in one text of the *Shiji* (“Shi jia” 世家 2: “Qi tai gong” 齊太公). Before crossing the Mengjin 孟津 ford, the general Shi Shangfu 師尚父 starts his harangue to the troops shouting, “*Cang si, cang si*” 蒼兕, 蒼兕. This event is also

recorded in the *Shangshu yiwen* 尚書逸文 and the *Lunheng* 論衡 ("Shiying pian" 是應篇) of Wang Chong 王充. Later on, in the preface of the *Shanghai jing* by Guo Pu 郭璞, a brief allusion to the *cangsi* can be found. For Ma Rong, *cangsi* is the title of the official in charge of the rowers. In the *Lunheng*, Wang Chong says that the *cangguang* 倉光 is an aquatic beast having nine heads. Anyhow, it is something connected with the water, and the two colours *cang* 蒼 and *qing* 青 are very similar.

Three Kingdoms, Western and Eastern Jin Texts

In the *Nanzhou yiwu zhi* 南州異物志 of Wan Zhen 萬震, the *Chen Lin shu* 陳琳書, the commentary of Wei Zhao 韋昭 on the *Guoyu*, the "Wudu fu" 吳都賦 of Zuo Si 左思, the *Baopuzi* 抱朴子 of Ge Hong 葛洪, the *Hou Hanshu* 後漢書, the character *si* 兕 is used more or less in the same way as in the texts of the pre-Qin period. The differences come mainly from two authors, Guo Pu and Liu Xinqi.

Guo Pu

Shanghai jing, "Nanshan jing" (juan 1), "Daoguo zhi shan" text: "At its bottom there are many rhinoceros and *si*"; Guo's commentary: "The *si* looks like a buffalo, has a grayish (*qing*) colour and only one horn; it weighs three thousand *jin* (斤)."

Shanghai jing tuzan 山海經圖贊: "The *si* is a strong animal; it looks like a gray-black (青黑) ox; it spends its whole strength until it drops dead; its skin is used to make military equipment (and) its horn strengthens your virtuous accomplishments."

"Jiang fu" 江賦: "The water *si* bellows like the thunder to Yang hou (陽侯, divinity of the water)."

Erya (see *supra*) commentary: "(The *si* has) only one horn (and) a grayish (*qing*) colour; it weighs a thousand *jin*."

The commentaries of Guo Pu exerted a strong influence on his successors. After him, many scholars have been repeating that the *si* is an animal with a single horn. But his view does not represent the opinion of many authors writing during the centuries before the Western Jin. Before him, only the *Shanghai jing* and Zheng Xuan said that the *si* has only one horn. Guo Pu took great interest in the *Shanghai jing*, wrote

his own commentary on it, and was deeply influenced by it. The *Shanghai jing* distinguishes the rhinoceros from the *si* but gives rather fanciful descriptions of both of them (see *supra*).

Liu Xinqi








Jiaozhou ji: "The *si* is native to Jiude 九德, it has a single horn, the horn is more than two *chi* (尺) long, having the form of a horse-whip handle."

The second part of this text, "the horn/s is/are more than two *chi* long ..." was already written by Wan Zhen in his *Nanzhou yiwu zhi*, but the first part of the text, mentioning "a single horn," was added by Liu Xinqi, most probably under the influence of the *Shanghai jing* and Guo Pu.




All the ancient texts, starting with the *Shijing*, until the end of the Eastern Jin, with the exception of the *Shanghai jing* and a few authors under its influence, never mentioned that the *si* was an animal with only one horn. The different characteristics of the *si* have been analysed at the end of the review of the pre-Qin texts (see *supra*). The hypothesis of the *si* being a wild buffalo seems to be the one which fits best all the texts.

Conclusion

The interpretation of the graph 兕 and the character 兕, until now, remains a matter of discussion. Starting the investigation with the Big Animal's Head Bone, it seems that this head bone, like the other deer head bones discovered nearby, was considered a hunting trophy. Consequently, the recorded text was inscribed on that trophy, that is, on the head of the animal so skillfully caught. After careful examination, the paleontologists declared that the Big Animal's Head Bone was the head of a buffalo. Taking these facts into consideration, we made a new examination of the graph 兕 and its variants, of the character cast in the bottom of the Niu Fangding (Tomb HPKM 1004), of the form of the head of the small stone bovine (*shi niu* of Tomb Number Five), of the pronunciation of the character 兕 at a later time, of the Shang oracle texts, and of the main ancient texts in general, starting with the pre-Qin period and going on until the end of the Eastern Jin dynasty. The results can be summarized as follows:

1. The Big Animal's Head Bone is a buffalo head bone.
2. In the graphs of the Shang oracle texts, the horn does not start from the top of the nose as it does for a rhinoceros, but always from the back of the head, as is the case for a bovine. The frequent indication of veins on the horn fits very well with the buffalo horn. The indication of a tuft at the end of the tail does not suit a rhinoceros tail, but, on the contrary, is a fitting addition for a bovine.
3. The basis of the horn figuring in the character cast at the bottom of the Niu Fangding is very wide, and strong veins are indicated on it. It fits well with the buffalo horn. The whole character is very similar to the graph of *Jiabian* 3916-10.
4. The small stone bovine of Tomb Number Five clearly represents a buffalo relaxing on the ground. The form of the muzzle, the strong veins on the horn fit very well with some variants of the graph  in Shang oracle inscriptions.
5. In the Shang oracle texts, the  is a wild animal caught during the hunt and can be shot with a bow. Sometimes, many of them can be caught during one hunting expedition. These feats are plausible with wild bovines, but not with rhinoceros.
6. Later on,  and  were clearly two different characters, but phonetically similar. Probably, they were considered as designating two different kinds of wild animals, similar only in some respects.
7. According to the paleontologists, during the Holocene, there were some *Bubalus mephistopheles* Hopwood in North China. Many remains of that species of buffalo were discovered at Xiaotun. Possibly, some of them were domesticated; others were still roaming about the wilderness.
8. Most of the ancient texts, from the pre-Qin period to the Eastern Jin, do not note that the *si*  has only one horn. The only exception is the *Shanhai jing*, and a few authors are influenced by it. The characteristics of the *si*, as they appear in the texts, fit the wild buffalo better than any other animal.
9. The graph  of the Shang oracle texts and the character  of a later period seem to be the same *word*. The elements of the graph may not have been always correctly analysed, the graphic evolution may have been different from what it was previously thought to be, but the semantic content seems to have been always the same: a wild buffalo.

The oracle bone inscriptions represent some kind of record of the language of the late Shang. For their study, the analyses of linguists are urgently needed. But language is the expression of thought, and the way of thinking is deeply influenced by the concrete conditions of life. The more we know about the concrete environment, the social system, the customs and habits of the Shang people, the more we understand them, and that understanding may be of great help for the study of their language.

The aim of this paper is an attempt at research conducted through such convergent lines. Should we rely only on the linguistic analysis, we would conclude that the *si* is a rhinoceros, as, in the oracle bone inscriptions, there is already another word for the bovines (), and, in the language of a later period, there is a phonetic similarity between  and . However, the scholars who are aware of the identification made by the paleontologists Teilhard de Chardin and Pei Wenzhong think that the *si* is a wild bovine. Some of them, like Ding Su, considering that at the time of the late Shang, in the Xiaotun area, the buffalo was a domesticated animal, conclude that the *si* is a wild ox. But some paleontologists were able to identify the Big Animal's Head Bone as the head of a buffalo. Starting from that fact, we submitted to a careful examination all the material, from the late Shang to the Eastern Jin. We have discovered that the identification of the *si* as a wild buffalo fits all the documents better than any other interpretation.