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Aijun Li

Chinese Writing

1. Introduction

The Chinese writing system is more than 3,000 years old. The oldest known documents are bone and bronze inscriptions that go back to the 13th century BCE. As these inscriptions mostly deal with divinatory (for bones) or commemorative concerns (for bronze inscriptions), their content is rather limited. The inscriptions reveal the syntax of the language that we recognize in later texts, in a more concise but not necessarily less complex way (→ Shāng 商 Chinese).

The Chinese script was adapted to record the Chinese language, but it was later also used to write down other languages as different as Vietnamese, Korean, and Japanese. It is not only a tool for writing down speech, it is also widely practiced as an art. Many Chinese universities, for example, display Máo Zédōng's (毛擇東 1893–1976) characteristic → calligraphy.

If the syntax of the Chinese language can be reconstructed as early as the Shāng inscriptions, a phonological reconstruction of the language of that time can only be speculative, since the earliest documents used to reconstruct the phonology of so-called → Old Chinese (the *Shījīng* 詩經 or Book of Odes) date from several centuries later, circa from the 8th–6th centuries BCE (cf. Baxter 1992; Sagart 1999:4; Baxter and Sagart 2014). Here I will limit my analysis to the relation between characters and the modern standard language.

2. The Characters

The basic units to write Chinese are not letters, as in an alphabetical system, but characters. In modern Standard Mandarin Chinese (Pǔtōnghuà 普通話), a character typically represents a whole syllable of the spoken language with a tone. The length of the syllable may vary from a simple vowel to segmentally more complex syllables of the CSVC type (C=consonant, S=Semivowel, V=vowel). We find some extremely rare but noteworthy exceptions

for this one-character-one-syllable-rule in the case of the noun suffix -*r* -兒, a few 19th-century creations such as *hǎilǐ* 浬 (海里) 'nautical mile', *háomǐ* 粍 (毫米) 'milimeter', *qiānwǎ* 瓩 (千瓦) 'kilowatt', and some modern popular inventions like *túshūguǎn* 圕 'library', also read *tuān*.

Graphically, characters or graphs are written symbols occupying a square space (*fāngkuàizì* 方塊字 'tetragraphs'). They are made of a certain number of strokes: from a single one, e.g., *yī* 一 'one', to as many as 36, e.g., *nàng* 齉 'snuffle' among the current characters, but one can always find more complex—but seldom used—characters in dictionaries, such as *zhé* 𪘓 'talkative' (64 strokes). The number of basic strokes used to write Chinese characters may vary according to schools of calligraphy. Modern dictionaries like the *Hànyǔ dà zìdiǎn* 漢語大字典 [Great dictionary of Chinese characters] and the *Xīnhuá zìdiǎn* 新華字典 [New China character dictionary] have only retained 5 basic strokes:

1. A horizontal stroke from left to right (*héng* 橫): e.g., 一;
2. A vertical stroke from top to bottom (*shù* 竪): e.g., 丨;
3. A long diagonal stroke downward from right to left (*piě* 撇): e.g., 丿;
4. A very short dash stroke (or dot) downward from left to right (*diǎn* 點): e.g., 丶 ; and
5. A horizontal stroke from left to right, ending with a downwards hook to the left (*nà* 捺): e.g., 乙 (乚, 𠃌).

There is in fact a wide variety of strokes representing realizations of each of the above *abstract* basic strokes, such as 丿, 丨, 丿, 乀, 丶, 乙, 乚, and 𠃌.

Strokes follow an imposed directionality. Characters also follow a prescribed way, a *ductus*. This *ductus* was probably adopted around the 5th century BCE (Yau 1993:203). It is useful to know the total number of strokes in order to find unknown characters in dictionaries, since from the 17th century, characters are still often ordered by number of their strokes.

Combined, strokes form graphic constituents, or graphemes. Graphic constituents represent recurrent graphic elements constitutive of characters that are, in principle, taken to consist of a well-defined number of strokes. It is this stable stroke count that make Chinese characters retrievable by radical and stroke number (→ Premodern Lexicographic Ordering). Usually associated with a meaning or a sound, they are said to bear semantic or phonetic functions in characters, but when none of these functions can be retrieved, they are simply called a graphic constituent. These two functions were first described by Xǔ Shèn 許慎 (58–157) in his → *Shuōwén jiězì* 說文解字 [Explaining graphs and analyzing characters] (100 CE) (→ Lexicographic tradition, and → *Wén* versus *zì*).

We call "semantic" those constituents that usually provide a general indication of the meaning of the graphs. 氵 (an abbreviation of *shuǐ* 水 'water'), for example, represents the semantic constituent in the character *yǒng* 泳 'swim'; *yǔ* 雨 'rain' fulfulls this role in *shuāng* 霜 'frost'; so does *bí* 鼻 'nose' in *nàng* 齉 'snuffle'. A few characters may include more than one semantic constituent. There are, for example, the two semantic constituents 亻 'man' and 戈 'dagger-ax' in *fá* 伐 'attack', the three constituents *mù* 木 'tree' in *sēn* 森 'forest', the five constituents *kǒu* 口 'mouth' (four times) and *tóu* 頁 'head' in *xiāo* 囂 'clamor', etc. Due to various contingent historical reasons, semantic constituents are not always accurate or even helpful to convey the general meaning of the characters. For instance, it does not help to know that the "semantic" constituent of *yàng* 樣 'manner' is *mù* 木 'timber', that of *zhí* 姪 'nephew' is *nǚ* 女 'woman', and that of *wù* 物 'thing' is *quǎn* 犬 'dog'.

We call phonetic constituents (or "phonophoric", cf. Boodberg 1957:118; Boltz 1994:72) the constituents that provided a more or less precise indication of the pronunciation of a character at the time of its creation, such as *yǒng* 永 in *yǒng* 泳 'swim', *yàng* 羕 in *yàng* 樣 'manner', *náng* 囊 in *nàng* 齉 'snuffle', *tǐng* 王 in *tīng* 聽 'listen', etc.

Semantic constituents correspond in many cases to ancient (oracle bone) graphs encoding words through the medium of iconic depiction or to what the Chinese philological tradition calls *xiàngxíngzì* 象形字 'symbolizing shape', i.e., 'pictographs'. In ancient

oracle bone inscriptions, some of these graphs were closer to drawings: 〰 → 水 'river/water', ⻗ → 雨 'rain', ⊔ → 口 'mouth', ⻖ → 女 'woman', ⻌ → 目 'eye', ⻥ → 魚 'aquatic animal', ⻆ → 月 'moon', ⻁ → 虎 'tiger', etc. That explains why they tend to play a semantic role in the composition of the graphs they form, even if they are not necessarily part of the original graphs, but secondarily added "determinative" elements used to differentiate homophonous or homoiophonous bare phonetics. However, one should not forget that these ancient so-called pictographs were in fact symbols standing for syllables or linguistic segments of the spoken language, and could always play a phonetic role as well (Bottéro 2004:251). This is true in the case of *kǒu* 口 'mouth' in *kòu* 扣 'knot, button', or *yú* 魚 'aquatic animal' in *yú* 漁 'to fish' (Note that in this last example, *yú* 魚 plays in fact both phonetic and semantic roles.)

Some graphemes represent independent characters: *wǎ* 瓦 'tile', *yuè* 龠 'flute', *qiū* 丘 'mound', *qiàn* 欠 'yawn/owe', etc.; other graphemes do not have this characteristic: 宀, 臤, 丶, 與, but lexicographs have usually given them a pronunciation if not a meaning: *mián* 宀 'roof'; *jiān* 臤, old form of *jiān* 堅 'firm', can also be read *qiān* or *xián*; 丶 is pronounced *diǎn* in modern dictionaries (but *zhǔ* in *Shuōwén Jiězì* with the meaning 'end, stop'), etc.

Characters are in turn made of a certain number of such graphic constituents. There are two kinds of characters: simple characters and compound characters.

Simple characters (*dútǐzì* 獨體字) consist of one single graphic constituent that can only be analyzed into a certain number of strokes, like *yǒng* 永 'eternal', with 5 strokes forming no subconstituents;

Compound characters (*hétǐzì* 合體字) consist of two or more graphic constituents:

- 2: 氵 'water' and *yǒng* 永 in *yǒng* 泳 'swim'; 2 semantic: *rén* 亻 'man' and *gē* 戈 'dagger' in *fá* 伐 'attack'; 2 phonetic: *jǐ* 己 and *qí* 其 in *jì* 覬 'to set with the leg crossed';
- 3: 木, 羊, 永 in *yàng* 樣 'manner';

- 6: 耳, 王, 十, 罒, 一, 心 in *tīng* 聽 'listen'; and
- 11: 自, 田, 丌, 一, 口, 丨, 冖, 口, 口, 辶, 衣 in *nàng* 齉 'snuffle'.

Depending on their position within a graph, the shape of the constituent may vary to a certain degree. The phenomenon already existed in ancient writing, but what we see in modern script is directly derived from cursive handwriting variants or abbreviations. Thus, for example, in modern *kǎishū* 楷書 orthographies, 水 'water' on the left side is written 氵 (in *xǐ* 洗 'wash'), 手 'hand' → 扌 (in *shí* 拾 'pick up'), 心 'heart' → 忄 (in *yuè* 悅 'happy'), *fù* 阜 'hill' → 阝 (in *yáng* 陽). On the right side *yì* 邑 'city' is written 阝 (in *dū* 都 'capital'), on the bottom 'fire' *huǒ* 火 becomes 灬 (as in *rè* 熱 'hot'), etc. Graphic constituents become smaller, larger or longer to adapt to the square space they occupy. This idealized square-shape, first sporadically marked in grids appearing in bronze inscriptions of the 8th century BCE, seems to become increasingly important on wood and bamboo slips.

Irrespective of the actual number of constituents in a graph, the general lexicographer's tendency is to analyze complex characters into only two immediate constituents:

- 木 and 羕 in *yàng* 樣 'manner' (instead of 3 as indicated above);
- 雨 and 相 in *shuāng* 霜 'frost' (instead of 3: 雨, 木, 目);
- 女 and 霜 in *shuāng* 孀 'widow' (instead of 4: 女, 雨, 木, 目); and
- 鼻 and 囊 in *nàng* 齉 'snuffle' (instead of 11: 自, 田, 丌, 一, 口, 丨, 冖, 口, 口, 辶, 衣).

But this is not always the case: *tīng* 聽 'listen' is usually analyzed as having 3 graphic constituents: 耳 (*ěr*) 'ear', 悳 (*dé dé*) 'virtue', 王 *tǐng*, so does *sēn* 森 'forest', which has 3 *mù* 木 'tree' (but note that the Hàn lexicographer Xǔ Shèn (100) distinguished only 2 (林 and 木) in his *Shuōwén Jiězì*), whereas *jí* 喦 'clamor' counts 4 graphic constituents 'mouth'.

3. Phonetism in Chinese Characters

Phonetic as well as semantic constituents are often recurrent in several characters. Phonetic constituents may appear in different characters with more or less the same pronunciation today. Characters with the same phonetic constituent form what is called 'phonetic series' (→ *xiéshēng xìliè* 諧聲系列). These were identified long ago by Chinese scholars (Baxter 1992:150 *sq*), but it is the Swedish sinologist → Bernhard Karlgren (1889–1978) who was the first one to systematically apply historical linguistics to the study of the Chinese language and who attempted to provide an explicit phonetic reconstruction for as many as 1,235 phonetic series of Ancient and → Old Chinese (Karlgren 1957).

The fact that characters with identical phonetic constituents might have different pronunciations in one single series can partly be explained by the constant evolution of language. Moreover, as Karlgren (1940:459) pointed out, "[i]t must be remembered that all the characters were not invented at one and the same time, on the contrary, the thousands of hie sheng [*xiéshēng* 諧聲, FB], phonetic compounds, must have been created during centuries as a result of frequent kia tsie [*jiǎjiè* 假借, FB] phonetic loans, by adding elucidating radicals [semantic constituent, FB]. In this slow process the sound value of a 'phonetic' was step by step shifted and enlarged."

In today's writing system, we can distinguish four types of phonetic constituents:

1. Phonetic constituents that provide the exact pronunciation of the character: *yǒng* 永 in *yǒng* 泳 (GSR 732); *kě* 可 in *kě* 哿 'good' (GSR 8);
2. Phonetic constituents that provide the same syllable but a different tone: *yáng* 羊 in *yàng* 羕 (GSR 732); *kě* 可 in *kē* 苛 'severe' (GSR 8);
3. Phonetic constituents that provide the same rhyme (=rime): *yǒng* 甬 in *tōng* 通 (GSR 1185); *kě* 可 in *hé* 河 'river' (GSR 8); and
4. Synchronically no longer transparent phonetic constituents, whose role can be deduced from the phonetic series: *gōng* 工 in *jiāng* 江 'river' (GSR 1172); *gōng* < Middle Chinese *kuŋ

< Old Chinese **kooŋ in *jiāng* < *kɯɔŋ < **krooŋ (reconstructions acc. to Pān Wùyún, TLS); *yí* 台 in *tāi* 胎 'foetus' (GSR 976); *yí* < MC *jɨ < OC **lu in *tāi* < MC *thəi < OC**lʰuuu.

In most cases, we have to take into account the diachronic perspective and look at the phonetic series in order to understand the possible role played by phonetic constituents in ancient times. Phonological reconstructions can give us a better understanding of the role of phonetic constituents, but they should always be taken as hypothetical.

4. The Typology of Chinese Writing

From the Hàn dynasty on, the Chinese philological tradition distinguishes six ways of writing down words, or → *liùshū* 六書. Three different lists of *liùshū* with different denominations were provided during the Hàn dynasty, but it is the list of the historiographer Bān Gù 班固 (32–92) with the terms given by Xǔ Shèn that is usually retained today: *xiàng xíng* 象形, *zhǐ shì* 指事, *huì yì* 會意, *xíng shēng* 形聲, *zhuǎn zhù* 轉注, and *jiǎ jiè* 假借. Yet it should be stressed that perpetuation of this old approach does not further our understanding of the relationship between written and spoken language.

Most modern Chinese specialists distinguish two kinds of writing systems in the world, *biǎoyīn wénzì* 表音文字 'phonetic writings' and *biǎoyì wénzì* 表意文字 'semantic writings' or 'ideographic writings'. Wáng (2009:8) has replaced *biǎoyì wénzì* by *gòuyì wénzì* 構意文字 'semantic structure writing'. Yet whether called *biǎoyì wénzì* or *gòuyì wénzì*, it does not make much difference, since it always refers to a writing that supposedly represent meanings or even ideas directly.

On the other hand, many labels are used in the West to characterize the Chinese writing system: ideographic, logographic, word-syllabic (Gelb 1952), morpho-syllabic, ideophonographic, etc. Which of these terms defines the Chinese writing system more properly?

If ideographic devices may have been useful in ancient times for creating graphs (such as the ancestors of *zhú* 逐 'pursue' or *fá* 'attack'),

ideography is unfortunately unable to record speech as a whole, for it lacks what makes writing systems work: phonetism. Both ideographic signs [🚭] 'no-smoking' and [🍴] 'fork+knife', for example, convey the meanings 'Smoking forbidden/not allowed' and 'place where one can eat'. But the whole point is that these ideograms do not refer to specific words in any given language. The sign [🍴] 'fork+knife', for example, can refer to a restaurant, a snack, a fastfood restaurant, a cafeteria, an automatic vending machine (providing forks and knives), a café, etc. Such signs are necessarily ambiguous since they are not limited to single words. One can hardly think of using any pure ideograms to record sentences like "I would like him to stop smoking" or "we did not eat in this nice restaurant". Abstract meanings as well as grammatical terms can simply not be properly or efficiently recorded with ideograms.

When we speak, we use sounds to refer to words and meanings, and it is mainly via the pronunciation that meaning is understood. It is the same type of mapping that applies to writing systems. Whatever device (drawing, abstract representation, ideography) is used to record a word, it is always the pronunciation that is encoded in the reading or enunciation process. Without phonetism, writing would not only be too ambiguous, it would also be too cumbersome for us to manipulate. The Chinese writing system is no exception. It used rebus writing from its earliest known beginnings in the 13th century BCE in order to record words that could not be encoded otherwise than phonetically. The rebus use of graphs is well attested in oracle bone inscriptions for all sorts of actions, grammatical words, names, sacrifices, etc. 'To come' 來 (lái < MC *ləi< OC **m-ruuu), for example, is written with the almost homophonous sign for 'wheat' (mài < *mɣɛk < **mruuug), the modal particle qí 其 (qí < *gɨ < **gu) is written with an almost homophonous pictograph for 'basket' (qí < *kɨ < **ku). This is possible because the so-called pictograms record sounds as well. In short, the opposition between phonetic and semantic writings is not only awkward, it is simply wrong. There is no such thing as an ideographic or semantic writing system.

Despite a few exceptions mentioned above (under 2), since Chinese characters typically record syllables (with tones), the Chinese writing is by and large necessarily a syllabic writing. But unlike most other syllabaries such as Japanese *hiragana* or *katakana*, for example, it also records meaningful units, or information related to the meaning of the syllables. While there is only one way to write the Japanese syllable *ma* using *hiragana*: ま, in Modern Chinese (if we ignore tones) there are as many ways to write *ma* as there are meanings attached to it: 嗎 'interrogative particle', 媽 'mother', 抹 'wipe', 孖 'twins', 麻 'hemp', 蟆 'toad', 馬 'horse', 螞 as in 螞蟻 'ant', 瑪 as in 瑪瑙 'agate', 罵 'curse', 嘜 'mark', 榪 'board', etc. (When writing down tones, we distinguish 5 different kinds of *ma* syllables: *må, mā, má, mǎ, mà*. Thus the numbers of different characters attached to each of them naturally decreases: *må* 嗎 'interrogative particle', *mā* 媽 'mother', 抹 'wipe', 孖 'twins', *má* 麻 'hemp', 蟆 'toad', *mǎ* 馬 'horse', 螞 as in 螞蟻 'ant', 瑪 as in 瑪瑙 'agate', and *mà* 罵 'curse', 嘜 'mark', 榪 'board', etc.). In other words, a distinction should not be made between phonetic and semantic writings but between writing systems whose basic units encode sound only and those which encode meaning as well.

In Modern Chinese, characters can correspond to words, morphemes (lexical as well as grammatical), but also to syllables with no reference. Quite a few characters write monosyllabic words (*kǒu* 口 'mouth', *shǒu* 手 'hand', *shuǐ* 水 'water', *tīng* 聽 'listen', etc.), yet most modern words are polysyllabic (*zìxíngchē* 自行車 'bicycle', *diànnǎo* 電腦, *jìsuànjī* 計算機 'computer', *tiānkōng* 天空 'sky', *nóngyè* 農業 'agriculture'). At the same time, one character can often represent several words (*xíng* 行 'to go', *háng* 行 'line'; *shǔ* 數 'to count', *shù* 數 'number', etc.). It is thus misleading to establish a simple correspondence between characters and words.

To establish a plain correspondence between characters and morphemes is also to oversimplify, since there are many polysyllabic morphemes such as *húdié* 蝴蝶 'butterfly', *gāngà* 尷尬 'awkward', *qūqū* 區區 'trivial' (approx. 7% of 10,400 morphemes, Yang-Drocourt 2007:215, 354), a few characters that write two morphemes:

bié 別: *bú yào* 不要, *lǐ* 浬: *hǎilǐ* 海里, *zhū* 諸: *zhī hū* 之乎, as well as the sub-syllabic morpheme *-r* 兒, mentioned above (see also the article on → Érhuà). Note also that foreign words transcribed into Chinese often represent polysyllabic morphemes, e.g., *kāfēi* 咖啡 'cofffee', *wéitāmìng* 維他命 'vitamin', and that words like *qūqū* 區區 'trivial' cannot be analyzed as the reduplication of one free morpheme, since they represent 'cranberry' or bound morphemes that cannot readily be assigned an independent meaning or grammatical function.

In addition, a very small number of characters have no meaning at all (*ā* 阿, *bó* 玻, *lí* 璃, *pú* 葡, *táo* 萄, *gān* 尴, *gà* 尬, etc.), whereas most of them can always be used as meaningless syllables to transcribe all sorts of foreign names (*bā* 巴, *lí* 黎, *huá* 華, *shèng* 盛, *dùn* 頓, in Bālí 巴黎 'Paris' or Huáshèngdùn 華盛頓 'Washington').

This complex situation clearly prevents us from using the often employed term "logographic" to characterize the Chinese writing system. Logograms are defined as written signs representing words (Coulmas 1996:309), but as we have seen representational units of the Chinese writing system do not always stand for words. Moreover, since all writing systems write words, they would all have to be called logographic. The term is simply not precise enough to clarify the relationship between the written and spoken language. Thus, from the linguistic point of view, the term morphosyllabic is more explicit because it shows that characters are basically related to morphemes corresponding to syllables, even if, as we have seen, this is not always the case. Now from the graphic point of view, the term ideophonographic (Cohen 1958:45) (or semantophonographic) can also be useful because it suggests that characters record meanings and associated ideas as well as sounds. Without being limited to semantic-phonetic compound characters (*xíngshēngzì* 形聲字), as usually understood, the term also describes simple characters such as *rì* 日 'sun' → 'day', *niǎo* 鳥 'bird', *shuǐ* 水 'water', where the graph represents a meaning and a syllable at the same time.

5. The History of the Writing Styles

The appearance of the Chinese writing has changed over time. Graphs have undergone formal transformations for all sorts of reasons (material, political, aesthetic, etc.), but the principles used to compose them did not change significantly.

5.1 *Writing on bones*

The *jiǎgǔwén* 甲骨文 represent texts written on bones (mostly bovine scapulae and tortoise plastrons), between the 13th and 11th centuries BCE. We possess around 150,000 pieces (*Héjí* 合集 1999) from tiny fragments to complete plastrons. Over one-third (1,682) of the 4,378 characters included in the *Jiǎgǔwénzì biān* 甲骨文字編 [Compilation of oracle bone characters] have been deciphered. Since most of the *jiǎgǔwén* record oracle matters, they have been called Oracle Bone inscriptions (OBI), although other kinds of notes can also be found on the bones (→ Paleography). The orientation of the texts could go from right to left or left to right, and was usually vertical, but we also have examples of horizontal sentences. The bones were engraved with a metallic instrument that gives this special aspect and style, but a small number of them were first written with a brush (Keightley 1978:46). Different methods were adopted to encode words in the graphic system of the *jiǎgǔwén*: pictography, phonography or rebus writing, abstract representation, as well as graphic combination (Bottéro 2004). The large number of graphic variants produced with these different methods shows that the scribes had the possibility to choose among them to write graphs (Bottéro 2001).

Chinese writing is commonly said to have "pictographic" origins (e.g., Táng 1981:87). Some of the OBI graphs clearly depict objects from the visible world, but the pictographic aspect of some graphs should not impede a proper linguistic analysis of the real nature of the writing system. Just like modern characters, *jiǎgǔwén*

characters are symbols representing elements of the spoken language.

5.2 *Writing on bronze*

During the Shāng and the Zhōu dynasties (13th–3rd cents. BCE), another kind of script called *jīnwén* 金文 'bronze inscriptions' was written on bronze sacrificial vessels, musical instruments, weapons, and other bronze objects. The vessels were mostly used in the context of sacrifices made to the ancestors and the inscriptions (when they existed) commemorated all sorts of merits, events, gifts, as well as the person who had the vessel cast. Inscription length varied considerably. Rather short at the beginning of this tradition, with one single 'clan sign' (*zúmíng* 族名, *zúhuī* 族徽) that could refer to the caster of the vessel or to the name of the ancestor or his lineage, and an ancestral title (e.g., *fù* X 父 'Ancestral Father X', *zǔ* X 祖 '(remote) ancestor X', *bǐ* X 妣 'deceased mother X', etc.), some of them became much longer from the mid- and late Western Zhōu onwards, so as to count as many as 498 characters in the Máogōng *dǐng* 毛公鼎 tripod (8th cent. BCE). In early times, the inscriptions were written with a stylus in the wet clay of the piece-mold used to cast the bronze, but later inscriptions were sometimes engraved after the casting of the bronze. More than 120,000 inscribed bronzes have been published until now. The total number of graphs in the *Xīn jīnwén biān* 新金文编 [The new repository of bronze inscription characters], edited by Dǒng Liánchí 董莲池 in 2011 is 4,637 (not including 105 *héwén* 合文 'ligatures'). Characters were written vertically, mostly from right to left, but with some noticeable exceptions (such as the *Luán shū fǒu* 欒[巒]書缶 inscription, dating from 573 BCE). One notices an increasing number of graphic combinations of the *xíngshēngzì* 形聲字 type involving semantic and phonetic constituents in the bronze inscriptions. Liú (2009) even reports an increased percentage from 13,75% in OBI writing to 58,54% in bronze writing, though one should remember that it is always tricky to deal with exact percentages. Nonetheless, the liberty to write words differently still persisted. It was always possible to use more or less "homophonous characters" (*tōngjiǎ* 通假) e.g., *yì* 易 (OC **leegs) 'change' for *cì* 賜 (OC **sleegs) 'give' or *xī* 錫 (OC **sleeg) 'reward'.

The different writing supports, as well as the different techniques for inscribing bones and bronzes, have engendered stylistic differences. The use of a stylus to write in the wet clay molds allows *jīnwén* strokes to be rounder and thicker than *jiǎgǔwén* strokes. But, as Qiú (2000:63) shows, an important "register" distinction should also be made between formal and everyday writing. *Jīnwén* corresponded to a solemn style related to the grave nature of the ritual context in which bronze vessels were used, whereas *jiǎgǔwén* corresponded more to an everyday style related to the routine practice of divination. This does not exclude that some of these inscriptions could also have had a "display" function (Keightley 1978:46, n. 90). Notwithstanding these stylistic and "register" differences, or changes in individual characters, there is a clear continuity between bone and bronze writings: the structure of the graphs in the bronze inscriptions is the same as that of the graphs in the bone inscriptions.

5.3 *Writing on silk and bamboo*

During the Warring States period, the situation of the script started to change. The texts produced were no longer limited to certain topics, as were *jiǎgǔwén* and bronze inscriptions. Moreover, all sorts of new media appeared (such as money, weapons, seals, measures, and weights), and all sorts of materials were used (such as stone, metal, jade, pottery, and seals) (Hé 2003). But next to wood, bamboo was probably the most common support for all kinds of texts, whereas silk was more limited to special and distinguished use. Writing on bamboo, wood, and silk were made with a brush and ink. Brush written characters on stone and bone already existed during the *jiǎgǔwén* period, but the currently earliest examples of Chinese ink writings on bamboo were discovered in the tomb of Marquis Yǐ of Zēng 曾侯乙, dating to circa 433 BCE.

Among the Warring States documents excavated throughout the 20th century (mostly discovered in southern tombs of the ancient state

of → Chǔ 楚 before it was overrun by the Qín in 278 BCE), specialists usually distinguish two kinds of writing: *zhuàn* 篆 'seal script' and *lì* 隸 'scribe script', with variations conventionally labelled *zhuàn lì* 篆隸 'seal scribe script', Qín *lì* 秦隸 'Qín scribe script', *gǔ lì* 古隸 'old scribe script' and Hàn *lì* 漢隸 'Hàn scribe script'.

The seal script *xiǎozhuàn* 小篆, or Qín *zhuàn* 秦篆, is traditionally presented as a Qín simplification of bronze style called *dàzhuàn* 大篆 'large seal script' or *Zhòuwén* 籀文 'script of [Scribe] Zhòu', and the 'scribe script' is said to have been invented under the Qín dynasty by scribes of offices such as the judicial administration in order to write faster (*Shuōwén jiězì* 15A 2a; *Hànshū* 1962:1721). However, evidence shows that both styles existed as early as Warring States period and were more related to the idea of formal versus everyday writing (Qiú 1990:67; 2000:103). Compared to the elongated and curvilinear seal script, the scribe script was more square and more angular, with straight strokes.

Most states developed their own writing habits, with graphic variants as well as aesthetically appealing styles during the Warring States period (Hé 1998, 2003). Writing had, however, a common base and graphic influences must have existed between the feudal states due to all sorts of exchanges among them.

With the Hàn dynasty, the seal script was mostly limited to some stone and stelae inscriptions, whereas the scribe script was used for everyday writing. Each style had its running script, usually referred to as *xíngshū* 行書 ('semicursive') or *cǎoshū* 草書 'rough script'. The scribe script was transformed into cursive following three main methods: (a) omission of a part of graph; (b) merging strokes while using dots or short strokes to represent the missing parts; and (c) by modifying certain strokes and making them continuous (Qiú 1990:88; 2000:136).

5.4 *The Zhèngshū* 正書 *or Kǎishū* 楷書 *'Regular Script'*

The regular style that is still in use today started to replace the scribe script around the 3rd century CE, probably in connection with the spread of paper. This style was developed from the scribe script by Zhōng Yáo 鍾繇 (151–230), and matured under the famous calligrapher Wáng Xīzhī 王羲之 (321–379), as well as under great calligraphers of the Táng dynasty like Ōuyáng Xún 歐陽詢 (557–641), Yán Zhēnqīng 颜真卿 (708–784), etc. In the square graphs of the regular script, the beginning or the ending of strokes are reinforced by a pause of the brush movement.

6. The Different Types of Characters

There are not only different *styles* of graphs, there are also different *types* of graphs. After a rich period of graphic variants of any kind, engendered by the proliferation of the script in all walks of life, as well as the necessity to propagate Buddhist faith, the need was felt during the Táng dynasty to organize and clarify the script. The increased importance of the state examination system lead to the development of model of characters, called *zìyàng* 字樣 (Zēng 1988), in which authors distinguished types of graphs such as *sútǐ* 俗體 'vulgar', *zhèngtǐ* 正體 'orthodox' or 'classical', *tōngzì* 通字 'current' ('correct' and 'common' according to Bökset 2006:21), *wùtǐ* 誤體 'erroneous', *jīn* 今 'modern', *gǔ* 古 'ancient', etc. 'Orthodox' or 'classical graphs' were usually related to the → *Shuōwén jiězì* 說文解字 dictionary. For example, according to the *Gānlù zìshū* 干祿字書 [Character book for a lucrative official position] written in the 7th century by Yán Yuánsūn 顏元孫 (ch. 1), *cōng* 聰 corresponds to the classical graph, whereas both 聡 and 聰 represent "current" graphs, that is graphs that have been used for a long time by habits. In the *Lóng kān shǒu jìng* (*Lóng kān shǒu jìng jiàn*) 龍龕手鏡 (龍龕手鏡鑒) [The handy mirror of the dragon shrine] of 997, 軆 is defined as the popular graph, and 軆 as the current graph of the classical graph *tǐ* 體 (ch. 1, s.v. radical *shēn* 身, Xíngjūn 1985:161). Popular graphs were mostly used in all sorts of administrative, judicial, religious, and everyday writing. The different types of graphs are one reason for the huge number of entries in modern character dictionaries.

7. The Simplification of Chinese Characters

During the 1950s, after a long period of debate going back to the end of the 19th century, the government of the People's Republic of China decided to simplify the characters in order to educate the people (Milsky 1974:30). Basing themselves on a wide historical, philological, and bibliographical documentation, the members of the "Committee in charge of the simplification of characters" (*Zhōngguó Wénzì Găigé Wěiyuánhuì* 中國文字改革委員會), inaugurated in 1954, chose certain graphs among existing ancient, popular, as well as cursive graphs for simplified forms, e.g.:

- *yún* 云 (ancient), instead of 雲 'cloud';
- *wéi* 为 (cursive), instead of 為 'become';
- *tǐ* 体 (popular), instead of 體 'body';

They also sometimes chose one constituent of a particular graph to replace the traditional character, e.g.:

- *yī* 医 (phonetic) instead of 醫.

They replaced phonetic constituents in some characters:

- *bǔ* 补 instead of 補.

They replaced semantic constituents in some other characters:

- *jì* 迹 instead of 跡.

They used a homophonous graph, e.g.:

- *gàn* 干 for *gàn* 幹 'trunk (of a tree)'.

Or they replaced the phonetic *and* the semantic element, e.g.

- *tīng* 听 instead of 聽;
- *bèi* 备 instead of 備.

The overall goal was to reduce the total number of strokes. Compare, for example, 6 strokes in *guān* 观 instead of 24 in 觀; 10 in *zuān* 钻 instead of 27 in 鑽; 7 in *tīng* 听 *versus* 22 in 聽; 5 in *lóng* 龙 *versus* 16 in 龍. *Vis-à-vis* the non-simplified characters, the simplified characters constitute another kind of graphic variants.

In 1977, a second list of simplified characters (such as *cài* 芽 for 菜, *jiǔ* 氿 for 酒) was published and was meant to replace the first one (Bourgeois 1978). However, due to much confusion and too many people complaining, the second list was eventually abrogated in 1986.

8. The Total Number of Chinese Characters

If the repertoire of graphic constituents is closed, while the inventory of characters stays open, one can always create new characters, although this is rather rare now. Thus, it is difficult to answer the question "how many characters are there?" The total → number of characters included in dictionaries has not ceased to grow since the 1st century CE: 9,353 characters in the *Shuōwén jiězì* of 100 CE; 16,917 characters in the *Yùpiān* 玉篇 [Jade tablets] of 543; 26,430 characters in the *Lóngkān shǒujiàn* 龍龕手鑒 of 997; 47,035 characters in the → *Kāngxī zìdiǎn* 康熙字典 [Dictionary of the Kāngxī emperor] of 1716; 60,370 in the *Hànyǔ dà zìdiǎn* 漢語大字典 [Great character dictionary of the Chinese language], etc. A dictionary of graphic variants like the *Yìtǐzì zìdiǎn* 異體字字典 [Dictionary of variant characters], published in Táiwān in 2004, gathers some 76,338 variant graphs for 29,892 characters, which gives a total of 106,230 characters. As a matter of fact, most large modern dictionaries include a significant number of graphic variants and rare graphs. However, about 6,000 to 8,000 characters are sufficient to read most modern publications. In 2013, the Ministry of Education of the People's Republic of China published a list of 8,105 standard Chinese characters (*Tōngyòng guīfàn Hànzì biǎo* 通用規範漢字表) including 6,500 common characters and 1,605 characters

for family names, toponyms, as well as other rare but useful characters.

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Chóngniǔ 重紐 (Repeated Buttons)

The term *chóngniǔ* 重紐, literally "repeated initial consonants", refers to situations where certain rhymes (=rimes) in the Middle Chinese → rhyming dictionaries of the *Qièyùn* 切韻 tradition (→ Traditional Chinese phonology) include separate homophone groups that seem to have the same initial consonant (based on →*fǎnqiè* 反切 spellings and on placement in the rhyme tables), which cannot be distinguished as *kāikǒu* 開口 *versus hékǒu* 合口, and which the later rhyme-table tradition distinguished by placing one in the third row of the tables (*sānděng* 三等) and one in the fourth row (*sìděng* 四等). The syllables placed in the third and fourth rows are conventionally called "division-III *chóngniǔ*" and "division-IV *chóngniǔ*" syllables respectively (in Chinese, *chóngniǔ sānděng* 重紐三等 and *chóngniǔ sìděng* 重紐四等); sometimes the word "grade" is used instead of "division". For example, the *Zhī* 支 rhyme of the *Guǎngyùn* 廣韻 includes two homophone groups with the traditional initial *Qún* 群 (g-), headed by the words *qí* 奇 and *qí* 衹 respectively, with different *fǎnqiè* spellings: both are *kāikǒu*, and the *Yùnjìng* 韻鏡 puts *qí* 奇 in the third row (division III), and *qí* 衹 in the fourth row (division IV).

The *chóngniǔ* contrasts are limited to syllables with non-coronal initials (labials, velars, and