Graphic Localism and Its Effects
on Visual Communication
with Special Reference to
Characters of the Chinese System of Writing[*]

0. Introductory

There are areas in the world where some systems of writing are commonly accepted by speakers of different dialects or even languages. However, since no writing system in the present world is accepted as the writing of all the languages, none of the writing systems is absolutely universal. Deviation exists in the seemingly or supposedly universal writing systems. The deviation is the graphic localism in question.

Every symbol in writing, each 'graph',[1] no matter whether it is an alphabetic letter, a syllabogram of a character, or a combination of any of these, started as an idiosyncratic individual which serves the need of an individual person at a certain period of time in a certain linguistic community to record a particular linguistic unit. In other words, it has its unique form and is assigned for some unique function. The unique form and/of function may prevail and spread across a large area. It then becomes universal in this area. Nevertheless, new forms and functions are being innovated and assigned continually. Before they become universal, they are always local to some extent, the newly innovated and the newly assigned being the most local. Some of the new forms and functions spread and also become universal relatively; some may just be confined to a certain smaller area within the larger area or even to an individual writer. These less fortunate forms and functions remain local. If they are used for visual communication in the larger area, they would not be understood or would be misunderstood.

The main purpose of this paper is to observe how graphic localism affects graphic universalism (Section 3). The graphic localism includes both form and function. By form it is referred to the choice among allographs as well as the design of new graphs; and by function it is referred to the designata of isographs, graphs of the same form but belonging to writing systems of different languages with different designations. Many factors account for the genesis of new graphs and assignment of new functions (Section 1). Roughtly speaking, there are linguistic factors and nonlinguistic factors. The linguistic factors include linguistic change and graphic adoption. The nonlinguistic factors are those which involve pyschology, culture and politics.[2] They have more bearing on the genesis of local semagraphs[3] than on phonographs.

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[1]A graph is a written form with semantic designation, and a gram without. In contexts where the distinction is redundant, 'graph' refers to either or both.

[2]It should be noted that stylistic change, the convergency of individual styles in the course of time, has been a constant trend in the evolution of writing. It is responsible for the variations in form found, for instnace, among the Devanagari systems in modern days. However, the formal changes in style rarely give rise to functional changes and hardly, if ever, conflicts of function of individual graphs in different localities. For the purpose of this paper this aspect of graphic variations as a result of stylistic change will not receive further attention.

[3]The commonly used term 'logograph' for Chinese characters is only a type of 'semagraph'. See Chang Yü-hung (1977b:Chart 1).

All these factors result in geographical, not to mention historical, graphic differences, in form and in function, by localization processes that can be classified into three types (Section 2). Innovation creates new forms with respective functions. Borrowing introduces new functions of old forms as well as new forms. Identification is a kind of borrowing. The only difference is that it occasionally reincarnates dead forms with new functions assigned to them.

As graphic localism is to a great extent conditioned by linguistic localism, it is expected that aside from the difference in linguistic units and the result of linguistic change, the difference in grammar will also bear some responsibility for graphic localism. The point has limited coverage and therefore is discussed as a remark (in Section 3.3). It is, however, a very important point since it helps to illustrate the significance of a common language as the prerequisite for graphic universalism, whether the common language is interdialectal, or international, whether living or dead.

1.   Factors of graphic localism

The unique forms or functions in a writing system are by definition the manifestations of graphic localism as is understood from the preceding introduction. The factors for the manifestations may be classified as linguistic, psychological, and sociopolitical.

1.1

In a literate society, when a new linguistic situation occurs, there may subsequently emerge new graphs or new uses of existing graphs to meet it. The new linguistic situation may be caused either by voluntary linguistic change or by pressure from other languages. By pressure from other language it is referred to linguistic borrowing and graphic adoption. Both voluntary linguistic change and linguistic borrowing may result in graphic innovation and graphic borrowing (Section 2). The voluntary linguistic change relevant to graphic change includes sound change, semantic change, and lexical change.

Semantic change alone rarely affects graphic change, but sound change exerts a great impact on graphs, even on semagraphs. Since the intervocalic consonant in English <fader> etc., 'father' became /ð/ in the sixteenth century (Scragg 1974:32), it has been replaced by <th>, making <father>. Substitution of semagraphs as a result of sound change is difficult to pin-point, but close approximation by conjecture is possible. Chinese *$m\underset{\smile}{i}ug$/$m\underset{\smile}{i}u$- (GSR 1109:t) 'fog, mist' has been coded as 霧 in standard Chinese as well as in literary Hokkien,[4] the linguistic form being $b\bar{u}$. Yet the same lexical item has developed in colloquial Hokkien as $b\hat{o}ng$. The latter is not identified as 霧 by the native speakers but as 霑, which is probably a Hokkien innovation that substitutes the etymological 霧.

The combination of semantic change and sound change affects graphic change more commonly than does mere sound change. The combined change may result in two or more lexical items of the same etymon. A different graph may then be used for encoding the derived item. For instance, Old Chinese 公 *$kung$ 'prince' (GSR 1173:a–f) has been derived along with sound change to ang to mean 'husband' etc., as well in Hokkien. A semantically unrelated form 尪 ang (GSR 739:t) has been in use for 'husband', whereas 公 is kept for 'prince' etc. ($kong$) and others ($kang, ang$).

When fusions of syllables occur, and the non-fused forms cease to exist, the fused forms are always coded in single characters in Chinese, either borrowed or innovated. For instance, some Taiwanese Hokkien subdialects contrast $m\grave{a}i$ 'don't' (imperative, from $\bar{m}$-$\grave{a}i$) and $b\hat{o}$-$\grave{a}i$ 'not want'. The fused form $m\grave{a}i$ is sometimes written as 邁. Another negation of auxiliary, 'unable',

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[4] 'Hokkien' is a covering term for the Amoy group of Southern Min. It is not as specific as 'Amoy' and is more specific than 'Southern Min'. The term is widely used in Southeast Asia, and as a matter of fact, less confusing than either 'Amoy' or 'Southern Min' when referring to the Amoy group.

is written in an innovated form 𣍐 in Foochow (*mē*, from negative + *ē*), in Hinghwa (*pē*, the same as in Foochow), and in Hokkien (*bē/bōe*, the same as in Foochow).[5] Even if the fused and the non-fused forms coexist, the fused forms are often written differently in single characters. In historical Chinese the examples of fusion are:

> 耳 ← 而已 'merely, only'
> 諸 ← 之於 'in it'

In Pekinese there are:

> 別 bié ← bú-yaò 'don't'
> 甭 béng ← bú-yòng 'don't have to'
> 俩 liǎ ← liǎng gě 'two persons'
> 仨 sā ← sān gě 'three persons'

Here 甭, 俩 and 仨 are formally local, and 耳, 諸 and 別 are functionally local. Many other examples of this kind can be cited from dialectal writings (See Section 2.3). The same principle applies to phonographs, such as English <don't>.

Linguistic borrowing ultimately expands the lexicon of the borrowing language and occasionally changes the phonological structure of the borrower. Both outcomes may demand new graphs for more precise recordings.

After the Chinese learned the name for 'lapis lazuli' from some language in central Asia and the name for 'agate' from Sanskrit (*aśmagarbha*), two graphs[6] 瑠璃 / 琉璃 and 瑪瑙[7] have been in use for the new terms respectively. Japanese, on the other hand, serves as an example of syllabus change due to heavy linguistic borrowing from Western languages. There is a perceivable process of change in the phonological structure of Japanese. A new syllabogram as well as some new combinations of syllabogram are required for more precise recording of new lexical items. The syllabogram ヴ thus has been added to the Japanese syllabus for the initial consonant [v] in *Vatican, Vanadin, vest, virgin, virus, volley*, etc., and the combinations ティ and トゥ have been innovated for the new syllables *ti* and *tu* as in *Marathi* and *Bantu*.

Cultural contacts not only cause a group of people to borrow lexical items but also to adopt a foreign system of writing. This is witnessed by the shift of Malay writing from Devanagari to Arabic and finally to Roman. In the process of the adoption, the borrower often finds problems in the maladjustment of a linguistic system to a borrowed graphic system. That is, a linguistic community that adopts a foreign writing system often encounters the problem of not having enough symbols to record all its linguistic units. There are many devices used to solve this problem, one of which is to invent graphs or grams[8] of the same type. Arabic script was the universal script in the Moslem world, and it is still so to a great extent. However, both Malay Jawi and contemporary Uighur have phonological units which cannot be represented by the original Arabic script, and new grams have been invented to suit thieir individual purposes:

	ŋ	p	ñ	v,w	etc.
Uighur	ڭ	پ	–	ۋ	etc.
Jawi	ڠ	ڤ	ڽ	–	etc.

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[5] There is definitely borrowing of this character among speakers of these dialects, but it is not known who started the innovation nor the direction of borrowing. Cf. Section 3.1 on the case between Cantonese and Hakka.

[6] A 'graph' is a gram or set of grams with a semantic designatum. Cf. Chang Yü-hung (1977b:44) and note 1 above.

[7] *Aśmagarbha* is literally 'horse brain', and the Chinese form (MSC *mǎ'nǎo*) is a loan translation. The graph is the semantization of 馬腦, literally 'horse brain'.

[8] See notes 1 and 6 above.

Similarly, a large proportion of the Chinese characters are shared by different linguistic communities. In the old times when classical Chinese was understood and used by the literati in different linguistic communities, these literati shared practically the same number of Chinese characters. The 'world' of Chinese characters was then in unison, and visual communication within it via classical Chinese was perfectly satisfactory. Nevertheless, classical Chinese is an ancient literary language and therefore foreign in a sense. Thus underneath the surface upper social structure which clung to the conservative universalism, there ran a stream of colloquialism, modernism, and localism. Local characters were then invented and local functions assigned to universal forms to meet local needs.

1.2

The psychological factors of graphic localism are graphic discrimination, analogy, and simplification. All involve innovation of graphic forms and may cause functional change as well.

Graphic discrimination is motivated by a writer's desire to make graphs reveal more of their meanings or sounds. Phonographs are supposed to record sounds only and have nothing to do with meaning. Nevertheless, in a time-honourd phonography where many of the phonographs are semagraphized with regard to their semantic designata and where there is a multiple-to-one relationship between graphs and sounds, the natives may associate certain grams with a certain semantic nuances. In English 'the -*or* suffix is a visual morpheme of prestige' (Bolinger 1946:336) and -*ie* 'is now generally used as a diminutive in new words' (ibid. 337). This association will eventually alter the structure of some phonographs such as the change from <adviser> to <advisor> (McDavid 1942:1). Similarly, a semagraph records a sound-meaning complex, a lexical item. But phonetization and semantization are two very active processes in the history of Chinese characters. Phonetization is the addition of a phonetic indicator to a graph so as to discriminate it from graphs similar in form or from a homograph with different designata. Semantization is the addition of a semantic indicator to a graph in order to show forth the special category of its semantic designatum.

It is impossible to trace the cause of phonetization of every character, bur fortunately there are examples for both of the cases mentioned above, i.e., to distinguish graphs of similar forms and to distinguish homographs. The earlier graphs in oracle bones for 'fowl' * and 'peacock' * resembled the graph for 'bird' (). In order to avoid ambiguity and confusion, 奚 () and 凡 () were respectively added to the two graphs as phonetic indicators (Tang Lan 1949:101). Many modern phonetic compounds have originated the same way. Of no less common frequency is phonetization to distinguish different designation of homographs. This often involves phonographization to begin with. As the graph 晶 for 'star' was also used to designate 'lustrous' (Lung 1972:100) and as sound change occurred, 生 was added to the original graph for 'star', leaving the original one to be specially designating 'lustrous'.

The revealing of semantic designata by semantization does not only involve discrimination. It betrays a man's world view or his cultural 'background'. In other words, the addition of semantic indicators is made in accordance with the designata. For example, the Chinese tend to 'add the bird radial on characters for birds, the fish radical on characters for aquatic animals, the worm and insect radical on characters for worms, insects, and reptiles, and the double sprout radical on characters for grasses' (Lu Deming [陸德明], Jingdian Shiwen [經典釋文], preface). They also tend to add or change radicals of characters according to the change in their material culture; thus after the Chinese civilization developed from the stone age to the bronze age, many characters either have the metal radical added to them or have their original radicals replaced by the metal radical.

In addition to semantization, assimilation is also a factor which gives rise to graphic analogy

(cf. Wang Li 1955:48–52). Assimilation refers to graphic analogic changes which are caused by the similarity between graphs in structure or in function, or by the forms of adjacent graphs. The introduction of French <ch> into English created <sh> (a simplification of <sch>) in English. They and the traditional <th> form a pattern of using <h> as a diacritic marker. The pattern subsequently forced OE <hw> to change to <wh> in ME (Scragg 1974:46–47). Since many Chinese characters designating birds have had bird radicals, the convention forced the phonetized pictographs for 'fowl' and 'peacock' (pictographs as shown on the previous page) to change to bird and yielded modern 雞 and 鳳. The constituent of one character may also affect that of anothers. Thus,

> 鳳皇 → 鳳凰 'phoenix'
> 場 → 塲 'an area of level ground'

The former is an assimilation of 皇 after 鳳, and the latter of 場 after 傷 'wound'.

Simplification is a process of graphic change contrary to discrimination by adding indicators. It is a much better known subject than the other processes stated above, and thus no further discussion will be needed here.

1.3

The sociopolitical implication of graphic localism is the normalization or conventionalization of graphs. It often concerns graphic policies. Both the linguistic situations vis-à-vis existing graphs and the writer's attitude towards graphs give rise to local graphs sporadically. That is, they occur to meet individual needs or individual views. They are occasionally conventionalized later, either by social practice or by normalization. In history many of the simplified characters have been socially accepted and considered standard. 垂 (埀) and 華 (華) have long been accepted as standard, but 乗 (乘) is still considered simplified and unofficial. In history also there are dictionaries claiming to be authorities. The claims may be based on social practice or on arbitrary selections by individual persons or individual institutions. The orthographs so claimed are normalized (which may or may not be conventionalized, especially when they are based on arbitrary selections).

The conventionalization or normalization of graphs has its limit. In other words, these graphs are universal only in a certain territory, large or small, where the conventionalization or normalization is effective. Even if the same graphological system may spread across sociopolitical or linguistic boundaries, since individual policies may be adopted concerning the writing system, complications are bound to occur if no concord is reached between governments. A sociopolitical body or a linguistic community may change some of the graphs which are also used by others who do not make the same changes or make different changes, such as the American orthographs *honor, center, catalog, jail,* etc., versus the British spelling. The ultimate result is still the existence of local graphs in a larger sense in spite of all the trouble taken in normalization. The same situation occurs between semagraphies of the same type. The individual standardizations are based on the requirements of circumstances within the individual communities concerned. As different means are taken in graphic simplification for different aims by Japan, the PRC, and Singapore, and as simplification is not considered proper in the ROC, there now exist three sets of standard Chinese characters (not including the Korean data, which is not available), e.g.:

<u>ROC</u>	<u>JAPAN</u>	PRC/Singapore (post-1976)	<u>Meaning</u>
農	農	农	agriculture
佛	仏	佛	Buddha
體	体	体	body
廣	広	广	wide
圓	円	圓	round; dollar
邊	辺	边	side, edge

Graphic policy applies to the engineering of a writing system, new and old alike. In the engineering of a new writing system, a decision has to be made between designing a new graphic system or adopting an existing graphic system. The former is definitely an innovation, but the innovation of a graphic system is not the concern of this paper. The latter raises another problem relating to graphic borrowing. Given that a graphic system is accepted without adding in innovated graphs, there still remains the task of allocating borrowed graphs. This is best illustrated by the phonological values of Latin letters in the writing of various languages. Chang Yü-hung (1977b) cites <j> in some detail as an extreme example. Many other letters are also used with different values in different writing systems.

2. Techniques in the localization of writing

Three main types of graphic localization are identified, identification, borrowing, and innovation. The first two types are the utilization of existing graphs or, in the case of phonographs, existing combinations of grams. The third type, as the term itself suggests, is the creation of new graphs.

A distinction has to be made between graphic identification and synonymous graphic borrowing. The former refers to the use of existing graphs to record lexical items etymologically related, or thought to be so related, to the original designata — evidence so far shows that graphic identification applies to semagraphs only. The latter is in common with the former only in their consideration of the semantic designata. In other words, the semantic designata of the synonymously borrowed graphs are the same as or similar to the original semantic designata. The two terms correspond to R. Cheng's (1978) *zhuanzhu* and *xunyong*. This paper follows the author's (1977b) distinction of two types of borrowing and keeps the use of 'synonymous graphic borrowing' vs. 'homophonous graphic borrowing' (*jiajie*). Anyhow, the nature of Xu Shen's *zhuanzhu* is still an unsolved problem in sinography. For details on synonymous graphic borrowing see Section 2.2.

2.1

Anyone encoding a local lexical item into a character (or characters) will try his best to find a character (or characters) etymologically related to the local lexical item. Only when he fails to do so will he have recourse to character(s) either semantically or phonologically (but not both) related to the lexical item. The characters designating traditional Chinese morphemes which are obvious cognates of the dialectal morphemes are most readily identified.[9] More often than not, however, the identification is done by careless researches and sheer speculations.

Some of the etymologically identified characters designate very different meanings from the common usage of the same characters, although they are truly related, and the local meanings designated by the identified characters may even be the original radical sense. The first Hokkien colloquial and the first Vietnamese chữ-nôm semantic designata (*lāi* and *côi* respectively) in the following examples are the radical sense. The chữ-nôm forms here are older Sino-Vietnamese

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[9]What I am dealing with here is the assignment of colloquial reading(s) to a character as a result of etymological identification. It is in fact a discussion of the problem of the colloquial versus literary readings of characters but from another angle.

forms than those considered as chữ-nho — otherwise, it is meaningless to talk about graphic identification in Vietnamese; the cases would then be graphic borrowing.

Hokkien	Literary Reading	Colloquial Reading
利	lī 'profit, again, advantage'	lāi 'sharp, as knife'
焦	chiau 'scorched'(lit.)	ta 'dry'
Vietnamese	Chữ-nho Reading	Chữ-nôm Reading
孤	cô 'alone; isolated'	côi 'to be orphaned'
初	sơ 'elementary'	xưa 'old, ancient'

Since etymological identification by individual writers is by and large ad hoc and speculative, there is always the possibility of false identification. In cases of irregular phonological correspondences, it is quite difficult to tell whether the borrowing is etymological or not. It is even more difficult in the case of common characters to pin-point the psychological status of the first user of these identifications whether he had any etymological consideration at all or just borrowed characters which designated the closest meanings. Examples of common characters in Hokkien which are probably falsely identified are:

	Character Reading	Lexical Reading	Meaning
脚	kiok	kha	foot, leg
人	jîn, lîn	lâng	man, person

Furthermore, when a dialect is reduced to dialectal writing in characters, every syllable has to be represented by a character. As such, when a morpheme is awaiting recording but its etymology is obscure, and when the recorder is not willing to give up identifying, he may force himself to believe that a certain character, often obsolete or exotic, must by the right character for such and such a morpheme. For instance, see 鈇 (in the first chart next page). It is, however, not easy to distinguish false etymology from forced etymology, for forced etymology automatically becomes false etymology. The difference is in the behavior of the recorder, but the end results are identical.

Characters may cease to function when their designated lexical items cease to exist or when they are replaced by other characters. False identification revitalizes some of these dead characters. These reincarnated characters do not have exactly, or do not have at all, the same designata as previously. The motivation to borrow synonymously or to identify characters is due to the recorders being not ready to innovate, or to borrow homophonously, characters. The less standard or standardized a local writing system is the more lexical items are awaiting recording. The nonstandard or nonstandardized writing system tends to identify characters whenever the recorders find it possible. As such, reincarnated characters are more frequently found in dialectal writings than in standard writings.[10] Among the Chinese, the Min speakers reincarnated characters more than did other dialect speakers.

Reincarnated characters are mostly phonetic compounds. They are used for recording on the basis of phonetic similarity between their readings and those of the lexical items or on the basis of semantic similarity between their dictionary meanings and those of the recorded lexical items. But more often than not the two criteria do not apply simultaneously. When the meanings are identical, similar, or related, they take priority irrespective of the difference in

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[10]The concept of reincarnation must be confined to individual dialectal writing systems. In other words, a character reincarnated in a local writing may be a character which has been very common in another. This character has to be considered as a reincarnated character only in the former dialect. For example, 蚱 is always common in MSC as 蚱蜢 zhàměng 'a kind of grasshopper', 蚱蟬 zhàchán 'a kind of cicada', and 螞蚱 mǎzhà 'a kind of locust'. Cognates of these lexical items do not occur in Min. On the other hand, some Foochow speaker coded 'jelly fish' (Foochow thà) with 蚱 (MC 蚱蟬 'a kind of cicada', the same as in MSC).

phonetic values. E.g.:

	Dictionary Meaning	MC	Foochow	Hokkien	Dialectal Meaning
紩	to sew	d'i̯ĕt.	–	thī^n	to sew
賗	to pay	γwan°	thìng	thàn	to earn

When the meanings of the dialectal designata are merely suggested by the semantic indicators of the characters, sounds of the phonetic indicators are taken into consideration, e.g.:

	Dictionary Meaning	Foochow	Hokkien	Dialectal Meaning
炖	burning intensely	thòng	–	to warm up leftovers
鮭	(a kind of fish)	–	kê	pickled fish or shellfish
矸	rocky	–	kan	bottle
蟉	(a kind of worm)	–	ka-chȯah	cockroach
蠘	(a kind of crab)			

2.2

Graphic borrowing refers to the borrowing of a graphic system as well as that of individual graphs. The borrowing of a graphic system forms the 'world' of a system of writing, such as that of Roman letters, of Cyrillic alphabets, of Devanagari, of the Arabic script, of the Uighur script, and of Chinese characters. In each 'world' there is a common core of grams (and graphs in some cases) contributed by the original user of the system. The borrowing of individual graphs applies to phonography as well as semagraphy; but in phonography, graphological borrowing is often, if not always, the adoption of a foreign spelling convention in place of the local one. Thus after the Norman conquest, OE <is> and <mys> gave way to <ice> and <mice> (Scragg 1974:43) and French <ch> replaced OE <c> for /tʃ/.

Semagraphic borrowing is of greater significance to our study here. There are two types: synonymous and homophonous. The former is to borrow a character with an identical or similar semantic designatum to encode a local lexical item The local lexical item so encoded does not bear any phonological relationship with the original. This type of borrowing is not prevalent in most languages and dialects using characters but is very common in Japanese and Hokkien, especially in the Taiwanese Christian hymnal.

The Japanese local phonological values for the synonymously borrowed graphs are known as kundoku, and the homophonously borrowed ones are known as ondoku. Below are some examples of the two Japanese reading of Chinese characters:

	Ondoku	Kundoku	Meaning
島	tō	shima	island
進	shin	susum-	advance
七	shichi	nana	seven
重	jū	omo-	heavy

Some Japanese lexical items are even encoded in two or more characters, the combinations of which designate the same or similar meanings as in standard Chinese. Observe the following examples:

	Ondoku	Kundoku	Meaning
明日	myōnichi	asu	tomorrow
梧桐	gotō	aogiri[11]	Chinese plane tree
蚊帳	–	kaya	mosquito net
梅雨	baiu	tsuyu	rainy season

The borrowed graphs in Japanese do not always have to have lexical doublets. They can be purely synonymous graphic borrowings.

In Hokkien Christianity there is a tendency to utilize more and more synonymous borrowings (whereas in secular literature the tendency is just the opposite). Compare the following texts: the first appeared in late 16th century, and the second is modern. In the examples synonymous borrowings are underlined. Lexical readings are based on the romanized texts in the sources.

(1) Hokkien Paternoster[12]

俺爹你在天上，你賜乞阮稱羨你名，你國賜乞阮。你賜乞阮只地上，順守你命，親像在天上。日日所用箇物，今旦日你賜乞阮。你亦赦阮罪，親像阮赦得罪阮人。魔鬼卜迷阮心悖，你莫放乞阮做，寧救阮苦難。哑民西士。

	Character Reading	Lexical Reading	Meaning
俺	iám	lán	we; our
在	chāi	tū	locative
人	jîn, lîn	lâng	man, person

(2) Taiwanese Hymnal[13]

日斜西山，　願主祢與我往，
暗冥愈深，　求你勿放棄我，
全無依倚，　同伴離別我去，
助人之主，　願你與我居住。

	Character Reading	Lexical Reading	Meaning
與	ú	kap	and; with
住	chū	tòa	to dwell
愈	jú, lú	ná	getting more...
勿	bu̍t	bo̍h	not
[放]棄	[hòng]-khì	[pàng]-sak	to abandon
助	chō͘	chān	to help
人	jîn, lîn	lâng	man, person
之	chi	ê	(attribute marker)
居住	ku-chū	khiā-khí	to dwell

A close examination would reveal that there are no local homophonous graphic borrowings in text (2), while in text (1) there are many, i.e.:

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[11] An alternative coding is 青桐.

[12] *Doctrina christiana en letra y lengus china* (Manila, c. 1605), cited in Appendix II, van der Loon 1967:144.

[13] "Abide with me, fast falls the eventide." From Tâi-oân Ki-tok Tióng-ló Kàu-hōe, Sèng-si (Tainan: Tâi-oân Kàu-hōe Kong-pò Siā, 1964, 1976).

	Hokkien Reading	Hokkien Meaning	MSC Meaning
乞	khit	(beneficiary word)	to beg
阮	góan	we, us, our	(surname)
只	chí	this	only
箇	gê	(adjectival marker)	(classifier)
[今]旦[日]	toà^n	[today]	morning
卜	poh	want, intend to	to divine

啞民西士 in text (1) is a transliteration of *Amen, Jesu* and thus is not relevant here.

Homophonous graphic borrowing is the adoption of a graph whose phonetic designation is identical or similar to the lexical item to be encoded. All languages and dialects using characters borrow homophonous graphs intralingually to different extents. The general tendencies are: 1) the more lexical items a language or dialect shares with the norm (the traditional Chinese) the fewer local homophonous graphic borrowings there will be; 2) the more standardized a language or dialect is, the fewer such borrowings will be found; 3) the more synonymous graphs a language or dialect borrows, the fewer homophonously borrowed graphs will be used; and 4) the more local characters are innovated, the fewer universal characters will be homophonously borrowed.

Japanese, Korean, and Vietnamese share fewer lexical items with standard Chinese than Sinitic languages do. In recording the local lexical items they went to two extremes. One is the innovation of enormous amounts of Vietnamese characters 'in conjunction with the regular Chinese script' (Hoà 1959:270). The other is the almost exclusively homophonous borrowing of Chinese characters in 8th century colloquial poetic works in Japanese. None of the characters in most of these works have their original or universal designation. The Korean *hyangka* falls in approximation to the Japanese case. Some illustrations are necessary to clarify this point. Each underlined homophonously borrowed character in the following examples stands for a syllable in Japanese and Sinitic languages, but it may also be less than a syllable in Korean.[14]

(3) Japanese Manyōshū[15]

余能 奈可 波, 牟奈之伎 毋乃 等志流 等伎子
伊與余 麻須萬須 加奈之 可利 家理
'The more I know that life is mutable,'
'The more forlorn does it grow.'

	Japanese Reading	Japanese Meaning	Chinese Meaning
余	yo	life	I; me
能	no	(possessive)	able
奈可	naka	interior	endure – may
波	wa	in regard to	the wave
牟奈之伎	munashiki	empty; vain	to low – endure – it – talent
毋乃	mono	thing	not – afterwards
等	to	when	grade
志流	shiru	know	ambition – to flow
等伎	toki	time; when	grade – talent
子	shi	(emphatic)	son
伊與余	iyoyo	all the more	he – and – me

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[14]Professor Hashimoto Mantaro has kindly made an effort to help me with the Korean text, from which the identification of homophonous borrowing in text (4) is made. The identification may not be completely correct, and I am fully responsible for all errors.

[15]報凶問歌 by 大伴旅人, from 校本萬葉集, Tokyo: 校本萬葉集刊行會, 1925, vol. 5, p. 16. English translation by H. H. Honda, *The Manyoshu, a New and Complete Translation* (Tokyo: The Hokuseito Press, 1967), p. 69.

麻須萬須	masumasu	increase	hemp – whiskers – 10,000 – whiskers
加奈之	kanashi	sorrow	add – endure – it
可利	kari	(perfective)	can – benefit
家理	keri	(interjectional)	family – management

(4) Korean *hyangka*[16]

去隱春皆理米,
毛冬居叱沙哭屋尸以憂音,
阿冬音乃叱好支賜烏隱,
兒史年數就音墮支行齊,
目煙迴於尸七史依衣,
逢烏支惡知作乎下是,
郎也慕理尸心未，行乎尸道尸,
蓬次叱巷中宿尸夜音有叱下是。

Spring, once past, will never return,
'(I) cannot keep sitting (here) and cry and deplore;'
etc.

	Reconstructed Korean Reading	Korean Meaning	Chinese Meaning
(去)隱	(ga)n	(nominalizer)	hide
皆理	gɔri	to hide; conceal	all – manage
米	mæ	(localizer)	rice
毛冬	modɔl	not	hair – winter
(居)叱	(ʔa)s	(final consonant)	chide
沙	sa	(suffix)	sand
(哭)屋尸	(ʔur)ol	(suffix)	house – carcass
以	ʔi	and	in order to
(憂)音	(si)rɯm	(second syllable of 'grief')	voice

etc.

Not so extreme are various local Chinese literary works, of which Cantonese tends to innovate more than the others, and Taiwanese folklore extensively borrows homophonous characters. The Japanese *Kojiki*, like all Chinese dialectal works, is less extreme than *Manyōshū* in being a mixture of homophonous borrowing with characters of traditional usage. In the following examples homophonous borrowings are underlined.

(5) Taiwanese narrative song[17]

朋友弟兄您正人，有榮來聽打磅空,
相襃句豆真丿送，不才宋個帶基隆,
宋個一生愛出外，着是專門塊編歌,
歌仔四句却真瓦，句豆做了足成話[活?]

	Normal Character	Taiwanese Reading	Taiwanese Meaning	MSC Meaning
您	–	lín	you (plural)	you (polite)
正	衆	chèng	multitudes	erect; correct
榮	閑	êng	leisure	glory
磅	–	pōng	to blast	pound (unit of weight or monetary)
豆	讀	tāo	clause; sentence	bean; pea
丿送	–	phiat-sàng	smart	downstroke – to escort
個	–	ê	(name suffix)	(classifier)
帶	–	tòa	to stay; to live	to carry; lace; belt
着	就	tiō	(emphatic)	to touch
塊	–	teh	(progressive)	(classifier)
四	詩	sì	poem	four
却	–	khioh	to arrange; to pick up	but; yet
瓦	倚	oá	close	tile
成	–	sêng	resemble	succeed

(6) Japanese *Kojiki*[18]

次國稚如浮脂而, 久羅下 那州, 多陀用 幣琉之時,   如葦牙因萌騰之物而, 成神
名宇麻志 阿斯 訶備 比古 遲 神,   次天之常立神, …

	Reading	Meaning
而	ni	(particle)
久羅下	kurage	jelly-fish
那州	nasu	to form
多陀用	tadayo	to float
幣琉	heru	(honorific)
宇麻志	umashi	fine; good
阿斯	ashi	reed
訶備	kabi	sprout
比古	hiko	(suffix to male personal name)
遲	ji	(honorific suffix)

It goes without saying that local homophonous graphic borrowing is based exclusively on local phonology. Thus when 罔 'net' was used to represent 'not' in Old Chinese, 'net' and 'not' were homophonous; when 罔 was used by the Chinese to represent Vietnamese 'yellow', the reading of the character in Chinese was homophonous with the phonological designator of Vietnamese 'yellow' (Quốc-ngữ *vàng*) ; and when 罔 was borrowed to represent Hokkien 'it will just do', the reading of the character and the phonological designator of 'it will just do' were homophonous (Hokkien *bóng*). In texts (3) and (6) above, the borrowing is based on the contemporary Japanese reading of the characters, in (4) on Korean, and in (5) on Taiwanese Hokkien. Thus the reading of 下 in (4) is *a* whereas in (6) is *ge*. When there is similarity of reading, such as 理 in (3) *ri* and (4) *ri*, it is because the deviation of the readings in both languages from Chinese is yet small.

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[18]安萬侶, 古事記, from Zhou Qiming's annotation and translation, Peking: Renmin Wenxue Chubanshe, 1963, Preface p. 2. Punctuation altered in this paper.

2.3

Phonographic innovation refers mainly to new words spelled out or new spelling conventions. In English <yo-yo> and <nite> are recent innovations. In Japanese, as mentioned in Section 1.1, ティ for *ti* and トゥ for *tu* are recent innovations. As for semagraphs, graphic innovation also includes the new permutations and combinations of existing constituents, as well as the creation of new constituents. Almost all attested semagraphic innovations by permutations and combinations accord with the two major principles governing the constitution of Chinese characters, viz. constitution by ideographization (mainly semantic compounding) and constitution by phonetic compounding.[19]

It is the tendency in Chinese writing in the past three or four thousand years that phonetic compounds prevail. The great majority of Vietnamese characters as well as Chinese local innovations are also phonetic compounds. The innovated characters underlined in the following Cantonese text (7) are exclusively phonetic compounds. To help the reader understand the text, homophonous borrowings are also indicated with double underscores and annotated.

(7) Cantonese[20]

舊時有個人，好貪心嘅。佢有一只鵝，一日生一只金蛋彼佢。 佢都重 唔心足。佢自己心裏頭想吓，佢話：我如果湯個只鵝，我就即刻得晒嗌嗙呤個的金蛋啦。佢咁樣想完，佢就真係去湯左個只鵝咯嚿。

Innovation	Reading	Meaning
嘅	kè	(adjectiveal/adverbial marker)
佢	khǿy	he; him
唔	m̂	not
吓	hǎ	once; a while
嗌嗙呤	hāmpānglāng	all
咁	kàm	like this/that
咯	lɔ	(particle of new situation)
嚿	pɔ̀	(final emphatic particle of situation)

Borrowing	Reading	Meaning
彼	péy	(beneficial marker)
重	cung	still, yet
湯	thong	to slaughter
個	kɔ́	that
的	ti	some
左	tsɔ́	(perfective aspect)
晒	sày	entire, complete

As for Japanese characters, the situation is just the opposite. With some exceptions, Japanese characters are normally semantic compounds. It is not surprising that no locally innovated phonetic compounds in Chinese and Vietnamese are for polysyllabic words, because conventional (non-polysyllabic) characters have monosyllabic readings exclusively. But in Japanese writing polysyllabic phonetic compounds do occur, e.g., 柾 *masa* 'spindle tree' with the phonetic

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[19]Even characters which seem not to show any involvement of their constituents with the phonological or semantic designata are structured in the same way that constructs compounds, such as Hokkien 𢙠 *chhōa* 'to lead' and Cantonese 𧗐[盅] *ham[cung]* 'earthen pot', the constituents of which are not related to their designated sounds or meanings.

[20]Lao Naixuan 1905, *Jianzi Quanpu*, quoted in Li Jinxi 1933, *Guoyu Yundong Shigang*, Shanghai: The Commercial Press, Preface p. 18.

正 *masa*. Since Chinese characters may have polysyllabic phonological values in Japanese, polysyllabic phonetic compounding by the Japanese is also not surprising.

Semantic compounding has long ceased to be a productive way of innovation. Only a handful of semantic compounds have been produced during the past two millenia, such as 尖 'sharp' and 楞 'square beams'. Such kind of compounds is also found in the writings other than standard Chinese. Cantonese has 孖 *maa* 'a pair', 儘 *lããy* 'the last among brothers sisters, or siblings', etc., and Japanese has 辻 *tsuji* 'crossroads', 榊 *sakaki* 'eurya ochnaces – an evergreen, a sacred tree', 畑 *hatake* 'dry farmland', etc. As for the modern noncompounding ideographs, there are even fewer instances. They are created by modifying existing characters. MSC 甩 'to cast away' is an instance, and Hokkien 冇 and 冇 are two other instances. The motives of modification that yield the last two examples are as follow:

	Reading	Meaning	Note
冇	phà$^{\text{n}}$	hollow; not solid; soft	based on 有 'have', which has something in 冂
冇	tēng/tāi$^{\text{n}}$	solid; hard	based on 冇 above, showing that is has something inside which 冇 does not.

With regard to the fused linguistic forms, two of the three types of graphic localization are attested. 耳 'merely, only' in classical Chinese is borrowing, 俩 'two persons' in Pekinese is innovation by semantic compounding, and � *xŏng* 'hope' in Cantonese is innovation by phonetic compounding. All these techniques were observed and discussed above. Yet often when there is a trace of fusion, that is, when there is a feeling of fusion in the native intuition, 'welded' characters or ligatures are used. We have Pekinese 甭 *béng* 'don't have to' above. The constituents of the graph, 不 and 用, indicate the two syllables that are fused together, *bù* and *yòng* respectively. The same technique is also used by other dialect speakers:

Szuchuan	嫑	pyàw	←	pû-yàw	不要	'don't'
Shanghai	覅	fyò	←	fəq-yò	勿要	'don't'
	朆	fəng	←	fəq-zâng	勿曾	'not have the experience of; never'

Incidentally, all these examples are negations.

Welding of characters for non-fused words was a practice in the oracle bone writing. It is also practised by the Japanese. There is one such welding extant which is entered in the Japanese official list of characters: 麿 *maro* 'first person pronoun used by ancient Japanese nobles; suffix to Japanese personal names', which has been in variation with 麻呂. The motivation is probably to regulate the one-to-one mapping between graph and meaning. The same technique was proposed in China in the 1930's[21] in the wake of Chinese script reform campaigns. To fulfill the requirement that one character corresponds to one lexical item, every lexical item irrespective of syllable number is supposed to be written as a single character. The technique is mainly to either weld or fuse the original characters for the syllables, and fusion occurs more often than welding in the practice. The attempt failed to gain support probably owing to two reasons: 1) the reforms entail unlimited expansion of the inventory of Chinese characters; 2) the polysyllabic characters violate the traditional one-to-one mapping between graph and sound.

As a matter of fact, the Tang Buddhists already used the technique of fusion in writing 菩薩 *púsà* 'Bodhisattva' as 卉. It is not just a recent technology, as in the case of welding, which is a Shang invention.

The foregoing does not exhaust all the techniques of graphic innovation. There are also many characters whose origins are still unknown, such as Hokkien 𡳞 *lān* 'the male organ'.

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[21]Yi Xiwu 1955–56 reports that in March 1936 the Research Institute of Peiping published 120 polysyllabic characters.

However, for the purpose of this paper there is no necessity to exhaust them.

3. Graphic localism versus graphic universalism

Graphic localism emerges mainly for dealing with linguistic units yet unrecorded and, in the case of normalization, for satisfying local sociopolitical situations. Both purposes lead to the same end: graphic mutual unintelligibility. On the graphic and lexical levels the unintelligibility is of three kinds: 1) the same linguistic designata designated by different graphs which are synonymously or homophonously related, 2) isographs with different linguistic designation, and 3) exotic graphs. In all, they are but a problem of form (different inventories of graphs) and function (complex correspondences between graphs and linguistic units).

To be familiar with a writing system is to be familiar with its form and function, with familiarity with the language as prerequisite. Unfamiliarity with the form entails unfamiliarity with the function; however familiarity with the form does not necessarily entail familiarity with the function. Therefore formal localism and functional localism are observed separately.

3.1

Formal localism is the result of local innovation. Being local, the innovated forms are either not understood or even not known to have existed by the people using the same graphic system. A man knowing the English system of writing will not necessarily understand some of the letters in the Scandinavian writing systems, aside from the language problem. A Chinese ignorant of Cantonese will not be able to appreciate text (7).

Cultural intercourse enables some innovation of other localities to be absorbed into a writing system. It increases universalism to some degree as more graphs become universal in the area concerned. The treatment of the borrowed foreign innovation is nonetheless different between phonographies and semagraphies. The 26-letter culture of the English speaking world seems quite intolerant of non-Roman letters and diacritics. Occasionally the foreign forms may be retained. However, the significance of the foreign symbols is often ignored and tends to be interpreted according to the Latin forms. As a compiler puts it, 'when a foreign word has become anglicized we see no reason to insist on retaining or reverting to the strict foreign form'.[22] Actually, even when the word is not anglicized, the foreign form is not retained. Thus <ü> in Romanized Chinese names is either written as <u> or as <ii>, and Vietnamese <Đ,d> (contrasting with <D,d>) are consistently reproduced as <D,d> in English. Such domestication of foreign phonographs is a kind of normalization, an attempt to adjust foreign forms to domestic writing system and make them universal within the domestic sociopolitical community. The domestication of foreign semagraphs, on the other hand, is to make the forms universal across sociopolitical communities. It can be done through lexical borrowing, such as MSC 垃圾 *lèsè* 'garbage' from probably the Wu dialect. It can also be done through local graphic identification and borrowing. When dialectal forms are written down in local characters by some dialect speakers, their cognates may then be written the same way in other dialect areas. They then become universal in the larger area where they are shared. The following local characters are shared by Cantonese and Hakka with cognate or probably cognate designata.

	Hakka	Cantonese	Meaning
嘅	kè	kè	(adjectival/adverbial marker)
唔	m̂	m̂	not
咁	kân	kàm	like this/that
冇	mô	mŏw	not have
佢	kî	khœ́y	he

These shared local linguistic forms either do not occur in MSC or are not considered cognates to MSC forms. They are therefore not written in the standard characters.

The borrowing of foreign graphs solves the problem of formal localism, but the functional problem concerning sound remains to be solved if they are not results of identification or synonymous graphic borrowing but graphic borrowing via lexical borrowing. It is required that these graphs each have a reading in the domestic language. For phonography this is easy to handle by reading partially according to the foreign phonological forms, such as English *rouge*, or according to the domestic spelling convention, such as English *Jesus*. For characters, the Japanese in the past did this in the former English way, but the Chinese generally do not. For all unfamiliar characters, the Chinese would first try to read them according to their phonetic indicators or according to characters using the same indicator. Therefore Vietnamese 字喃 *chữ-nôm* 'Vietnamese demotic writing' becomes (by switching the order of attribute and head) *nánzì* (喃字) in Chinese. 喃 *nán* is a borrowed character read according to the phonetic indicator 南 *nán*. Now in Taiwan the Japanese 味噌汁 *miso-shiru* 'bean paste soup' becomes written as 味噌湯 on hawker stalls and restaurants and is read as *weisēng-thāng* in Mandarin. 噌 *sēng* is another borrowed word, read according to some other character using the phonetic indicator 曾, such as 僧 *sēng* 'monk'.

It is only when no phonetic indicator is present in a borrowed character that it is read according to the foreign phonological forms. Actually only one such instance is available.[23] The Chinese in Malaya either invented or incarnated 峇 to transliterate [ba] and [va] in Malay and English, read *bā* [ba˥] in Hokkien, as in the forms for *Baba* 'straits born Chinese', *Bali* (an Indonesian island), *batok* 'coconut shell' (in *Bukit Batok*, place name), *River Valley*, etc. After Mandarin became official, this character was assigned *bā* [pa˥] as its reading. There are other dialectal non-phonetic compounds unavoidable in Mandarin, especially personal names, such as Taiwanese Hokkien 屘 *ban* 'the last among brothers, sisters, or siblings'. There must be Mandarin readings for them. Unfortunately they are not known to this author.

Individual graphic borrowing between different writing systems serve to reduce the degree of graphic localism to some limited extent. The effort to reduce graphic localism will be even more fruitful if different sociopolitical bodies using the same type of graphic systems agree to select jointly the same graphic forms as common norms from among allographs. As seen from Section 1.3, there now exist at least three sets of characters. The situation does not mean that visual communication between communities will immediately be jeopardized, but it in fact hinders visual communication to a certain degree, however slight. The slight disturbance is attributed to the fact that now many, probably most, people in these communities still know most of the variants. It is not impossible that some day in the future most people in individual communities will know only their own varieties,[24] just like what happens in Devanagari today. On the other hand, agreement between communities only concerns common graphs. A one hundred percent

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[23]Zheng (1974:ii, 72) treats Japanese 匁 *momme* '0.1325 ounce or 3.7568 grammes' as a character with no MSC reading. The character did occur in a temple tally in Taiwan as reprinted in 片岡巖,《臺灣風俗誌》, Taipei, 1924, p. 897, which is also a unit of weight. It is very likely a 'formalized' style of the popular writing 戔 (錢), like modern Chinese 〈书〉 being a 'formalized' style of 〈書〉 in the 'grass' style. A Taiwanese 錢 equals to 0.132277 ounce or 3.75 grammes.

[24]A young clerk in a Japanese post office had difficulty in copying out 號, which I wrote on the form for sending a parcel. He apparently did not know that it is a variant of 号. Personally I was not certain whether 邓 was the simplified form of 鄧 for quite a few years.

agreement still leaves many graphs that serve the need of one community but not others and thus are not universal. The case is more severe when the communities speak different dialects or languages, for then there are fewer common lexical items between them.

3.2

Between writing systems using the same type of graphs, the function of their graphs may enter into two kinds of undesirable relationships, as stated in the introduction to Section 3. One is that the equivalent designata are designated by different graphs. The other is that the same graph have different designata in different systems. The different forms of characters in Section 1.3 are typical examples of the first kind. The next examples involve the other kind of relationship as well. In Bahasa Malayu <e> equals <é> in Bahasa Indonesia, and Malay <ĕ> equals Indonesian <e>. Hanyu Pinyin uses <b, d, g> for voiceless unaspirated stops, whereas in many other writing systems voiceless unaspirated stops are designated by <p, t, k> while <b, d, g> stand for voiced stops.

Cases purely of the first kind of relationship are formally local. They are already discussed in Section 3.1. The concern here is with cases involving the second kind of relationship, the isographic relationship, the one-to-multiple mapping between designators and designata. For visual communication the sound is not significant; so the designata here in question is the meaning.

Between phonographic systems the visual confusion is usually trivial and can be disambiguated in contexts. As for semagraphs, the isographic problem is more significant. When local innovations are isographic either with innovations of other localities or with the standard ones, misunderstanding definitely will occur, for it is now a question of isographic identification. See the following examples. The listed local innovations are either standard or nonstandard.

	PRC	Singapore
冈	ridge of a hill (岡)	the same (同)
耒	a plough (耒)	to come (來)
竺	a kind of bamboo (do)	simple; simplified (簡)
忈	moral (德)	idea (意)

	Chinese	Japanese
豊	a sacrificial vessel (do)	abundant (豐)
芸	rue (plant) (do)	skill; art (藝)
辺	road; way (道)	side (邊)
广	wide (廣)	eagle (鷹)

	Hokkien/Teochew	Cantonese/Hakka
冇	hollow; not solid; soft	not have

Isographs can be constituted by two or more characters, and their semantic designata may or may not be related etymologically, e.g.:

	Chinese	Japanese
手紙	toilet paper	letter (mail)
切手	to cut hand	postal stamp
下手	to take the initiative	unskillfulness

	Mandarin	Taiwanese
阿媽	amah; serving woman	grandmother
拳頭	fist	boxing; martial art
變鬼	to turn into ghost	to play tricks

The problem of graphic identification with regard to characters is their semantic designation. It does not involve phonological designation because of the semagraphic nature of the character. Whenever a graph shared by different linguistic communities has an identical meaning, mutual intelligibility is achieved despite the difference in reading. The unimportance of phonological designation is further supported by the multiple phonological designation of standard or universal characters which do not hinder intelligibility among linguistic communities, such as 天, 地, 人, 日, 月, 星 'heaven, earth, man, sun, moon, star'. As such, synonymous graphic borrowing such as in text (2) gives little difficulties to cross-community communication, but homophonous graphic borrowing such as in texts (1), (5) and (6) is an obstacle and can reduce mutual intelligibility to zero, as in the case of texts (3) and (4). In the texts using homophonously borrowed characters, each graph so borrowed has a different semantic designatum from that in standard Chinese.

Texts (3) and (4) are cases of non-Chinese homophonous graphic borrowing whose linguistic designata are totally foreign to Chinese. Even Chinese dialectal borrowing of the same kind will not necessarily be totally intelligible. Adjustment is required, and if the reader fails to adjust, he is lost. Take text (5) for example. Slight adjustment is sufficient for the reader to understand 句豆 'sentence and phrases' which is 句讀 in literary Chinese. A speaker of the Shantung dialect may adjust himself to decode 正人 as 眾人 'everybody'. Nevertheless, the rest may just remain riddles due to nonparallel phonetic correspondences, such as 榮 (*êng* for 閑 'leisure') and 瓦 (*oá* for 倚 'close to'), or to difference in lexes, such as 磅空 (*pōng-khang* 'tunnel') and 丿送 (*phiat-sàng* 'handsome'), and even to homophonous borrowing of synonymously borrowed characters, such as:

個	*ê* (nominalizer)	←	*ê* (general classifier)
		←	Mandarin *gě* (general classifier),
塊	*teh* (progressive marker)	←	*tè* 'piece' (classifier)
		←	Mandarin *kuài* 'piece' (classifier)

Synonymous graphic borrowing is a solution to avoid graphic localism as conditioned by lexical localism; nevertheless, synonymous graphic borrowing comes to the rescue only imprecisely and temporarily. A synonymously borrowed graph may not designate the same meaning as it does in the donor. The result is isographic instead. Take Japanese 紅葉 *momi ji* 'maple tree; red-leaf' for example. The first gloss refers to a species of tree whose leaves turn red in autumn, whereas Chinese 紅葉 *hóngyè* is any red leaf, corresponding exactly to Japanese 紅葉 *kōyō*. Languages sharing truly synonymous graphs do not develop hand in hand, and semantic change will cause these graphs to become isographs. Take Japanese 喧嘩 *kenka* 'quarrel' to illustrate. It probably is a derivation of Chinese 喧嘩 *xūanhuá* 'clamour'. In such circumstances synonymous graphic borrowing only serves as a transitional stage in slowing down the production of isographs.

On the other hand, very often one finds it easier and more practical to borrow homophonously than synonymously. Thus Taiwanese Hokkien songs use more homophonous borrowing if they are written by the less sophisticated (R. Cheng 1978:311–312). After all, one writes for one's fellow speakers to read, not for those who do not know the language. Synonymous graphic borrowing creates difficulty for fellow native speakers of the borrower. A native speaker, like any foreigner using characters, might understand a text such as text (1) with synonymously borrowed characters, but like a foreigner, he will not necessarily know the exact

or intended phonological designata of many characters. Take 在 in text (1) for example; it could stand for the literary *chāi* as well as the colloquial *tī* etc., and both readings are comprehensible and perfectly natural in the context, but one would not know which is the writer's intention had not the romanized text been compared. Confronted with such texts, one has to figure out which characters are etymological, which are synonymously borrowed, and which are homophonously borrowed. As a matter of fact, very often there is no agreement reached among native speakers, at least in the case of modern Hokkien. On the contrary, homophonous graphic borrowing causes less problem for native speakers.

As little agreement can be reached between communities on a common writing, as synonymous graphic borrowing cannot guarantee a common semantic designation, as homophonous graphic borrowing proves to be more practical, isographic identification continues to be a challenge to readers from different communities.

3.3

Graphic localism involves more than forms and functions of individual graphs. The arrangement of graphs also counts. Visual message is transmitted not graph by graph but group of graphs by group of graphs. Supposing two dialects have identical lexical items and use identical graphs for these lexical items, the sentences or phrases written will not be identical if the word orders are different. Pekinese 他沒來呢還 'He has not come yet' is a classic example of word order. To this add Singapore Mandarin 五十個人才 'fifty people only', which to all readers means 'fifty men of ability'. Fortunately, both the Pekinese and the Singaporean Chinese try to write as close to MSC as possible, and thus 他沒來呢還 and 五十個人才 (for 'fifty people only') do not appear on paper except for special purposes. It is just like the Chinese, the Koreans, the Japanese and the Vietnamese trying to write as close to classical Chinese as possible in the past and like the modern Chinese dialect speakers trying to write as close to MSC as possible.

The Japanese in the past seem to have tried to minimize the problem of syntactic difference, among others, by writing in conformity with classical Chinese. Except for the homophonous borrowings discussed above, text (6) is written in imitation of classical Chinese. So is text (8) below, which is modern. To do so, the writers have to write in a word order that is not Japanese. On the other hand, the reader has to read it in an order other than the order in which it is written. For instance, the first clause of text (6) is written in the order $_1$*tsugi-ni kuni wakaku* $_2$[*no*] *gotoku* $_3$*ukaberu abura* $_4$*ni* [*shite*] 'next, a young country resembling floating oil', but it is to be read in the order 1-3-2-4.

(8) Japanese *sōrōbun* (epistolary)[25]

為歳暮之御祝儀、不相變鰤二本進上仕候。押詰候而殊之外取込候故、明春緩々可得尊意候。謹言。

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[25]From 中川靜 1925, 書翰文精義, vol. 2, Tokyo, p. 49.

	Reading	Meaning	Type
御	go	(honorific prefix)	homophonous
不相變	aikawarazu	as usual	synonymous
鰤	buri	yellow-fish	innovation
本	hon	(classifier of fish)	homophonous?
仕	tsukamatsuri	to do	synonymous
候	sōrō	(final particle – honorific, in	synonymous
		sōrōbun only)	
押詰	oshitsumari	approaching the end of the	synonymous
		year	
而	shikōshite	and also	synonymous
殊之外	koto-no-hoka	exceptionally	synonymous
取込	torikomi	in a bustle, confusing	synonymous + innovation
故	yue	because	synonymous
緩々	yuruyuru	without hurry	synonymous

The conformity to Chinese word order does not make Chinese readers comfortable, however. Actually the two texts are only vaguely intelligible to the Chinese. In text (6), 稚 *wakaku* 'young', 因 *yori* [-*te*] '(particle:) on and after', and 萌騰 *moe-agaru* 'to sprout' are synonymous borrowings alright, but the first two are not used the same way as they are in Chinese, and the third one is not a group of characters that the Chinese would combine to encode a compound of the same meaning. The same difficulties exist in text (8). A list of lexical items that are alien to the Chinese either in form or in function is given following the text. In the list, 込 is a Japanese innovation, and 御 is a homophonous borrowing. 鰤 may also be a Japanese innovation independent of Chinese 鰤 'a kind of spiral shell', and 本 may be a homophonous borrowing, though 本 in Chinese is also used as a classifier (cf. Section 4 below). The rest are synonymous borrowings.

Neither will the conformity to MSC syntax make the reader comfortable if a passage is full of nonstandard lexical items. It may even be unintelligible. Text (9) is a passage composed for the purpose of illustrating this point. It is based on colloquial Singaporean Mandarin with a high concentration of local linguistic features. It is the kind of writing favoured by some nationalistic Singaporeans.

(9) Singaporean Mandarin

亚峇和聪明公司[a]隆帮[b]我的罗厘车[c]态[d]去巴杀[e]买胡姬[f]。我們走沙拉[g]了，走进山芭[h]，找不到路回。问人宊[i]，人宊都说不�[j]，搞得汁头雾水[k]，结果撞到一顶吊秤车[m]，罗厘坏了。我叫亚峇搭德士[n]跑先，毗[p]人未拖去修理了釜[q]十千[r]，真衰[s]！

Gloss

a.	to share labor or expenses; together	j.	不懂 don't know
b.	to go along with; to take a lift/ride	k.	滿頭霧水 frustrated
c.	lorry	m.	a portable motorized crane
d.	想	n.	taxi
e.	bazaar; market	p.	帶
f.	orchid	q.	整
g.	wrong; mistaken	r.	ten thousand
h.	remote mountains; jungles	s.	bad luck
i.	人家		

The text deviates from MSC syntax only in two occasions, that is, in the lack of directional complement 去 *qù* (departing) following 回 *húi* 'return' as required in MSC, and in the order of

the verb 走 *zǒu* 'go' preceding its attribute 先 *xiān* 'first' rather than following it. Nevertheless, the text is still difficult for the noninitiated to Singaporean Mandarin due to the great amount of lexical items borrowed from English, such as 罗厘 *luólí* 'lorry' and 十千 *shíqiān* 'ten thousand', from Malay, such as 隆帮 *lóngbāng* 'to go along with' and 沙拉 *sālaʔ* 'wrong', and from other Sinitic languages, such as 公司 *gōngsī* 'to share labor or expenses' and 衰 *shuāi* 'bad luck'.

In short, aside from individual graphic forms and functions, lexicon and syntax play decisive roles in the intelligibility of visual communication. The same lexical items may not be permuted and combined the same way in different localities. Likewise, even subdialects with practically identical syntactic structures, in addition to identical graphs, have difficulties communiticating with one another visually if they deviate greatly from one another in lexicon. In other words, graphic localism is basically a linguistic problem. Only when linguistic differences are leveled can graphic universals be attempted.

4.   Conclusion

The same linguistic unit can theoretically be recorded in an infinite number of ways. In practice, however, if a linguistic unit is recorded by more than one graph, the number of allographs is still very small. This is due to the following factors. Firstly, at the very beginning of writing there are not many people who do the recording. Secondly, when these pioneers have set their examples, the later recorders will usually follow suit. There may be reformers, but their number is also limited. For this reason, graphic innovations for a single linguistic unit are in general not many. Even so, communication can in this way be hampered either temporally or permanently. The situation could be worsened by recording different linguistic units by the same graphs.

Competition among the variants leads to graphic normalization. Graphic normalization is the key to mutual visual understanding. Within the same sociopolitical boundary it is easier to handle the task of graphic normalization. But between communities it is conditioned by the motivation and willingness of the two parties, such as between Indonesia and Malaysia; otherwise, the problem remains, such as between China and Japan.

Granted that intercommunity graphic normalization is satisfactorily achieved, what are normalized are graphs that have or share the same designated linguistic units. It is true that Sinitic languages share many lexical items with MSC, it is also true that identification and synonymous graphic borrowing can increase mutual intelligibility, but it is not true that the use of the same graphs for the shared lexical items and for the synonymous or cognate lexical items means the elimination of graphic localism. First of all, there are still idiosyncratic or local nonsynonymous lexical items. They are still designated idiosyncratically either by borrowing or by innovation. Secondly, there are synonymous lexical items that cannot be written the same way, such as 親像 (MSC 好像) 'like, as; as if' in text (1), 暗冥 (MSC 夜晚) 'evening, night' and 依倚 (MSC 依靠) 'to rely on' in text (2), and 萌騰 'to sprout' (literary Chinese could be 發) in text (6). Thirdly, there are cognate items that are written the same way alright but have different functions, such as 足 'very' (MSC 'enough') in text (5), 係 'to be (here emphatic)' (MSC 是, classical Chinese 係) and 走 'to run, to go in a hurry' (MSC 'to walk') in text (7), 本 '(classifier, for fish here)' (MSC classifier for book) in text (8), and 忺 (懂) 'to know' (MSC 'to understand') in text (9). In this area no mutual understanding is to be expected.

Chinese characters in Mandarin Chinese writing were to a great extent normalized even before the official move in the 1950's. There is certainly a common core of graphic universals in Chinese; nevertheless, this common core is only sustained by the common vocabulary and similar grammar. Without a common language as the object of recording, there is always graphic localism. Even with a common language as the recording object, graphic localism develops in accordance with the development of deviation of the common language. In the case of dialectal or local literature cited in texts (1) to (9), the possibility that the Chinese can communicate through writing is very doubtful. The situation can either be played up or

played down, neither of which is the intention of this paper. With the constant infiltration of non-MSC lexes into written Mandarin, through the writing of non-MSC speakers, there is no overall graphic universal foreseeable. It has to be pointed out, however, that at the present stage when non-MSC literature is not deemed important, a nearly overall universal is a fact, not a fiction, within each of the various Chinese communities.

One should not argue against the trans-spatial advantage of the characters, but one should know where the limitation of the transcendence is. It is not easy for writing of the same variety of a language to achieve absolute universalism. It is even more difficult, in fact high impossible, for writings of different varieties of a language or different languages to agree on the use of graphs, either formally or functionally or both. Willy-nilly, graphic localism remains in spite of all the efforts at standardization. The question is one of degree.