

BENJAMIN K. T'SOU

LANGUAGE CONTACT AND LEXICAL INNOVATION

1. PROBLEMS CONCERNING THE STUDY OF LOAN-WORDS,
LEXICAL IMPORTATION AND CULTURAL DIFFUSION

When languages come into contact, either directly through the personal contact of the speakers of these languages, or indirectly through the media, one common outcome is the diffusion of cultural items across linguistic boundaries. One clear manifestation of this cultural diffusion is the emergence of new lexical items in a recipient language. These new lexical items are replicas of models in the donor language and they can be manifested as phonetic or semantic adaptations, including calques or translation loans. The linguistic processes relevant to this phenomenon have often been the subject of studies concerned with loan-words or word borrowing. These traditional studies have concentrated on *what* has been loaned, and *how* the loans have come about, rather than *why* they have come about, which is an equally, if not more, intriguing question. Before proceeding to examine these questions it is important to first note that in the literature on loan-words in Chinese two distinct trends have emerged.

On the one hand, many scholars¹ have strongly insisted that the study of loan-words is concerned with phonetically adapted lexical items, to the exclusion of semantically adapted items, which, according to them, should simply be seen as new lexical items in the language resulting from 'influence' by items from another language. We shall call this the Narrow Approach to lexical importation.

On the other hand, other individuals have argued from a wider perspective involving the addition of non-linguistic but sociological and

¹ Cf. e.g. Lü Shuxiang 呂叔湘 . 1942. *Zhongguo wenfa yaoliüe* 中國文法要略 (An outline of Chinese grammar). Shanghai: Shangwu yinshuguan; Gao Mingkai 高名凱 and Liu Zhengdan 劉正燾 . 1958. *Xiandai Hanyu wailaici yanjiu* 現代漢語外來詞研究 (A study of loan-words and hybrid words in Modern Chinese). Beijing: Wenzigaige chubanshe; Henry A. Gleason. 1961. *An Introduction to Descriptive Linguistics*. Boston: Holt, Rinehart and Winston; Wang Li 王力 . 1958. *Hanyu shigao* 漢語史稿 (A draft history of the Chinese language). Beijing: Kexue chubanshe; Zdenka Novotná. 1967. "Linguistic Factors of the Low Adaptability of Loan-Words to the Lexical System of Modern Chinese", *Monumenta Serica* 26, pp. 103–18.

cultural considerations that lexical items reflecting foreign origin (regardless of phonetic or semantic adaptation) should and can be fruitfully studied within the same setting.²

This approach assumes that similarities in denotation traceable to a foreign origin without necessarily including phonological similarities qualify an item for consideration under lexical importation. It also subscribes to a simple and broad relationship between language and culture. We shall designate this the Broad Approach.

The intolerance for a broader basis of consideration exemplified by the Narrow Approach is in keeping with the view among structural linguists that language is strictly stratified in a hierarchy. Thus, not only is analysis in phonology autonomous and admits no morphological or grammatical considerations, but the analysis of loan-words should be separated from non-lexical factors such as societal and cultural influence and intervention. The rigor with which this approach can be brought to bear on the analysis of loan-words is considerable. Thus, Gao and Liu were able to explore 1,266 (phonetically adapted) loan-words and Novotná managed to study 1,450 similarly defined items.³ They have been able to produce an extensive taxonomy of linguistic and etymological categories for this kind of loan-words from which some inferences about cultural influence can be drawn. However, these inferences appear to be unnecessarily limited and circumscribed by a concern for descriptive adequacy rather than an explanatory account of the phenomenon.

The Broad Approach, on the other hand, permits a much more exhaustive analysis of cultural impact in language contact situations and could, if pursued vigorously, offer the possibility of proposing useful indices on the extent and nature of such impact which are not easily or meaningfully quantified.

² Cf. Chao, Yuen Ren. 1976. "Interlingual and Interdialectal Borrowings in Chinese", in: id. *Aspects of Chinese Sociolinguistics: Essays by Yuen Ren Chao*. Stanford: Stanford University Press and Beijing: Kexue chubanshe, pp. 184–200; Gao Huanian 高華年. 1943. *Heiyiyu zhong Hanyu jieci yanjiu* 黑夷語中漢語借詞研究 (A study of loan-words in the Nasu language). Kunming: Nankai daxue; Benjamin K. T'sou. 1975. "On the Linguistic Covariants of Cultural Assimilation", *Anthropological Linguistics* 17, pp. 445–65; Federico Masini. 1993. *The Formation of Modern Chinese Lexicon and its Evolution Toward a National Language: The Period from 1840 to 1898*. Berkeley: Journal of Chinese Linguistics (Monograph Series, no. 6).

³ Cf. Gao and Liu 1958; Novotná 1967.

While it is generally recognized that there can be no phonetically adapted loan-words without cultural contact and cultural diffusion, there is little realization that the converse is not true; cultural diffusion is not exclusively limited to, or manifested by, phonetically adapted loan-words. In order to understand the full impact of cultural diffusion which underlies language contact, it would be unnecessarily limiting if concern in the study of loan-words is to be restricted, as it has been, to the phonetically adapted kind. In deference to some of the traditional and established interpretations of what is meant by *loan-word*, the term *lexical importation* has been suggested as a general term and as a refinement of Chao's notion of interlingual borrowing.⁴ This new term is justified by the fact that *lexical importation* should be differentiated from a subsequent stage of *lexical substitution*, both of which are instances of interlingual (and inter-dialectal) borrowing.

From a longitudinal perspective lexical importation is only an initial phase in language contact, which, if events were to run the full course, could lead to bilingualism and even language shift as well as an implied cultural shift.⁵ This dynamic perspective is not commonly realized because in any given society only marginal groups, such as emigrants or immigrants, would normally undergo the complete course of change. However, this is probably more true of the Old World and the Third World than of the New World. Nevertheless there are ample examples in the former cases. The assimilation by the Han Chinese of Manchus and other Tungusic groups, such as the Kitans and the Jurchens, and the language shift of the Celts in Ireland and Scotland all bear witness to such colossal shifts on a global scale. Examples are prevalent in the Americas as well where no significant indigenous language group (except possibly for Navaho and Guarani) could maintain its language. The creole language communities (e.g. Haiti and Jamaica) are perhaps the only examples of incomplete transition.

A contact (and often confrontation) situation readily results in groupings polarized by a dominant group and a dominated group on a global level, though the domination relationship may not be consistently drawn across all aspects of society and culture. In a contact situation between societies A and B, Society A may dominate in most fields except in cuisine for which Society B could have the dominant

⁴ T'sou 1975.

⁵ Ibid.

role. The resultant situation will be one in which cultural diffusion goes in the direction from A to B in most fields except cuisine where diffusion goes from B to A. Contact between China and the West in recent times may be a simplistic example. The diffusional process would begin with *importation* and could then be followed by *substitution*. For example, new items in the area of food and cuisine could be first added to the recipient culture, along with the designations for them (importation), and subsequently some or many of these items may replace indigenous items (substitution), thus altering the fabric of the recipient culture in important ways. It will be easy to see then, that given the close relationship between language and culture, lexical importation is culturally additive and lexical substitution is culturally subtractive.

As an example, one could consider the contact situation between China and Japan. As a consequence of language contact, the Japanese language has undergone massive and unprecedented lexical, as well as general linguistic, importation, which had also led to lexical substitution. Consider, for example, the system of numerals and nominal classification in Japanese. Examples from the native system are given in the following table:

Table 1: Native counting in Japanese

<i>Numeral</i>	<i>... in isolation</i>		<i>... counting objects</i>		<i>... counting people</i>	
1	<i>hi(to)</i>	一	<i>hitotsu</i>	一つ	<i>hitori</i>	一人
2	<i>fu(ta)</i>	二	<i>futatsu</i>	二つ	<i>futari</i>	二人
3	<i>mi</i>	三	<i>mittsu</i>	三つ	<i>sannin</i>	三人
4	<i>yo</i>	四	<i>yottsu</i>	四つ	<i>yonin, yottari</i>	四人
5	<i>i(tsu)</i>	五	<i>itsutsu</i>	五つ	<i>gonin</i>	五人
6	<i>mu</i>	六	<i>muttsu</i>	六つ	<i>rokunin</i>	六人
7	<i>na(na)</i>	七	<i>nanatsu</i>	七つ	<i>nananin, shichinin</i>	七人
8	<i>ya</i>	八	<i>yattsu</i>	八つ	<i>hachinin</i>	八人
9	<i>koko</i>	九	<i>kokotsu</i>	九つ	<i>kyunin, kanin</i>	九人
10	<i>to</i>	十	<i>to</i>	十	<i>junin</i>	十人

When counting people, five out of the ten basic numerals (i.e. 3, 5, 6, 8 and 10) have been substituted by Chinese ones, and there are 3 additional numerals (i.e. 4, 7 and 9) which have the imported Chinese numerals coexisting with the indigenous ones. The same is true of the

counter or classifier *-tari* (native Japanese) and *-nin* (Chinese). While *-tsu* is the indigenous general counter, there are at least about a dozen others:

Table 2: Japanese counters

No.	Japanese	English
1	<i>ashi</i> 足	steps, paces
2	<i>ban</i> 晩	nights
3	<i>fukuro</i> 袋	bagfuls
4	<i>hako</i> 箱	boxfuls
5	<i>heya</i> 部屋	rooms
6	<i>kire</i> 切れ	slices, cuts, pieces
7	<i>kumi</i> 組	groups, sets (of matching objects)
8	<i>ma</i> 間	rooms
9	<i>sara</i> 皿	platefuls
10	<i>saji</i> 匙	spoonfuls
11	<i>soroi</i> 揃い	sets, suits
12	<i>taba</i> 束	bunches
13	<i>tsuki</i> 月	months

The underlying classification of semantic space in this system, when compared with that derived from Chinese,⁶ is quite different. The system of semantic classification based on Chinese has implications beyond lexical importation for it involves a concomitant scheme of abstract categorization of semantic space, which is quite fundamentally different from that of the native system. The adoption of such a system impinges also on the broader areas of culture and cognition, and is intricately linked to the establishment of a broadly based layer of Sino-Japanese morphemes in the language. As can be seen in Table 1, some of these Sino-Japanese morphemes have replaced native Japanese morphemes. The process of assimilation remains to be studied but the progression of steps could be easily hypothesized. Chinese classifiers were initially adopted together with the lexically imported nouns from Chinese, and then the system became productive. It began

⁶ See Benjamin K. T'sou. 1976. "The Structure of Nominal Classifier Systems", in: Philip N. Jenner, Stanley Starosta and Laurence C. Thompson (eds.). *Austroasiatic Studies*. Honolulu: University of Hawaii Press (Oceanic Linguistics, Special Publication, no. 13), pp. 1215–48.

to be used in alternation with the indigenous system, leading to a situation where the Sino-Japanese system has replaced the native system in a wide domain of use. The adoption of the Chinese writing system was instrumental in the spread of this process of lexical importation (of *on*-reading morphemes). A similar situation is found in Korea with its large layer of Sino-Korean morphemes, though in the area of numerals and classifiers there is fewer substitution than in Japanese. The same may be said of the large layer of Sino-Vietnamese morphemes in Vietnamese. The fact that the Chinese writing system had been adopted (and adapted) by Korea and Japan (as well as Vietnam in the past) does not appear to have accelerated the process of lexical importation and lexical substitution. The minority languages in South Western China have replaced native morphemes by Chinese ones in the area of numerals and classifiers to varying degrees and in ways comparable with the situations in Japan, Korea and Vietnam. Yet none of these have made any serious attempt to adopt (and adapt) the Chinese writing system. In the same area of classifiers, many of the Tibeto-Burman languages in China have substituted Chinese numerals and Chinese classifiers for native ones. The extent of lexical importation and substitution generally varies with the duration and intensity of contact, and very often only a small portion is retained. Thus, for example, many of the Tai languages in China have retained only the numeral for 'one' as well as the general classifier for animate things (e.g. *deu* in Zhuang).

2. CULTURAL COMPATIBILITY AND CONSTRAINTS ON LEXICAL IMPORTATION

There is a generally prevalent belief that there is no regularity underlying lexical diffusion other than the simple generalization on the taxonomy of semantic categories to which loan-words belong. This is in line with the general principle in structural linguistics that borrowing is one of three areas in which regularity in linguistic change could allow exception. This is best expressed by Gleason who considers borrowing to be a "more or less random and unsystematic process. Individual items are involved, seldom definable groups of words."⁷

⁷ Gleason 1961, p. 398.

Though concerned with synchronic descriptive linguistics, Gleason was most likely still thinking about the historical process of ‘borrowing’, and was acknowledging that the wide range of contributing factors accounts for the unpredictability. This view is still current more than a third of a century later.⁸

Examples in Table 3 offer an interesting starting-point for considering this hypothesis concerning the non-predictability of lexical importation. All sixteen examples represent cultural items that had been new or are new to the recipient language. Both modes of phonetic and semantic adaptations are very much in evidence, though clearly Cantonese differs from Mandarin, or Modern Standard Chinese (MSC), in the utilization of these two modes. Of the sixteen items, nine in Cantonese have undergone phonetic adaptation whereas in Mandarin only five have undergone phonetic adaptation. In the case of Cantonese it can be readily seen that those items (with the exception of no. 14) which have been phonetically adapted represent culturally compatible items, whereas those which have been semantically adapted are culturally less compatible. The notion of *cultural compatibility* may be refined in terms of *accessibility*, *agreeability* and *familiarity*.

Thus, in Table 3, no. 5 ‘pump’, no. 6 ‘bus’ or no. 7 ‘taxi’ are, on the one hand, more *accessible* to the average member of the community than no. 11 ‘video-recorder’ or no. 12 ‘washer’. No. 1 ‘coffee’ or no. 3 ‘motor’ are much more *agreeable* than no. 8 ‘hot-dog’ or no. 14 ‘streaking’. No. 2 ‘film’ and no. 4 ‘dozen’ are much more *familiar* than no. 9 ‘cocktail’ or no. 16 ‘giraffe’. Taken together then, and in the context of *accessibility*, *agreeability* and *familiarity*, no. 5 ‘pump’, no. 6 ‘bus’, no. 7 ‘taxi’, no. 1 ‘coffee’, no. 3 ‘motor’, no. 2 ‘film’, and no. 4 ‘dozen’ are much more compatible with their culture than no. 11 ‘video-recorder’, no. 12 ‘washer’, no. 8 ‘hot-dog’, no. 14 ‘streaking’, no. 9 ‘cocktail’ and no. 16 ‘giraffe’ at initial contact, if not subsequently. In short, these lexical items readily fall into two natural classes of *cultural compatibility*.

When the Cantonese situation is compared with that in Mandarin it is clear that there is also reasonable correlation between cultural compatibility and the mode of adaptation. The Cantonese speaking com-

⁸ Cf. April M. S. MacMahon. 1995. *Understanding Language Change*. Cambridge: Cambridge University Press, p. 205.

munity has had exposure and access to Western culture for a longer period of time, and on a more massive scale than the Mandarin speaking community in China that tended to reside in the interior of the mainland. Hong Kong, which is the hub of Cantonese culture, has a population which is much more urban (and perhaps urbane) than that in the interior of China. This explains the general difference in the manifestation of cultural compatibility with respect to photography (no. 2), modes of transportation (nos. 6 and 7) and exposure to recent technology (no. 10).

Table 3: Lexical importation in Mandarin and Cantonese

<i>Donor language</i>		<i>Recipient languages</i>			
<i>No.</i>	<i>English</i>	<i>Mandarin</i>		<i>Cantonese</i>	
1	coffee	咖啡	<i>kafei</i>	咖啡	<i>gafe</i>
2	film	底片	<i>dipian</i>	菲林	<i>feilum</i>
3	motor	摩托 馬達 機器	<i>motuo</i> <i>mada</i> <i>jiqu</i>	摩打	<i>moda</i>
4	dozen	打	<i>da</i>	打	<i>da</i>
5	pump	泵 抽水機 抽機	<i>beng</i> <i>choushuiji</i> <i>chouji</i>	泵	<i>bam</i>
6	bus	公共汽車 公車	<i>gonggong qiche</i> <i>gongche</i>	巴士	<i>basi</i>
7	taxi	計程車 小汽車 的士 (德士) 打的	<i>jichengche</i> <i>xiaoqiche</i> <i>dishi (deshi)</i> <i>dadi</i>	的士	<i>diksi</i>
8	hot-dog	熱狗	<i>regou</i>	熱狗	<i>yitgau</i>
9	cocktail	雞尾酒	<i>jiweijiu</i>	雞尾酒	<i>gaimeihjau</i>
10	photo-copier (xerox)	影印機	<i>yingyinji</i>	影印機 斯洛士	<i>yingyanggei</i> <i>siloksih</i>
11	video- recorder	錄映機 錄像機	<i>luyingji</i> <i>luxiangji</i>	錄映機	<i>lukyinggei</i>
12	washer	洗衣機	<i>xiyiji</i>	洗衣機	<i>saiyigei</i>
13	refrigerator	冰箱	<i>bingxiang</i>	雪櫃	<i>syutgwai</i>
14	streaking	裸跑	<i>luopao</i>	裸跑	<i>lopaau</i>
15	hippie	頹廢派 嬉皮士	<i>tui feipai</i> <i>xipishi</i>	嬉皮士	<i>heipeisi</i>
16	giraffe	長頸鹿	<i>changjinglu</i>	長頸鹿	<i>cheunggenluk</i>

Table 4 below provides some comparative data on lexical importation in Japanese and Chinese. Items no. 1 to 10 are generally common to both Japanese and Chinese and are examples of semantic adaptation through Sino-Japanese morphemes. Historically these items were first introduced in Japan and subsequently assimilated in China. These ten items represent cultural innovations which, when compared with items no. 11 to 20, have lower yields on accessibility, appreciability or familiarity. Items no. 11 to 20 are clearly examples of phonetic adaptation in Japanese, but in Chinese, with the exception of possibly no. 12 'golf' and no. 20 'hippie', which will be discussed in the next section, they are all semantic adaptations. The generalization on the greater prosperity in the contemporary Japanese language than in Chinese to phonetically adapt lexical importation is readily borne out by reference to any dictionaries. These cross-linguistic differences correlate with the greater propensity on the part of the Japanese, as compared to the Chinese, to find foreign objects or concepts culturally compatible. This generalization may be further correlated with the social histories of the two societies. The initial Japanese response to contact with the West in the last century had been much more positive than that of the Chinese. The redirection and broadening of cultural compatibility that comes with such a positive response are reflected in the large-scale lexical importation through phonetic adaptation. This observation offers a stark contrast with the situation in China, which has become much more positive to Western contact only in recent decades. It is supported by the generally much lesser extent of lexical importation by phonetic adaptation thus far. In summary then, because of the lack of opportunity to broaden its cultural compatibility, China has remained much more in the realm of semantic adaptation than Japan, as is the case with Chinese communities from the interior of the country when compared with their cousins in the coastal urban centres.

The common designations in Japanese and Chinese for items no. 1 to 10 point to the possibility that a shared writing system could have facilitated the transfer of lexical importation. It should be pointed out that the situation could not have been wholesale assimilation for there are numerous instances of difference as exemplified by 'logic', which has been rendered as *luoji* 邏輯 in Chinese. It has also been suggested that the availability of a parallel phonetic (syllabic) writing system in Japanese but not in Chinese may have facilitated phonetic adaptation

in Japanese. Examples given in Table 3 and Table 2 should offer convincing proof that this is not the case, for both Japanese and Chinese could readily utilize either phonetic or semantic adaptation.

Table 4: Comparison of lexical importation in Japanese and Chinese

Donor language		Recipient languages			
No.	English	Japanese		Mandarin Chinese	
1	recession	不景氣	<i>fukeiki</i>	不景氣	<i>bujingqi</i>
2	police station	派出所	<i>hashutsujo</i>	派出所	<i>paichusuo</i>
3	authority	權威	<i>ken-i</i>	權威	<i>quanwei</i>
4	experience	經驗	<i>keiken</i>	經驗	<i>jingyan</i>
5	procedures	手續	<i>tetsuzuki</i>	手續	<i>shouxu</i>
6	aesthetics	美學	<i>bigaku</i>	美學	<i>meixue</i>
7	beautify	美化	<i>bika</i>	美化	<i>meihua</i>
8	court	法庭	<i>houtei</i>	法庭	<i>fating</i>
9	statutory	法定	<i>houtei</i>	法定	<i>fading</i>
10	degree	學位	<i>gakui</i>	學位	<i>xuwei</i>
11	ski	スキー	<i>suki</i>	滑雪	<i>huaxue</i>
12	golf	ゴルフ	<i>gorufu</i>	哥爾夫球	<i>geerfuqiu</i>
13	piano	ピアノ	<i>piano</i>	鋼琴	<i>gangqin</i>
14	television	テレビジョン	<i>terebijiyon</i>	電視	<i>dianshi</i>
15	tape-recorder	テープレコーダ	<i>tepurekoda</i>	錄音機	<i>luyinji</i>
16	radio	ラジオ	<i>rajio</i>	無線電	<i>wuxiandian</i>
17	violin	バイオリン	<i>baiorin</i>	小提琴	<i>xiaotiqin</i>
18	typewriter	タイプライター	<i>taiburaita</i>	打字機	<i>daziji</i>
19	supermarket	スーパー (マーケット)	<i>supa</i> (<i>maketto</i>)	超級市場	<i>chaoji</i> <i>shichang</i>
20	hippie	ヒッピー	<i>hippie</i>	嬉皮	<i>xipi</i>

Conversely the stringent phonotactic structure and morpheme structure conditions in Chinese,⁹ coupled with a primarily morphemic writing system, could also suggest a propensity for semantic adaptation in Chinese greater than that for Japanese. It should be noted that fidelity must be compromised in any situation involving phonetic adaptation by a recipient language unless there is much similarity between the donor and recipient languages. In the Chinese case, as is also the case

⁹ Cf. Gao and Liu 1958; Novotná 1967.

with minority languages in China, the language shows a high degree of flexibility to accommodate new phonemic distinctions, and new characters (symbols) could be created to accommodate them. Some examples are provided in Table 5 as well as in the Appendix. The usual velar fronting, prevalent in the earlier Republican era, is exempted in examples such as no. 2 ‘curry’, no. 3 ‘coffee’, no. 5 ‘card’, ‘calorie’, ‘car’, and new characters may be created to represent the new sounds. The same is true of no. 11 ‘pump’ and no. 12 ‘tyre’. In the Appendix, all except twelve common terms such as no. 79 *jin* ‘gold’, no. 47 *yin* ‘silver’ or no. 6 *tan* ‘carbon’ are new characters specially created for phonetic adaptation of terms for chemical elements. Attempts were made in the creation of these characters to fully exploit the semantic categories underlying the radical system. Thus some basic chemical properties are reflected in the use of radicals; gaseous elements have the gas radical and metallic ones have the metal radical.

This does not mean that internal structure in language does not affect lexical importation, as will be seen in the following section.

Table 5: Special characters for lexical importations in general

No.	Special characters	Examples	Meaning
1	叻 <i>le</i>	叻幣 <i>lebi</i>	Singapore currency
2	咖哩 <i>gali</i>		curry
3	咖啡 <i>kafei</i>		coffee
4	加侖 <i>jialun</i>		gallon
5	卡 ^a <i>ka</i>	卡片 <i>kapián</i> 卡路里 <i>kaluli</i> 卡車 <i>kache</i>	card calorie lorry (car)
6	呔 <i>ka</i>	呔叭 <i>kaji</i>	khaki
7	佻僑 <i>kawa</i>		a minority group in China
8	喀 <i>ka</i>	喀布爾 <i>kabuer</i>	Kabul
9	佻 <i>mu</i>	佻佬 <i>mulao</i>	a minority group
10	颱 ^b <i>tai</i>	颱風 <i>taifeng</i>	typhoon
11	泵 ^c <i>beng</i>		pump
12	呔 ^d , 鞅 <i>tai</i>		tyre

Notes: (a) Normally *jiá* as in *guanjiá* 關卡, ‘entry point at border’. (b) Cantonese variants could be either *tai* or *toi*. (c) Originating in Cantonese (*bam*) and recently adopted into Standard Chinese dictionaries. (d) Primarily in Cantonese and Fukian. Cantonese also uses 呔 (*tai*) to denote ‘tie, a piece of garment’.

3. STRUCTURAL CONSTRAINTS ON HYBRID FORMS AND LOAN BLENDS

Phonetic adaptation entails compromise, and extensive inventories of such compromise relevant to Chinese are already available, for example, from Gao and Liu, and Novotná. It may be fruitful to explore two different areas in which internal structure in language influences variation in the mode of adaptation, which has been shown to be sociolinguistically significant.

The first concerns the influence of the Chinese preference for disyllabic expressions on processes of semantic adaptation. The hypothesis which has been advanced in this paper assumes a simple dichotomy between phonetic adaptation and semantic adaptation. However, there are intermediate categories of *loan blends* and *hybrid forms* which are derived by means of both phonetic adaptation and semantic adaptation, and they cannot be readily accounted for by the hypothesis outlined thus far.

With the exception of no. 2 'Poland', no. 3 'Ireland', no. 6 'Guam', no. 7 'Switzerland', and no. 11b 'Laos', examples given in Table 6 are *hybrid forms*. The first syllable represents phonetic adaptation while the second (e.g. *guo* 國 'country', *dao* 島 'island') represents semantic adaptation. These are instances of a linear or serial application of phonetic and semantic adaptations. Other examples are: *ji-wei-jiu* 雞尾酒 (chicken-tail-wine) 'cocktail' (Table 3, no. 9); *tan-ke-che* 坦克車 (tank-vehicle) 'tank'; *ka-pian* 卡片 (card-sheet) 'card'; *pi-jiu* 啤酒 (beer-wine) 'beer'. In each of these cases the last syllable represents a morpheme which is not found in the model but represents a class designation and may be considered redundant in most cases.

It can be seen that phonetic adaptation is the general method underlying Chinese renditions of the names of countries. Other than the examples of hybrid forms given above, only a few exceptions are found in which the original place name is polymorphemic. Examples are: 'Ivory Coast', 'Central Africa', 'South Africa' and 'Iceland' (although the 'Virgin Islands' in the Caribbean are designated by phonetic rather than semantic adaptation). In addition to these examples, countries such as 'New Zealand' and 'New Guinea' were phonetically adapted in Chinese (*Niu-xi-lan* 紐西蘭 and *Niu-ji-nei-ya* 紐几內亞) until recently when they have become hybrid forms: *Xin* (New)-*xi-lan* 新西蘭 and *Xin* (New)-*ji-nei-ya* 新几內亞. This practice has been

extended to more recent political entities such as the ‘New Hebrides’ and ‘New Caledonia’. It is specially noteworthy that after Singapore was granted independence it has often become known in Chinese as *Xin* (New)-*jiā-po* 新加坡 instead of *Xingjiapo* 星加坡 outside of the country. This may be a case of *hyper-relexification*.

However the problem remains as to why the morpheme *-land* in no. 1 ‘Thailand’, no. 2 ‘Poland’, no. 3 ‘Ireland’, no. 4 ‘Iceland’ and no. 6 ‘Switzerland’ has undergone such a wide range of variation in adaptation. In the case of ‘Switzerland’ phonetic adaptation will probably produce four syllables, but given the disyllabicity preference in Chinese this was simplified to two syllables, probably via the French and German designation. The same is also true of no. 7 ‘America’, no. 8 ‘Britain’/‘England’, no. 9 ‘France’ and no. 10 ‘Germany’, where the first syllable forms the basis to which the descriptive term *-guo* ‘country’ is added. In fact, this process is productive and may be applied to any geographical name in an abbreviation. In the case of no. 1 ‘Thailand’ and no. 11a ‘Laos’ this option has been exercised. The insular and isolated nature of no. 4 ‘Iceland’ is captured by using *-dao* ‘island, which is also the morpheme added in the case of ‘Guam’ to make it disyllabic.

Table 6: Disyllabic Chinese names of countries

No.	Name of country	Pinyin	Chinese characters
1	Thailand	<i>taiguo</i>	泰國
2	Poland	<i>polan</i>	波蘭
3	Ireland	<i>ai' erlan</i>	愛爾蘭
4	Iceland	<i>bingdao</i>	冰島
5	Guam	<i>guandao</i>	關島
6	Switzerland	<i>ruishi</i>	瑞士
7	America	<i>meiguo (meilijian)</i>	美國 (美利堅)
8	Britain	<i>yingguo (bulidian)</i>	英國 (不列顛)
9	France	<i>faguo (falanxi)</i>	法國 (法蘭西)
10	Germany	<i>deguo (rierman)</i>	德國 (日爾曼)
11a	Laos	<i>liaoguo</i>	遼國
11b		<i>laowo</i>	老撾

We have seen two trends in operation. The first is the reduction of polysyllabic terms to a disyllabic term. This parallels the following abbreviations:

‘peanut oil’: *hua-sheng-you* 花生油 → *sheng-you* 生油
 ‘sesame oil’: *zhi-ma-you* 芝麻油 → *ma-you* 麻油

Hua 花 here means ‘flower’, *sheng* 生 ‘give birth’, *you* 油 ‘oil’, *hua-sheng* 花生 ‘peanut’, *ma* 麻 ‘jute’ and *zhi-ma* 芝麻 ‘sesame’.

The second trend is the augmentation of monosyllabic terms (which are usually phonetic adaptations) by the addition of a descriptive label. Examples are *piju* 啤酒 ‘beer’, *kapan* 卡片 ‘card’, *Liaoguo* 遼國 ‘Laos’ and *Guandao* 關島 ‘Guam’. The schematic representation given in Figure 1 is a summary of these two trends:

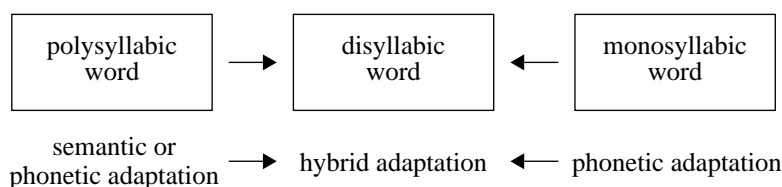


Figure 1. Relexification under disyllabicity preference

A second area of interest concerns predictability between two types of semantic adaptation: (1) *calque* or translation loan and (2) *descriptive labelling*.

In Table 7 below, column A gives examples of *calques*, where the morphemic constituents in Chinese are generally traceable to those in the donor language; these are polymorphemic words. Examples of *descriptive labelling* are given in column B where each word is a monomorphemic word in the donor language. The renditions given in Chinese are usually descriptive and involve denotative or connotative meaning. Thus B.2 ‘giraffe’ is rendered as the ‘long-necked deer’. Through cultural mediation the animal was seen to be belonging to the genus of deers, and the unusual feature of its elongated neck is foregrounded in the descriptive label. Similarly, in the case of B.3, ‘kangaroo’ has been rendered as the ‘pocketed-rat’. It has been seen to belong to the genus of rodents, though kangaroos are marsupials. The significant difference in size appears to have much less importance than the pouch which marsupials have. The ‘platypus’ is similarly labelled as the ‘duck-billed beast’. The bolt action of the ‘rifle’ is

foregrounded in the Chinese term, and ‘streaking’, which is what a flasher does on the run, has that foregrounded in the Chinese term.

Table 7: Semantic adaptation: (A) calques and (B) descriptive labels

No.	(A) Polymorphemic		(B) Monomorphemic			
1	錄音機	<i>luyinji</i>	recorder	裸跑	<i>luopao</i>	streaking
2	牛津	<i>niu jin</i>	Oxford	長頸鹿	<i>changjinglu</i>	giraffe
3	無線電	<i>wuxiandian</i>	wireless (radio)	袋鼠	<i>daishu</i>	kangaroo
4	洗衣機	<i>xiyiji</i>	washer	手復槍	<i>shoufuqiang</i>	rifle
5	影印機	<i>yingyinji</i>	photocopy	浪漫史	<i>langmanshi</i>	romance
6	拖拉機	<i>tuolaji</i>	tractor	郵票	<i>youpiao</i>	stamp
7	愛人	<i>airen</i>	lover	鴨嘴獸	<i>yazuishou</i>	platypus
8	熱狗	<i>regou</i>	hot-dog	飛鏢	<i>feibiao</i>	boomerang

This tentative generalization that polymorphemic words become calques while monomorphemic words become descriptive labels when conditions for semantic adaptation are met seems readily justifiable. There is more to work with in the case of a polymorphemic word in the donor language, and chances are good that some or all of the morphemic constituents have direct and single correspondences in the recipient language. It should be remembered that monomorphemic words are semantically adapted on the condition that they represent culturally non-compatible items. This means there are no simple morphemic correspondences and a descriptive label becomes the only liable alternative.

The most successful cases in semantic adaptation are perhaps *loan blends*, for these represent maximal *juxtaposition* of both semantic and phonetic adaptation. This is generally accepted to be better than either phonetic adaptation or semantic adaptation or *hybrid forms* where both modes have been applied, but in linear sequence.

Table 8 below contains examples of such loan blends. In each case the phonetic approximation is outstanding: the number of syllables in the replica generally corresponds to that in the model, the initial and medial consonants as well as a large portion of vocalic segments also have regular correspondences. Semantic adaptation is mostly by means of descriptive labelling with connotation and association. No. 1 comes from the Mongolian term *tsam* meaning ‘road’ or ‘passage’, and was introduced into China during the Yuan dynasty when the sys-

tem of relay by messenger was very well developed. Using the Chinese verb 'to stand' fits in nicely with making a stop at a stand on the road, which becomes a station. No. 2 nicely captures tenancy on the farm. No. 3 evokes transmission through space by association with *lei* 雷 'thunder' and *da* 達 'to reach'. No. 4 in Chinese means 'body matter'. No. 5 in Chinese means 'to sustain (one's) life', to which quality vitamins are supposed to contribute. No. 6 in Chinese evokes 'submerged message'. No. 7 means in Chinese 'to collect and codify'. No. 8 in Chinese means 'rainbow colours' which can be easily associated with flashing neon lights. No. 9 means 'lead and obtain'. No. 10 in Chinese means 'raise-head(ing)'. No. 11 conveys the idea of one who provides a model, and no. 12 one who is associated with peace and precious objects such as jade. No. 13 conveys playfulness and mischief, which would fit the seemingly irresponsible nature of hippies. No. 14 refers to some kind of wheel which leans against something, a fair description of the clutch. No. 15 refers to ruffians with an aura of omnipresence, again a fair description of the Gestapo. The same may be said of no. 16 which in Chinese means 'gathering the pure/essence'.

No. 17 to no. 22 are Chinese renditions of trade names which represent popular objects and have come about through strenuous efforts on the part of the advertising media. They are also probably the *crème de la crème* of loans blends. Thus, no. 17 'Coca-Cola' is rendered into Chinese as 'ingestible and enjoyable', and the item has become so common in many Chinese speaking areas that the last two syllables meaning 'enjoyable' (in literary Chinese) are now accepted abbreviations. No. 18 represents an attempt by Pepsi Cola not to be outdone and the Chinese means 'all-things enjoyable'. No. 19 in Chinese means 'wealth and magnanimity/generosity', projecting qualities which go well with a Volvo owner. No. 20 literally means 'mat-dream-thoughts', matters and activities which are positively associated with Simmons mattresses and beds. No. 21 literally means 'auspicious/pleasure-comes-elevate' which may be ambiguously interpreted as 'auspicious things come up' or 'pleased to come up', altogether good subliminal messages from the management of the Hilton Hotel in Hong Kong. No. 22 represents a recent product from the Scotch (guard) manufacturers and it means in Chinese 'think-elevated-cleanliness'—again nice inferences and positive subliminal messages.

These examples point to the epitome of conscious and fruitful linguistic exploitation. The benefits of both phonetic adaptation (easy

identification of the item) and semantic adaptation (association with the properties or qualities of the item) have been reaped. If the item is not yet culturally compatible with the intended speech community, it could easily become so by means of phonetic adaptation, operated on a firm base of semantic information.

Table 8: Loan blends

<i>No.</i>	<i>Chinese characters</i>	<i>Pinyin</i>	<i>Donor language</i>
1	站	<i>zhan</i>	<i>tsam</i> (Mongolian)
2	佃農	<i>tiannong</i>	tenant
3	雷達	<i>leida</i>	radar
4	體素	<i>tisu</i>	tissue
5	維他命	<i>weitaming</i>	vitamin
6	幽默	<i>youmo</i>	humour
7	邏輯	<i>luoji</i>	logic
8	霓虹 (燈)	<i>nihong (deng)</i>	neon (light)
9	引得	<i>yinde</i>	index
10	抬頭	<i>taitou</i>	title
11	模特 (兒)	<i>mote(er)</i>	model
12	安琪 (兒)	<i>anqi(er)</i>	angel
13	嬉皮 (士)	<i>xipi(shi)</i>	hippie(s)
14	靠背輪	<i>kaobeilun</i>	coupler (clutch)
15	蓋世太保	<i>gaishitaibao</i>	Gestapo
16	納粹	<i>nacui</i>	Nazi
17	可口可樂	<i>kekoukele</i>	Coca-Cola
18	百事可樂	<i>baishikele</i>	Pepsi Cola
19	富豪	<i>fuhao</i>	Volvo
20	席夢思	<i>ximengsi</i>	Simmons (bed)
21	喜來登	<i>xilaideng</i>	Hilton (hotel)
22	思高潔	<i>sigaojie</i>	Scotch (guard)

The recent advertising blitz in China for new foreign products reveals how some of the principles are at work. Citizen watches have attained an excellent sales record outside of China. It is second only to Seiko watches. The trade name is rendered as *sing-san* 星辰 (Cantonese) in Hong Kong, and means ‘star-time’, which has good enough connotations of chronometry. However, in its push to outdo Seiko it has changed its trade-name in Mainland China to *xi-tie-chen* 西鐵辰,

which means literally 'West-iron-time'. The additional connotations of Western origin and durability of iron brook well for a vast potential market in a country which has professed its wish for modernization by absorbing Western technology, and which has a population steep in frugality and in its demand for quality. The combination of new semantic adaptation and improved phonetic adaptation has no doubt contributed to the success of this brand in China.

CONCLUSION

We began with the assumption that there are intricate interdependent relationships between language and culture as well as language and social structure and have argued that the study of language contact and the resultant lexical diffusion across linguistic boundaries should not be limited to those new lexical items which have resulted from phonetic adaptation of non-native words, but should also include those which have resulted from semantic adaptation. A hypothesis has been outlined in which cultural compatibility is seen as the major constraint in determining whether lexical importation is realized through phonetic adaptation or semantic adaptation which challenges the commonly held view that there is no regularity governing how words relating to cultural items of foreign origin are manifested in the recipient language in a contact situation. The major aspects of cultural compatibility contributing to regularity in lexical importation are seen to be (1) familiarity, (2) agreeability, and (3) accessibility. These concepts must go hand in hand with further studies on the cognitive processes of the familiarization of new cultural items, on the evaluation of acceptability (i.e. agreeability) of these items, and on the logistics and economics which determine the accessibility of these items.

This paper points to a direction by which quantitative comparison may be made of the differential rates of assimilation of new cultural items found, on the one hand, in Chinese and other languages such as Japanese, and on the other hand, in the languages of coastal and rural populations in China.

The special role of the writing system in the assimilative process has also been explored and it has been shown that the morphosyllabic writing system of Chinese places no unnecessary obstacle in phonetic adaptation. A secondary hypothesis has been advanced to suggest that internal structural constraints such as disyllabic preference in Chinese

plays an important role in relexification. The derivation of *hybrid forms*, which involves the serial application of both phonetic and semantic adaptation, has been analysed in terms of such constraints, and the optimal concomitant exploitation of both modes of adaptation in the case of *loan blends* has been analyzed with examples from trade names.¹⁰

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APPENDIX

SPECIAL CHARACTERS FOR LEXICAL IMPORTATION:
THE CHEMICAL ELEMENTS

<i>Atomic number</i>	<i>Latin name</i>	<i>Chinese character</i>	<i>Pinyin</i>	<i>Atomic symbol</i>
1	Hydrogenium	氫	<i>qing</i>	H
2	Helium	氦	<i>hai</i>	He
3	Lithium	鋰	<i>li</i>	Li
4	Beryllium	鈹	<i>pi</i>	Be
5	Borium	硼	<i>peng</i>	B
6	Carbonium	碳	<i>tan</i>	C
7	Nitrogenium	氮	<i>dan</i>	N
8	Oxygenium	氧	<i>yang</i>	O
9	Fluorum	氟	<i>fu</i>	F
10	Neonum	氖	<i>nai</i>	Ne
11	Natrium	鈉	<i>na</i>	Na
12	Magnesium	鎂	<i>mei</i>	Mg
13	Aluminium	鋁 硅	<i>lu</i> <i>gui</i>	Al
14	Silicium	矽	<i>xi</i>	Si
15	Phosphorum	磷	<i>lin</i>	P
16	Sulphur	硫	<i>liu</i>	S
17	Chlorum	氯	<i>lu</i>	Cl
18	Argonium	氬	<i>ya</i>	Ar
19	Kalium	鉀	<i>jia</i>	K
20	Calcium	鈣	<i>gai</i>	Ca
21	Scandium	鈹	<i>kang</i>	Sc
22	Titanium	鈦	<i>kai</i>	Ti
23	Vanadium	釩	<i>fan</i>	V
24	Chromium	鉻	<i>ge</i>	Cr
25	Manganum	錳	<i>meng</i>	Mn
26	Ferrum	鐵	<i>tie</i>	Fe
27	Cobaltum	鈷	<i>gu</i>	Co
28	Nicolum	鎳	<i>nie</i>	Ni
29	Cuprum	銅	<i>tong</i>	Cu
30	Zincum	鋅	<i>xin</i>	Zn
31	Gallium	鎳	<i>jia</i>	Ga

<i>Atomic number</i>	<i>Latin name</i>	<i>Chinese character</i>	<i>Pinyin</i>	<i>Atomic symbol</i>
32	Germanium	鍺	<i>zhe</i>	Ge
33	Arsenium	砷	<i>she</i>	As
34	Selenium	硒	<i>xi</i>	Se
35	Bromium	溴	<i>xiu</i>	Br
36	Kryptonum	氙	<i>ke</i>	Kr
37	Robidium	銣	<i>ru</i>	Rb
38	Strontium	銣	<i>si</i>	Sr
39	Yttrium	釷	<i>yi</i>	Y
40	Zirconium	銩	<i>gao</i>	Zr
41	Niobium	鈮	<i>ni</i>	Nb
	Columbium	鈷	<i>ke</i>	Cb
42	Molybdänium	鉬	<i>mu</i>	Mo
43	Technetium	錳	<i>de</i>	Tc
44	Ruthenium	鈳	<i>liao</i>	Ru
45	Rhodium	銠	<i>lao</i>	Rh
46	Palladium	鈀	<i>ba</i>	Pd
47	Argentum	銀	<i>yin</i>	Ag
48	Cadmium	鎘	<i>ge</i>	Cd
49	Indium	銦	<i>yin</i>	In
50	Stannum	錫	<i>xi</i>	Sn
51	Stibium	銻	<i>ti</i>	Sb
52	Tellurium	碲	<i>di</i>	Te
53	Iodium	碘	<i>dian</i>	I
54	Xenonum	氙	<i>xian</i>	Xe
55	Caesium	銫	<i>se</i>	Cs
56	Baryum	鋇	<i>bei</i>	Ba
57	Lanthanum	釷	<i>lan</i>	La
58	Cerium	鈰	<i>shi</i>	Ce
59	Praseodymium	鐳	<i>pu</i>	Pr
60	Neodymium	釷	<i>nü</i>	Nd
61	Promethium	鉅	<i>po</i>	Pm
62	Samarium	釷	<i>shan</i>	Sm
63	Europium	鈾	<i>you</i>	Eu
64	Gadolinium	釷	<i>ga</i>	Gd
65	Terbium	鉕	<i>te</i>	Tb
66	Dysprosium	鐳	<i>di</i>	Dy
67	Holmium	釷	<i>huo</i>	Ho

<i>Atomic number</i>	<i>Latin name</i>	<i>Chinese character</i>	<i>Pinyin</i>	<i>Atomic symbol</i>
68	Erbium	鉕	<i>er</i>	Er
69	Thulium	銩	<i>diu</i>	Tm
70	Ytterbium	釷	<i>yi</i>	Yb
71	Lutecium	鑷	<i>lu</i>	Lu
72	Hafnium	鈹	<i>ha</i>	Hf
73	Tantalum	鉭	<i>tan</i>	Ta
74	Wolfram	鎢	<i>wu</i>	W
75	Rhenium	銻	<i>lai</i>	Re
76	Osmium	銱	<i>e</i>	Os
77	Iridium	銱	<i>yi</i>	Ir
78	Platinum	鉑	<i>bo</i>	Pt
79	Aurum	金	<i>jin</i>	Au
80	Hydrargyrum	汞	<i>gong</i>	Hg
81	Thallium	鉍	<i>ta</i>	Tl
82	Plumbum	鉛	<i>qian</i>	Pb
83	Bismuthum	鉍	<i>bi</i>	Bi
84	Polonium	釷	<i>po</i>	Po
85	Astatium	砒	<i>ai</i>	At
86	Radon	氡	<i>dong</i>	Rn
87	Francium	釷	<i>fang</i>	Fr
88	Radium	鐳	<i>lei</i>	Ra
89	Actinium	錒	<i>a</i>	Ac
90	Thorium	釷	<i>tu</i>	Th
91	Protactinium	釷	<i>pu</i>	Pa
92	Uranium	鈾	<i>you</i>	U
93	Neptunium	釷	<i>na</i>	Np
94	Plutonium	釷	<i>bu</i>	Pu
95	Americium	錒	<i>mei</i>	Am
96	Curium	錒	<i>ju</i>	Cm
97	Berkelium	錒	<i>pei</i>	Bk
98	Californium	錒	<i>kai</i>	Cf
99	Einsteinium	錒	<i>ai</i>	Es
100	Fermium	錒	<i>fei</i>	Fm
101	Mendelevium	錒	<i>men</i>	Md
102	Nobelium	錒	<i>nuo</i>	No
103	Lawrencium	錒	<i>lao</i>	Lr