

Tilburg Papers in Culture Studies

Paper 44

Transliteration or Loan Translation: Constraints on English loanwords' integration into Mandarin Chinese

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January 2013

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***Abstract*----**Lexical borrowing deserves serious professional attention because borrowed words can constitute a major part of the lexicon in a language. Chinese loanwords of English origin can be roughly divided into three groups: transliteration, semantic loan and a combination of the two. This paper gives a brief sketch of the three different kinds of loanwords and goes further to point out that semantic loan or loan translation tends to be the eventual form for words borrowed from English, for the reasons that Chinese is monosyllabic, that the Chinese writing system is morphemic, and that it has little to do with its sound system. Direct replication of the pronunciations of English words is not compatible with the coding structure of Chinese, which is why transliterations tend to be replaced by loan translations or semantic loans. To support this hypothesis, this paper presents a data-based analysis of 55 borrowed lexical items as found in 80 articles from a Chinese newspaper and a magazine. The findings show that the token frequency of transliterated loanwords is lower than that of semantic loans.

***Key words*----**loanwords, transliteration, semantic loan, loan translation, integration, constraint

1. INTRODUCTION

English, an Indo-European language, is the most widely spoken language in the world. Chinese, a Sino-Tibetan language, has the largest number of speakers in the world. When these two “giant” languages come into contact with each other, interesting processes of language change occur. Lexical borrowing, one of the most prominent types of language change, is the focus of the present paper.

While cross-linguistically, loanwords are often taken from other languages with their phonological and other characteristics intact, most English words undergo adaptations when entering into Chinese. The adaptation of a loanword seems a balancing act between preserving certain aspects from the source word while still satisfying the constraints that make the lexical item sound like a word of the recipient language (Kager 1999:32). The present study was undertaken to explore and describe the constraints on lexical borrowing from English into Chinese, especially constraints that are imposed by the Chinese writing system. The influence of the writing system, whether Chinese or other, on lexical borrowing has to the best of our knowledge not been systematically studied so far, and it has not been the topic of much discussion in language contact studies. In this paper we attempt to show that in the contemporary setting it is important that a loanword can be written in Chinese, and that this influences the nativization of the loanword. Section 2 first summarizes the ways in which English words are borrowed into Chinese, and suggests that the semantic extension of an existing word or word combination, which we refer to as ‘semantic loan’, is ultimately the most common approach. However, during the initial stages of borrowing, another technique, which we will call ‘transliteration’, plays an important role. This technique makes use of coincidental phonetic resemblances between existing Chinese words and the English word that is being borrowed. To test this hypothesis, Section 3 describes a small-scale

analysis of a loanword database that was obtained by manually extracting loanwords from a Chinese newspaper and a magazine. The frequencies of the different types of loanwords in this corpus were compared, and were found to confirm the hypothesis. Section 4 presents some possible explanations for the patterns we found. Ultimately, we hope, the article not only provides a better understanding of how English loanwords are nativized in the Chinese context, but also makes a convincing argument that this particular case introduces a phenomenon not discussed before in contact linguistics.

2. CLASSIFICATION OF LOANWORDS IN MANDARIN CHINESE

Modern Chinese presents contact linguistics with some interesting problems. There are various models of loanword adoption and adaptation in contact linguistics, but none of them allow exhaustive treatment of English words in Chinese, and this is mostly because of the role of writing in Chinese. To be sure, universally relevant distinctions also play a role in Chinese borrowing of English words. English loanwords, for example, can be divided into cultural and core loanwords (see Myers-Scotton 2002), as this distinction is based on the semantics of the words involved. Studying this dimension presents clues as to why these words were borrowed at all. A second universally valid distinction is between the synchronic phenomenon of mixing material from two languages (code-switching) and the diachronic development it is responsible for (borrowing; see Backus & Dorleijn 2009). Loanwords have variable degrees of integration into the host language lexicon, depending on how many people use them, how often they use them, and to what extent they accept them as the best lexeme for the concept they encode. We will return to these classifications towards the end of this paper.

However, where English loans into Chinese present a challenge is the division of loanwords into structural types. The borrowing of material from another language can be classified in many ways, the most basic one being the division into lexical and structural elements, most recently characterized as Matter and Pattern Borrowing, respectively (Matras 2009). Pattern Borrowing plays no role in our paper, since we are not dealing with grammatical interference, but, on the other hand, collapsing all lexical borrowing into one category is not sufficient for our purposes. Haugen's (1950) early taxonomy is perhaps the best point of departure. It distinguishes between loanwords (form and meaning are copied completely), loanblends (complex words consisting of at least one copied part and at least one native part), and loanshifts, where only the meaning is copied. The latter can be further divided into semantic extensions (when the meaning of a native word is extended on the model of its foreign equivalent) and loan translations (when two or more native morphemes are combined on the model of the combination of their foreign equivalents in a foreign model). This classification, like most of contact linguistics, is essentially about spoken language, however, and this does not prepare them well for one striking aspect of loanwords in modern Chinese.

Chinese loanwords of English origin can also be subdivided, but Haugen's classification doesn't quite cover the phenomena we witness. We will distinguish between three types: transliterations, semantic loans, and a combination of phonemic and semantic loan. Transliterations, or phonemic loans, are roughly "loanwords", as the whole form - meaning unit is copied. It comes with a twist, though, as we will see in the next subsection: they need to be close enough in sound to existing Chinese morphemes, so that they can be written down. The second type, semantic loan, resembles Haugen's "loanshifts" (or loan translation), but only to a degree. It is really more of a loan *creation* than a loan *translation*. It refers to cases where a word is newly coined by combining existing morphemes to express an

approximation of the foreign concept. The third type is a combination of semantic and transliteration/phonemic loan: a quite unique Chinese phenomenon. We will now discuss these types in turn.

2.1 Transliteration

Transliteration is a kind of phonetic transcription. Transliterated loanwords are Mandarin Chinese words that are phonologically similar to an English target word. For example, Chinese *mai ke feng* is used to convey the English word “microphone”. In the writing system, it is represented as 麦克风. The three characters mean “wheat”, “gram”, and “wind”, respectively. They are just combined in that order to imitate the sound of the English word: their meanings have nothing to do with it. Another example is the English word “fan”: its Chinese equivalent is /fen si/ (the sound is itself an imitation of the plural form “fans”). The Chinese character sequence chosen to represent the sound is 粉丝, which refers to a kind of noodle dish. Sometimes this can be very confusing for beginning Chinese readers who may not realize that one should read out the sound sequence and ignore the meaning. What’s more, to transcribe the sounds of foreign words, Chinese has also coined some characters that do not mean anything. For instance, “coffee” in Chinese is /ka fei/ represented in the writing system as 咖啡. These two characters did not have any pre-existing specific meaning in Chinese, i.e. they were just coined to symbolize the sound of the English word. Of course, the coinage of new characters is not done in arbitrary fashion, but based on certain rules. Usually, a character that resembles the sound of the English word is employed and a radical is added to give an indication of the word’s meaning, a radical being a component of a character. All Chinese characters are made up of one or more radicals, which sometimes provide clues to the pronunciation and the meaning of the character. In the case of loanwords, the added radicals are semantic radicals. For example, the radical “口”(mouth) is added to character “加” and “非” to indicate that 咖啡 is something that can be eaten or drunk. In Mandarin Chinese, there are many such characters that have been coined just for the purpose of transcribing loanwords.

2.2 Semantic loan

Semantic loans are also sometimes called ‘free translations’ of foreign words. A free translation is a translation that reproduces only the general meaning of the original. It may or may not closely follow the form or organization of the original (Richard, Platt, and Weber 1985). Semantic loans resemble somewhat the more familiar “semantic extension”, which refers to an indigenous word which extends its meaning to match the meanings its foreign equivalent has (Grzega 2003: 27; also compare Haugen’s notion of “loanshift”, which results from “taking a word in the base language and extending its meaning so that it corresponds to that of a word in the other language”; cf. Romaine 1995). We include these words in our analyses because they clearly represent foreign influence on the Chinese lexicon, despite the fact that they are obviously not true loanwords (see Poplack, Sankoff, and Miller 1988, who

exclude loan translations etc. from their analysis on this ground). In this paper, we adopt a broader definition of loanwords, and include all forms of what may be called lexical interference. Be that as it may, semantic loans in Chinese are not really examples of semantic extension or loanshift, because the native words used to express the foreign concepts did not exist before in the language, only the characters that make up the word did. So, the Chinese semantic loan is more a loan creation than a semantic extension. For example, the Chinese word 安乐死 (/an le si/) is made up of three characters which mean ‘peaceful’, ‘happy’, and ‘death’, respectively. It conveys the meaning of English “euthanasia”, and was created to roughly translate the meaning behind “euthanasia”. Other typical examples include 病毒 (/bing du/, literally: “illness poison”) for English “virus”, 火车 (/huo che/, literally: “fire vehicle”) for English “train” and 电话 (/dian hua/, literally: “electronic conversation”) for English “telephone”.

The mechanism that produces a semantic loan is similar to that which gives us loan translations. Loan translation, also known as “calquing”, involves “rearranging words in the base language along a pattern provided by the other and thus create a new meaning” (Romaine, 1995: 57). The difference between loan translations and loanwords is thus that the former are foreign only in meaning, whereas the latter are foreign in both form and meaning. In Chinese, the compound words that are created to translate the concept behind the borrowed word may be only vaguely reminiscent of the English model, such as the examples above, or they may follow that model more closely. For example, English “blueprint” is known as /lan tu/ (蓝图, literally: blue+picture), “flagship” is /qi jian/ (旗舰, flag+ship), and “bottleneck” is /ping jing/ (瓶颈, bottle+neck). Interestingly, there are also English words calqued from Chinese, such as “brainwashing”, a direct translation from Chinese 洗脑 *xǐ nǎo* (in which 洗 means “wash”, and 脑 means “brain”, hence brainwash; Harper 2012). And “long time no see” may have derived from a Chinese pidgin English spoken by native Americans or Chinese (Partridge and Beale 2002). Finally, “lose face” is definitely from Chinese 丢脸 (/diu lian/) (Carr, 1992). “Save face”, the converse of “lose face” came later, but has no direct equivalent in Chinese.

2.3 *Combination of Transliteration and Translation (Phono-semantic Matching)*

Many Chinese loans combine aspects of transliteration and semantic loan, as in the case of 蹦极 (/bengji/), which is the translation for “bungee” and literally means “jump extreme”. Zuckerman (2003a) refers to this type of loanword as “phono-semantic matching”, which he defines as: “(...) distinct from calquing. While calquing includes semantic translation, it does not consist of phonetic matching (i.e. retaining the approximate sound of the borrowed word through matching it with a similar-sounding pre-existent word/morpheme in the target language)”. Words borrowed in this way are

not only phonologically similar in English and Chinese, but the Chinese characters selected to represent the sound also have a meaning that is compatible with that of the original word. To take another example, when ‘media’ was transliterated as 梅地亚 (*/meidiya/*, which literally means “plum flower earth Asia”), it sounded like a foreign geographical name, but its current form 媒体 (*/meiti/*) clearly means ‘an agent for news’. This phenomenon has given rise to words which not only have a perfect combination of sound imitation and meaning representation in the writing system, but also exhibit creative and imaginative meanings in the choice of Chinese characters. For example, English “miniskirt” is rendered in Chinese as 迷你裙 (*/mi ni qun/*), where the three characters mean literally “attract you skirt.” As Myers-Scotton (2006:221) points out: “Speakers try to find Chinese characters that stand for a similar reference to the borrowed words. But speakers also want the characters to sound like the borrowed word. They end up with some very imaginative ways of accommodating a borrowed word...”. Some of the words she gives as examples are given in Table 1.

This technique is especially popular with proper nouns in advertising. They usually appear in brand names for commercial purposes. As loanwords, they are well received and well incorporated because they echo the sound of the original English word and give an indication of its meaning, thus filling in the semantic blank left by pure transliteration. In addition, they also add new meanings to some characters, form new morphemes and word parts, and as a result enrich Chinese vocabulary. Examples include: *dishi* (的士, ‘taxi’), leading on to *dige* (的哥, ‘taxi driver’), *di-jie* (的姐, ‘woman taxi-driver’), *da di* (打的, ‘take a taxi’), and *main-di* (面的, ‘minibus taxi’); and *jiu-ba* (酒吧, ‘wine bar’), leading on to *shui-ba* (水吧, ‘water bar’), *yang-ba* (氧吧, ‘oxygen bar’), *wang-ba* (网吧, ‘internet bar’), and so forth.

Table 1: Myers-Scotton’s examples of phono-semantic matching

Original Forms	Translation Forms (Character /Pinyin Form)	Word-by-word Equivalent Meanings in English
Benz	奔驰 <i>/ben chi/</i>	run race
Benz-Mercedes	宝马 <i>/bao ma/</i>	treasure horse
gene	基因 <i>/ji in/</i>	basic element
vitamin	维他命 <i>/wei ta ming /</i>	keep his life

To summarize, English loanwords enter Chinese with an eye to how they can be written down. This has led to two types of forms, and a mixture of the two as a third type. The first type is transliteration, in which semantically unrelated characters that happen to approximate the sounds of the English syllables are put together in a sequence that sounds more or less like the English word. The other type is semantic loan, and is a creative combination of characters whose combined meaning is more or less compatible with the meaning of the English word. Now that the manifestations of loanwords have been

established, we will turn to their distribution. In the next section, a data-based study that we carried out to investigate this is described.

3. DATA

3.1 Data Collection

The data in this study were collected from a newspaper, Beijing Youth Daily, and a magazine, Beijing Youth Weekly. The Beijing Youth Daily is the official newspaper of the Communist Youth League Committee in Beijing. It is one of Beijing's most widely-circulated newspapers, publishing an average of 50 pages a day in 32 provinces. Similar to major newspapers in any language with a national circulation, Beijing Youth Daily has a great deal of coverage of important events in China and around the world. Beijing Youth Weekly, likewise, targets primarily young readers in Beijing. It features stories about shopping, travel, performances, and various aspects of pop culture in Beijing. It consists of three different sections, "focus", "life" and "entertainment". We assume that the loanwords found in these publications are fairly representative of Chinese borrowing from English, in vocabulary as well as in grammar.

The data were obtained from articles published between August and December 2011. The days for data collection were chosen randomly. From Beijing Youth Daily, articles were selected from all sections except sports, which the first author had earlier determined, in a pilot study, to be a domain unlikely to contain loanwords. In Beijing Youth Weekly, articles were selected from all sections. The data were obtained from the electronic versions on the publications' websites. The procedure for selection was as follows. First, headlines were scanned. If the headline suggested a topic that made the presence of English lexical items likely, such as topics related to modern life and globalization, the article was downloaded and became part of the data base. This was considered defensible because the aim was to see what happens to English loanwords, not how prevalent they are in modern Chinese. Usually only one article was selected from any section in one issue. The data thus collected contain 80 articles, 47 from Beijing Youth Daily, and 33 from Beijing Youth Weekly. Finally, the loanwords were extracted. Altogether, we ended up with 55 loanwords; the complete list is given in the appendix.

Several observations can be made about the list. First, among the 55 loanwords, 22 are transliterations while 20 are semantic loans. Second, the number of loanwords found in the newspaper and the magazine is also roughly the same, which seems to support our decision to pool these sources. Third, seven of the thirteen cases of the third type of loanwords, the mix of the other two categories, concerns brand or commodity names which is in accordance with the general impression about the domain where this type is used a lot.

Another thing that should be pointed out is that the semantic loans are exclusively loan translations. That is, the type introduced in Section 2.2 as loan creation was not found at all. This may well be because they are extremely hard to identify. Compared with the other types of loanwords which can be easily extracted from the data through intuition or linguistic knowledge, semantic loans are not easy to distinguish from native words. Often, there will be no consensus on their origin, leaving only the suspicion of ultimately a foreign origin, but no conclusive proof. For example, the word 机器人 (/ji qi

ren/, ‘robots’) might be a semantic loan or it might be a native word. The literal meaning of 机器人 is “machine man” and as it has no phonological similarity to English “robots”, it cannot be a loanword. Another example is 收音机 (*/shouyinji/*), which is thought by some people to be a semantic loan from the English word “radio”. Literally, it means ‘sound-receiving machine’. Again, it is clearly not a loanword, as there are no morphological matches between it and “radio” (Zhou and Jiang 2004), but without a historical analysis, we cannot judge whether it is a semantic loan or a native coinage. For these reasons, we didn’t include semantic loans in the empirical study.

3.2 *Degree of Integration*

We hypothesize that the more an English loanword becomes socially integrated or established in the community, the bigger the chance it will become conventionalized as a loan translation or semantic loan, rather than as a transliteration. That is, loanwords may start off as transliterations or as semantic loans, but the former are predicted to be unstable. This is because the morphemes that are used to put them together are based on characters that have their own meaning, and Chinese readers cannot block out those meanings when the word appears in writing. The nonsensical combination is not a good basis for long-term establishment of the intended association with the meaning of the similar-sounding English word.

To test this, we need some way of measuring a loanword’s degree of integration. We partially adopted the method of Poplack and Sankoff (1984), who examined the linguistic integration of English loanwords in French in five francophone communities in Canada. They used four parameters that are generally felt to be relevant in the establishment of loanwords: its frequency of occurrence, whether it is replacing a native synonym, whether it’s phonologically and morphosyntactically integrated, and the degree to which speakers accept it as a word in their language. It is difficult to ascertain for every word whether or not there was an earlier Chinese synonym, but in general the words either stand for new concepts or have a meaning not adequately covered by any Chinese equivalent, which casts doubt on their being synonyms in the first place. Phonological integration is also of limited relevance, since all transliterations are phonologically adapted to Chinese, while the criterion is irrelevant for semantic loans. Morphosyntactic integration is also problematic as a determinant of loanword status, for reasons not germane to the issues we are dealing with here. Finally, for this study, we had no recourse to speaker judgments, but we did measure the frequency with which the 55 loanwords obtained from our database occurred in a larger Chinese corpus: the National Broadcast Media Language Resources Online, a large-scale dynamic and diachronic corpus of broadcast media language monitoring, which includes radio and TV multimodal data from various periods. We selected the time period from January 2004 to December 2010, and determined the frequencies of the loanwords in that sub-corpus.

The basic data are given in Table 2. First, compared with transliterations, there are more loan translations that are very frequent. We put the words into two bins, high and low frequency, with the cut-off point for high frequency arbitrarily set as more than 700 occurrences. Altogether, there are eight loan translations that appear more than 700 times in the corpus but only two transliterations. In addition, there are more transliterated words in the low frequency bin, which contained all loanwords with a frequency less than 100. Eight transliterated words met this standard, versus only three loan

translations. What this suggests is that the more established a loanword is as a conventional lexical choice, the more likely is it to be a loan translation, while individual transliterations tend to be used less widely.

Table 2: A comparison between the frequencies of transliteration and loan translation

Most frequently used loanwords		Least frequently used loanwords	
Transliteration	Loan translation	Transliteration	Loan translation
Aids, 艾滋病 (/ai zi bing/), 1550	Hot-line, 热线 (/re xian/), 9775	Rally, 拉力赛 (/la li sai/), 100	Generation gap, 代沟 (/dai gou/), 33
Fans, 粉丝 (/fen si/), 874	Super-market, 超市 (/cha shi/), 4903	Bikini, 比基尼 (/bi ji ni/), 55	Soap opera, 肥皂剧 (/fei zao ju/), 19
	Legal person, 法人 (/far en/), 1542	Mosaic, 马赛克 (/ma sai ke/), 45	Bachelor mother, 单身母亲 (/dan shen mu qin/), 14
	Low-carbon, 低碳 (/di tan/), 1518	Elnino, 厄尔尼诺 (/e er ni nuo/), 39	
	Mini-blog, 微博 (/wei bo/), 1030	Bungee, 蹦极 (/beng ji/), 30	
	White-collar, 白领 (/bai ling/), 968	Hula loop, 呼啦圈 (/hu la quan/), 15	
	Cold war, 冷战 (/leng zhan/), 905	Laser, 镭射 (/lei she/), 15	
	Bottleneck, 瓶颈 (/ping jing/), 715	Punk, 朋克 (/peng ke/), 6	

Given that we did not expect any transliterations in the high frequency group, it is interesting to have a closer look at the two cases we found. The first word 粉丝 (/fen si/, fans) does not completely belong to transliterations because 粉丝 is a word which already exists in Chinese and, as was mentioned in Section 2.1, refers to a kind of noodle. The extension of its meaning to refer to “enthusiasts” involves some special pragmatic effects which may explain its popularity; however, we still feel it is suitable to place it in the category of transliteration since the phonemic translation involved in its appearance in Chinese is more prominent. The other transliterated word that has a relatively high frequency is 艾滋病 (/ai zi bing/, aids). Its high frequency is probably the result of the fact that health care was a frequently discussed topic in the news reports of the period covered. Nevertheless, the inclusion of these two cases in the high frequency group shows that our hypothesis can only reflect a tendency, not an absolute constraint.

Similarly, we should look at the three loan translations that have low frequencies – 代沟 (generation gap), 肥皂剧 (soap opera) and 单身母亲 (bachelor mother). Their low frequencies presumably reside

again in a lower need to refer to them in the texts. Frequency, that is, is not just dependent on a word being a transliteration or a semantic loan. Interestingly, though, 单身母亲 and 肥皂剧 are multisyllabic words while most of the Chinese words are disyllabic (see the next section). Being too unlike Chinese words may exclude them from entering the mainstream vocabulary.

Some of the transliterated words, but none of the loan translations in the data are nonce borrowings in the sense that they occur only once (cf. Sankoff, Poplack & Vanniarajan 1990). They co-occur with typographic markings and/or metalinguistic commentary. Typographic markings include italics, boldface, or quotation marks, while metalinguistic commentary usually translates or explains a term. Both strategies indicate that the loanword is used infrequently and is probably restricted to bilingual speakers. They have just started to be borrowed (Field 2002:9). In the data, we find, for example, 你这个想法也有点太“花辰”(时尚)了吧。(Your idea seems to be too fashionable). Here, the loanword “花辰” (/hua chen/), enclosed in quotation marks and with Chinese meaning provided in the brackets is a typical nonce borrowing. The characters chosen to transcribe the word “fashion” are not yet fixed, it can be “华臣” or “花臣” or “花辰”, which only indicates that “花辰” is not an established loan and is currently used by only a limited number of speakers.

3.3 More Evidence

The results described above to some degree confirm our hypothesis that loan translation or semantic loans tend to be the final form of adaptation for English words borrowed into Chinese, while individual transliterations tend to occur less frequently, though there may be quite a lot of them. Technically, there are two ways in which this can come about: transliterations rarely become very widespread, or English words that are ‘here to stay’ and come in as a transliteration, change their form at some point into a semantic loan. The first scenario has some conceptual problems: one would expect that semantic need determines the ultimate diffusion of a loanword – if it is useful, would its strange form be enough to keep it from spreading? There seems to be some evidence for the second scenario. Some English words are rendered in two ways in the data: a transliteration and a semantic loan, with the semantic loan gaining in popularity in data of a later date. This suggests that when these words were newly borrowed, they took the form of a transliteration, and after a period of time, this transliterated version started to get replaced by a semantic loan. In between, there is a period when people just hesitate as to which version they should use. In other words, words enter as transliterations and if they are kept, a semantic loan is formed. Examples are as follows:

Table 3: Loanwords that have two versions of translation in Mandarin Chinese

Original Form	Translation Form 1 (Character/Pinyin)	Translation Form 2 winning more popularity today (Character/Pinyin)	Literal Meaning of Translation Form 2
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microphone	麦克风 /mai ke feng/	话筒 /hua tong/	loud speaker
e-mail	伊妹儿 /yi mei er/	电子邮件 /dian zi you jian/	electronic letter
vitamin	维他命 /wei ta ming/	维生素 /wei sheng su /	life sustaining substance
laser	镭射 /lei she/	激光 /ji guang/	stimulate ray
copy	拷贝 /kao bei/	复制 /fu zhi/	duplicate

One thing that should be pointed out is that the transliterated form of many of these words was borrowed from English indirectly, via Hong Kong or Taiwan. For example, ‘vitamin’ was translated in the 1920s as 维他命 (/weitaming/ ‘sustain his life’), and was changed into 维生素 (/weishengsu/ ‘life-sustaining substance’) in mainland China in the 1950s, when the Ideological Remolding Campaign was launched, during which some leading translators advocated free translation and naturalization to avoid the ‘foreign tone’. The mainland has tended to favor translations, while in Hong Kong and Taiwan, the tradition of transliteration is much more maintained, still until today. It can be said that in mainland China, English words are subjected to transformation more, while in Hong Kong and Taiwan, loanwords were used more spontaneously.

Finally, it is interesting to look at words borrowed in the May Fourth period. The May Fourth Movement was an anti-imperialist, cultural, and political movement that grew out of student demonstrations in Beijing on May 4, 1919, protesting the Chinese government's weak response to the Treaty of Versailles, which granted Shandong province to Japan. This was also a period in Chinese history during which the interaction of Western and Eastern civilizations became ever more intensive, and had a tremendous influence on Chinese society, including on the Chinese language. In the process of imitating and learning from the West, large numbers of English words were imported into Chinese, most of them initially in the form of transliteration. Many of these were later replaced by semantic loans (Mavromatis 2009:58). Some examples appear in the following table:

Table 4: Words borrowed in the May Fourth Period

The original English word	Transliterated form in May Forth Period	Present form in modern Chinese/literal meaning of translation
bank	版克 (/ban ke/)	银行 (/yin hang/), silver bank
democracy	德莫克利西 (/de mo ke li xi/)	民主 (/min zhu/), ruled by people
science	赛因斯 (/sai yin si/)	科学 (/ke xue/), -ology
cement	水门汀 (/shui men ting/)	水泥 (/shui ni/), water mud
telephone	德律风 (/de lü feng/)	电话 (/dian hua/), electronic speech
grammar	格朗玛 (/ge lang ma/)	语法 (/yu fa/), law of language
violin	梵华玲 (/fan hua ling/)	小提琴 (/xiao ti qin/), little portable musical instrument
seminar	塞米纳尔 (/sai mi na er/)	讨论会 (/tao lun hui/), discussion
mister	密司脱 (/mi si tuo/)	先生 (/xian sheng/), gentleman

4. CONSTRAINTS ON THE INTEGRATION OF ENGLISH LOANWORDS INTO CHINESE

We have shown above that English words can enter Chinese in one of two ways. One is as a purely formal transliteration in which characters are put together whose sounds jointly approximate the sounds of the English word, but the meanings of which have to be ignored as they don't make sense together and certainly don't carry any resemblance to the meaning of the English word. The other strategy is the semantic loan, which is more or less a loan translation. The question now is why these two types exist. Our suggestion is that this is caused by features of the Chinese writing system. Borrowing between Indo-European languages requires no special consideration of the written mode: since both source and target language will use an alphabetic writing system, transliteration will be more or less automatic and not present any big problems. Borrowing into Chinese, however, is much harder in this respect. Chinese characters are rooted in a fundamentally different approach to writing. While the letters of an alphabet stand for phonemes, Chinese characters are form-meaning combinations that represent syllables, morphemes or even single-syllable words (Xu 2001). Specifically, these differences translate into two constraints that help determine whether a transliteration or a loan translation is chosen to nativize any English loanword candidate, one morphological in nature and the other one orthographic.

4.1 Morphological Constraints

One of the contrasts between English and Chinese that may have imposed constraints on loanword integration is that between monosyllabic coding structure of Chinese and the polysyllabic one of English. By coding structure, we refer to the relationship between syllables, morphemes and words. In Chinese, there is a tight correspondence between syllable, morpheme and character. Most Chinese morphemes are monosyllabic; tellingly, most exceptions are loanwords, such as 葡萄 (/putao/, 'grape'), 玻璃 (/boli/, 'glass') and 菩萨 (/pusa/, 'Buddha'), etc. The overwhelming percentage of Chinese morphemes is exactly one syllable long. In contrast, English morphemes may consist of one syllable or more syllables. At the word level, the distinction is repeated: all of the Chinese characters are single-syllable morphemes, almost all of them can stand alone as individual words, and many Chinese words are disyllabic (Hannas 1997), combining two morphemes or characters, while English words are often much longer. This has had important impacts on the formation of Chinese vocabulary.

This means that the traditional Western notion of a word closely resembles a character in Chinese which is a single-syllable morpheme. There were many single-syllable or single-character words in ancient Chinese whereas in modern Chinese, most words consist of two morphemes or two characters. Of course, there are also multi-syllabic words which contain more than two characters, but the typical two-character words are the norm in Chinese morphology. There seems to be no need for more complex morphology to come into play. In fact, according to Chen Mingyuan (1980), words with three or more syllables account for just 2 % of texts in contemporary Chinese writings, whether the subject is related to everyday life or to science and technology (where more complex words could maybe be expected).

Therefore, when English polysyllabic words are transliterated into Chinese, they become polysyllabic Chinese words with a morphological composition which, in most cases, semantically is a jumbled

mismatch of Chinese characters that makes no sense. It is likely that the polysyllabic nature is enough to make these words of limited acceptability to Chinese speakers. This in turn may help explain why transliteration is not often the final form for loanwords borrowed from English. In fact, most of the transliterated words that are well established in Mandarin Chinese are disyllabic (Hannas 1997).

4.2 Orthographic Constraints: Chinese Writing System on Chinese Culture and Mind

We turn now to orthographic constraints, by which we mean that the Chinese writing system, as compared with the English alphabetic orthography, may have played a role in bringing about the specific patterns of integration of English loanwords described in this paper. When an English word is borrowed into Chinese, it undergoes phonological changes to sound like Chinese. Then, certain Chinese characters will be selected to represent the sound. As soon as these need writing down, they assume the shape of characters, and characters carry meaning. It is the choice of Chinese characters that poses much of the problem. As Zuckerman (2003a:304) points out:

In Chinese, it is impossible to import the Anglicism as it stands, for example by morpho-phonemic adaptation. One can calque the Anglicism or neologise, but---at least in writing-----one cannot import the sound without using indigenous characters...the use of Chinese characters is a necessity (although in the future the Chinese might well embed words written in Roman alphabet in their script---as Japanese sometimes do)...

A transliterated English loanword which emphasizes sound imitation and overlooks the similarity between the meaning of the original word and the meaning of characters selected to symbolize the sound usually sounds strange to native Chinese speakers, especially to monolinguals who are not familiar with English.

The writing system of Chinese is primarily pictographic and ideographic and has almost nothing to do with its sound system. By “pictographic”, we refer to characters such as 山 (mountain) and 火 (fire), which are originally pictures of the objects they denote, whereas “ideographic” refers to characters such as 明 (bright) which is composed of two radicals meaning respectively the sun and the moon, together conveying brightness. Therefore, unlike alphabetic orthography, each Chinese character is a self-contained unit of form and meaning, with the form representing a particular meaningful sound sequence. In literate native speakers’ minds, there is a strict correspondence between syllable, character and meaning. Zuckermann (2003b: 255), studying the Chinese writing system, argues that Bloomfield’s assertion that “a language is the same no matter what system of writing may be used” is inaccurate: “If Chinese had been written using roman letters, thousands of Chinese words would not have been coined, or would have been coined with completely different forms”. We might refer to this phenomenon as a specific type of linguistic relativity, perhaps to be named ‘orthographic relativity’.

After thousands of years of evolution, pictographic characters do not constitute a large part of the inventory of Chinese characters, but the practice of writing, and of recognizing script forms in terms of images, has evolved into a cognitive process that is deep-rooted in Chinese people’s minds. This

cognitive process has been argued to have played a significant role in shaping Chinese culture and the Chinese mind as a result of thousands of years of reinforcement (Jia & Jia 2005:152). A question Chinese people frequently ask when hearing an unfamiliar word is: “which character do you refer to?” China has a high literacy rate of 92%, according to the 2012 data from the census bureau. Therefore, the way a loanword is written in Chinese and which characters are chosen to represent them play a very important role in determining whether it will be accepted or not. As transliterated words usually cannot be analyzed as meaningful combinations of characters, their status in the language is unstable. Most of them are replaced by semantic loans or simply discarded.

It is an open question what will happen in the near future. With growing proficiency in English, Chinese speakers may start preserving the English pronunciation more, and this limits the opportunities for transliteration. As a consequence, though, it will also further limit the opportunities for using the word in writing. Whether this will lead to an increase in semantic loans, to a loosening of the ban on using letters from the Latin alphabet (see Zuckerman’s quote above), or yet some other solution is as yet hard to say.

5. DISCUSSION

This study has hopefully shed some light on lexical borrowing in Mandarin Chinese from English. Specifically, we showed that Chinese presents a type of loanword integration that is discussed rarely in the contact linguistic literature, perhaps due to the under-representation of Chinese as the borrowing language, and a lack of attention for the role of writing. We distinguished between two kinds of loanword adaptation in Chinese, transliteration and semantic loan, and concluded that semantic loans, or loan translations, tend to be more easily accepted by Mandarin Chinese. English words face orthographic and morphological constraints when entering into Chinese, and these work against the acceptability of transliterations. Although we believe that, therefore, semantic loans will often be the ultimate form of adaptation for loanwords borrowed from English, this does not necessarily mean that one should encounter more semantic loans than transliterations in synchronic data. In fact, the numbers of transliterations and loan translations we obtained are roughly the same. We take this to be an indication that the contact between English and Chinese is very intense: transliterations tend to be the early form of loanwords, and having many of them suggests there are many recent loanwords. However, the synchronic data do suggest particular diachronic developments. Most of the transliterated words that go on to become acceptable loans from English, in our view, will be replaced by semantic loans in the future. This has the effect that, in contrast to the familiar picture in which loanwords remain recognizable in a language for centuries, due to their phonological resemblance to the source word in the source language and sometimes also due to phonological irregularities caused by the preservation of foreign sounds, the pervasiveness of foreign lexical influence in Chinese will always be hard to ascertain. Many loanwords are masked by having adopted a completely different shape, just as is the case for loan translations in any language. The morpheme combinations will, after some time, look just like other Chinese multi-syllable combinations, and could just as well have been coined within Chinese. In fact, this is the reason why it is exceedingly hard to actually identify all cases of semantic loan in any database (cf. Section 3.1).

This brings up a theoretical question about how we should define loanwords. Should semantic loans really be included in the category of loanwords, and more importantly, are the three types we identified

in Section 2, semantic loans, loanshifts, and semantic extensions, the same thing? In this paper, we adopt a broad definition of loanwords, regarding the semantic loan as a type of loanword. The reason for that is that the ultimate source of the innovation is a foreign word. To a certain extent, this applies to contact linguistics in general, in which loanwords and loan translations or semantic extensions are routinely separated as different phenomena. We think that our data show that we shouldn't overdo this separation because there are clear similarities. As for loan translations, the data also have implications for how we define that category. The semantic loans we discussed resemble classical loan translations, but do seem to form a new sub-category. Due to the loose semantic identity between English source and Chinese copy, we have referred to this as the loan creation of new words using existing morphemes.

Intended to be descriptive and explanatory, this study has its limitations. The database is of limited size, and was not collected in an entirely random manner. In addition, many semantic loans will not have been included in our samples, due to the difficulty of identifying them. Our conclusion that the semantic loan, and not the transliteration, will usually be the ultimate form of the nativization of English words borrowed into Chinese is only a tentative one. However, it is clear that contact linguistics would do well to pay more attention to lexical borrowing in Chinese.

ACKNOWLEDGEMENT

This work was supported by the 2011 Fundamental Research Funds for the Central Universities in China and by the Special Fund of Beijing Municipal Commission of Education for Co-Sponsored Projects.

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APPENDIX: List of Loanwords Found in Beijing Youth Daily and Beijing Youth Weekly

Transliterations	Loan translations	Combination of the two Word-by-word Equivalent Meanings in English
Bungee, 蹦极 (/beng ji/)	legal person, 法人 (/fa ren/)	Hacker, 黑客 (/hei ke/), black guest
hula loop, 呼啦圈 (/hu la quan/)	bachelor mother, 单身母亲 (/dan shen mu qin/)	Shampoo, 香波 (/xiang bo/), fragrant waves
Party, 派对 (/pai dui/)	dark horse, 黑马 (/hei ma/)	Shock, 休克 (/xiu ke/), rest overcome
Outlets, 奥特莱斯 (/ao te lai si/)	negative growth, 负增长 (/fu zeng zhang/)	Lace, 蕾丝 (/lei si/), bud silk
Radar, 雷达 (/lei da/)	official website, 官网 (/guan wang/)	Pamper, 帮宝适 (/bang bao shi/), help baby comfortable
Model, 模特 (/mo te/)	High-tech park, 高科技园 (/gao ke ji yuan/)	Johnson, 强生 (/qiang sheng/), strong life
rally race, 拉力赛 (/la li sai/)	generation gap, 代沟 (/dai gou/)	Mazda, 马自达 (/ma zi da/), horse reach himself
Fans, 粉丝 (/fen si/)	hot-line, 热线 (/re xian/)	Playboy, 花花公子 (/hua hua gong zi/), dandy, a man about town
Cool, 酷 (/ku/)	cold war, 冷战 (/leng zhan/)	Show, 秀 (/xiu/), elegant
Copy, 拷贝 (/kao bei/)	white collar, 白领 (/bai ling/)	carnivore, 嘉年华 (/jia nian hua/), good year party
Sauna, 桑拿 (/sang na/)	silicon valley, 硅谷 (/gui gu/)	Gucci, 古奇 (/gu qi/), ancient and special
Elnino, 厄尔尼诺 (/e er ni nuo/)	test-tube baby, 试管婴儿 (/shi guan ying er/)	Carrefour, 家乐福 (/jia le fu/), family happy luck
Mosaic, 马赛克 (/ma sai ke/)	data bank, 数据库 (/shu ju ku/)	Beatles, 披头士 (/pi tou shi/), men whose hair hang down loosely
Aids, 艾滋病 (/ai zi bing/)	Supermarket, 超市 (/chaos hi/)	
Punk, 朋克 (/peng ke/)	low-carbon, 低碳 (/di tan/)	
Laser, 镭射 (/lei she/)	Superstar, 超星 (/chao xing/)	
Pudding, 布丁 (/bu ding/)	call girl, 应招女郎 (/ying zhao nv lang/)	
Bikini, 比基尼 (/bi ji ni/)	Flagship, 旗舰 (/qi jian/)	
Bazaar, 芭莎 (/bas ha/)	Bottleneck, 瓶颈 (/ping jing/)	
Clone, 克隆 (/ke long/)	blue-collar, 蓝领 (/lan ling/)	
share, 晒 (/shai/)		
Fashion, 花辰 (/hua chen/)		