

JOURNEY TO THE EAST

*The Lexicon  
of Chinese Language*

**Tereza Slaměníková a Michaela Frydrychová (eds.)**

# **Journey to the East: The Lexicon of Chinese Language**

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Editors

Olomouc, 11 June 2022

## EDITORIAL

This issue of our journal is a collection of nine single-author articles written in English by Zdenka Heřmanová. It attempts to provide easy and comprehensive access to Z. Heřmanová's studies published over time in various places. They are referred to here by their original date in the following list:

- 1962** Some Remarks on the Analysis of Compound Types of Chinese Characters<sup>1</sup>
- 1964** On the Semantic and Grammatical Functions of the Word Hsiang<sup>2</sup>
- 1967a** Linguistic Factors of the Low Adaptability of Loan-words to the Lexical System of Modern Chinese<sup>3</sup>
- 1967b** Contributions to the Study of Loan-words and Hybrid Words in Modern Chinese<sup>4</sup>
- 1968** Contributions to the Study of Loan-words and Hybrid Words in Modern Chinese<sup>5</sup>
- 1969** Contributions to the Study of Loan-words and Hybrid Words in Modern Chinese<sup>6</sup>
- 1971** Coinage and Structure of Economic Terms in Modern Chinese<sup>7</sup>
- 1975** Morphemic Reproductions of Foreign Lexical Models in Modern Chinese<sup>8</sup>
- 1994** Can a Generative Dictionary Be Used as a Diagnostic One?<sup>9</sup>

We chose a distinctly reverent adaptation, only interfering with the texts in the technical sense. We have removed the authorship of the texts or affiliation. The articles are ordered chronologically from the oldest to the newest ones. The three pieces **1967b**, **1968**, and **1969** constituted a series and were published under the same title. The current anthology distinguished between them with the numbers I, II, and III. The footnotes included at the end of the 1971 text have been moved to the appropriate pages below the line.

For clarity, we have placed the originally mostly handwritten Chinese characters directly into the text: in the original texts, they are mainly in the attachments. The Chinese characters in the text **1962**, which could not be found in the Word set of symbols, were rewritten by doc. David Uher, PhD, and provided in the form of

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<sup>1</sup> Originally: *Archiv orientální* 30, 4, pp. 597–623.

<sup>2</sup> *Archiv orientální* 32, 1, pp. 44–76.

<sup>3</sup> *Monumenta Serica* 26, 2, pp. 103–118.

<sup>4</sup> *Archiv orientální* 35, 4, pp. 613–648.

<sup>5</sup> *Archiv orientální* 36, 2, pp. 295–325.

<sup>6</sup> *Archiv orientální* 37, 1, pp. 48–75.

<sup>7</sup> In: ČERNÝ, Václav, A.: *Asian and African Languages in Social Context*. Praha 1971, pp. 46–77.

<sup>8</sup> *Archiv orientální* 43, 2, pp. 146–171.

<sup>9</sup> *Archiv orientální* 62, 2, pp. 154–159.

pictures. In light of the current practice, we have decided to use simplified Chinese characters in papers addressing issues of Modern Chinese. Only the Chinese characters in texts 1962 and 1964 are therefore provided in their traditional versions.

Following the practice of the journal, we have supplemented the articles with an abstract and a list of “References.” We have also simplified the full in-text or note citations to their short versions. Apart from the two oldest texts, the format of the full citations adheres to the journal guidelines. Following the original versions, texts **1962** and **1964** are provided either with the publication place or the publishing house. In light of the relatively long period since their publication dates, we decided to refrain from the journal guidelines in favor of keeping all the information provided by the author.

The most significant change in the original text was replacing the Wade-Giles transcription with the currently used Hanyu Pinyin in the seven older texts published between **1962** to **1969**, including the word “hsiang” in the title of the text **1964**. The reasons for this were practical: younger generations of sinologists are no longer familiar with Wade-Giles. We added tone marks in the case of examples and quotes in Chinese. We refrain from any changes in the marking of word boundaries. All the other transcription systems were left unchanged. Only the originally different IPA symbols, varying between the texts **1967a** and **1968**, were unified in favor of their more recent versions. Apart from “References,” we do not interfere with the use of capital letters. Transcribed words or transcribed quotes are provided in a different font style which makes them easily distinguishable.

Although we have made every effort to minimize their occurrence, we apologize for any mistakes we have made in the digitalization and subsequent editing of the original texts. Please send your comments to Mgr. T. Slaměňíková, Ph.D., KAS FF UP, tř. Svobody 26, 771 80 Olomouc, Czech Republic.

T. Slaměňíková and M. Frydrychová  
Olomouc, 11 June 2022

## SUCH KINDNESS OF WARM SUN, CANNOT BE REPAID BY GRASS

/shéi yán cùn cǎo xīn, bào dé sān chūn huī/

誰言寸草心報得三春暉<sup>1</sup>

David Uher

Zdenka Heřmanová-Novotná, known in China as Fu Siduan 傅思端, is, together with Jarmila Kalousková (1908–1989), Oldřich Švarný (1920–2011) and Jaromír Vochala (1927–2020), the most important representative of the Prague school of Czechoslovak sinological linguistics. She is also one of the key figures of the so-called second generation of Czechoslovak sinologists. Z. Heřmanová is also a translator and promoter of Chinese culture. For her work, she was awarded the Czechoslovak Academy of Sciences' Certificate of Merit [Čestné uznání ČSAV] (1969) for her lexicological studies and the Czechoslovak Academy of Sciences' Prize [Cena ČSAV] (1991) for her work on the *Czech-Chinese Dictionary* [Česko-čínský slovník].<sup>2</sup> Her husband was the Czechoslovak Slavist Sáva Heřman (1926–2021), co-founder of the Czech language lectureship at the Peking Institute of Foreign Languages (1954–1955) in the PRC, and the author of the still remarkable and therefore inspiring Jie-Han Huihua 捷汉会话 *Czech-Chinese Conversation* [Česko-čínská konverzace] (1958).<sup>3</sup>

She was born on 8 December 1930, in Rakovník. She spent a year (1946–1947) in Great Britain studying English before graduating from the Zikmund Winter Grammar School there (1950). The language stay and her thorough knowledge of German, French, Russian, and, of course, Chinese were invaluable helpers in her professional career. From 1950–1953, she studied Chinese and the history of the Far East at the Faculty of Philosophy of Charles University in Prague. She continued her studies of Chinese and Chinese literature at the prestigious Peking University in the PRC between 1953 and 1958.<sup>4</sup> In this context, her classmate Jaromír Vochala states he and Z. Heřmanová were the only ones at the Faculty of Chinese Language and Literature to insist on defending their thesis, which was certainly not a common practice at the time.<sup>5</sup>

Her professional career was closely connected with the Oriental Institute of the Czechoslovak Academy of Sciences in Prague. She worked there from 1958–1992, with a two-year break between 1988–1990, when she retired. At the request of the institute's new leadership, she consequently returned there for two more fruitful

<sup>1</sup> Meng Jiao 孟郊: You zi yin 遊子吟 *A Song about a Son on the Road*.

<sup>2</sup> Černý 2008: 218.

<sup>3</sup> Bláha 2008: 216–217.

<sup>4</sup> Černý 2008: 218.

<sup>5</sup> Bakešová 2012.

years. Her main task was to work on the *Czech-Chinese Dictionary* [Česko-čínský slovník] (Prague 1974–1984), the compilation of which had already been launched by Danuška Heroldová-Štovičková (1929–1976). She taught Hindi at the Faculty of Arts of Palacký University in Olomouc up until 1951. She is the author of the *Czech-Chinese Thematic Dictionary* [Česko-čínský tematický slovník] (Beijing 1961),<sup>6</sup> which is still very relevant today. She laid solid foundations for the correspondence of the professional expressions and terms of both languages.<sup>7</sup> At that time, Zdenka Novotná “looked over the entire text, made some adjustments and corrections, and proofread the entire dictionary.”<sup>8</sup> After the tragic death of D. Heroldová-Štovičková in 1976, Z. Heřmanová led the entire project. She created the theoretical background for it in her article “Some Problems of a Czech-Chinese Dictionary” in 1962. Dana Šejnohová-Khestlová, Li Taj-ťün Hejzlarová and Tchang Jün-ling Rusková were other members of the author’s collective. It was designed as a medium-sized dictionary of 40,000 entries and was initially supposed to be printed in China, but due to the strained relations between Czechoslovakia and the People’s Republic of China, this did not occur. It was eventually typewritten and the Chinese characters were added into the text by hand. The dictionary thereby significantly increased its volume to the final nine books of A4 format, each of which has approximately 700 pages.<sup>9</sup> This dictionary was primarily intended for Czech users, translators, interpreters, and a circle of people interested in Chinese. Thanks to the wealth of phrases and phraseology, it was also of great use to Chinese connoisseurs of Czech.<sup>10</sup>

In her letter to the management of the Oriental Institute dated 10 January 1990, Z. Heřmanová described the atmosphere in which the dictionary was created: “I consider it a positive thing in my life that despite the obstacles created by the previous management of the institute, the lexicographic collective, which I led for several years, succeeded in completing and publishing the *Czech-Chinese Dictionary*. I view, however, the period of my work at the Oriental Institute, the years 1972–1985, to be the worst because I was not allowed to make use of all my qualifications. I also did not have the opportunity for professional growth or full participation in foreign relations. (During this period, I only visited the GDR three times, twice at the invitation of German sinologists who appreciated my lexicographic works). The unfair and incompetent assessment of my work led [in 1976 – author’s note] to a nervous breakdown. I would very much hope that none of my younger colleagues would ever have to experience something similar when their work was evaluated by incompetent people.”<sup>11</sup>

Her work was also significantly influenced by collaboration with Ladislav Zgusta (1924–2007), an Indo-Europeanist of Czech origin, a researcher in the field of on-

<sup>6</sup> Uher 2008: 215–216.

<sup>7</sup> Heřmanová 1999.

<sup>8</sup> Štovičková 1961: xi–xii.

<sup>9</sup> Trísková 2020: 3.

<sup>10</sup> Heřmanová 1999.

<sup>11</sup> *Materiály komise pro nápravu křivd* 1990: 25–26.

omastics, and a lexicographer. He emigrated to the United States in 1970 after the August occupation of Czechoslovakia by the Warsaw Pact troops. He taught and directed the Center for Advanced Study at the University of Illinois Urbana-Champaign from 1987–1995. His *Manual of Lexicography* (Prague 1971) is still an up-to-date linguistic study which gained him renown all over the world.<sup>12</sup>

Z. Heřmanová also collaborated on international lexicographic projects, mainly with colleagues from the GDR and the PRC.<sup>13</sup> She was, for example, a member of the Nomenclature Commission of the Czech Geodetic and Cartographic Office (1967–1984), the editorial board of the journal *Archiv orientální* (1990–1999), the committee of the Czech-Chinese Society, and the editorial board of its magazine *Fénix*, etc. She specializes in the problems of the structure and development of Chinese character writing and its reform (including “Some Remarks on the Analysis of Compound Types of Chinese Characters” 1962). She also published studies on Chinese terminology (“Coinage and Structure of Economic Terms in Modern Chinese” 1971) and especially on word formation in Chinese (“Linguistic Factors of the Low Adaptability of Loan-words to the Lexical System of Modern Chinese” and “Contributions to the Study of Loan-words and Hybrid Words in Modern Chinese” 1967; *Affix-like Word-Formation Patterns in Modern Chinese* 1969 and “Morphemic Reproductions of Foreign Lexical Models in Modern Chinese” 1975).

In addition to professional work, she also dealt with translations of Chinese literature into Czech. Her most important work in this sense is *The Monkey King* [Opičí král] (Prague 1961), a selection from Wu Cheng'en's novel *Journey to the West*. It is the very first translation of this work into Czech. After English, French, and Russian, it became only the fourth European language into which the novel was translated. This successful book was later published in English (1964 and 1992), German (1964 and 1992), and French (1992). Z. Heřmanová subsequently translated the script of the Chinese TV series *The Monkey King* (1986) for Czechoslovak Television Brno, the first broadcast in Czechoslovakia in 1991 and the rerun two years later.<sup>14</sup> Her other essential translations include, e.g., *Treasure Box: Love Stories of Ancient China* [Skříňka s poklady: milostné povídky stare Číny] (Prague 1961); Liao Jingwen: *Life Written with a Brush* [Život psaný štětcem] (Prague 1989), a biographical novel about the modern Chinese painter Xu Beihong; or *The Call of the Cranes* [Volání jeřábů] (Kladno 1996) – an anthology of Chinese poetry from the second and third centuries. She also wrote two popular books about Chinese cuisine.

Even after retirement, she continued working. As her much younger colleague, I remember how selflessly she dedicated herself to those interested in studying Chinese. One should name at least Jakub Hrubý, out of all of them, who was especially interested in her *Monkey King*. She devoted herself mainly to students of Sinology studies in Prague and Olomouc as part of the annual translation competition of the Czech-Chinese Society. She also willingly shared her views on the issue of Chinese

<sup>12</sup> Holeš 2008: 720–721.

<sup>13</sup> *Materiály komise pro nápravu křivd* 1990: 25.

<sup>14</sup> [2022-08-02] cs.wikipedia.org/wiki/Zdenka\_Heřmanová

studies with young Sinologists (including Vlastimil Dobečka) and younger colleagues (Hana Trísková and Ondřej Kučera). Last but not least, her nephew – the Japanologist and religionist Robin Heřman – has certainly made her proud. She always defended her work and colleagues convincingly and uncompromisingly. As one of the renewers of Chinese studies in Olomouc, I will never be grateful enough for the great interest she displayed in its renaissance. Her gift, in the form of a whole series of book titles, most of which are marked with her Chinese seal, to the library of the Department of Asian Studies at Palacký University, will never be forgotten. Finally, I would like to highlight her collaboration with Chinese scholars of Czech. The difficult living situation of the elderly in the Czech Republic, together with caring for her husband, forced her to leave her cosy Prague apartment in Petřiny and move to a House for the Elderly, Rybníční in Strakonice, South Bohemia. Perhaps only by an irony of fate, her mature and original research personality escaped the attention of the compilers of the prestigious *Encyclopedia of Chinese Language and Linguistics* (Brill 2016). Her analysis of loanwords in Chinese has inspired an entire range of her followers both at home and abroad.

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## SOME REMARKS ON THE ANALYSIS OF COMPOUND TYPES OF CHINESE CHARACTERS

**Abstract:** *This paper argues that the two types of compound characters described in Xu Shen's *Shuowen jiezi* do not exhaust the variety of compound characters that originated in the Chinese script's development process. It introduces a more subtle classification, including an early type unknown to Xu Shen and two later types. The compound characters are divided according to the basic principle governing the characters' inner structure into three groups. First, the phonetic principle is represented by the phonograms based on the method of *fanqie* that appear in translations of Buddhist *Sūtras*. Second, the signfic principle includes compound ideograms of an earlier type and a later type associated with the existence of *lishu*. Third, combinations of these two principles are subdivided into a) phonoideograms that are composed of a phonetic and a signfic with a differentiative function; b) ideophonograms, i. e., compound ideograms in which case one of the components is playing the part of signfic and phonetic at the same time; and c) ideophonograms of *fanqie* type which were created by special needs of Chinese dialects. This paper describes the main features of all the types demonstrated in several examples. The conclusion summarizes the observed characteristics and highlights the role of the three different principles in Chinese script development.*

**Key words:** *Chinese script, compound characters, phonetic principle, signfic principle, fanqie*

Chinese characters, from the point of view of their graphic structure, can be divided into two large groups, characters of simple structure and characters of compound structure. This division was already accomplished in the first classical work dealing with the analysis of Chinese script, in Xu Shen's 許慎 *Shuowen jiezi* 說文解字<sup>1</sup> whose epilogue bears the date of 100 A. D. Xu Shen divides all characters into two large categories, *wen* 文 and *zi* 字. According to the commentary of Duan Yucai 段玉裁<sup>2</sup> (1735–1815) “*Ān xī yán zhī, dú tǐ yuē wén, hé tǐ yuē zì. Tǒng yán zhī, zé wén zì kě hù chēng.*” 「按析言之，獨體曰文，合體曰字。統言之，則文字可互稱。」 “Ana-

<sup>1</sup> It is out of scope of the present paper to tackle the question when *Shuowen* was accomplished and appeared, as well as the question of its various texts and editions, as it has been already discussed elsewhere. E. g. Paul Pelliot (1930, pp. 365–367) gives a survey of views held by western sinologists, himself taking the view that *Shuowen* was accomplished rather in the year 100 than in the year 121. The year 121 is only the year of publication. The texts of *Shuowen* have been discussed in detail in Zhou Zumo's study *Shuowen jiezi zhi chuanben* 說文解字之傳本 [The Texts of *Shuowen jiezi*] (1957, pp. 240–267).

<sup>2</sup> The characters of all Chinese books, their authors and editions will be given for the sake of clearness, marked with Roman figures, in a separate list joined at the end of the present paper. Editors' note: The original list of Chinese references was modified according to the journal praxis and supplemented by all titles quoted in the text.

lytically taken, characters of simple structure are called *wen*, characters of compound structure are called *zi*. Generally taken, *wen* and *zi* stand in mutual correspondence.” (*Duan*, vol. 14, p. 2)<sup>3</sup>

In *Shuowen jiezi* (*Duan*, 14, pp. 3–5) the traditional six types of characters, *liushu* 六書, were systematized and newly classified. These six types are as follows: indicative characters, *zhishi* 指事, which indicate the meaning through symbolic usage of indicative marks; pictograms, *xiangxing* 象形, characters schematically drawing outward features of concrete objects; phonoideograms, *xingsheng* 形聲, composed of a signfic (classifier, determinant) indicating the signification category of the character, and a phonetic indicating its phonetic shape; compound ideograms, *huiyi* 會意, which are composed of two or more structural elements; the combination of these elements conveys the meaning of the character different from that of the single elements, but intelligible by analysis of the structure of the character; characters explaining one another, *zhuanzhu* 轉注, actually two or more phonoideograms, which are close, in many cases even synonymic in meaning; they have the same signfic and are phonetically very close; phonetic loans, *jiajie* 假借, characters borrowed to record another meaning represented by the same phonetic shape, which successively lose the original meaning and acquire the new one.<sup>4</sup>

Analysing these six types of characters, we see that the first two types, indicative characters and pictograms, belong to the category of simple characters, as their structural components form a whole which cannot be further split into independent graphs, while the third and fourth types, phonoideograms and compound ideograms *huiyi*, are composed of elements which at the stages of development of the

<sup>3</sup> When quoted more than once, the titles of Chinese books will appear under an abbreviation according to the following list:

*Duan* – *Shuowen jiezi Duan zhu* 說文解字段注 [Duan’s Commentary to Shuowen jiezi]

*Guang* – *Guangyun shengxi* 廣韻聲系 [The Phonetic System of *Guangyun*]

*Long* – *Song ben xinxiu longkan shoujian* 宋本新修龍龕手鑑 [The Song Print of the Newly Revised Mirror of Buddhist Pagodas]

*Jing* – *Jingxian fangyan kaozheng* 涇縣方言考證 [An Investigation of the Jing District Dialect]

*Yue* – *Yueyan fu shengyu* 越諺附勝語 [Common Sayings of Yue, Repetitions Appended]

*Gu* – *Gusheng yuegu* 舐臍粵舐, *Shuoling* 說鈴 [About Banalities]. *Gusheng* 舐臍 [What’s Left in the Container].

*Hu* – *Huyan* 滬諺 [Common sayings of Hu]

*Gui* – *Guihai yuhengzhi* 桂海虞衡志 [Record of Hills and Streams of Guihai]

*Tong* – *Tongsubian* 通俗編 [Collection of Common Words]

*Dongbei* – *Changyong dongbei fangyan qianshi* 常用東北方言淺釋 [Explanations of Common Dialectal Words in Dongbei]

<sup>4</sup> R. B. Blakney (1935, p. 30) when giving the explanation of the above-mentioned six types of characters, does not seem to be quite clear about the essence of some classes, especially of indicative characters, *zhishi*, which according to him “point the reader directly to the object they refer to”. His explanation of *zhuanzhu* as “characters which time and usage have extended or made analogical in meaning” seems rather vague and confusing. Wiegner’s explanation of *zhuanzhu* (see L. Wiegner et al. 1940, pp. 10–11) also discloses that Wiegner did not take *zhuanzhu* for cognate phonoideograms, which is their only correct explanation.

Chinese script preceding the radical changes brought about by the style *lishu* 隸書 could function as independent graphs or can do so even now. The last two types, characters explaining one another and phonetic loans, not being structural types, are only a mode of functional usage of a character. Phonetic loans, as regards their structure, can be either indicative characters or pictograms, compound ideograms or phonoideograms.

The types of compound characters given in *Shuowen* do not exhaust the variety of types of compound characters which originated in the process of development of Chinese script. There is an early type unknown to Xu Shen, the so called *hewen* 合文, common on the early oracle bones found about 1,800 years after Xu Shen's death; there is a type which came into existence in mediaeval Chinese, phonetic characters based on the method of *fanqie* 反切, and even a later type, ideophonograms of the *fanqie* type which were brought about into being by special needs of dialects, as we shall see later.

Compound characters composed of independent elements (i. e. elements which were independent graphs in the old styles of writing, great and small seal, or even are graphs in the new styles of writing, i. e. styles from *lishu* onwards), now preserved in the Chinese script, can be divided, according to the basic principle governing their structure, into three groups:

1. phonetic principle  
phonograms based on the method of *fanqie* as an attempt at pure phonetic writing
2. signfic principle – compound ideograms
  - a) earlier – before the existence of *lishu*
  - b) later – after the existence of *lishu*
3. combination of phonetic and signfic principles
  - a) phonetic principle preponderant – phonoideograms, composed of a phonetic and a signfic with a differentiative function
  - b) signfic principle preponderant – ideophonograms, i. e. compound ideograms, one of their structural elements playing the part of signfic and phonetic at the same time
  - c) two principles in balance – ideophonograms of the *fanqie* type

In addition to these three groups there are compound characters which as one graphic unit represent two or more syllables, i. e. one polysyllabic word. These are a) of unredacted structure – *hewen* on the oracle bones, b) of reduced structure – the type of recent simplified characters aiming at word-writing.

From the above list we can note two facts characteristic for the development of Chinese script: 1. new types of characters were formed through the combination of existing graphs, 2. there was a struggle between the signfic and phonetic principles, the positive effort of the phonetic principle to form graphs representing syllables being hampered by the signfic principle.

Now we shall try to point out the main features of all the types mentioned above, starting with the phonoideograms as the leading type in Chinese writing, not offering a detailed analysis, as they were often described and analysed by Chinese

and western sinologists.<sup>5</sup> We shall rather concentrate upon types which have not been discussed in detail, trying to demonstrate on a number of examples the inner structure of these types.

### Phonoideograms

Phonoideograms are the basic and the most productive type in Chinese writing. They form  $\frac{8}{10}$  of the total of over 9,000 characters given in *Shuowen*. Nowadays they cover 90% of all characters. They mark outstanding progress in the phonetizing tendency of Chinese writing, but at the same time they are the main obstacle preventing Chinese script from developing into a pure phonetic script and overcoming the restriction of signific elements present in the structure of a character. Phonoideograms combining phonetic and signific elements in one graph were a very suitable graphic means of writing the many homophones in Archaic and Ancient Chinese, in its essence a monosyllabic language with little developed morphology and comparatively poor phonetic system. For this reason they have existed in Chinese script from the oracle bones to the present day, when the phonetic system of Chinese has been further impoverished. All the time new characters were formed after their structural pattern. Due to changes in the lexical meaning of words (or morphemes) they represent, the signific of a phonoideogram which remained almost always the same, is in many cases no longer in accordance with the present meaning of the word (morpheme) recorded. The same is the case with the overwhelming majority of phonetics. In the changes which the phonetic system of the Chinese language has been subject to, the phonetic shape of the phonetic and the phonetic shape of the word represented by the phonoideogram as a graphic unit followed their own separate lines, thus often causing a discordance between the two said phonetic shapes.

But why do we classify phonoideograms composed of a signific and a phonetic as compound characters with the phonetic principle governing their structure? This classification has to be seen from the point of view of the main reason which gave rise to phonoideograms. For words representing different objects, abstract notions etc. for which neither a pictogram nor an ideogram could be invented, an existing character (pictogram, ideogram) was borrowed on the basis of phonetic identity or similarity, one character thus representing two or more different meanings with no inner relation whatsoever. On the other hand, one and the same word was in many cases rendered by different characters. Thus arose a disharmony between the oral and written form of language. (Compare the difficulty of deciphering the oracle bones inscriptions and bronze inscriptions, one of the principal reasons being the

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<sup>5</sup> Specimens of phonoideograms can be easily found in the two cited books, R. B. Blakney, *A Course in the Analysis of Chinese Characters* (1935) and L. Wieger et al., *Chinese Characters* (1940) and Bernhard Karlgren, *Grammata Serica Recensa* (1957, pp. 1–332). As to the theoretic views of the present Chinese paleographers, representative are the views of the leading Chinese paleographer Tang Lan 唐蘭 exposed in *Zhongguo wenzixue* 中國文字學 [A Study of Chinese Characters] (1949).

frequent use of phonetic loans.) In order to do away with this disharmony and to form new characters, significs were added to homophonous monosyllabic stems, i. e. one existing homograph was borrowed as phonetic, thus forming the basis of the new character – for, as we know, the meaning is rendered in oral form by the respective phonetic shape – and a signific enabling the differentiation of the signification category in the written form, was added. In this way a new graphic unit recording the respective meaning was formed, e. g.

*tʃəŋ*<sup>6</sup> 止 𠂔 𠂔 𠂔 𠂔 𠂔, “foot”; “to stop, to rest”, the graph is a drawing of a foot. By means of another signific “foot” 足 (the original became unclear and therefore was reduced to a phonetic) a new phonoideogram *tʃəŋ* 趾 “foot, heel” was formed; with the signific “water” there arose a phonoideogram *tʃəŋ* 沚, meaning “islet”; by means of the signific “plant” a phonoideogram *tʃəŋ* 芷, meaning “a fragrant plant”, was formed; together with the signific “omen” it gave a phonoideogram *tʃəŋ* 祉, meaning “happiness, prosperity”; with the signific “tooth” it formed a phonoideogram *tʃəŋ* 齒, “front teeth”. (For all these examples see Karlgren 1957, pp. 253–254.)

Further examples of characters of later origin not known from oracle bones or bronze inscriptions can be added:

*zhǐ* 址, “the foundations of a wall” (signific “mound”)

*zhǐ* 址, “a foundation, boundary” (signific “ground”)

*chǐ* 耻, “ashamed, shame” (signific “ear”, that which is at the side)

*chě* 扯, “to drag, to tear” (signific “hand”)

The appearance of phonoideograms on oracle bones inscriptions means the first revolutionary change in Chinese script; the basic character of Chinese writing begins to change from ideographic to phonoideographic. This change is closely connected with the development of material culture, e.g. phonoideograms for various kinds of cattle, connected with nomadic way of life, are earlier than those with signific “metal” connected with the knowledge of using and melting metals, phonoideograms with signific “word”, “heart” are also of later date, for the expression of abstract notions is required only by a community with a highly developed culture.

Apart from the main pattern of forming phonoideograms (signific added to a phonetic) there existed also a reversed procedure – phonetic being added to signific – justified by various reasons: the former pictogram not being clear enough, it was reduced to a signific and a phonetic element was added; a pictogram or ideogram used in a dialect took an extra phonetic to notify the dialectal reading etc., methods which we do not intend to enumerate, as they are not part of the main stream of formation of phonoideograms described above. At the same time, the resulting structure of these new phonoideograms is the same.

<sup>6</sup> The phonetic shapes of characters in Archaic Chinese are given according to Karlgren's (1957) reconstruction of Archaic Chinese.

## Phonetic characters based on the method of *fanqie*

Before we proceed to analyse and enumerate examples of compound phonograms of this type, we must make clear the meaning and the purpose of *fanqie*.

*Fanqie*, the traditional way of spelling the phonetic shape of a character and of indicating the reading of a character through employment of the phonetic values of other characters, has been known – according to the widespread view of Chinese linguists-phoneticians of the Qing dynasty – since the end of the Han dynasty, i. e. since the 2nd century A. D.<sup>7</sup> Scientifically most accurate and adequate is the definition of Chen Li 陳澧 (1810–1882):

“*Qiē yǔ zhī fǎ, yǐ èr zì wéi yī zì zhī yīn. Shàng zì yǔ suǒ qiē zhī zì shuāng shēng, xià zì yǔ suǒ qiē zhī zì dié yùn. Shàng zì dìng qí qīng zhuó, xià zì dìng qí píng, shǎng, qù, rù. Shàng zì dìng qīng zhuó ér bù lùn píng, shǎng, qù, rù.*”

「切語之法，以二字為一字之音。上字與所切之字雙聲，下字與所切之字疊韻。上字定其清濁，下字定其平、上、去、入。上字定清濁而不論平、上、去、入。」

“The way of cutting (spelling) of words means indicating the sound of one character by means of two characters. The first character has with the cut character the same initial consonant, the second character has with the cut character the same final vowel. The first character indicates its voicelessness or voicedness, the second character indicates its tone (even, rising, falling, the tone of syllables with finals -p, -t, -k). The first character indicates only voicelessness or voicedness, its tone is irrelevant.” (*Qieyun kao* 1, foreword, p. 2)

<sup>7</sup> The leading classic scholar and phonetician of the first years of the Qing dynasty Gu Yanwu 顧炎武 (1613–1682) already held this view. In his *Yinxue wu shu* 音學五書 [Five Books on Phonetics] he says: “*Shì Hàn mò rén dú zhī fānyǔ. Zhìyú Wèi shì, cǐ shì dà xíng.*” 「是漢末人獨知反語。至於魏世，此事大行。」 “The people of the end of the Han dynasty alone knew the analysis and combining of sounds. As to the Wei period, this thing was very widespread.” (*Yinxue wu shu, Yinlun* 3 音論卷下 [Discussion on Sounds, part 3], *Fanqie zhi shi* 反切之始 [The Beginning of fanqie], p. 9). Or: “*Fānqiē zhī yǔ, zì Hàn yǐshàng, jī yǐ yǒu zhī.*” 「反切之語，自漢以上，即已有之。」 “The name of *fanqie* has been existing already from the Han-time onwards.” (ibid., p. 10). The famous classic scholar Zhang Binglin 章炳麟 (1868–1936) has drawn attention to the following commentary of the *Geographic Record of Hanshu*: “*Yòu xún Hàn dìlǐzhì: Guǎnghànjùn Zītóng xià, Yīng Shào zhù: Tóng shuǐ suǒ chū, nán rù Diànjāng. Diàn yīn tú jiā fān. Liǎodōngjùn Tà shì xià, Yīng Shào zhù: Tà, shuǐ yé. Yīn cháng (d’iàng) dā fān. Shì Yīng Shào shí yī yǒu fānyǔ, zé qí yú Hàn mò yé.*” 「又尋漢地理志：廣漢郡梓潼下，應劭注：「潼水所出，南入墊江。上音徒，下反」。秦東郡沓氏下，應劭注：「沓水也。音上反」。是應劭時已有反語，則起于漢末也。」 “Further I was looking through the *Han Geographic Record*. Under “the prefecture Guanghan, Zitong” Ying Shao comments: “The river Tong flows from here, empties itself into the river Dian. Dian is read after *t’u* and *ch’ieh*.” Under “the prefecture Liaodong, Tashi” Ying Shao comments: “Ta is a river, is read after *ch’ang* (*d’iàng*) and *tā*.” Thus, at the time of Ying Shao the analysis and combining of sounds has been existing. It arouse towards the end of the Han period.” (*Zhang shi congshu, Guogu lunheng* 1 國故論衡卷上 [Critical Disquisition on National Heritage 1], *Xiaoxue* 11 小學十一篇 [Small Learning, vol. 11], *Yinlilun* 音理論 [Discussion on the Principle of Sound], p. 17)

The spreading and application of this analysis of the phonetic shape of a character was by no means causal, it was necessitated firstly by the development of Chinese poetry which attached great attention to rhythm, rhyme and alternating of tones, secondly by penetration of Buddhism to China. The translations of Sūtras introduced not only the knowledge of Indian phonetics, but also necessitated analysing the phonological system of Chinese when borrowing words from Sanskrit. Numerous rhyming dictionaries were compiled to serve the needs of Chinese poetry, reference dictionaries were arranged phonetically on the basis of classes of the same initials and finals. The characters in these dictionaries are provided with indications of pronunciation on the basis of the analytical method of *fanqie*. The earliest dictionary of this type is Lu Fayān's 陸法言 *Qieyun* 切韻 (appeared 601 A. D.) The original edition was lost, the earliest preserved copies come from the Tang period, the enlarged edition of Wang Renxu 王仁煦 from the year 706 is the most complete. Even dictionaries arranged according to radicals, like *Yupian* 玉篇 by Gu Yewang 顧野王 (appeared 548 A. D.) use the method of *fanqie* when giving the phonetic shape of characters.

On the basis of this method there develops a new type of characters. They were never commonly used, they appear only sporadically in translations of Buddhist Sūtras. They are collected in *Longkan shoujian* 龍龕手鑑 [A Mirror of Buddhist Pagodas], a dictionary in four volumes comprising 89,600 characters, paying special attention to characters of Buddhist terms. The author of this dictionary is a Buddhist monk named Xingjun 行均, of Youzhou 幽州 in the North of the Khitan Empire. He provided all characters arranged according to radicals and four tones with explanations of meaning and pronunciation by means of the *fanqie* method and gave at the same time all their graphic variants. The earliest preserved edition is the one with an epilogue by a monk named Zhiguang 智光 from the year 998, known as *Song ben xinxiu longkan shoujian* 宋本新修龍龕手鑑 [The Song Print of the Newly Revised Mirror of Buddhist Pagodas].

There are seventeen of these characters in *Song ben xinxiu longkan shoujian*. They are always composed of two characters, the one on the left indicates the initial, the one on the right indicates the final. Some of these characters are left without explanation, some are provided with a remark that they represent a Sanskrit phonetic shape, some are termed words of incantation.

These insufficient explanations of meaning and the phonetic shapes which the characters are supposed to represent, suggest that they form an auxiliary method of introducing syllables which were not usual in Chinese. It was very hard to find a suitable existing character, and therefore on the basis of analysing the initial and the final of the borrowed syllable a new auxiliary character was formed "to spell" the borrowed syllable by the method of *fanqie*. From the examples below we can see that the number of characters in these compound graphs used both for initials and finals is limited – that reveals the obvious tendency to represent the same initials and finals by the same character. If we disregard the practice of dissecting a foreign polysyllabic loan-word into syllables common in Chinese, a language with mono-

syllabic morphemes, we can clearly see a conscious attempt at assembling a set of graphs with a tendency to form a phonetic script. Examples:

*mja*<sup>8</sup> 𪛗 (名 + 夜) (Long 1, p. 68; 3, p. 8) composed of *mjäŋ* and *ja*<sup>9</sup>

*mjang* 𪛘 (名 + 養) (Long 1, p. 68) composed of *mjäŋ* and *jang*

*mja* 𪛙 (名 + 也) (ibid.) composed of *mjäŋ* and *ja*. These three characters have a common explanation terming them characters of incantation.

*pja* 𪛚 (并 + 也) (Long 2, p. 69) composed of *pjäŋ* and *ja*, no explanation

*pja* 𪛛 (卑 + 也) (ibid.) composed of *pje* and *ja*, no explanation, compared with the previous character possibly a different spelling of the same syllable

*nja* 𪛜 (寧 + 也) (Long 1, p. 68) composed of *nieng* and *ja*, no explanation

*njet* 𪛝 (寧 + 壹) (ibid.) composed of *nieng* and *jet*, no explanation

*njep* 𪛞 (寧 + 立) (ibid.) composed of *nieng* and *ljep*, no explanation

*tja* 𪛟 (丁 + 也) (Long 2, p. 69) composed of *tieng* and *ja*, no explanation

*tja* 𪛠 (丁 + 夜) (Long 3, p. 8) composed of *tieng* and *ja*, no explanation, possibly again different spellings of the same syllable

*d'jang* 𪛡 (亨 + 匠) (Long 1, p. 68) composed of *d'ieng* and *dz'jang*

*d'jem* 𪛢 (亨 + 音) (ibid.) composed of *d'ieng* and *jem*

*d'ja* 𪛣 (亨 + 夜) (ibid., Long 3, p. 8) composed of *d'ieng* and *ja*, also pronounced *tja* after *tieng* and *ja* 𪛤

*d'ân* 𪛥 (亨 + 單) (Long 1, p. 68) composed of *d'ieng* and *tân*

The last four characters according to Long 1, p. 68 represent Sanskrit phonetic shapes.

## Compound ideograms

Above we divided compound ideograms into two groups – earlier type, before the existence of the style *lishu*, and later type, after the existence of the style *lishu*. This division, however, cannot be taken as absolute, as both the earlier and the later type existed on the oracle bones, the earlier type being very frequent especially after *lishu*, which became widespread and normalised towards the end of the Later Han dynasty (25–220) and caused considerable changes in the structure of most

<sup>8</sup> The phonetic shapes of characters in Ancient and Mediaeval Chinese are given according to *Guangyun shengxi* 廣韻聲系 [The Phonetic System of *Guangyun*] by Shen Jianshi 沈兼士 (1945; further only *Guang*).

<sup>9</sup> The examples are given according to *Song ben xinxiu longkan shoujian* 宋本新修龍龕手鑑 [The Song Print of the Newly Revised Mirror of Buddhist Pagodas] (1923; further only *Long*).

characters. Many characters, especially pictograms drawing the outward features of a concrete object, ideograms composed of two or more structural elements or separate lines forming a symbol for an abstract idea or object difficult to picture directly, became mere fixed symbols with no outward resemblance to the original object they ought to represent.

The earlier type of compound ideograms, one of the oldest structural types, which came into being next to the pictograms, combines several structural components in one graph and forms a whole with one symbolic meaning, but can scarcely be analysed into individual independent graphs. These compound ideograms are frequent on the oldest monuments of Chinese writing, oracle bones and bronze inscriptions. Meanwhile, the later type of compound ideograms which appears already, but is still very rare, on the oracle bones, is a compound of existing individual graphs, especially pictograms. This compound also conveys a new meaning which can be often read off from the meaning of the single graphs, which as structural units still keep a certain degree of independence. In Chinese these compound ideograms are called *huiyi* 會意. There was an age-long struggle among Chinese paleographers on how to understand the term *huiyi*. One school interpreted *hui* in the sense of *huihe* 會合, “to combine”, and came to the conclusion that these graphs are a combination of two or more characters which form a new meaning. The other school understood *hui* as *linghui* 領會, “to comprehend, to judge”, and therefore explained *huiyi* as characters from whose graphic structure one could guess at their meaning. Although these interpretations are not quite identical, they should not be taken as controversial, they actually supplement each other. What we should understand under the term *huiyi*, is a compound graph consisting of two or more existing characters; from the combination of meanings represented by these characters, we can reach the new meaning rendered by the new compound graph. Terms represented by these characters express in the majority of cases qualities and attributes of persons and objects, their conditions and actions. Let us now compare a few examples of the “earlier” and “later” type of compound ideograms:

Earlier type – several structural elements forming a new meaning

*sjer* 死 𣦵<sup>10</sup> “to die, death” (Karlgren 1957, pp. 148–149), a symbolic drawing of “a kneeling man crying over a corpse laid on a bed” or of “a man kneeling over a skeleton”

*d'jap* 涉 𣦵<sup>10</sup> “to wade, to cross a stream” (ibid., pp. 168–169), evidently a drawing of “two feet crossing a stream”, a symbolic presentation of the meaning “to cross, to wade”

*tsjēt* 即 𣦵<sup>10</sup> “to go to, to attain to” (ibid., p. 113), a symbolic drawing of “a man kneeling before a food vessel”, the first part of the graph representing

<sup>10</sup> For various explanations of the structure of the quoted characters and the development of their graphic forms compare *Guzhou huibian* 古籀彙編 [Collection of Great Seal], by Xu Wenjing 徐文鏡 (1934).

food in a vessel, the second part representing the figure of a kneeling (sitting) man

*pək* 北 𠂇𠂇, “north” (ibid., pp. 240–241) a symbolic drawing of “two men back to back”, original meaning “to turn the back”, later it served as a phonetic loan for “the north”

*b'o* 步 𣥂, “to walk” (ibid., p. 38), a symbolic drawing of “two feet making a step” or “two footprints following one another”

Later type – characters composed of already existing graphs representing together a new meaning, specimens appearing already on oracle bones

*mǎng* 明 𠄎𠄎, “bright” (ibid., p. 201), a compound of pictograms for “sun” and “moon” forming a symbol for “light, bright”

*g'jəp* 及 𠂇𠂇, “to come to, to reach” (ibid., p. 180) a compound of pictograms for “man” and “hand”, i. e. “a hand grasping a man”

*nəm* 男 𠂇𠂇, “man, male” (ibid., p. 172), composed of two pictograms for “field” and “strength” (a picture of a muscle), a symbolic presentation of the one “who uses his strength in the fields”

Many compound ideograms both of the earlier and the later type have undergone considerable changes in structure, so that their original composition is concealed. They have become mere conventional graphic symbols with no direct relation to the meaning of the word represented.

Compound ideograms *huiyi* which were formed later, especially after the style *lishu*, can be now recognized at first sight as graphic units composed of independent graphs. These graphs, by their nature, can be either pictograms, compound ideograms, or even indicative characters and phonoideograms or combination of these classes of characters. The combination of two characters, especially pictograms and ideograms, is the most usual, e. g.

*nuən* 𠂇 (初 + 生), 𠂇 (始 + 生), 𠂇 (少 + 生) (*Long* 1, p. 64) are classified as vulgar variants of the character *nuən* 嫵 (嫩), “weak, tender, fragile”, composed of characters for “beginning” and “to be born”; “to begin” and “to be born”; “little” and “to be born”, which is a very distinct presentation of the meaning “weak, fragile”

*p'uət* 𠂇 (日 + 出), 𠂇 (日 + 出) (*Guang*, p. 399, *Long* 3, p. 29) gives another graphic variant differing only by the vertical position of the components, i. e. characters for “sun” and “to come out”. *Guang* explains as “bright morning with rising sun”, *Long* as “bright” and “rising sun”

*mjuən* 𠂇 (入 + 耳) (*Long* 2, p. 55, *Guang*, p. 41) is an ideographic variant of the phonoideogram *wén* 聞, “to hear”, i. e. “enter into the ear”, as a rule classified as vulgar

s'jäm 閃 (門 + 人) (*Guang*, p. 782) explains as “to come out of the door”, composed of “man in the door”, *Shuowen* (*Duan* 11, p. 10) gives the explanation “to put the head out of the door”, later on the meaning changes into “to emerge and disappear” and finally into “to avoid, to shun”, this being the common meaning of this character in standard Chinese as well as in dialects

ts'jəp 聾 (口 + 耳), composed of “mouth” and “ear”, *Guang* (p. 581) explains as “an expression of praise and admiration”, which contradicts the original meaning given in *Shuowen* (*Duan* 2, p. 14) “the words of whisper” which is justified not only by the structure of this ideogram “a mouth inclined towards the ear”, but also by its present use in the dialects in the sense of “to whisper, to speak in a low voice”, e. g. *Jingxian fangyan kaozheng* 涇縣方言考證 [An Investigation of the Jing District Dialect] by Hu Wenyu 胡韞玉 (1924, vol. 2, p. 6; further only *Jing*) and *Yueyan fu shengyu* 越諺附錄語 [Common Sayings of Yue, Repetitions Appended] by Fan Yan 范寅 (1936, vol. 3, p. 7; further only *Yue*) give the example “to bend towards the ear and speak softly” 聾聾啞啞

peng 泵 (石 + 水), composed of “stone” and “water”, in *Gusheng*, a miscellany from the beginning of the Qing dynasty by Niu Xiu 鈕琇 (*Shuoling, Gusheng* 1, *Gusheng yuegu*, *Yu zi zhi yi* 語字之異 [About the Differences between Words], p. 40) it is explained as “water flowing over the stones”. Later on this remote local character was borrowed as phonetic loan for the word “pump” and was first used in the coastal area, e. g. in Canton it is pronounced *bem*<sup>11</sup>, in Shan-dong *pang*, later on it penetrated also into the colloquial. Compare: *qibèng* 氣泵, “air-pump”, *shuibèng* 水泵, “water-pump”, *yóubèng* 油泵, “oil-pump”. This character has been for long a puzzle to those occupied with Chinese script, as it could not be attributed to any of the traditional six classes of characters. It was even described as “onomatopoeic” character (a stone thrown into water gives the sound *peng*) which was made specially to render the phonetic shape of the loan-word. From the above record in *Gusheng yuegu* we are bound to take it as a compound ideogram serving as phonetic loan.

Another structural type of compound ideograms are ideograms formed by duplication, triplication, in isolated cases even by quadruplication of the same character. In most cases these characters are pictograms, drawing simply the outlines of the object, e. g.

tiēp 聾 (Guang, p. 280) two characters for “ear”, means “hanging ears”

ngjēn 吠 (Guang, p. 243) two characters for “dog”, means “dogs belling at one another”, *Yue* (3, p. 18) gives an example in duplication, meaning “two dogs biting one another”

<sup>11</sup> In places where the source of a dialectal character is not given, I gathered this information from different dialect-speakers, students of Peking University.

*tsi*, 孖仔 (*Guang*, pp. 583, 638) composed of two characters for “child”, means “twins”, in Canton it is still used in the sense of “a pair”, pronounced *ma yiep* 孖 (*Guang*, p. 1021) composed of three characters for “force”, meaning “with joint forces”

*pjäu* 𩇛 (*Guang*, p. 457) composed of three characters for “horse”, means “the running of several horses”

*luäi* 磊 (*Guang*, p. 1050), an ideographic variant of the character *luäi* 礫, composed of three characters for “stone”, means “a lot of piled up stones”. With the character *dui* 葶 (*lěidui* 磊葶) it even now records a bisyllabic word, meaning “piled up”, used about luggage, still very common in northern Chinese.

Here belong also compound ideograms composed of three characters, two of which, as a rule, are the same, e. g.

*nieu* 𢇛 (男, 女) (*Long* 1, p. 68), “a woman between two men”, with a graphic variant “heart between two men” 𢇛 (男, 心) which is classified as vulgar. *Guang* (p. 329) gives another graphic variant “force and two men” 𢇛 (男, 力). All these variants mean “to tease and excite one another”. This character is still common in standard language (pronounced *niǎo*) in the sense of “to dally with”, as well as in dialects. Hu De 胡德 in *Huyan* 滬諺 [Common sayings of Hu] (1914, vol. 2, p. 14; further only *Hu*) gives the reading *kao* and two meanings “coquetry between men and women” and “romping of children”.

In the dialect of Chaozhou 潮州 it is pronounced *nieu*, used in metaphorical sense “strange, unusual”, this meaning being symbolized by “one women between two men”

*gěp?* 𢇛 (手, 合) a character now commonly used in the Shanghai dialect (*Hu* 1, p. 49, Zuo Qi 1957, 8, p. 65) composed of two characters for “hand” and a character for the meaning “to comprise, to bring together” in the sense of “embracing with two hands”. *Yue* (3, p. 9) gives this character in a slightly different graphic form distinguished only by the position of structural components *nuò* 𢇛; the word rendered by this character has two meanings: 1. “to clasp a thing with two hands”, 2. a narrowed meaning – “to pursue a criminal”

*pai* 𢇛 (手, 分) a character common in North China, composed of “two hands” with a character meaning “to divide” inserted inbetween them, is a very figurative presentation of the meaning “to break, to crack”

*ch'ia*, *k'a* 卡 (上 + 下) a character composed of the demonstrative characters “above” and “below”, meaning “neither above nor below”. In present use it serves as phonetic loan in the dialects, in some meanings even in standard language. It is used first of all for the following meanings: 1. “to press with vigour between fingers”, 2. “to embrace”, 3. “to press down” (*Fu Chaoyang* 1957, p. 208). It records also various suffixes with no definite lexical meaning, e. g. adjectival suffix in Sichuan dialect: *sou-kia-kia* 瘦卡卡, “thin, meagre”,

noun-suffix: *san-kia-kia* 山卡卡, “remote mountain parts”. Gu (p. 41) records this character in the meaning “narrow, dangerous road”

*t'an* (k'en) 志 (上 + 心) and *t'e* 忒 (下 + 心) two characters composed of the pictogram “heart” and the indicative characters “above” and “below”. The combination of these two characters *t'an-t'e* has a meaning suggested by the individual structural elements of these two characters “heart above and heart below” – “beating heart, timid, wavering”, even now used in standard language

characters *ing* 𠂔 (上 + 口) and *ang* 𠂔 (下 + 口) are composed of the characters for “mouth” and indicative characters “above” and “below”. According to the record of the *Jing* district dialect (*Jing*, p. 7) the character *ing* means “to scream first” the character *ang* means “to give response”. The character *ang* is here identified as character *ang* 𠂔 (*Guang*, p. 836) meaning “the voice of response”. These two characters have also graphic variants with reversed position of structural elements 𠂔.

The principle of combining already existing graphs in a new ideographic structure was very productive in mediaeval Chinese, especially in forming local, dialectal characters. These characters were formed as simple graphic variants which were to substitute characters with rather complicated graphic structure or phonoideograms whose phonetic did not correspond to the dialectal reading. Last but not least, they were formed to record words which occurred only in a certain dialect. Very many of them, as collected in mediaeval dictionaries and mentioned in occasional entries of dialectal words in travel records, are combinations of *bù* 不, “not, no” and *dà* 大, “big, great” with various pictograms. As we shall see from the examples given below, the new meaning is formed by negation of the meaning of the pictogram (or ideogram) by means of *bù* 不 and through intensification of the meaning of the pictogram (or ideogram) by means of *dà* 大.

These characters, as a rule, were condemned by the conservative literati as vulgar and although very common among the less educated strata, they were always proscribed and prevented from becoming acknowledged characters. This tendency can be very well seen from the description of dialectal characters in the district of Guilin 桂林 in a travel record called *Guihai yuhengzhi* 桂海虞衡志 [Record of Hills and Streams of Guihai] with a foreword dated 1176 by the famous writer Fan Chengda 范成大. According to the foreword Fan Chengda arrived Guilin in the same year. His record can also serve as a document of origin and usage of compound ideograms in the region of Guilin in the second half of the 12th century.

Fan Chengda's record reads as follows:

“Sú zì. Biān yuǎn sú lòu. Dié sù juàn yuē zhuān yòng tǔ sú shū. Guǐlín zhū yì jiē rán. Jīn gū jì lín Guì shù zì. Sū shèn biyě ér piānpáng yì yǒu yī. Fù: ai yīn ai, bù cháng yě; uən yīn uən, zuò yú mén zhōng, wēn yě; uən yīn uən, dà zuò yī wēn yě; niu yīn niu, xiǎo ér yě; d'ung yīn d'ung, rén shòuruò yě; tǝng yīn

*tšjung, rén wáng jué yě; lâp yin lâp, bù néng jǔ zú yě; d'âi yin d'âi, nǚ dà jí yí yě; k'âm yin k'âm, shān shí zhī yánkū yě; şwan yin şwan, mén héng guān yě; tā bù néng xī jì. Yú yuè sòng dié èr nián xī jiàn zhī.*"

「俗字邊遠俗陋。牒訴券約專用土俗書。桂林諸邑皆然。今姑記臨桂數字。雖甚鄙野而偏旁亦有依。附：𡗗，音矮，不長也；闔，音穩，坐於門中，穩也；壘，音穩，大坐亦穩也；𡗗，音孀，小兒也；𡗗，音動，人瘦弱也；歪音終，人亡絕也；𡗗，音臘，不能舉足也；𡗗音大，女大及姨也；𡗗，音礪，山石之巖窟也；𡗗，音攔，門橫闔也；他不能悉記。余閱訟牒二年習見之。」

"Vulgar characters. The border-regions are remote, primitive and uncivilized. In letters, contracts and arraignments vulgar characters are used in particular. This is the case in all districts around Guilin. I record at random several characters from the neighbourhood of Guilin. Although they are all very crude and unpolished, their components have their justification. (i. e. correspond to the six classes of characters as assorted by Xu Shen, Z. N.) I subjoin: *ai* sound *ai*, means rather short, not too big; *uən* sound *uən*, (the character) to sit in (the character) door, means firm, stable; *uən* sound *uən*, big and sit, also means firm, stable; *nieu* sound *nieu*, means a small child; *d'ung* sound *d'ung*, means a thin, weak man; *tšjung* sound *tšjung*, means the decease of a man; *lâp* sound *lâp*, means not to be able to lift the feet; *d'âi* sound *d'âi*, means a grown up girl and elder sister; *k'âm* sound *k'âm*, means a cave in the mountain rocks; *şwan* sound *şwan*, means a door barred crosswise. Other characters I can no more recollect. I used to see them for two years when reading accusations and applications." (*Guihai yuhengzi* 1921, p. 31; further only *Gui*).

The above mentioned characters are in most cases distinct ideograms, their meaning can be easily read off from the combination of their structural components. In some cases they are clearer substitutes for a more complicated or less distinct phonoideogram, e. g. the character *ai* 𡗗 (不 + 長) composed of "not" and "long", meaning "short, not too big", which is also in the same meaning and two graphic forms 𡗗, 𡗗 recorded as vulgar in *Long* (3, p. 64). Another graphic variant, composed of "not" and "high" 𡗗 (不 + 高) with the same reading and similar meaning "short people and things" is given in the above mentioned miscellany *Gusheng*, in its part *Gusheng yuegu* (p. 40) which brings an interesting record of dialectal characters and words in the region of Yue (provinces Guangdong and Guangxi). These characters are evidently all ideographic variants of the phonoideogram *ai* 矮, "of short stature", "low in growth". In *Gusheng yuegu* are also recorded several other characters given in *Guihai yuhengzhi*. This may serve as a proof that these characters were used for centuries in lower strata of the population in the South of China. This includes such characters as *uən* 壘 (大 + 坐), "big" and "sit", meaning "firm, stable" (*Gu*, p. 40), ideographic variant of the character *wên* 穩, "firm, stable"; *k'âm* 𡗗 (石 + 山), meaning "a cave in the rocks", composed of "stone" and "mountain" (*ibid.*); *d'ung* 𡗗 (不 + 大), composed of "not" and "big", meaning "thin, weak man". *Gu* (*ibid.*) gives the reading *mâng*, meaning "a thin man",

“a tiny thing”. Similarly the character *nieu* 仆 (人 + 小), composed of “man” and “small” is evidently an ideographic simplification of the phonoideogram *niāo* 嫋, “slender and delicate”. This meaning is symbolised by “child”, a small human being. This hypothesis is supported by the concurrent reading of both characters. Character *tsjung* 歪 (不 + 生), also very clear in its structure, composed of “not” and “to live”, is also recorded as vulgar in *Long* (3, p. 65), in the meaning of “the decease of a man”. The character *lâp* 𠂔 (不 + 行) with the same reading we also find in *Yueyan* [Common Sayings of Yue], recording for the most part Shaoxing 紹興 dialect. The foreword of this record is dated 1879. *Yueyan* mentions *Guhai yuhengzhi* as source, but the meaning given here rather differs from the original meaning given in *Gui* (p. 31), “not to be able to lift the feet”, as indicated by the structural elements of this character, “not” and “to go”. In *Yue* (3, p. 3) this character records another meaning “to provide with a prop in order to prevent motion”, as “firm, steady, without motion”, “to prevent revolving” 𠂔牢, 𠂔轉.

Ideographic combinations of *bù* 不, “not” and *dà* 大, “big” with other characters are not limited to examples in the above mentioned records, they can be found in other sources as well. Words recorded by characters which can function as components of these compound ideograms can be adjectives, verbs or nouns. The choice of the character functioning as structural component in such an ideographic compound is governed both by the meaning and by the grammatical function of the new word.

### Combination of *bù* 不, “not” + adjective

*uām* 𠂔明 (不 + 明) composed of “not” and “clear, bright”, *Long* (3, p. 64) gives no explanation. This character is still used in Nanfeng 南豐, province Jiangxi, in the meaning “not bright, dull”, pronounced *ngo*

*xwai* 歪 (不 + 正) “not straight, crooked”, used in standard language, is a compound of “not” and “straight”. It was formed as vulgar variant of a complicated character *xwai* 𠂔 which was finally completely replaced by this simple and clear ideographic compound

### Combination of *bù* 不, “not” + verb

two characters rendering the same phonetic shape *mji* 𠂔 (不 + 成), 𠂔 (不 + 合) (*Long* 3, p. 64) both classified as vulgar, composed of “not” and “to perfect, to succeed”; of “not” and “to agree”, no explanation given, but it follows from the meaning of the structural elements

two characters rendering two phonetic shapes *uəu* or *uəu* 𠂔 (不 + 示), 𠂔 (不 + 出) (*Long* 3, p. 64), both classified as vulgar, no explanation given, the meaning evidently again follows from the meaning of the structural elements “not” and “to manifest, to exhibit”; “not” and “to come out, to manifest, to appear”

**Combination of bù 不, “not” + noun**

*niep* 𪛗 (不 + 風) (*Long* 3, p. 65) a vulgar variant of the character *niep* 𪛗, composed of “not” and “wind”, means “interruption of sound”. The same meaning is also given in *Yue* (3, p. 3), pronounced *yeŋ*, with a remark “used when we beat a child and do not want it to cry”

**Combination of dà 大, “big” + adjective**

*jām* 𡗗 (大 + 小) (*Guang*, p. 930) “big above and small below”, *Long* (3, p. 5) gives the same meaning and two readings *jām*, *dz’ām*, *Yue* (2, p. 57) gives the same meaning with the reading *t’a*. This character was formed evidently by analogy with the character *jān* 尖 (小 + 大), “sharp”, composed of “small above and big below”. The meaning of this character is deduced from the position of the individual components, while in other characters of this kind the upper *dà* 大, “big”, is an intensification of the adjective below, e. g.

*t’au* 套 (大 + 長) (*Guang*, p. 296, *Long* 3, p. 5) composed of “big” and “long”, meaning “very big, very long”

*xwāng* 𡗗 (大 + 明) (*Long* 3, p. 5) composed of “big” and “clear, bright”, a vulgar variant of the character *k’wāng* 𡗗 which according to the record in *Guang* (p. 64) means “bright, brilliant, roomy and bright”

**Combination of dà 大, “big” + noun**

*p’āk* 𡗗 (大 + 面) composed of “big” and “face”, in *Guang* (p. 399) classified as vulgar variant of the character *p’āk* 𡗗, “big face”. *Long* (3, p. 5) on the contrary takes *p’āk* 𡗗 for older, being later replaced by the phonoideogram *p’āk* 𡗗. *Tongsubian* 通俗編 [Collection of Common Words] (1959, vol. 36, p. 791; further only *Tong*) by Zhai Hao 翟灏 (1736–1788) gives the reading *puān* and the same meaning, “a big face”, with a remark that this character is used similarly to the character *pàng* 胖, “fat, stout”, referring mainly to the body and to the face, excluding ears

*xang* 𡗗 (大 + 力) composed of “big” and “force”, *Tong* (38, p. 865) explains as “to lift up a thing steadily and with force”. This character is still used for the record of the word *k’ang*, used in colloquial, meaning “to drive in a stake with all one’s might”.

**Ideophonograms**

Ideophonograms can be taken also as a kind of ideograms *huiyi*, but widely differ from them, as one of their components plays two parts: the part of a phonetic and the part of a signific. In their inner structure they combine both the principles of the phonoideograms and ideograms *huiyi*, forming a link between these two classes of characters. For this reason we will rather group them as an independent class and call them ideophonograms. Both of their components, independent graphic units, play the part of significs and the meaning of the new character can be guessed at from their combination. That is why we say that the signific principle governs their structure. Notwithstanding, we must not ignore the fact that one of the significs

plays the part of a phonetic, representing the phonetic shape of the whole character, thus in no way differing from the phonetic of a pure phonoideogram. Let us give some examples:

These characters are very often a combination of characters for numerals and characters for the names of animals. The numeral indicates the phonetic shape of the character and the age of the animal, e. g.

*si* 𠂔 (牛 + 四) composed of *si*, “four” and “ox”, according to unanimous explanations in *Guang* (p. 662) and *Long* (1, p. 40) it means “an ox four years old”

*pat* 𠂔 (馬 + 八) composed of *pat*, “eight” and “horse”, according to unanimous explanations in *Guang* (p. 391) and *Long* (2, p. 45) it means “a horse eight years old”

The numeral with the character “horse” can, apart from serving as phonetic, indicate how many horses are in the team, e. g.

*ts'ām* 𠂔 (馬 + 參) composed of character for “horse” and of character *sām*, meaning “three”, this character means then in accordance with its structural elements “(a carriage) with three horses” or “to yoke three horses to the carriage” (*Duan* 9, p. 7, *Guang*, p. 721)

Similarly the character *si* 𠂔 (馬 + 四), composed of *si*, “four” and “horse”, means “(a carriage) and four horses” or “to yoke four horses to the carriage” (*Duan* 9, p. 7, *Guang*, p. 662)

Another, the most frequent type of these ideophonograms is a combination of pictograms or a combination of an ideogram of earlier type with a pictogram, e. g.

*b'ien* 𠂔 (馬 + 并) composed of a character for “horse” and the ideogram *pjäng*, which means “united, together” and indicates also the reading, the new compound ideogram means “to yoke together two horses” (*Duan* 9, p. 7, *Guang*, p. 46)

*ljät* 𠂔 (列 + 馬) composed of “horse” and *ljät*, “row” meaning “horses running in a row one after another” (*Guang*, p. 238)

*tāp* 𠂔 (大 + 耳) composed of “ear” and *d'ai*, “big”. According to *Guang* (p. 279) and *Long* (3, p. 6) it means “a big ear”, as suggested by the components. *Tong* (36, p. 797) gives as vulgar variant of this character the phonoideogram *tā* 𠂔, meaning “ears hanging down”. Evidently the lexical meaning of the word represented by this character has been shifting in this direction as proved by the present usage in dialects which penetrated also into the colloquial, as *dälazhe ěrduo* 𠂔拉着耳朵, “with ears hanging down”. The character is especially popular in Northeast China with double writing *dā* 𠂔, 搭, it is not confined to the ears, meaning in general “hanging down, drooping”, e. g.

*nāoguā dālazhe* 腦瓜耷拉着, “with stooped head”, *dālazhe wēiba* 耷拉着尾巴, “with tail drooping”

*k'jān, yan* 堅 (𠂔 + 牛) composed of “ox” and *k'jen, k'an*, “firm, strong, fierce”. The new character in accordance with the meaning of individual components means “a fierce, obstinate ox difficult to lead” (*Guang*, p. 809, *Long* 1, p. 40). In the dialect of Yue this specialized meaning has extended to “obstinate, unyielding” in general and can also be used about man (*Yue* 2, p. 9)

*g'iang* 𢱇 (强 + 力) composed of “force” and *g'iang*, “vigorous, fierce”. *Guang* (p. 70) gives the meaning “to compel, to press upon, to urge with force”. The character is still used in Anhui province in the meaning, “enraged and fierce, not willing to bear anybody” (*Jing*, p. 1)

*xjəu* 𦵏 (鼻 + 臭) composed of “nose” and *ts'jəu*, the name for “perception of smells”, means “to perceive odours with the nose, to smell” (*Duan* 1, p. 12, *Guang*, p. 747)

*nəu* 𦵏 (小 + 乳) composed of “small” and *nzju*, “weak, fragile”, the combination of these two units renders the meaning “small growth” (*Guang*, p. 1094)

Characters of this type are formed sporadically even later in individual dialects, e. g.

*t'ing* 𦵏 (不 + 定) used in Shaoxing dialect, composed of “not” and *ting*, “steady, stable, firm”, means “a hung up thing losing balance when touched by somebody”, as described in *Yue* (3, p. 3), e. g. “to swing to and fro when suspended” 懸𦵏, “to oscillate and revolve” 𦵏轉, “a jade-ring” 𦵏環, sometimes “three rings hanging freely from the earring”

*t'iang* 𢱇 (强 + 牛) a newly formed dialectal character, composed of “ox” and *t'iang*, “strong, fierce”, which takes also the part of phonetic. It recalls by its structure as well as by its meaning the character *k'jān* 堅. It is common especially in Sichuan and Northeast China, e. g. *jiàngyǎnzi* 𢱇眼子, “an unsubmitive, unyielding person who would take nobody’s advice” (*Dongbei*, p. 68)

*nǚ* 𦵏 (幼 + 子) composed of the character for “child” and the character *jəu*, “tiny, weak, tender”, in the Min 閩 dialect in the southern part of Zhejiang province it is used to record diminutive suffixes of adjectives or is put after diminutive nouns for children and together with the suffix 𦵏仔 it is affixed to diminutive nouns, e. g. *i a nǚ* 椅仔𦵏, “a small chair”, *kau a nǚ* 狗仔𦵏, “a little dog”

## Ideophonograms of the *fanqie* type

Just like pure phonoideograms have their counterpart in the ideophonograms described above, the compound phonograms based on the method of *fanqie* have to a certain extent a counterpart in ideophonograms of the *fanqie* type which we are

about to describe. A link can be certainly drawn between these two types of characters. They are both combinations of two characters which indicate the phonetic shape of the new compound character on the basis of the *fanqie* method, one of the characters indicating the initial, the other the final. The main dissimilarity is that the above type are mere graphic symbols with no relation to the meaning, while the components of ideophonograms of the *fanqie* type at the same time indicate the meaning of the new character. The rise of corresponding compound words, which are actually two contracted syllables, together with the rise of appertaining compound characters, is determined by the speed of speech. In slow speech the two words, in most cases a negative – *bù* 不, *wù* 勿 with a verb, adjective or adverb following – are pronounced separately, in fast speech the initial (in most cases a semi-vowel) of the second word disappears and the vowel of the first word (which is in most cases an open syllable) fuses with the vowel of the second word. Thus arises a new monosyllabic word, expressing the notions originally expressed in two words. This process is expressed in graphic form by grouping the characters in question vertically into one graphic unit, e.g. *bù* + *yòng* → *béng* 不 + 用 → 甬 (Compare: the compound phonograms based on the method of *fanqie* are in all cases known to us arranged horizontally.) The upper character, as a rule, records the initial consonant, the lower character, as a rule, records the final. As to their graphic structure, these characters are compound ideograms *huiyi* – from their inner composition we can judge their meaning, phonetically taken, their governing principle is the principle of *fanqie*. In most cases they are a product of recent dialects, penetrating in several cases into the standard colloquial.

The famous linguist of the Song dynasty Zheng Qiao 鄭樵 (1104–1162) draws our attention to a similar phonetic and graphic phenomenon:

“*Màn shēng wéi èr, jí shēng wéi yī yě. Màn shēng wéi ts'a jwon, jí shēng wéi ts'jān. Ts'jān wéi ts'a, jwon zhī yīng. Màn shēng wéi ts'a jwo, jí shēng wéi ts'jwo. Ts'jwo wéi ts'a, jwo zhī yīng. Yòu rú màn shēng wéi nǐzī i, jí shēng wéi nǐzī. Màn shēng wéi ts'i ji, jí shēng wéi ts'ie. Màn shēng wéi ts'a ja, jí shēng wéi ts'a. Màn shēng wéi ja ts'a, jí shēng wéi ja. Màn shēng wéi uo xuo, jí shēng wéi uo. Màn shēng wéi i xji, jí shēng wéi i. Jiē shì xiāng yīng zhī cí yě.*”

「慢聲為二，急聲為一也。慢聲為者焉，急聲為旃。旃為者，焉之應。慢聲為者與，急聲為諸。諸為者，與之應。又如慢聲為而已，急聲為耳。慢聲為之矣，急聲為只。慢聲為者也，急聲為者。慢聲為也者，急聲為也，慢聲為嗚呼，急聲為嗚。慢聲為噫嘻，急聲為意。皆是相應之辭也。」

“Spoken slowly they are two (words), spoken fast, they are one (word). Slow *ts'a* and *jwon*, fast *ts'jān*. *Ts'jān* corresponds to *ts'a* and *jwon*. Slow *ts'a* and *jwo*, fast *ts'jwo*. *Ts'jwo* corresponds to *ts'a* and *jwo*. Or further, spoken slowly *nǐzī* and *i*, spoken fast *nǐzī*. Slow *ts'i* and *ji*, fast *ts'ie*. Slow *ts'a* and *ja*, fast *ts'a*. Slow *ja* and *ts'a*, fast *ja*. Slow *uo* and *xuo*, fast *uo*. Slow *i* and *xji*, fast *i*. All these are corresponding words.” (Zheng Qiao 1935, vol. 5, p. 6)

In these cases the same phonetic phenomenon is approached in different ways, either some other already existing character is borrowed to represent the phonetic shape of the new syllable, e. g. *ts'a + jwon* → *ts'jān* 者 + 焉 → 旃 (originally this character meant a flag) or, when the new syllable is very near to the phonetic shape of one of the words, the meaning of both words is in graphic form rendered by one of the characters. In some cases a new character is formed to represent the contraction of the two syllables, e. g. *p'uā* 叵 → 不可, new pronunciation *pō*, in the meaning “cannot, must not” – this character is actually a fusion of two characters “not” and “can”. It is still used in standard language in the meaning cannot, e. g. *jūxīnpōcè* 居心叵測, “an incalculable character, temper”.

The recent characters recording monosyllabic words formed through contraction of two monosyllabic words, as a rule, combine both characters in one graph.

Most common is the combination of negatives *bù* 不 or *wù* 勿 with a verb or adjective, e. g.

*béng* 甬 composed of *bù* “not” and *yòng*, “to use, to need”, in the meaning “no need for, need not”; it is also used as a negative imperative which is never categorical prohibition, it always has a certain flavour of “need not”. This character is already recorded in *Long* (3, p. 64), today it is still very common in the dialect of Hebei province, especially in the Peking dialect, penetrating into the standard colloquial

*boi* 𠂇 (不 + 会), a character formed and now used in the Chaozhou dialect, it is composed of the negative *m* 唔 and the character for “can, to know” (a simplified graphic variant is used). In the Chaozhou dialect the consonant *m* does not tolerate the diphthong *oi*, therefore *m* is replaced by the labial *b*, so that in the graphic form the negative *bù* is used. The meaning of the new character is the same as the meaning of both characters when written separately “cannot, not now how to”

*mui* 𠂇 (不 + 畏) the graphic form of this character is composed of the negative *bù* and the verb *ūi*, “to fear, to be afraid”; in meaning it agrees completely with the meaning of both components, “not to fear, not to be afraid”. Phonetically it is composed of the dialectal negative *m* and *ūi*, “to be afraid”. *m* in the Chaozhou dialect cannot be put together with the diphthong *ūi*, therefore the nasal disappears in the new syllable *mui*

Analogous to the character *béng* 甬, in accordance with the use of the negative *wù*, there exists in the Shaoxing dialect a character *fèng* 甬 (勿 + 用), composed of the negative *wù* and verb *yòng*, “to use, need” (*Yue* 3, p. 2), again in the meaning “no need for, need not”, e. g. “no need for so much thinking” *fèng duō xiāng* 甬多想

In the Shaoxing dialect this type of words and respective characters, as proved by the record in *Yueyan* is fairly widespread, e. g.

*fiáu* 𢆶 (勿 + 要) composed of the negative *wù* and *yào*, “to want to, to wish”, used as negative imperative, e. g. “do not go there” *fiàoku* 𢆶去, “do not come here” *fiàolai* 𢆶來 (Yue 3, p. 2). This character written horizontally *fiào* 𢆶 in contrast to the vertical structure in the Shaoxing dialect is also very common in the Sichuan dialect

*fan* 𢆶 (勿 + 頑) composed of the negative *wù* and character *wán*, “obstinate, wilful, mulish”, is used in the Shaoxing dialect when begging children to obey, “don’t be obstinate” (Yue 3, p. 2)

*fei* 𢆶 (勿 + 為) composed of the negative *wù* and verb *wéi*, “to be, to do, to make, to cause”, meaning “not know how to”, as “not know how to do” 𢆶做, 𢆶弄 (Yue, 3, p. 2)

*fe* 𢆶 (勿 + 礙) composed of the negative *wù* and verb *ài*, “to be in the way, to obstruct”, the compound character means “is not in the way, does not matter” (Yue 3, p. 2)

*pien* 𢆶 (不 + 圓) composed of the negative *bù* and *huán, yuán*, “a circle”. Sometimes this character is used as a substitute of the character *yuán* 圓, “round”. Here it is evidently used in the meaning *yuán*, “round” as the compound character means, pointing to objects and instruments, “neither round nor square” (Yue 3, p. 3)

Very widespread is the character composed of the negative *bù* and adjective *hǎo*, “good” 𢆶 (不 + 好). Its reading varies in different dialects. It is already recorded in Long (3, p. 65), pronounced *wai*, in the same pronunciation it is also recorded in Yue (3, p. 3), with a mention that it has two shades of meaning, one “laudatory”, when praising somebody’s abilities, the other “reproaching”, both can be used only by a senior towards a junior. In Sichuan this character is read *pie*, meaning “bad, not well”. In Chaozhou it is read *mo* and has the same meaning. It is actually a contraction of the negative *m* and *ho*, “good”. In the north, especially in Northeast China, it is read *nāo* and means “weak, having no abilities, useless”. It occurs frequently in bisyllabic compound words, e. g. *nāozhǒng* 𢆶種, “a coward”; *nāobāo* 𢆶包, “a craven, saucy man”, “a good-for-nothing fellow”; *nāohuò* 𢆶貨, “a bad thing”, “too timid man”; *fānāo* 發𢆶, “to act as a coward”; *nāohǎo* 𢆶好, “at any price, at all cost”, “it is necessary” (Dongbei, p. 34)

In the Shaoxing dialect a variant of this character *fao* 𢆶 (勿 + 好) with the negative *wù* is used. It serves for warning a person against an unpleasant thing.

Of the combinations of a negative and an adverb, the most frequently used is the character *fen* 𢆶 (勿 + 曾), used in Suzhou 蘇州, meaning “not yet, never up to now”, composed of the negative *wù* and adverb *céng*, “once, formerly”

There are also characters recording formerly bisyllabic conjunctions contracted into one syllable, e. g.

*ziao* 𠄎 (只 + 要) common in the Suzhou dialect and Shaoxing dialect, composed of *zhī*, “only” and *yào*, “to want to, to wish”, has the same meaning as the bisyllabic conjunction rendered by these two characters “only when, only in the case of”

In the Shaoxing dialect there exists a character *zio* 𠄎 (止 (=只) + 有), composed of *zhī*, “only” – a substitute of this character, the homograph *zhǐ*, meaning “to stop”, is used – and *yǒu*, “to have”. Again it renders the conjunction “only when, if only”

*nang* 𠄎 (那 + 样), a character used recently in Sichuan, a combination of the character *nà*, “this, that” and *yàng*, “way, manner”, in the meaning of “in this way, in that way, like this, like that”, corresponding to the contraction of these two syllables.

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Before we conclude, we must at least mention types of compound characters which have occurred at different stages of development of the Chinese script, but met with the same destiny – were put aside, as they did not correspond with the basic feature of the Chinese language – its monosyllabism. All the analysed types of compound characters enumerated above (with the exception of the last type analysed) always recorded one syllable (a word or a morpheme), nevertheless there were also attempts at forming characters representing bisyllabic or even polysyllabic words. There are two types of these characters, as already mentioned, a combination of two (or rarely three) characters, in most cases pictograms, like the compound characters *hewen* 合文 on the oracle bones, and a combination of characters and their reduced structural elements, like the simplified compounds used in the liberated areas (1937–1949). As these compound characters came into conflict with the monosyllabic nature of the Chinese language, they never formed a productive structural type nor anchored in common usage.

The compound characters *hewen* appear on the oracle bones inscriptions till the period of Western Zhou (1066?–481 B. C.) and sporadically till the period of Warring States (403–221 B. C.). In majority of cases, one compound graphic unit is a combination of two independent characters which represent two independent semantic and phonetic units. As to the inner graphic arrangement of individual components in the structure of the compound, there are types arranged horizontally, vertically, either in the direction of reading or against the direction of reading and finally a type whose components are inserted as inner and outer elements into the graphic structure. (See Chen Mengjia 1957, p. 81). At the time of Western Zhou a considerable number of these compound characters already disappeared. The names of months written in the Shang-Yin period (1766?–1154 B. C.) as one compound character (numeral + month) are already written separately, compound numerals formed formerly through combination of figures with decades into double figures (50, 60), through combination of figures with hundreds into hundreds (300, 400) and compound proper names are also split into respective characters. Putting these characters aside completely agrees with the monosyllabic nature of

the Chinese language and script which require each phonetic and morphological unit (a syllable) to have a corresponding independent graphic unit.

This structural principle in a modified, reduced form is applied in the structure of compound simplified characters which were common especially in the liberated areas during the struggle for Liberation. These characters are combinations of reduced structural elements of two, occasionally of three characters. As to the inner arrangement there are forms analogous to those of compound characters on the oracle bones – 1. horizontal arrangement, two characters side by side 𠔁 → 辭 + 典; 𠔂 → 介 + 紹; 𠔃 → 階 + 級; 𠔄 → 你 + 們; 𠔅 → 他 + 們, 2. vertical arrangement, one character above the other 𠔆 → 學 + 者; 𠔇 → 學 + 院, 3. inserted arrangement, the characters are placed in the structure as inner and outer elements 𠔈 → 國 + 家; 𠔉 → 中 + 國; 𠔊 → 問 + 題; 𠔋 → 圖 + 書 + 館.<sup>12</sup>

These and similar characters were never quite current for the same reason as the compound characters of the oracle bones inscriptions – they are inconsistent with the fundamental law of Chinese script, i. e. one graph records one basic phonetic and morphological unit of the Chinese language, one syllable.

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Drawing to the close of our paper we would like to stress several points which may serve as conclusion.

1. the combining of independent graphs or of their structural elements is one of the basic principles and methods of creating Chinese characters
2. in the types of compound characters we can see the struggle of two tendencies governing the development of Chinese script, the signific and phonetic tendency; the variety of types of compound characters is the result of this struggle
3. ideograms being the oldest type of compound characters served as a graphic pattern for other compound types
4. the signific principle, being limited in its employment, had to give way to the phonetic principle, which could be widely applied in creating a universal productive type of Chinese characters, phonoideograms
5. compound characters, to be more precise, one of their types, the phonoideograms, formed the majority of Chinese characters at all stages of their development (except for the most primitive stages)
6. combining two graphs in one compound graphic unit, from the middle ages onwards, survived especially in the dialects, where it helped to solve problems proper to the dialects – to record dialectal words and to form local graphic substitutes for phonoideograms whose phonetic did not agree with the phonetic shapes of the respective syllables in the dialects.

<sup>12</sup> The examples of reduced simplified characters are given according to the materials of the exhibition on the development of Chinese writing initiated by the Chinese Committee for the Reform of Writing in Peking 1957.

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## ON THE SEMANTIC AND GRAMMATICAL FUNCTIONS OF THE WORD XIANG

**Abstract:** *This paper aims to demonstrate how the functions and meanings of the xiāng 相 “mutually” changed in the historical development of the Chinese. First, as an introduction, the paper points out the difficulty of establishing the etymology of the character 相 that, already in Archaic Chinese, recorded several homophones of various meanings. After that, the article systematically surveys all the essential functions and meanings of xiāng 相 in wenyān and literary vernacular. The analysis is based on about 1,000 excerpts from the most important monuments of Chinese prose that enable us to observe three primary stages in the semantic and grammatical functions of the word xiāng 相: I. adverbial stage (the relation of reciprocity and the modifications); II. pronominal stage (the relation of one-sidedness with a demonstrative shade of meaning); III. prefixal stage (prefix of direction of the action of objective verbs). In each stage, the paper investigates a) the meaning, b) syntactic arrangement, and c) grammatical character of the predicate.*

**Key words:** *Chinese, etymology, character 相, semantic function, grammatical function*

The purpose of the present paper is to give a diachronic analysis of the semantic and grammatical functions of the word 相 with the central meaning “mutually”, and to specify the semantic variations of this meaning and the pertaining grammatical functions.

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Before tackling the proper problem of this paper, we find it useful to discuss the other meanings recorded by this character. Except for the meaning “mutually”, the character 相 recorded already in Archaic Chinese, i. e. in the period up to the rise of the Qin dynasty in 221 B. C., several homophones of various meanings. It is very difficult to decide upon a final view regarding their classification either as homographic homonyms or as advanced polysemy of one basic meaning. In the traditional commentaries of Chinese classics the meanings of 相 are usually divided into two groups according to two tones *píng* 平, even and *qù* 去, falling:<sup>1</sup>

### I. Basic meanings pertaining to the even tone:

1. apart from the meaning “mutually, one another, reciprocally”, there figures the meaning

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<sup>1</sup> Bernhard Karlgren (see *Grammata Serica Recensa*, 1957, p. 193) groups the meanings in the following way: falling tone: look at, see; (to look to:) assist, assistant, minister; aid; a kind of time-beating instrument; appearance, quality; even tone: mutually; trying thus to establish the possible etymology of 相.

2. “substance, quality” which occurs in isolated cases only in *Shijing* 詩經 [The Book of Odes], e. g. *Tuī zhuó qí xiāng. Jīn yù qí xiāng.* 追琢其章，金玉其相. Engraved and chiselled are the ornaments, of metal and of jade is their substance.<sup>2</sup> (*Shijing* III, I, IV; Legge, p. 444)

## II. Basic meanings pertaining to the falling tone:

1. “to look, to examine” in the function of an objective verb, e. g.

*Xiàng shí xiān mín.* 相時儉民. Look at those short-sighted people! (*Shujing* 書經 [The Book of Historical Documents] IV, VII, I, 12; Legge, p. 228)

*Xiàng shí ér dòng.* 相時而動. To examine circumstances and only then take action. (*Zuo Zhuan* 左傳 [Zuo's Appendix] I, year XI; Legge, p. 31–33)

This meaning is the starting point for the lexically narrowed meaning “to perform observations for a certain purpose”, e. g.

*Wéi tàibǎo xiān Zhōugōng xiàng zhái.* 惟太保先周公相宅. The Grand Guardian went before the duke of Zhou to inspect the localities (in order to found a city). (*Shujing* V, XII, 2; Legge, p. 421)

... *wèi Hánjī xiàng yōu.* ..... 為韓姑相攸. ... he would select a home for Hanji (to settle). (*Shijing* III, III, VIII; Legge, p. 551)

“The observations for a certain purpose” were usually followed by fortune-telling and a forecast whether the given object was suitable for the desired purpose. By further narrowing and specialization of this meaning the meaning “examine a man's physiognomy in order to foretell his fortune” was derived, e. g.

*Gōngsūn Áo wén qí néng xiàng rén yě.* 公孫敖聞其能相人也. Gongsun Ao heard that he could examine the physiognomy of men and foretell their fortune. (*Zuo Zhuan* VI, year 1; Legge, p. 227–229)

Later on, this meaning becomes further specialized so as to denote the observed object, e. g. human physiognomy, face, looks, features, e. g.

*Xiàng rén duō yí, wú rú jì xiàng.* 相人多矣，無如季相. I have examined the physiognomy of many people. There are not such who could match with your face. (*Shiji* 8, p. 9 [617])

There are also bisyllabic compounds or syntagmas using the two meanings mentioned above:

- a) *xiàng* 相 takes on a verbal function  
*xiàng miàn* 相面,<sup>3</sup> to practice physiognomy

<sup>2</sup> In cases where the translations in the quoted books do not render the function of 相 with sufficient clearness, they are deliberately changed by the author of the present paper.

<sup>3</sup> In cases of examples with no quotations, information provided by current Chinese dictionaries such as *Ci yuan* 辭源, *Ci hai* 辭海, *Guoyu cidian* 國語辭典 was used. As regards bilingual dictionaries, Mathew's *Chinese-English Dictionary* and F. S. Couvreur, *Dictionnaire Classique de la Langue Chinoise* proved helpful. Examples, no matter if they are provided with

*xiàng shǒu* 相手, to practice chiromancy  
*xiàng zì* 相字, to dissect a character in fortune-telling  
*xiàngshù* 相術, the art of physiognomy  
b) *xiàng* 相 is a substantive or a substantival morpheme  
*xiàngmào* 相貌, appearance, likeness  
*bēnxiàng* 本相, original likeness  
*rénxiàng* 人相, human likeness  
*yǎxiàng* 雅相, noble appearance  
*kàn xiàng* 看相, to practice physiognomy

2. “to help, to assist, to support” in the function of an objective verb, e. g.

*Jīn tiān qí xiàng mín.* 今天其相民。Now Heaven is helping the people. (*Shujing* V, VII, 9; Legge, p. 369)

*Dàn Hòu Jì zhī sè, yǒu xiàng zhī dào.* 誕后稷之穡，有相之道。The husbandry of Hou Ji proceeded on the plan of helping (the growth). (*Shijing* III, II, I; Legge, p. 469)

*Xiàng* 相 in this meaning can also appear in the substantival function, i. e. refer to those who help or are ready to help, e. g.

*Wéi cǐ huì jūn, mín rén suǒ zhān. Bǐng xīn xuān yóu, kǎo shèn qí xiàng.* 維此惠君，民人所瞻。秉心宣猶，考慎其相。There is a good and righteous ruler, who is looked up to by the people and by all. He keeps his heart, and his plans are formed by mature deliberation, searching carefully for helpers. (*Shijing* III, III, III; Legge, p. 524)

The meaning can be further specialized according to the sphere in which the help is rendered:

- a) from a very common phrase, “to aid the state, the government”, e. g. ... *qí wéi jí shì, yòng lì xiàng wǒ guójiā.* .....其惟吉士，用勵相我國家。... only good officers, and get them to use all their powers in aiding (the government) of our empire (*Shujing* V, XIX, 20; Legge, p. 520) developed the names for the highest offices in ruling the state, e. g. *Yuán lì zuò xiàng.* 爰立作相。On this (the king) raised (him) to do (his) Chancellor. (*Shujing* IV, VIII, 1; Legge, p. 251) In this meaning *xiàng* 相 can also acquire a verbal function, i. e. to be chancellor, prime-minister, to take the office of chancellor, prime-minister, e. g. *Huizǐ xiàng Liáng, Zhuāngzǐ wǎng jiàn zhī. Huò wèi Huizǐ yuē: “Zhuāngzǐ lái, yù dài zǐ xiàng.”* 惠子相梁，莊子往見之。或謂惠子曰：「莊子來，欲代子相」。Huizi has been prime-minister to Liang. Zhuangzi went to see him. Somebody told Huizi: “Mister Zhuang has come, (because) he wants to take your place to be prime minister.” (*Zhuangzi* I, 17, p. 98)

Later on when a part of the Chinese verbs acquired the factitive function, the verb *xiàng* 相 could also be used factitively, e. g. *Wèi zhì xiàng, xiàng Tián Wén.* 魏

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quotation of the respective place or taken over indirectly, are not used in full extent, only the most typical ones are given in the present paper.

置相，相田文。In Wei they were installing a prime-minister, they made Tian Wen prime-minister. (*Shiji* 65, p. 16 [3314])

Successively new terms for the highest offices in the state government were coined in the form of bisyllabic compounds, e. g. *xiàngguó* 相國, *xiànggōng* 相公, *zǎixiàng* 宰相, *chéngxiàng* 丞相.

b) “a servant, a guardian in the house”, e. g.

*Dù Qiáo zhī mǔ zhī sāng, gōng zhōng wú xiàng, yǐ wéi gū yē.* 杜橋之母之喪，宮中無相，以為沽也。When mourning was held for the mother of Du Qiao, there were no guardians in the palace (to lead the ceremonies), it was considered very vulgar. (*Liji* II, I, III, 15, p. 174)

In this meaning the word *xiàng* can also form a secondary derived word by means of the suffix *zhě* 者 (denoting a substantival agent) or become a component of a bisyllabic compound word, e. g. *Kè zì qián guì, chè fàn qí yǐ shòu xiàng zhě.* 客自前跪，徹飯齊以授相者。The guest himself kneels down in front, removes the food and the spices to hand them over to the servants. (*Liji* I, I, III, 59, p. 37) *Shì bù míng jiāxiàng zhǎngqiè.* 士不名家相長妾。An ordinary official does not call by name the intendant of his house nor the main of his concubines. (*Liji* I, II, I, 6, p. 72)

c) “helpers at other occasions”, e. g. at hunting:

*Wáng mìng xiàngzhě qū shè.* 王命相者趨射。The king ordered the hunters to run and shoot. (*Zhuangzi* II, 24, p. 47)

3. “to lead, to guide”, a meaning very near to the preceding one “to help, to aid, to assist”, e. g.

*Wèn shuí xiàng lì.* 問誰相禮。To ask who is to lead the ceremonies. (*Guoyu* 17, p. 196)

*Yuè yǒu xiàng bù.* 樂有相步。A (blind) musician (must) have (somebody) to lead his steps. (*Liji* VIII, II, 7, p. 560)

The Chinese traditional schools of commentators held 相 for a polysemic word and searched for its original meaning “mutual directing from something to something” in the graphic structure of the character (composed of the graphemes “wood” and “eye”). Duan Yucai 段玉裁 attempt at vulgar etymology in his commentary to *Shuowen jiezi* 說文解字 can serve as an illustrating example: “*Mù jiē wù, yuē xiàng. Gù fán bǐ cǐ jiāojiē, jiē yuē xiàng.*” 目接物，曰相。故凡彼此交接，皆曰相。“If the eye reaches a thing, we can call (it) *xiàng*.” Thus all mutual intercourse and crossing is called *xiàng*.” In a similar way Duan Yucai also explains the meaning “to lead a blind man” (intercourse with somebody and his support) and the figurative meaning “quality, substance” which means the quality of a thing in intercourse with some other thing. (Compare *Shuowen jiezi Duan zhu* 說文解字段注 [Duan’s Commentary to *Shuowen jiezi*], vol. III, 4a, p. 6.1).

It is almost impossible to prove with any degree of reliability that in Archaic Chinese 相 was a polysemic word, as, taking into account the heterogeneity of Archaic Chinese records, its etymology is very hard to ascertain.

Notwithstanding, it is worth mentioning that all its verbal meanings “to look, to examine”, “to help, to assist”, and “to lead, to guide”, are, according to the traditional commentaries, bound with the falling tone. In Ancient Chinese, in the period from the 3rd till the 5th century a part of the verbs changed the tone from the original even tone to the falling one, e. g. 上 above, originally even tone *shāng*, changed to the rising tone *sháng*; 上 in the verbal function, “to ascend, to go up” changed to the falling tone *shàng*. Similarly 衣 clothing, originally even tone *yī*, in its verbal function “to dress, to wear” acquires the falling tone *yì*, etc.

Further on, it is useful to notice the doublet of 相, which was recorded by means of the substitutive character *xū* 胥, meaning originally “preserved food made of crabs or shrimps”. Its archaic reconstruction according to Wang Li 王力 (compare *Hanyushi gao* 漢語史稿 [An Outline of Chinese Historical Grammar], 1958, vol. I) is *sja*. The open syllable is a doublet of the closed syllable *sjaŋ*, a fact which fully corresponds to the rule of alternation between open and closed syllables in Chinese (*yinyang duizhuan* 陰陽對轉).<sup>4</sup> This doublet was used in three basic meanings, i. e. 1. a) mutually, b) together (even tone); 2. to examine, to survey, 3. to help, to support (falling tone).

Examples:

1. a) “mutually, one another”

*Xiōng dì hūn yīn, wú xū yuǎn yī*. 兄弟婚姻，無胥遠矣。Brothers and relatives by marriage should not (treat) each other distantly. (*Shijing* II, VII, IX; Legge, p. 404)

*Rǔ hé fú gào zhèn, ér xū dòng yǐ fú yán?* 汝曷弗告朕，而胥動以浮言？Why do you not report their words to me, but go about to excite one another by empty speeches? (*Shujing* IV, VII, 1, 12; Legge, pp. 228–229)

There is a very convincing place in *Chunqiu* 春秋 where both commentaries Gongyang 公羊 and Guliang 穀梁 explain *xū* 胥 by the word *xiāng* 相.

*Xià Qíhóu Wèihóu xū mìng yú Pú*. 夏齊侯衛侯胥命于蒲。In summer the duke of Qi and the duke of Wei were waiting for each other's orders at Pu. (*Chunqiu* II, year III, p. 67)

*Gōngyáng: Xū mìng zhě hé? Xiāng mìng yě*. 公羊：胥命者何？相命也。What does *xū mìng* mean? The same as *xiāng mìng*. (ibid.)

*Gǔliáng: Xū zhī wéi yán yóu xiāng yě*. 穀梁：胥之為言猶相也。Xū means the same as *xiāng*. (ibid.)

<sup>4</sup> According to this rule, a closed syllable – *yangsheng* 陽聲 loses the nasal coda (n) and very frequently passes through the stage of nasalization of the vowel and finally changes into an open syllable (an → ã → a). In the case of an open syllable *yinsheng* 陰聲 the reverse process can take place. This process is proved: 1. by the same phonetics of phonoidiograms which may represent both open and closed syllables, 2. by double reading of the same character (open syllable versus closed syllable), 3. by the occurrence of doublets, e. g. Archaic *xua* 呼, Ancient *xuan* 喚, to call; Archaic *qiaŋ* 卯, Ancient *qia* 吾, I etc.

## b) “together”

This meaning found in several cases only in *Shujing*, corresponds to the later adverb *xiāngyǔ* 相與, together and denotes that several subjects partake in the same action, but are not recipients of this action as in the case of *xiāng* 相, e. g.

*Gǔ zhī rén, yóu xū xùngào, xū bǎohuì, xū jiàohuì, mǐn wú huò xū zhōu zhāng wéi huàn.* 古之人，猶胥訓告，胥保惠，胥教誨。民無或胥譴張為幻。 Old virtuous rulers were together warning, admonishing, together protecting and loving, together teaching and instructing the people, so that among their people there was hardly one who would impose on them by extravagant language or deceiving tricks. (*Shujing* V, XV, 14; Legge, p. 471)

## 2. “to examine, to survey”, e. g.

*Yù lái xū yǔ.* 聿來胥宇。 Thereupon they came to survey the dwelling site. (*Shijing* III, I, III; Legge, p. 438)

## 3. “to help, to support”, e. g.

*Xū, yóu, fū yě. Wú Yuè yuē xū, Yàn zhī běi bǐ yuē yóu.* 胥，由，輔也。吳越曰胥，燕之北鄙曰由。 *Xū, yóu* means to support. In Wu and Yue they say *xū*, in the north of Yan they say in vulgar speech *yóu*. (*Fangyan jiao jian ji tongjian* 1956, p. 40)

The frequency of this doublet in the oldest studied texts (*Shijing*, *Shujing*) is smaller than the frequency of 相, in later texts the relation turns even more in favour of 相. This fact can mean either 1) that this doublet is older, or 2) that it is a dialectal variant, as indicated in the above record in *Fangyan*.

The above observations give rise to a hypothesis that the traditional commentaries ascribe the falling tone to the verbal meanings of 相 erroneously, that in Archaic Chinese 相 possessed only the even tone, in which case 相 could be considered one word with a rich polysemy.

— \* —

Having pointed out the difficulty of establishing the etymology of 相, we can now concentrate on the meaning “mutually” and discuss it more in detail. It seems to us, on the basis of analysis of our material, though still incomplete – we have assembled a set of about 1,000 excerpts from the most important monuments of Chinese prose (as regards poetry only *Shijing* was taken into consideration) from the oldest works such as *Shujing* and the writings of the philosophers of the pre-Qin area, following the line of vernacular prose as formed in the Song tales and Ming and Qing novels like *Xiyouji* 西遊記 [Pilgrimage to the West] and *Hongloumeng* 紅樓夢 [Dream of the Red Chamber] – very profitable to observe three basic stages in the semantic and grammatical functions of the word *xiāng* 相 (mutually):

I. adverbial stage (the relation of reciprocity and the modifications thereof)

II. pronominal stage (the relation of one-sidedness with a demonstrative shade of meaning)

III. prefixal stage (prefix of direction of the action of objective verbs)

These stages are not characterized by strict time-limits, but the chronology of their origin can be ascertained with a safe degree of reliability. The pre-Han texts furnish evidence of the first stage which continues in the Han period. The second stage also appears in the Han period, although examples can be sporadically found even earlier. The first stage belongs to the *wenyan* language stratum, the second occurs most frequently from Wei–Jin till the Song–Ming period, in texts written in literary language based on vernacular (*bianwen* 變文, *huaben* 話本, and later on narrative novels). The third stage appears mostly in vernacular prose of the late middle ages. Constructions and meanings of the first stage also occur in this style, but as a rule they are residues of *wenyan* phrases.

In each stage we shall notice 1) meaning, 2) syntactic arrangement of the clause, 3) grammatical character of the predicate. The character of the verb is on the whole irrelevant; the verb is almost exclusively objective. Subjective verbs were found to a larger extent only in the adverbial stage when the meaning of collectivity came into account. This fact will be especially stressed in the respective place. For dividing the stages there are two basic criteria, semantic and syntactic, which are mutually conditioned. However, the individual stages can be divided only on the basis of various types of the clause-arrangement. The boundness of certain meanings to certain syntactic constructions and their non-existence outside these constructions only corroborates the correctness of the division of the semantic-grammatical stages of the word *xiāng* 相.

## I. The adverbial stage

has three basic syntactic constructions which have certain modifications as we shall see from the examples. They are the following:

- a.    **x y xiāng** 相 v  
       x – agent  
       y – recipient  
       v – verb

x and y are coordinate subjects, there is no formal marker of coordination, x and y are both agents and recipients of the action of an objective verb

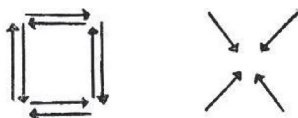
- b.    **x yǔ y xiāng** 相 v  
       yǔ 與 is a coordinate conjunction, which marks the coordination of two subjects x and y, which are mutually agents and recipients of the action of an objective verb

- c.    **x – – yǔ y xiāng** 相 v  
       yǔ 與 is a preposition, the members x and y are not placed close to each other, they are separated by other clause members, the recipient y partakes conditionally in the action as agent only in dependance on the meaning of the objective verb, grammatically y is object, x is subject

There are five variations of meaning:

1. Two-sided reciprocity – x performs the action, the recipient thereof is y, which reciprocally turns the action towards x. x and y are both active agents. Graphically ⇄

2. many-sidedness – actually a modification of the two-sided reciprocity, a plural reciprocity, which in fact is determined by the character of the subject (either the same subject in plural or more than two coordinate subjects). The relation of reciprocity is manifold according to the number of subjects, sometimes it may be performed according to the mathematic laws of combination. Graphically



etc.

3. conditioned reciprocity – a later modification of the two-sided reciprocity, where the relation of reciprocity is rather weakened. The action starts from the agent x and proceeds towards the recipient object y which receives the action without taking any active part in it, but reflects it back, as the initiative comes out from the active agent x. Graphically ⇄

4. succession, ensuing either from the logical context or from the meaning of the verb. The action takes place in an interrupted successive order. x passes the action to y, which does not turn the action back to x, but passes it on to a further member of the order, which is x, i. e. x and y pass to each other the action on the basis of temporal or other sequence. Graphically →|→|→

5. collectivity – *xiāng* 相 preceding a subjective verb takes on the meaning “all, together”, i. e. all the subjects equally partake in the action of the subjective verb

## 1. Two-sided reciprocity

**Meaning:** Both x and y are active and equivalent agents and recipients of the same action of an objective verb

Example: *Gù yǒu wú xiāng shēng*. 故有無相生。Thus existence and non-existence give birth to one another. (*Laozi* 1, 2, p. 5)

**Syntactic constructions:** they are the basic types a and b or their modifications

**Basic type a:** x y *xiāng* 相 v

Example: *Xiǎo dà xiāng chéng, zhōng shǐ xiāng shēng*. 小大相成，終始相生。Sharp and blunt tones form one another, the ends and beginnings produce one another. (*Liji* XVII, II, 17 p. 78)

**Syntactic modifications:**

x y *zhī* 之 *xiāng* 相 v

*zhī* 之 – marker of the subject

Example: *Gōng sī zhī xiāng bèi yě*. 公私之相背也。Common and private are (as regards meaning) contrary to one another. (*Hanfeizi jijie* 韓非子集解 [The Text of Hanfeizi with Collected Commentaries]; *Zhuji jicheng* V, XIX, 49, p. 345)

x y -- *xiāng* 相 v

-- member separating x and y from the predicate usually is an adverb or adverbial syntagma, a negative particle or an auxiliary verb

Example: *Chū Hàn jiǔ xiāng chí wèi jué*. 楚漢久相持未決. Chu and Han resist one another for a long time without any decision. (*Shiji* 7, p. 60 [590])

x =, y =, *xiāng* 相 v

x and y are expressed in a broader context, in the preceding coordinate clauses

Example: *Dāng shíshí, Xiàngwáng jūn zài Hóngmén xià, Pèigōng jūn zài Bàshàng, xiāng qù sìshí lǐ*. 當是時，項王軍在鴻門下，沛公軍在霸上，相去四十里。At that time the army of the king Xiang was below Hongmen, the army of the duke Pei was at Bashang, distant from each other forty miles. (*Shiji* 7, p. 34 [564])

**Modifications in the character of the subject:**

x<sub>2</sub> (--) *xiāng* 相 v

(--) negative particle, auxiliary verb, adverb an adverbial syntagma

If there are two subjects of the same kind, which are bound together by the relation of reciprocity, this fact is expressed either by the numeral or by context

Examples: *Èr rén xiāng shì ér xiào*. 二人相視而笑. The two of them (i. e. two men) looked at each other and laughed. (*Zhuangzi* I, 6, p. 42)

*Shàng tiān jiàng zāi, shǐ wǒ liǎng jūn fēi yǐ yù bó xiāng jiàn*. 上天降災，使我兩君匪以玉帛相見。High Heaven has sent down calamity and made my two lords see each other not with gems and silk. (*Zuo Zhuan* V, year XV; Legge, pp. 165–168) ... *wǔ gǔ duō guā tóng, zé jiǎ xiāng ruò, jù dà xiǎo tóng, zé jià xiāng ruò*. .....五穀多寡同，則賈相若，屢大小同，則賈相若。... when the quantity (i. e. little and lot) of cereals is the same, then the prices agree, when the size (i. e. small and large) of shoes is the same, then the prices agree. (*Mengzi* 孟子 [The Works of Mencius] III; I, V; Legge, p. 256)

x<sub>pl</sub> (=) *xiāng* 相 v

(=) the subject is to be understood in a broader context

If the subject is in plural, the reciprocal relation takes place between pairs of individuals of the same kind.<sup>5</sup>

Example: *Fū mǎ lù jū, zé shí cǎo yǐn shuǐ. Xǐ zé jiāo jǐng xiāng mí, nù zé fēn bèi xiāng dì*. 夫馬陸居，則食草飲水。喜則交頸相摩，怒則分背相踞。The horses live on the land, therefore they eat grass and drink water. When they are merry, they cross their necks and rub each other. When they are angry, they turn their backs and kick one another. (Graphically 𩇛 𩇛 𩇛) (*Zhuangzi* I, 10, p. 54)

x y w z (---) *xiāng* 相 v

<sup>5</sup> Compare the same sentence-type in the following discussion of the modification of meaning termed as “many-sidedness”. Sometimes the logical context only is relevant when deciding about the classification of the respective modifications of meaning (two-sidedness – many-sidedness, two-sidedness – succession).

(-- --) negative particle, adverb, adverbial syntagma

The subject can be enlarged to two coordinate pairs of substantives, the reciprocal relation then takes place between the members of the respective pair.

Example: *Wǎngwǎng fù zǐ fū qī, zhōng shēn bù fù xiāng jiàn.* 往往父子夫妻，終身不復相見。And then father and son, man and wife did not see each other again for the whole life-time. (*Feng Yumei tuanyuan* 馮玉梅團圓 [A Happy Union of Feng Yumei], *Song Yuan*, p. 1)

As regards the grammatical character of the subject, x and y can be either 1) substantives, in singular or plural, 2) pronouns (e. g. *Wéi shì yǔ nǚ, yī qí xiāng xué.* 維士與女，伊其相諠。So the gentlemen and ladies, this and that have fun with one another. (*Shijing* I, VII, XXI; Legge, p. 148), or 3) substantival clause (e. g. *Jī míng gǒu fèi xiāng wén.* 雞鳴狗吠相聞。The crowing of cocks and belling of dogs can be mutually heard. (*Mengzi* II, I, II; Legge, p. 183). In the case of subject x<sub>2</sub>, x can be expressed either by a noun or a pronoun. Example of a pronoun subject: *Qiě bù shuō tā liǎng xiāng dòu nán fēn.* 且不说他兩相鬥難分。But we shall not talk about how these two fought one another without decision. (*Xiyouji*, p. 698)

**Basic type b:** x yǔ 與 y xiāng 相 v

Example: *Tiān yǔ rén bù xiāng shèng yé.* 天與人不相勝也。Heaven and people do not subdue one another. (*Zhuangzi* I, 6, p. 37)

**Syntactic modifications:**

x zhī 之 y xiāng 相 v

zhī 之 – marker of the subject

Example: *Měi zhī yǔ è, xiāng qù hé ruò?* 美之與惡，相去何若？Beauty and ugliness, how distant are they from one another? (*Laozi* I, 20, p. 45)

x yǔ 與 y --- xiāng 相 v

--- negative particle, auxiliary verb, adverb or adverbial syntagma

Example: *Wǒ yǔ ruò bù néng xiāng zhī.* 我與若不能相知。I and you cannot know one another. (*Zhuangzi* I, 2, p. 16)

**Modification in the character of the subject:**

x yǔ 與 x (---) xiāng 相 v

(---) negative particle, auxiliary verb, adverb or adverbial syntagma

The relation of reciprocity can take place between individuals of the same kind, as to meaning it has universal value.

Example: *Ruò shǐ tiān xià jiānxiāng ài, guó yǔ guó bù xiāng gōng, jiā yǔ jiā bù xiāng luàn, .....* 若使天下兼相愛，國與國不相攻，家與家不相亂..... If we achieved that (all) in the empire mutually loved, a state with a state did not attack one another, a house with a house did not put each other into confusion... (*Mozi Jiangu* 墨子閒詁 [Leisure Commentaries on Mozi]; *Zhuzi jicheng*, IV; IV, 14, p. 63)

The conjunction yǔ 與 which is of verbal origin (meaning “to be at”, “to take part in”) can be substituted in its function by the verb jí 及 “to reach to”, which thus turns into a conjunction with the meaning “in relation to”.

Example: *Xiōng jī dì yī, shì xiāng hào yī, wú xiāng yóu yī.* 兄及弟矣，式相好矣，無相猶矣。May elder brother and (in relation to) younger brother be mutually loving and having no schemings against one another! (*Shijing* II, IV, V; Legge, pp. 303–304)

**Character of the predicate:**

1. objective verb

In older texts it is a monosyllabic verb, in later texts, in accordance with the tendency of the Chinese language of forming bisyllabic compounds, there also appear bisyllabic verbs.

Example: *Yún yǔ shuǐ xī xiāng jiēlián.* 雲與水兮相接連。The clouds and water are linked together. (*Wu Zixu bianwen* 伍子胥變文; *Dunhuang*, p. 311)

2. other parts of speech in the function of objective verbs

a. adjective, e. g.

*Wù yǔ wù hé yǐ xiāng yuǎn?* 物與物何以相遠? What is it that makes one thing distant to another thing? (*Zhuangzi* II, 19, p. 6)

b. substantive, e. g.

*Cháng duǎn xiāng xíng.* 長短相形。Long and short form one another as to shape. (*Laozi* I, 2, p. 5)

c. numeral, e. g.

*Fū wù zhī bù qí, wù zhī qíng yě. Huò xiāng bèi xī, huò xiāng shí bǎi, huò xiāng qiān wàn.* 夫物之不齊，物之情也。或相倍蓰，或相什伯，或相千萬。It is the nature of things to be (of) unequal quality. Some are twice, some are five times, some ten times, some a hundred times, some are several thousand times as (valuable) as others. (*Mengzi* III; I, V; Legge, p. 256)

The verb can also have an object, but it is a rather rare case.

Example: *Nán nǚ fēi yǒu xíng méi, bù xiāng zhī míng.* 男女非有行媒，不相知名。Man and wife without the mediation of a match-maker do not know each other's names. (*Liji* I, I, III, 36, p. 30)

In mediaeval Chinese, from the Song dynasty onwards (earlier only sporadically), *xiāng* 相 in the meaning of mutual reciprocity appears also as a bound form deriving adjectives, which are usually predicative, rarely attributive.

Examples: *Cǐ rén zhèng yǔ lìng'ài xiāngyí.* 此人正與令媛相宜。This man and your respectful daughter can match very well. (*Gujin*, tale 27, p. 4)

*Fūfù zhī jiān, shēng sǐ xiānggòng* ... 夫婦之間，生死相共..... Man and wife (between man and wife) (they have to) together (bear everything) in life and death... (*Jing shi tong yan* 警世通言, tale 52, p. 496)

Other adjectives whose component *xiāng* 相 expresses that the meaning of the other component refers reciprocally to both subjects:

*xiāngjìn* 相近, to be near each other

*xiānggān* 相干, *xiāngguān* 相關, to refer mutually, to have a mutual bearing

*xiāngshú* 相熟, to know each other

*xiāngqīn* 相親, to be mutually intimate, to love each other

*xiāngsì* 相似, to be similar to each other

*xiāngyīng* 相應, to be in mutual accord, to agree mutually

Some of these and similar adjectives still figure in contemporary Chinese, especially in its literary form.

With objective verbs meaning “to know somebody”, “to be acquainted with somebody”, *xiāng* 相 forms compound substantives in the meaning “an acquaintance, a friend”, which take on all the functions of substantives.

Examples: *Cuī dài zhào... zài yí gè jiǔ sì, yǔ sān sì gè xiāng zhī fāng cái chī dé shù bēi.* 崔待詔.....在一個酒肆，與三四個相知方纔吃得數盃。

Master Cui... was just drinking a few cups with three or four friends in an inn. (*Nian yu Guanyin* 碾玉觀音 [Guanyin Carved of Jade], *Song Yuan*, p. 204)

*Èr rén dōu shì jiù rì xiāng shí.* 二人都是舊日相識. The two of them were old acquaintances (of his). (*Gujin*, tale 24, p. 5)

## 2. Many-sidedness

The meaning-variation of many-sidedness is caused by the character of the subject which has two basic types: 1. one plural subject which is to be understood from the logical context or marked by plural grammatical indicators, 2. several coordinate subjects. All the subjects take active part in the action both as agents and recipients. In case of plural subject the action starts from each individual and does not necessarily have to be directed towards a certain individual.

Example: *Qí rén zhī jǐng, yǐnzhě xiāng zú yě.* 齊人之井，飲者相掙也. Around the wells in the country of Qi the thirsting pushed one another. (*Zhuangzi* II, 32, p. 91)

In case of several coordinate subjects the action starts from each subject and is directed to each of the partaking subjects, so that each subject is a multiple agent and recipient, as many times as many there are subjects.

Example: *Pì rú ěr mù bí kǒu, jiē yǒu suǒ míng, bù néng xiāng tōng.* 譬如耳目鼻口，皆有所明，不能相通. For example ears, eyes, nose, mouth. All have something by which one comprehends. But they cannot substitute one another (in their functions) (i. e. the ears cannot substitute the eyes, the nose, the mouth, the eyes cannot substitute the ears, the nose, the mouth etc.) (*Zhuangzi* II, 33, p. 96)

According to the structure of the subject we distinguish two syntactic types:

1.  $x_{pl}$  *xiāng* 相  $v$  (modification of the basic syntactic construction a)

Example: *Xīzhě Qí guó lín yì xiāng wàng, jī gǒu zhī yīn xiāng wén.* 昔者齊國鄰邑相望，雞狗之音相聞. A long time ago the neighbouring towns in the state of Qi faced one another. The voices of cocks and dogs could be mutually heard. (*Zhuangzi* I, 10, p. 55)

**Syntactic modification:**

$x_{pl}$  = *xiāng* 相  $v$

the subject can be expressed in the preceding coordinate clause

Example: *Bù yī xiāngyǔ jiāo, wú fù hòu yī xiāng lì.* 布衣相與交，無富厚以相利。 Common people make friends with each other, they have no riches which they could mutually strive for. (*Hanfeizi; Zhuzi jicheng* V, XIX, 49, p. 346)

The plural of the subject can be marked by:

a. a substantive with a collective meaning, e. g.

*Qún gōng jì jiē tīng mìng, xiāng yī qū chū.* 群公既皆聽命，相揖趨出。 All (i. e. the group of) dukes having heard this charge, bowed to one another and hastily withdrew. (*Shujing* V, XXIII, 6; Legge, p. 568)

b. numeral, e. g.

*Sì rén xiāng shì ér xiào.* 四人相視而笑。 The four of them (four people) looked at each other and laughed. (*Zhuangzi* I, 6, p. 40)

c. pronoun expressing plurality, e. g.

*Jiē ān qí wèi ér bù xiāng duó yě.* 皆安其位而不相奪也。 All are guarding their ranks and do not usurp each other. (*Liji* XVII, II, 10, p. 73)

2. a. **x y q w z (---) xiāng 相 v** (enlarged basic syntactic construction a)

(---) marks a member qualifying the verb or a broader context, the number of subject-members can vary

Example: *Zhè Xīhú, chén, hūn, qíng, yǔ, yuè zǒng xiāngyí.* 這西湖，晨、昏、晴、雨、月總相宜。 On that Western lake dawn, dusk, clear weather, rain and moonlight are always in harmony with each other. (*Xihu san ta ji* 西湖三塔記 [A Tale about Three Pagodas of the Western Lake]; *Song Yuan*, p. 295)

b. **x yǔ y yǔ 與 z (---) xiāng 相 v** (enlarged basic syntactic construction b)

(---) member qualifying the verb

Example: *Rán zé wǒ yǔ ruò yǔ rén bù néng xiāng zhī yě.* 然則我與若與人不能相知也。 Then I and you and other people cannot know each other. (*Zhuangzi* I, 2, p. 17)

The objective verb qualified by the adverb *xiāng* 相 meaning “many-sidedness” can also take an object, e. g.

*Suī zhì dàfū zhī xiāng luàn jiā, zhūhóu zhī xiāng gōng guó zhě yìrán.* 雖至大夫之相亂家，諸侯之相攻國者亦然。 If the nobles put each other's houses into disorder, then it is the same with the dukes, they attack each other's states. (*Mozhi; Zhuzi jicheng* IV, IV, p. 63)

The adverb *xiāng* 相 in this meaning together with the respective verb can also perform other syntactic functions, e. g. object, attribute etc.

Objective usage:

*Cháng chá luàn hé zì qǐ, qǐ bù xiāng ài.* 嘗察亂何自起，起不相愛。 Once I examined where disorder comes from, it arises from a lack of mutual love. (ibid., p. 62)

Attributive usage:

*Mín... wú yǒu xiāng hài zhī xīn.* 民.....無有相害之心。The people... had no intention of harming each other. (*Zhuangzi* II, p. 79)

### 3. Conditioned reciprocity

Conditioned reciprocity, as a modification of the meaning of two-sided reciprocity, is motivated by the meaning of the verb. The subject *x*, the active agent, directs the action towards the object *y*, which conditionally reflects the action. The verbs which cause *xiāng* 相 to acquire this meaning, are mostly verbs of seeing, meeting, parting, eventually they can express various ways of encounter and contest, etc.:

*xiāng jiāo* 相交, to associate with

*xiāng jiàn* 相見, to see, to meet

*xiāng huì* 相會, to meet, to assemble

*xiāng jié* 相結, to make friends

*xiāng yù* 相遇, *xiāng féng* 相逢, to meet

*xiāng bié* 相別, *xiāng cí* 相辭, to part

*xiāng wǎng* 相往, to come into contact

*xiāng jī* 相擊, to encounter

*xiāng chí* 相持, to resist one another in fight etc.

The meaning of these verbs shows that one of the participants of the action must take initiative and only then the object of the action can repeat the same action conditionally. The moment of reciprocity is thus weakened and in fact, there is a transition towards one-sidedness, a stage when *xiāng* 相 substitutes the pronoun.

The construction of clauses with this meaning of *xiāng* 相 belongs to the basic syntactic type c. *x* is the subject, *y* is the indirect object introduced by the conjunction *yǔ* 與 together, with. This construction which forms some sort of a bridge to the pronominal stage, is the last of all constructions where *xiāng* 相 in the position preceding the verb plays the part of an adverb. This construction in its typical form, appears in the texts of the Han period and is used, together with the pronominal *xiāng* 相, up to the mediaeval texts.

#### Basic syntactic construction:

*x* --- *yǔ* 與 *y* *xiāng* 相 *v* (type c)

Example: *Zhāowáng tǒng líng yǒngfū, suì yǔ Wújūn xiāng jī.* 昭王統領勇夫，遂與吳軍相擊。The king of Zhao led brave warriors. After that they had a clash with the army of Wu. (*Wu Zixu bianwen; Dunhuang*, p. 316)

#### Syntactic modification:

*x* --- *yǔ* 與 *y* --- *xiāng* 相 *v*

the predicate includes further members preceding *xiāng* 相 and the verb

Example: *Qī yuè dì zhì Héyáng, yǔ Hào gé hé xiāng wàng.* 七月帝至河陽，與顓隔河相望。In the seventh month the emperor reached Heyang and faced Hao across the river. (*Luoyang jialanji xiaozhu*, I, p. 9)

#### Modifications in the character of the subject and the object:

1. *x* --- *yǔ* 與 *y* *z* *xiāng* 相 *v*

Example: *Jīng Kē suī yóu yú jiǔ rén hū... qí suǒ yóu zhūhóu, jīn yǔ qí xiánháozhāngzhě xiāng jié.* 荊軻雖游於酒人乎.....其所游諸侯，盡與其賢豪長者相結。 Although Jing Ke used to associate with drunkards... the persons with whom he had intercourse during his travels among the feudal lords were all of superior worth and excellence. (*Shiji* 86, p. 22 [3912])

2. x --- **yǔ** 與 y **xiāng** 相 v

Example: *Qiě shuō sānguān zài Wǔmén wài, yǔ péngyǒu xiāng xù.* 且說三官在午門外，與朋友相叙。 And then let us say, the Third Master was outside the Noon-gate and talked with friends. (*Jīng shì tong yan*, tale 24, pp. 344–345)

3. (x) **yǔ** 與 y **xiāng** 相 v

The subject is not expressed in the respective clause, but it is quite evident from the context

Example: *Fēng xuě zǔ zhōu, nǎi tiān qiān yǔ zūn xiōng xiāng huì, shí xiǎo dì zhī xìng yě.* 風雪阻舟，乃天遣與尊兄相會，實小弟之幸也。 Wind and snow stopped the boat and the heaven granted (me) the meeting with the respected brother. Really it is great luck for me (for the younger brother). (*Jīng shì tong yan*, tale 32, p. 494)

4. (x) **yǔ** 與 y) --- **xiāng** 相 v

the members x and y are not expressed, but can be understood from the context  
This type appears sporadically in the oldest texts, later texts have taken over some petrified phrases.

Example: *Yǒu měi yī rén... xièhòu xiāng yù, shì wǒ yuàn xī.* 有美一人.....邂逅相遇，適我願兮。 There was once a beauty... We met together (i. e. she and I) accidentally. So my desire was satisfied. (*Shijing* I, VII, XX; Legge, p. 147)

In the mediaeval texts written in vernacular, apart from the conjunction **yǔ** 與 the conjunction **hé** 和 is also used, e. g.

*Xǔxuān dào: "Zì cóng hé nǐ xiāng shí zhī hòu, ..."* 許宣道：「自從和你相識之後.....」 Xuxuan said: "Since the time I got acquainted with you, ..." (*Jīng shì tong yan*, tale 28, p. 441)

Another syntactic peculiarity of the c type construction is the position of the negative. In the preceding a and b type constructions the negative was always placed closely preceding **xiāng** 相, in the c type it precedes the indirect object introduced by a preposition, e. g.

*"Èr zhēngxīe bù yǔ māmā xiāngjiàn!"* 「兒爭些不與媽媽相見！」  
"Pretty sure, the son would have hardly seen his mother again!" (*Xihu san ta ji*; *Song Yuan*, p. 302)

#### 4. Succession

In this case the meaning of reciprocity is changed into the meaning of “succession” on the basis of temporal sequence, order etc. The members of the subject pass on the action from one to another, in case of two coordinate subjects they take turns in the action alternately. The meaning of succession is determined either directly by the meaning of the verb – as a rule they are verbs of succeeding, passing on, following, linking, inheriting etc. – or follows from the context.

Example: *Sì shí xiāng dài, xiāng shēng xiāng shā*. 四時相代，相生相殺。The four seasons succeed each other alternately. They give birth to one another, they kill one another. (*Zhuangzi* II, 25, p. 60)

In the first clause the meaning of succession follows from the meaning of the verb, in the second clause the logical context determines that the preceding season gives birth to the following one, while in the third clause the following season kills the preceding one. Graphically  $\rightarrow| \leftarrow| \rightarrow$  and  $\leftarrow| \leftarrow| \leftarrow$

As regards the syntactic constructions, the basic type a with modifications in the character of the subject is prevalent. The basic type b is very sporadic, it appears only in case of identity of coordinate subjects.

##### Basic syntactic construction:

x y *xiāng* 相 v

Example: *Qián hòu xiāng suí*. 前後相隨。The front and the back follow each other. (*Laozi* I, 2, p. 6)

##### Modification in the character of the subject:

$x_{pl}$  = *xiāng* 相 v

= member of the predicate or a broader context, the subject may be expressed in the preceding clause

Example: *Bǎi guān yǐ cǐ xiāng chǐ*. 百官以此相齒。The hundred officials according to this follow one another in order. (*Zhuangzi* II, 33, p. 96)

The objective verb can take an object.

Example: *Wú dì shū shí, bù xiāng yán yuè, sān wáng yì shì, bù xiāng xí lǐ*. 五帝殊時，不相沿樂，三王異世，不相襲禮。The five emperors lived in a different period, they did not pass the music to each other. The three rulers lived in a different epoch, they did not inherit the rites from another. (*Liji* XVII, I, 27, pp. 62–63)

##### Syntactic construction b:

x *yǔ* 與 x *xiāng* 相 v

the relation of succession between individuals of the same kind, which follows from the logical context; the meaning becomes universal

Example: *Qí bì yǒu rén yǔ rén xiāng shí zhě yě?* 其必有人與人相食者也? Why must a man with another man eat each other? (one man eats another man, this one again the next one etc.) (*Zhuangzi* II, 23, p. 34)

## 5. Collectivity

*Xiāng* 相 can represent the meaning “all, together” if used preceding a subjective verb. It indicates that the action of the verb refers to both subjects or to each individual, if the subject is a collective noun.

### Syntactic constructions:

1. x (=), y (=), *xiāng* 相 v

Example: *Gāo Jiānlǐ jī zhù, Jīng Kē hé ér gē yú shì zhōng, xiāng lè yě. Yí ér xiāng qī, páng ruò wú rén zhě.* 高漸離擊筑，荊軻和而歌於市中，相樂也。已而相泣，旁若無人者。 Gao Jianli played the five stringed lute, Jing Ke accompanied him singing in the bazaars, they entertained one another. Then they cried together, as if there were nobody around. (Shiji 86, pp. 21–22 [3911–3912])

2. x<sub>pl</sub> (=) *xiāng* 相 v

Example: *Mín jiē hàohū màlì, xiāng jùhuì, ...* 民皆號呼罵詈，相聚會..... All the people were shouting and swearing, rioting together, ... (Hanshu, 65, p. 5a)

## II. Pronominal stage

This stage means a decisive change in the semantic and grammatical function of the word *xiāng* 相. Semantically *xiāng* 相 is no longer a word with full meaning, it no longer denotes reciprocity, it only marks the transition of the action from the agent – subject to the recipient – object. As to content, it is very indefinite, it can point to all three persons. This semantic degradation is caused by a change in the grammatical function of *xiāng* 相. Although *xiāng* 相 in this stage, as well as in the adverbial stage, is placed immediately preceding the verb, there is a great difference in its grammatical function and its content in these two stages: in the adverbial stage the recipient of the action is expressed directly either by a substantive or a pronoun, in the pronominal stage it is expressed only by *xiāng* 相 which plays in this case the role of the substitute of personal pronouns of all three persons in the position of the object. Its momentary value is dependent on the context. Apart from the function of the substitute of personal pronouns, *xiāng* 相 still contains the meaning of demonstrativeness, it marks the transition of the action from the subject to the object.

The most striking feature raising doubts about the classification of *xiāng* 相 as a substitute of personal pronouns, is its position preceding the verb. Several facts can balance this doubt: 1. the pronominal function of *xiāng* 相 developed directly from its adverbial function, the degrading of the meaning of reciprocity proceeded by way of meaning of conditioned reciprocity and gradual omission of the object, so that neither discontinuity nor the need to postpone *xiāng* 相 representing the object to the usual position of Chinese pronouns, i. e. following the verb, were felt. 2. In pre-Han Chinese *xiāng* 相 could be placed in parallel constructions in the same position as the pronoun, which suggests that there was no sharp difference between *xiāng* 相 and the pronoun, e. g. *Fán jiāojìn, zé bì xiāng mí yǐ xìn, yuǎn zé bì zhōng zhī yí yán.* 凡交近，則必相靡以信，遠則必忠之以言。 Everything neighbouring

must be in mutual agreement, in order to have trust. Everything remote must be devoted to this, in order to cherish confidence. (*xiāng* 相 is in the same syntactic position as *zhī* 之, pronoun of the 3rd person in the position of the object) (*Zhuangzi* I, 4, p. 25) 3. the position of the Chinese pronoun following the verb is not its only and exclusive position. In the pre-Han texts personal and interrogative pronouns in negative clauses and in questions are usually placed preceding the verb, e. g. *Bù wú zhī yě*. 不吾知也. They do not know us. (*Lunyü* 論語 [Confucian Analects] XI, XXV; Legge, p. 247) *Wú shuí yǔ wéi lín?* 吾誰與為鄰? With whom shall I be neighbour? (*Zhuangzi* II, 20, p. 14)

Another, rather convincing fact which can reinforce the argument about the pronominal character of *xiāng* 相 in this stage, is its occurrence in the function of a direct object with verbs which in other places of the same text have their objects expressed by pronouns, e. g. “*Xiàguān shēn shì Wú Zìxū, ... lǚkǒng Píngwáng xiāng bǔ zhú*” 「下官身是伍子胥.....慮恐平王相捕逐。」 “Your humble servant is Wu Zixu,... I am afraid that the king Ping may follow me and catch me.” (*Wu Zixu bianwen*; *Dunhuang*, p. 302) *Yúrén... Bào Zìxū yányuē*: “... *Chǔwáng bǔ zhú yú zǐ, zhuōhuò shǎngcì qiān jīn*.” 魚人.....報子胥言曰: 「.....楚王捕逐於子, 捉獲賞賜千金。」 The fisherman... turned to Baozi and said: “The king of Chu is following and trying to catch you and has promised a reward of a thousand pieces of gold to anyone who captures (you).” (*ibid.*, p. 309) (The object here is expressed by the pronoun *zǐ* 子 used in direct address; note also that both examples are fragments of direct speech with a regular rhythmical pattern, with 7 syllables in the first case and 6 syllables in the second case.) Let us take another set of two examples from *Xiyouji*, occurring again in direct speech; in the first case *xiāng* 相 substitutes the personal pronoun of the first person, in the second case the personal pronoun of the third person is expressed explicitly: “... *ruò wǒ shū yǔ tā, bù bì liègōng xiāng zhù*...” 「.....若我輸與他, 不必列公相助.....」 “... if I lose with him, the respectful dukes need not help me...” (*Xiyouji*, p. 62) “... *Wǒ rújīn zhù tā yī gōng*...” 「.....我如今助他一功.....」 “... now, I shall help him to success...” (*ibid.*, p. 66)

It is also worth noticing that *xiāng* 相 in the function of substitute of personal pronouns with demonstrative meaning precedes in prevalent number of cases verbs which contain a shade of meaning of reciprocity or conditioned reciprocity. They are verbs of intercourse, such as *kuān* 款, to treat someone to something; *péi* 陪, to accompany someone; *bié* 別, to part with someone; *yù* 遇, to meet someone; *sòng* 送, to accompany someone somewhere; *suí* 隨, *gēn* 跟, *cóng* 從, to follow someone; *yíng* 迎, to welcome someone; *fǎng* 訪, to pay a visit to someone; *liú* 留, to keep, to detain someone; *róngnà* 容納, to receive someone; they are verbs of seeing, such as *kān* 看, *guān* 觀, to see, to look at someone; verbs expressing various feelings and sentiments, such as *liàng* 諒, to understand someone; *rèn* 認, *shí* 識, to know someone; *ài* 愛, to love someone; *yí* 疑, to suspect someone; *fù* 負, to manifest ungratefulness to someone; lastly verbs expressing help and reward, such as *bāng* 幫, *zhù* 助, to help someone; *jì* 濟, to save, to rescue someone; *chóu* 酬, to reward someone; *zèng* 贈, to give a present to someone, etc.

When discussing the meaning of conditioned reciprocity in the adverbial stage, we already have pointed out that the transition to the meaning of one-sidedness is semantically marked here. Grammatically this transition is marked by a construction with a conjunction, but the recipient of the action is left out and is to be understood from the context. The purpose of the action is one-sided, but when accomplished, the recipient, on its part, is also involved in the action.

**Syntactic construction:**

x --- yǔ 與 (y) xiāng 相 v

Example: *Jí cháng suí shūfù zhì dōngjùn, Yǎnzhōu cìshǐ Wáng Chǎng qǐng yǔ xiāng jiàn.* 籍嘗隨叔父至東郡，兗州刺史王昶請與相見。(Ruan) Ji once followed his uncle from his father's side to the Dong commandery. The governor of Yanzhou, Wang Chang, asked to see (him). (*Jinshu*, 49, p. 1a)

Grammatically and semantically, the transition to pure one-sided pointing is denoted in clauses which no longer have a preposition nor express the recipient of the action, but their one-sided purpose of action is accompanied by the meaning of conditioned reciprocity.

**Syntactic construction:**

x --- (yǔ 與 y) xiāng 相 v

Example: *Wúwáng jī líng jí shǐ, xiàng shì zhōng yíngzhào xián chén.* “*Wèi zhèn chuán yǔ, suī bù xiān xiāng shí, yù dé xiāng jiàn*” 吳王即令急使，向市中迎召賢臣。「為朕傳語，雖不先相識，欲得相見。」 So the king of Wu at once sent an express messenger to the market to fetch his valuable minister. “Deliver (him) my message, that although I am not acquainted with him, I am most anxious to see him.” (*Wu Zixu bianwen*; *Dunhuang*, p. 313)

*Xiāng* 相 as substitute of personal pronouns denotes only a one-sided purpose of action.

**Basic syntactic construction:**

x = xiāng 相 v i.e. x = v y<sub>(1,2,3)</sub>

= marks either a broad context or members of the predicate

The semantic value of y is not constant, it varies according to the context. In view of the fact that the subject can also be in one of three persons, there are seven possibilities of relation between the agent and recipient as regards person:

- |          |          |
|----------|----------|
| 1. 1 – 2 | 4. 2 – 3 |
| 2. 1 – 3 | 5. 3 – 1 |
| 3. 2 – 1 | 6. 3 – 2 |
| 7. 3 – 3 |          |

The most usual is the relation 3 – 3. It occurs in indirect speech. The frequency of the other relations is smaller. With the exception of earlier sporadic examples, this function of *xiāng* 相 is typical for the mediaeval texts written in literary vernacular.

Examples:

1 – 2 “*Tiān míng, rǔděng kāi chuán zì qù, wú qiě zàn huí, bù dé xiāng péi yī*”  
「天明，汝等開船自去，吾且暫回，不得相陪矣。」 “When the

day breaks, you go on the boat alone, for the time being I shall go back, I cannot accompany you.” (*Jing shi tong yan*, tale 26, p. 402)

Sometimes the relations of persons have to be taken according to their logical sense, grammatically, in view of the fact that Chinese has the habit of using polite substantives instead of pronouns, these cases should belong to the third person, e. g.

“*Xiǎodì xián zài jiā zhōng, lǎo xiōng yòngdézháo shí, biàn lái xiāng bāng.*” 「小弟閒在家中，老兄用得着時，便來相幫。」 I (i. e. the younger brother) idle at home, if you (i. e. the elder brother) need, I will help you. (*Cuo zhan Cui Ning 錯斬崔寧* [Cui Ning Unjustly Beheaded]; *Song Yuan*, p. 101)

1 – 3 “*Nǐ yǔ wǒ jiàozhù nà páijūn, wǒ xiāng wèn zégé.*” 「你與我叫住那排軍，我相問則個。」 “You call that captain for me, I shall ask him about that.” (*Nian yu Guanyin*; *Song Yuan*, p. 213)

2 – 1 *Yúrén gē ér huàn yuē: “Lú zhōng zhī shì, hé gù qián shēn? Chū lái cǐ chù xiāng kàn, wú nǎi zhōng wú èyì.”* 魚人歌而喚曰：「蘆中之士，何故潛身？出來此處相看，吾乃終無惡意。」 The fisherman sang and cried: “Man of the Reeds, why are you hiding? Come out at this place to have a look at me, after all, I have no bad intention.” (*Wu Zixu bianwen*; *Dunhuang*, p. 309)

3 – 2 and 2 – 3 *Cuī wèi Chōng yuē: Jūn kě guī. Nǚ shēng nán, dāng yǐ xiāng huán, wú xiāng yí, ...* 崔謂充曰：「君可歸。女生男，當以相還，無相疑……」 Cui said to Chong: “Sir, you can go back. If the lady gives birth to a boy, she must give (him) to you, do not suspect her, ...” (*Lu Chong 盧充, Soushenji 搜神記, Jiu xiaoshuo*, vol. 1, p. 111)

3 – 1 *Dàshèng dào: “Qǐ xǐ zhèfān Yùdì xiāng ài, guǒ fēng zuò qítiāndàshèng.”* 大聖道：「且喜這番玉帝相愛，果封做「齊天大聖」。」 The Great Sage said: “Moreover I am glad that this time the Jade Emperor manifested his love to me and really bestowed me the title ‘Great Sage Equal to Heaven’” (*Xiyouji*, p. 53)

3 – 3 *Xiàngwáng nǎi xī, ... dà pò Hànjūn, Hànjūn jiē zǒu, xiāng suí rù Hú, Sì shuǐ.* 項王乃西，……大破漢軍，漢軍皆走，相隨入穀，泗水。 The king Hsiang turned westwards, ...defeated the Han army terribly, the whole Han army fled and he pursued it up to the rivers Hu and Si. (*Shiji* 7, p. 51 [581])

*Xiāng* 相 can also point at inanimate things, e. g.

*Tā yě bù guǎn nà chuán yǒu zài méi zài, bǎ shǒu xiāng zhāo, ...* 他也不管那船有載沒載，把手相招，…… He did not care, whether that boat had cargo or not, he waved his hand at it, ... (*Jing shi tong yan*, tale 26, p. 401)

### III. Prefixal stage

The prefixal stage is linked directly with the pronominal stage. *Xiāng* 相 expresses only the direction of the action from the agent to the recipient, it does not represent the recipient itself, which is now for the sake of clearness expressed as the object of the verb by means of a substantive or its substitutes (pronoun, numerative). *Xiāng* 相 declines to a mere prefix of objective verbs denoting only the direction of the action. Thus the development is fully completed. *Xiāng* 相 degraded from the adverb first to a substitute of personal pronouns and further on to a verbal prefix, the member *y* as regards its grammatical function changed from a coordinate subject to a direct object.

When discussing the meaning of mutual reciprocity and succession in the adverbial stage, we have pointed out that the objective verb can also take an object expressed by a substantive. This object is a direct one, *xiāng* 相 in such cases expresses an exchange of action between two subjects, the one which plays the part of recipient is logically an indirect object. In the prefixal stage the prefix of direction of action precedes an objective verb which governs a direct object expressed by a substantive or a pronoun. In the pronominal stage, where *xiāng* 相 substitutes the pronoun, it is an independent word, because it can be replaced by the pronoun itself. In the third stage it degrades to a bound form, to an anteposition of a monosyllabic verb.

This prefixal stage of *xiāng* 相 appears only in texts written in literary vernacular, in the tales of the Song period and the long narrative stories of the Ming Qing period. The frequency is by far not so great as the frequency of the pronominal type.

#### Basic syntactic construction:

x (=) *xiāng* 相 v y

y is usually 2nd or 3rd person, 1st person was not found

Object expressed by a substantive:

*Lú Dá xiāngcí le Jīnlǎo fù zǐ èr rén.* 魯達相辭了金老父子二人。Lu Da took farewell of the father and son of the Jin family. (*Shuihu quanzhuan*, p. 61)

Object expressed by a pronoun:

*Siwēn suì gào sān'ér dào:* "Wǒ yǒu jiàn shì xiāngfán nǐ" 思溫遂告三兒道：「我有件事相煩你。」After that Siwen said to the third son: "I have a matter I will trouble you with." (*Gujin*, tale 24, p. 2)

Object expressed by a numerative:

*Zhè jǐ nián zǒng méi jiānzáo, kě qiǎo qián'ér lù shàng cái xiāngzhǔn le yī gè.* 這幾年總沒揀著，可巧前兒路上才相准了一個。In the last few years he did not make his choice, accidentally some time ago he became engaged to someone while travelling. (*Hongloumeng*, p. 703)

Verbs with the prefix *xiāng* 相 expressing the direction of action are mostly verbs of intercourse, such as *xiāngbàn* 相伴, to make friends with someone; *xiāngpéi* 相陪, to accompany someone; *xiāngjié* 相結, to have intercourse with someone; *xiāngjiāo* 相交, to make friends with someone, to see someone; *xiāngdài* 相待, to entertain, to regale someone.

If we survey the views on *xiāng* 相 held by both Western and Chinese grammarians, we find that not all of them noticed the changes in the grammatical and semantical character of *xiāng* 相. Some authors, analyzing the grammatical system of Archaic Chinese, limit themselves to the consideration of the reciprocal function of the adverb *xiāng* 相, mostly failing to differentiate its variations of meaning.

Of the most important, we call the reader's attention to the view of Georg von der Gabelentz, as given in *Chinesische Grammatik*: "Gegenseitigkeit der Handlung wird regelmäßig durch das Adverb *siāng* = einander, gegenseitig, ausgedrückt". (§ 1158, p. 431) In the following paragraph G. von der Gabelentz ascribes to *xiāng* 相 the function of turning "verba neutra" "zu reciproken verbis neutris, nicht zu Faktiven oder Causativen". (§ 1159, p. 431; see also § 846d, p. 330) This view is at present, due to the "universalist" approach to Archaic Chinese, antiquated.

Georg von der Gabelentz's Chinese contemporary Ma Jianzhong 馬建忠 is more concrete in the classification of *xiāng* 相, noticing its demonstrativeness, committing though a serious mistake in placing it in the same category with the reflexive pronoun *zì* 自 and thus drawing the erroneous conclusion that *xiāng* 相 is "a pronoun with a reciprocally demonstrative function". (see *Mashi wentong jiaozhu* 馬氏文通校注 [Collated Edition of Ma's Grammar], 1st Vol., p. 103)

As regards modern authors, the most important function of *xiāng* 相 in Archaic Chinese is adequately characterized in W. A. C. H. Dobson's *Late Archaic Chinese*: "Where two agents reciprocally engage in the activity of the verb (i. e. they are mutually agent and affectee), the verb is determined by the determinants of reciprocity. These are *xiāng* 相 \**siang*, *jiāo* 交 \**kog*; and (hendiadys) *jiāoxiāng* 交相." (1959, p. 84)

Of the authors who paid attention to the changing grammatical and semantical character of *xiāng* 相, we must not fail to mention Yang Bojun 楊伯峻, who classified first *xiāng* 相 as an adverb of manner with the meaning of mutual reciprocity, without pointing at its pronominal-demonstrative function (see *Zhongguo wenfa yuwen tongjie* 中國文法語文通解 [Thorough Explanations of Chinese Grammar and Language], 1955, p. 115). Continuing his research of old Chinese grammar, Yang Bojun noticed this pronominal-demonstrative function and in his *Wenyan yufa* 文言語法 [Grammar of *wenyan*] (1955, p. 135) he remarks that the adverb of manner *xiāng* 相 sometimes has the function of the object – substitute.

The views of Wang Li, as exposed in *Hanyushi gao* (1958, pp. 329–330) are formed with more precision. Wang Li classifies *xiāng* 相 as an adverb with a demonstrative function, which as far as the lexical meaning goes, points out that the agent also becomes the recipient of the same action, and as far as its grammatical function goes, it determines the objective verb which cannot have any object in this case. In cases when the verb denotes only a one-sided action, *xiāng* 相 loses the meaning or reciprocity, but its demonstrative function lasts still and thus, as to meaning, it resembles a personal pronoun placed preceding the verb. Wang Li, though, did not follow the development of *xiāng* 相 thoroughly, as he did in cases of other phenomena in his historical morphology, thus not offering a complete picture.

In this respect, the most advanced as far is the study of Lü Shuxiang 呂叔湘 *Xiang zi pian zhi shili* 相字偏指釋例 [Explanations and Examples of the One-

-sided Demonstrativeness of the Character *xiang*]. (1955, pp. 36–45) In this paper Lü Shuxiang traces the process of the weakening of the meaning of reciprocity and demonstrates it on the type of constructions. He also gives a detailed analysis of the person the agent and the recipient of the action belong to. He draws the conclusion that neither *xiāng* 相 with the reciprocal-demonstrative meaning nor *xiāng* 相 with the one-sided demonstrative meaning can be placed following the verb and that it is thus proper to classify them as adverbs. But viewed from the aspect that the one-sided demonstrative *xiāng* 相 causes the omission of the object, it should be, according to Lü Shuxiang, classified as a pronominal adverb. If the limitations of the position preceding or following the verb were disregarded, *xiāng* 相 could be then viewed as a kind of pronoun.

The author of the present paper is deeply indebted to Dr. Lü Shuxiang for his advice and personal guidance in the selection of sources and for his kind explanations of some unclear points emerging while the assembled set of excerpts was being analyzed.

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In contemporary colloquial, especially in its literary form, almost all of the meanings of *xiāng* 相 are preserved, though, *xiāng* 相 no longer appears as a substitute of personal pronouns. Most frequently it figures as a component of bisyllabic adjectives and verbs expressing their reciprocity and other shades of meaning. It can also precede bisyllabic verbs and adjectives expressing reciprocity. This usage is more current in specialized literature than in prose.

On the whole there are the following cases of occurrence of the morpheme *xiāng* 相 in contemporary colloquial:

1. in petrified phrases taken over from literary *wenyan*, e. g.  
*xiāngtí bìnglùn* 相提並論, to compare mutually and judge
2. component of bisyllabic adjectives expressing reciprocity, e. g.  
*xiāngtóng* 相同, the same, coincident  
*xiāngsì* 相似, similar  
*xiāngjìn* 相近, near, approximate  
*xiāngdāng* 相當, appartenant, relevant  
*xiāngyīng* 相應, corresponding  
*xiānggān* 相干, referring to, having relation to  
*xiāngfǎn* 相反, contrary  
*xiāngděng* 相等, equal

These adjectives, except for the predicative function, which they had already in the mediaeval literary language based on vernacular, can also have the attributive function, e. g.

... *jīngguò le xiāngdāng qījiān*... .....經過了相當期間..... ... after a certain time... (Gao Mingkai 1954, vol. I, p. 108)

3. component of bisyllabic adverbs, expressing:

- a. reciprocity, e. g.  
*xiāngfú* 相符, to correspond  
*xiāngpèi* 相配, to suit each other, to match  
*xiānghùn* 相混, to muddle, to mix together
- b. succession, e. g.  
*xiānggēn* 相跟, to follow  
*xiāngchuán* 相傳, to hand down
- c. prefix of direction of action, e. g.  
*xiāngxìn* 相信, to believe, to trust someone
4. preceding bisyllabic verbs and adjectives, expressing reciprocity, e. g.  
*xiāng hùnxiao* 相混淆, to mix together  
*xiāng fúhé* 相符合, to correspond to each other  
*xiāng shìhé* 相適合, to suit one another  
*xiāng yīzhì* 相一致, to be in conformity  
*xiāng pínghéng* 相平衡, to be in mutual balance

The syntactic construction with these predicates is, as a rule, the following one:

x *hé* 和 or *yǔ* 與 *xiāng* 相 v

Examples: *Dānyīncí yǔ fùyīncí bù xiāng hùnxiao*. 單音詞與復音詞不相混淆  
 Monosyllabic words and polysyllabic words are not mixed together.  
 (*Tongyin cidian* 1955, foreword, p. 1)  
*Wénxué yǔyán ..., yě jiù bù néng hé zhè zhǒng fāngyán wán quán xiāng yīzhì*. 文學語言……, 也就不能和這種方言完全相一致。Literary language cannot be completely the same as this dialect. (Gao Mingkai 1954, p. 107)

The respective verbs and adjectives can figure in the same constructions also without *xiāng* 相, e. g.

*Zhèzhǒng wénxué zuòpīnde yǔyán yě hé yībānde wénxué yǔyán bù shì wánquán yīzhìde*. 這種文學作品的語言也和一般的文學語言不是完全一致的。The language of these literary works is not the same as the usual literary language. (Gao Mingkai 1954, pp. 111–112)

The contemporary colloquial language casually expresses the relation of reciprocity either by a bisyllabic adverb *hùxiāng* 互相, mutually, or by syntactic means, by a phrase x v y, y v x, e. g. *nǐ ài wǒ, wǒ ài nǐ* 你愛我, 我愛你, to love each other (word by word translation: you love me, I love you).

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Bisyllabic compounds, where *xiāng* 相 is the second component of the compound, function exclusively as adverbs. The basic meaning is usually determined by the morpheme *xiāng* 相, the modification of meaning is determined by the first morpheme.

Some compound adverbs, as *hùxiāng* 互相, *jiāoxiāng* 交相 have the same meaning as mere *xiāng* 相. Thus, there arises a suspicion, that these compounds, composed of two synonyms, were formed in accordance with the general tendency of the Chinese

language of forming bisyllabic compounds or, maybe, in order to achieve rhythmical balance, e. g.

*Yúshì dìzú wánghóu, wàiqī gōngzhǔ, ... zhēng xiū yuánzhái, hùxiāng kuājing.* 於是帝族王侯、外戚公主，……爭修園宅，互相誇競。Thereafter the members of the imperial family, dukes and marquises, relatives from the empress's side, princesses, ... competed in building gardens and courts, and mutually boasted to one another. (*Luoyang jialanji xiaozhu* IV, p. 206)

A bisyllabic adverb is desirable in order to match a bisyllabic verb, e. g.

*Cí lǐng xiōng dì chuòchuò yǒu yù, bù lìng xiōng dì jiāoxiāng wéi yǔ.* 此令兄弟綽綽有裕，不令兄弟交相為瘡。Those brothers who are good, continue to display much generous feeling; brothers who are not good, cause trouble to each other. (*Shijing* II, VII, IX; Legge, p. 405) The presence of the bisyllabic adverb is necessitated by the concurrent number of feet in the verse.

The subjects can be either coordinate or joined by the conjunction *yǔ* 與, e. g.

*Shì sàng dào yī, dào sàng shì yī. Shì yǔ dào jiāoxiāng sàng yě.* 世喪道矣，道喪世矣。世與道交相喪也。The World destroys the Way. The Way destroys the World. The World and the Way are destroying each other. (*Zhuangzi* I, 16, p. 89)

In most bisyllabic compounds the modification of meaning is determined by the first component of the compound, e. g.

*jiānxiāng* 兼相, together, all, according to the meaning of the first morpheme, e. g.

*Gù tiānxià jiānxiāng ài, zé zhì, ...* 故天下兼相愛，則治，…… Therefore, when all in the empire mutually love, (law and order) is set up, ... (*Mozzi; Zhuzi jicheng*, IV; IV, 14, p. 63)

*diéxiāng* 迭相, alternately, according to the meaning of the first morpheme, which means “alternately, successively, repeatedly,” in some cases the meaning of alternation may be weakened, e. g.

*Zhū Qiāng wén zhī, xī jiē liú tì, diéxiāng wèi yuē:* 諸羌聞之，悉皆流涕，迭相謂曰：When all the Qiangs heard this, they all shed tears and alternately said to each other: (*Luoyang jialanji xiaozhu*, I, p. 207)

*dìxiāng* 遞相, one after another, in turns, alternately, according to the meaning of the first morpheme which means “to hand to, to pass over, to forward, to substitute, to alternate,” e. g.

*Guǐ yán: “Bùxíng tài chí, kě gòng dìxiāng dān.”* 鬼言：「步行太遲，可共遞相擔。」The devil said: “To go on foot is very tedious. We can alternately carry one another on the back.” (*Song Dingbo* 宋定伯, *Lieyizhuan* 列異轉, *Jiu xiaoshuo*, vol. I, p. 100)

The second group of compound adverbs is formed by adverbs composed of the adverb *xiāng* 相 and a verb. First of all, it is *xiāngwéi* 相為 and *xiāngyǔ* 相與. In older texts *wéi* 為 should be viewed as a verb in the meaning “to be, to do, to act as”, e. g.

*Xiǎo mín fāng xīng, xiāngwéi dí chóu.* 小民方興，相為敵讎。The lesser people consequently rise up. They are enemies and rivals to each other. (*Shujing* IV, XI, 2; Legge, p. 275)

In later texts *xiāngwéi* 相為 plays the part of an adverb in the meaning “mutually”, e. g.

*Liǎng rén xiāngwéi yǐnzhòng.* 兩人相為引重。The two of them aided and respected one another. (*Shiji* 107, p. 15 [4443])

Similarly also *xiāngyǔ* 相與. In older texts it should be understood as the adverb “mutually” and the verb in the meaning “to share in, to be present at”, e. g.

*Èr qì gǎn yīng yǐ xiāng yǔ.* 二氣感應以相與。Their two influences moving and responding to each other and thereby forming a union. (Shen Zhongtao, *Huaying Yijing*, 11, XXX I, pp. 135–136)

It is interesting that this meaning was preserved in a bisyllabic verb *xiāngyǔ* 相與 in vernacular up to a relatively recent time. It is current in *Rulin waishi* 儒林外史 [The Unofficial History of Mandarins and Scholar]:

*Zhèyàngde rén, wǒ wèishéme yào xiāngyǔ tā?* 這樣的人，我為什麼要相與他？Such people, why should I be together with them? (*Rulin waishi*, p. 7)

As an adverb *xiāngyǔ* 相與 has two basic meanings:

1. “mutually, one to another”, e. g.

*Sǐ shēng xiāngyǔ lín.* 死生相與鄰。Death and life are neighbours to one another. (*Zhuangzi* I, 14, p. 82)

2. “together, at the same time”, e. g.

*Zāng yǔ Gū èr rén xiāngyǔ mù yáng.* 臧與穀二人相與牧羊。The two men, Zang and Gu, together kept sheep out at grass. (*Zhuangzi* I, 8, p. 51)

*Xiāngyǔ* 相與 can also function as a preposition, e. g.

*...Kuàijǐ lì fāng xiāngyǔ qún yīn, bù shì Mǎichén.* .....會稽吏方相與群飲，不視買臣。... the official of Kuaiji was just drinking with the others and did not even look at (Zhu) Maichen. (*Hanshu* 64.1, p. 12.b)

In order to stress the meaning “together”, a trisyllabic adverb is formed, namely *xiāngyǔgòng* 相與共, the last morpheme *gòng* 共 which means “all, collectively”, determines and strengthens the meaning of collectiveness, e. g.

*Jiē yuē: “...” Nǎi xiāngyǔgòng lì Yǔ wéi jiǎ shàngjiāngjūn.* 皆曰：「……」乃相與共立羽為假上將軍。All said: “...” After that they together appointed (Xiang) Yu acting supreme general. (*Shiji* 7, p. 20 [550])

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We are aware of the fact that due to the incompleteness of the assembled material, the division of the three stages in the development of 相, i. e. adverbial, pronominal and prefixal may not be sufficiently clear-cut and that the criteria for division may

not have been worked out to the minutest detail. The picture might be modified, if the research were continued. Notwithstanding we hope to have demonstrated clearly enough, how the functions and meanings of 相 changed in the historical development of Chinese. We trust that all the important functions and meanings of 相 both in wenyan and literary vernacular were described with a fair amount of perspicuity.

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## LINGUISTIC FACTORS OF THE LOW ADAPTABILITY OF LOAN-WORDS TO THE LEXICAL SYSTEM OF MODERN CHINESE

**Abstract:** *The adaptability of loan-words varies across different languages. Simply speaking, two factors can affect the number of foreign elements assimilated by a particular language: purposely regulated language policy practices and the inherent disposition of the language to adopt foreign lexical features. Modern Chinese is noted for the relatively small number of borrowed, especially international lexical elements. This paper argues that purist tendencies do not dominate the low adaptability of loan-words in modern Chinese; rather than it emerges from a set of linguistic factors. They include the restrictions of Chinese phonemes in membership and sequence and the impermeability of the Chinese phonemic system, the phonoideographic character of Chinese writing, the differences in the morphemic structure of native Chinese words and adapted loans, the difficulties in the adaptation of loan-words to native word-classes, and the restrictions in word-forming ability and ensuing isolation the Chinese lexical system.*

**Key words:** *Modern Chinese, Chinese lexicon, loan-word, word-formation patterns, restrictions on borrowing*

**1.1.** The amount of loan-words and their position in the lexical system of a language is determined both by social and linguistic factors.

Lexical borrowing or the creation of new words denoting newly introduced foreign concepts by native lexical means may be purposefully directed by the collective effort of the intellectual circles which can influence language policy (linguists, writers, journalists, pedagogues, scientists etc.). In times of national oppression or social and political isolation, though, the response of a society to lexical borrowing is very often governed by intensified patriotic and nationalist feeling and the effort to preserve the purity of the national language may be unduly exaggerated. The linguistic purism of small nations is, as a rule, more intense than that of the big ones.

On the other hand, individual languages are characterized by varying degrees of immanent disposition to adopt foreign lexical elements. As is well known, the toleration of English towards foreign lexical elements is practically unlimited and the readiness of French to borrow words is also comparatively great; German, on the other hand, prefers loan-translations and new-creations; Italian adopts gallicisms more easily than anglicisms.<sup>1</sup>

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<sup>1</sup> Cf. L. Deroy (1956, p. 304) and the rather rigid and one-sided, but not completely unfounded view of O. Vočadlo (1938), who divides languages according to their lexical composition into homogenous (Slavonic languages), amalgamate (Neo-Latin languages, Modern Greek) and heterogeneous, characterized by wholesale importations of foreign terms (English, Romanian, Persian).

In the case of modern Chinese which is noted for the relatively small number of borrowed, especially international lexical elements<sup>2</sup>, the social factors cannot be neglected, yet they do not seem to play a decisive role. Although Chinese language policy does not support large-scale lexical borrowing, its attitude towards this way of improving the lexical system is critical and not altogether negative. The due reserve is not dominated by purist tendencies, but rather by the appreciation that loans (graphic loans from Japanese excepted) owing to their difference in shape from native words are not easily accepted by the general public. The principal causes of the comparatively small number of foreign elements in the Chinese lexical system are to be sought mainly in linguistic factors which account in a decisive measure for the low degree of adaptability of loans to the Chinese lexical system.

**2.1.** To the linguistic factors which play an important role in this respect, belong in the first place *the restrictions of Chinese phonemes in membership and sequence and the impermeability of the Chinese phonemic system.*

When we compare the phonemic systems of Chinese and English which supplied the majority of loans (69.65% of our set), we find that there exist in the Chinese phonemic system phonemes (allophones) phonetically similar to the English ones (9 consonant phonemes with a corresponding manner of forming the closure and a very near point of articulation: *f, s, m, n, ŋ; p, t, k* [corresponding to the English *b, d, g*]; vowels *i, u*; English /ə/ and /ɑ:/ have corresponding counterparts in Chinese allophones [ə] and [ɑ] etc.) Nevertheless, these phonemes due to their strictly limited distribution very frequently cannot appear in the adapted shapes of loans as substitutes for the corresponding phonemes of the English model.

The phoneme in Chinese as a minimum distinctive unit of the expression system is characterized by its restricted autonomy. It is very strictly bound to its environment in the syllable, it cannot be isolated and put into other combinations than the customary and permitted ones. The structure of the Chinese syllable, too, is very precisely fixed and does not allow exceptions in the membership of phonemes in the initial, medial and final positions. Thus, loans in Chinese do not differ from native words in the functional usage of phonemes.<sup>3</sup>

<sup>2</sup> According to our detailed research into loans and hybrid words in modern Chinese (see Novotná 1967, 1968, 1969), the number of loans from European languages in modern Chinese (including chemical elements and naturally excluding geographic names) is about 650 and of hybrid words about 800. This number is more or less corroborated by the study of Gao Mingkai 高明凯 and Liu Zhengtan 刘正琰, *Xiandai hanyu wailaici yanjiu* 现代汉语外来词研究 [Study of Loan-words in Modern Chinese] (1958, p. 32), who give the number of 1,266 (p. 38); into this number they include both loans (a rather high amount of unassimilated foreignisms) and hybrids, as well as loans from Asian languages, especially graphic loans from Japanese which account almost for 40% of the set the two authors have collected.

<sup>3</sup> In other languages it is customary for the loans to differ from native words in the functional usage of phonemes and in their repertory. Cf. the original description of this phenomenon by V. Mathesius, "Cizí slova se stanoviska synchronického" [Foreign Words From the Synchronic Point of View], in *Čeština a obecný jazykozpyt* [The Czech Language and General Linguistics] (1947, esp. pp. 97–99); cf. also C. C. Fries and K. L. Pike (1949, pp. 29–50).

2.2 There are three types of restrictions of Chinese phonemes in membership and sequence that are relevant for the final phonemic shapes of loan-words:

1. Restrictions in the combination consonant + consonant; the Chinese phonemic system does not admit consonant clusters.

In principle, there are three ways of adapting consonant clusters of the foreign models:

a) Insertion of epenthetic vowels between the members of the cluster, e. g.

[*braunin*], Browning > [*po-laŋ-nin*], 勃郎宁

[*æspərin*], aspirin > [*a-sɿ-p'i-lin*], 阿斯匹灵

b) Elision of one, as a rule, the second member of the cluster, e. g.

[*maikrəfoun*], microphone > [*mai-k'ɾ-fəŋ*], 麦克风

[*trʌst*], trust > [*t'uo-la-sɿ*], 托辣斯

c) Formation of a syllabic seam after the first member of the final cluster nasal (liquid) + unvoiced consonant and adding a paragogic vowel after the second member, e. g.

[*t'æŋk*], tank > [*t'an-k'ɾ*], 坦克

[*p'ʌmp*], pump > [*pəŋ-p'u*], 帮浦

[*gɔlf*], golf > [*kau-ər-fu*], 高尔夫

2. Restrictions in the combination vowel (diphthong) + consonant; the Chinese phonemic system does not admit closed syllables, except those closed by /n/ and /ŋ/.

Syllables of the model closed by nasals cause no difficulties, sometimes only underdifferentiation between /n/ and /ŋ/ can be observed, e. g.

[*k'atu:n*], cartoon > [*k'a-t'uŋ*], 卡通

[*fɑ:ðin*], farthing > [*fɑ-ɕin*], 法新

Final /m/ may be substituted both by /n/ and /ŋ/, e. g.

[*oupiəm*], opium > [*ja-p'ien*], 鸦片

[*t'outəm*], totem > [*t'u-t'əŋ*], 图腾

The final lateral of the English model is usually substituted by the retroflex vowel /ər/ or may be elided, e. g.

[*laisɔl*], lysol > [*lai-su-ər*, *lai-su*], 来苏尔, 来苏

Final labials and sibilants are turned into initials of parasitic syllables. The paragogic vowel is /u/ following labials, e. g.

[*hɔp*], hop > [*xu-pu*], 忽布

and [ɹ] or [ʃ] following sibilants, e. g.

[*seɹjulɔs*], cellulose > [*ɕie-liou-sɿ*], 写留路斯

[*tʃi:z*], cheese > [*tɕi-ʃɿ*], 吉士

In syllables with alveolar and velar finals there are two possible modes of adaptation, the adding of a paragogic vowel, e. g.

[*wɔt*], watt > [*wa-t'ɾ*], 瓦特

[*ʃəlæk*], shellac > [*ʃɾ-lai-k'ɾ*], 舍来克

or the elision of the final consonant, e. g.

[dʒækɪt], jacket [tɕia-k'ɾ], 夹克  
 [k'oudæk], kodak [k'ɾ-ta], 柯达

3. Restrictions in the combination consonant + vowel (diphthong) which are pertinent for the choice of the vowel (diphthong) or the consonant (palatalization).

E. g. /w/ and /f/ cannot be followed in Chinese by [i] and thus [vi] and [fi] of the model have to be substituted by [wei] and [fei]:

[vikə], vicar > [wei-k'ɾ-ər], 维克尔  
 [k'ɔfi], coffee > [k'a-fei], 咖啡

When a velar plosive is followed by [i], the substituted consonant is always palatalized, as the combination of a velar plosive with a high front vowel is not permissible in Chinese, e. g.

[k'a:ki], khaki > [k'a-tɕi], 卡叽  
 [git'a:], guitar > [tɕi-t'a], 吉他<sup>4</sup>

**2.3.** The impermeability of the Chinese phonemic system which is, no doubt, strongly supported by the Chinese phonoideographic writing, does not allow the borrowing of foreign phonemes and their incorporation into the Chinese phonemic system. Consequently, the assimilation of loan-words has not called forth any qualitative changes in the Chinese phonemic system; assimilated loans in Chinese do not differ from native words in the repertory of phonemes. Monolingual Chinese speakers are bound by the graphic shapes of loans which determine also their oral shapes; only in the idiolects of partly bilingual speakers when they utter foreign quotations, foreign names etc. the penetration of admixtures of other phonemic systems is observable.

**3.1.** Another linguistic factor, not of secondary significance, influencing in a negative way the adaptability of loans in Chinese, is the *phonoideographic character of Chinese writing*. Chinese graphs as self-contained units recording only syllables do not facilitate the record of various phonemic combinations present in the phonemic shape of the foreign model. Besides, the relics of the ideographic character of Chinese writing still exert influence and require a certain semantic relation to be set up between the graph and the recorded morpheme.

**3.2.** As regards graphics in general, there are two circumstances which favourably affect borrowing:

1. the feasibility and serviceableness of the writing system of the borrowing language,
2. the use of a common writing system by the giving and the borrowing language.

<sup>4</sup> Further examples are discussed in our quoted study (see note 2), in the chapter "Adaptation of Loan-Words in Modern Chinese."

No doubt, the degree of the genetic and typological proximity of the languages concerned plays a decisive role in the facility of borrowing and the adaptability of loans. On the other hand, if a language has at its disposal a feasible writing system, its lexical system is more ready to borrow notwithstanding its typological differences from the possible giving languages. Quite a convincing example is that of Japanese where the syllabic writing *katakana* enabled the recording of the rather numerous loans borrowed from European languages.<sup>5</sup>

The influx of loans, especially of terms connected with modern civilization, from Japanese into Chinese in the first half of the 20th century, was no doubt rendered possible not only by the general agreement in the morphemic structure of the word in Japanese and Chinese, but above all by the common use of character writing. The technique of introducing these loans into Chinese was a rather special one – only the graphic shapes of Japanese words together with their meaning (regardless of their diachronic nature, i. e. native Japanese words, original Chinese words borrowed by Japanese, Japanese loan-translations and new-creations) were borrowed. Their phonemic shapes were formed on the basis of the Chinese phonemic system, according to the phonemic values represented by the applied graphs and irrespective of the phonemic shapes of the models.

The graphic substitution as a preliminary condition of adaptation of all loans in Chinese coming from languages not using ideographic writing, is a serious impediment to large-scale borrowing. It is in close interdependence with phonemic adaptation – the record of syllables which could be possibly segmented, no matter whether the loan was taken over in the oral or in the visual way, is limited by the existence of a suitable graph which again in its turn, as a sign of the written form of the language, embodies only the permitted phoneme combinations of Chinese.

**3.3.** The relics of the ideographic character of Chinese writing, too, have a strong bearing upon the assimilation of loans. The majority of phonoideograms which amount to 90% of Chinese characters, when recording native words are in a definite, though very loose, semantic relation to the recorded morpheme. This semantic relation cannot be established between the borrowed morpheme and the graph which already is semantically defined. Chinese graphs recording loans turn into mere conventional graphic signs recording the sound-forms of syllables. Thus, Chinese speakers who are used to figure out the meaning of a lexical unit, not familiar to them, from its graphic shape, find the sequences of graphs recording loans very often semantically not perspicuous, misleading or even nonsensical.

The effort to solve the discrepancy between the relics of the ideographic character of Chinese graphs and their loss in the graphic shapes of loans is manifested in the

<sup>5</sup> In *Riyu wailaiyu cidian* 日语外来语词典 [A Dictionary of Loans in Japanese] (1964) the author Tang Senlin 湯森霖 collected 18,000 items borrowed from European languages. Although this amount cannot be taken as an absolute figure, as the majority of these items appear to be unassimilated occasional foreignisms, it can be taken into account as a corroboration of the point at issue.

choice of suitable graphs contiguous in meaning to the meaning or denotation of some loan-words.

There are loans the entire graphic shape of which is either in artificial semantic relation to their meaning or renders the shape of the loan meaningful, e. g.

*diànnóng* 佃农, tenant (the meaning expressed by the graphic shape: farmer taking a lease of land); *máosīlún* 毛丝纶, muslin (wool, silk, silk thread); *wéitāmíng* 维他命, vitamin (to uphold other's life)

In the majority of these cases, only one graph is in artificial semantic relation to the meaning or denotation of the loan, e. g.

*tuōlāsī* 托辣斯, trust (*tuō* 托 – to entrust); *mótèr* 模特儿, model (*mó* 模 – model, form); *túténg* 图腾, totem (*tú* 图 – picture)

The amount of loans where this auxiliary technique of conditioned choice of graphs can be applied is very limited and moreover, the artificially established semantic relation is very remote and inaccurate.

### 3.4. The difficulties in recording loans are being overcome

1. by applying some graphs as exclusive conventional signs for the sound-forms of certain syllables, e. g.

克 [*k'ŕ*] (in final and medial position); 可 [*k'ŕ*] (in initial position); 巴 [*pā*]; 丁 [*tīng*]; 林 [*lín*]; 卡 [*k'ā*]; 阿 [*ā*]; 尼 [*ní*]; 亚 [*ja*]; 尔 [*ěr*]; 斯, 司 [*sī*];

For other syllables, though, the choice of graphs is largely arbitrary. Consequently, the existence of alternative graphic shapes is a characteristic feature of loans in Chinese.

2. by formation of new characters applied for the record of loans only, like “pseudophonoideograms” with the classifier 口, which signifies that the character is used exclusively in loan-words, e. g.

*mǎ* 吗, *fēi* 啡, *kā* 咖 (*mǎfēi* 吗啡, morphia, *kāfēi* 咖啡 coffee), *dūn* 吨, ton

and newly created phonoideograms for chemical elements and other isolated graphs, e. g.

*bàng* 镑, pound (monetary unit) and *bàng* 磅, pound (unit of weight) etc.

The above techniques solve only a lesser part of the difficulties encountered in the graphic adaptation of loans in modern Chinese and cannot overcome the unsuitability of the phonoideographic writing in this respect in general. If in future the Chinese language will use a more serviceable writing, i. e. alphabetic spelling, lexical borrowing will be greatly facilitated. The recording of phoneme combinations not customary so far in the Chinese phonemic system, the adoption of new phonemes and the change of allophones into phonemes will not be seriously hindered.<sup>6</sup> The possible result may be a strong impact upon the impermeability

<sup>6</sup> A very interesting experiment of this type was undertaken in *Hanyu pinyin cihui* 汉语拼

of the Chinese phonemic system and a progressive internationalization of the Chinese word-stock.

**4.1.** Further linguistic factors affecting the low adaptability of loans to the Chinese lexical system are *the differences in the morphemic structure of native Chinese words and adapted loans*. They include (a) the differences between the monosyllabic character of native root-morphemes and the polysyllabic character of the morphemes of loans adapted in Chinese, (b) the ensuing discordance between the prevalent type of native words, i. e. monosyllabic simple words and polysyllabic compound words, and the type of adapted loans, i. e. polysyllabic simple words.

The morphemic system of Chinese widely differs from the morphemic systems of Indoeuropean languages which supplied the loans that are the object of the present research. Although there are a number of common features between the morphology and word-formation of Chinese and English (e. g. a high number of monosyllabic root-morphemes in English compared to their prevalent majority in Chinese, the simplicity of paradigms in English and the absence of inflexion in Chinese, the preference for word-composition and frequent conversion in the two languages, etc.), nevertheless, the loans from English are not easily accepted by the lexical system of Chinese. A great number of these loans are international words of French or Latin and Greek origin whose shape is even more remote from the prevalent shape of native Chinese words.

**4.2.** Foreign words composed of lexical morphemes or lexical morphemes and word-formatives and subordinate to the paradigms of the giving language, when being introduced into Chinese, are all subject to morphemic reinterpretation. They enter the lexical system of this language as units not analysable into smaller individually meaningful elements and not liable to morphemic variations.

This is not a phenomenon peculiar only to borrowing in Chinese. Not infrequently, loans that are composite in structure in the giving language enter into the borrowing language as indivisible root-words, e. g.

in the borrowed verb *saunter* in English (< OFr. *s'aunter*) the French infinitive *-er* is retained in all its grammatical forms and the French reflexive pronoun *s-* has become fixed as an inseparable element of this verb. In the loan *umbrella* the Italian diminutive suffix *-ella* cannot be distinguished without special historical morphemic analysis.

A characteristic feature of the morphemic reinterpretation of loans in Chinese is the total incapability of observing the morphemic structure of the model. The

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音词汇 [Chinese Phonetic Dictionary], compiled by the lexicographic team of the Chinese Committee for the Reform of Writing, Peking 1963, which gives the loans in two shapes, in the original shape of the model (or slightly graphically adapted) and in the shape written in the official Latin transcription and adapted according to the graphic shape in characters. Cf. *model*, *mó'tér*; *valve*, *fán'ér*; *vaselin*, *fánshílín*; *ounce*, *àngsǐ*; *guitar*, *jítā*; *brandi*, *báilándì*; *nilon*, *nílong*; *kloroform*, *gēluófāng* etc.

morphemic seams easily distinguishable in the model are completely obscured in the adapted shapes of loans in Chinese; all loans, regardless of the number of morphemes in the model, enter into Chinese as monomorphemic units. The morphemes of the foreign models lose in Chinese their meaning and decline into syllables. E. g.

the compound word *microphone* can be analysed as consisting of two meaningful constituents *micro* + *phone*, while in Chinese the form *màikèfēng* 麦克风, is not further analysable as regards meaning, the segments of this form are only syllables. The same is the case with the borrowed forms such as *bǔ'ěrshíwéikè* 布尔什维克, *bol'she/vik*, *démókèlāxī* 德谟克拉西, *demo/cra/cy*, *díkètūiduō* 狄克推多 *dict/at/or* etc.

In this respect loan-words in Chinese resemble native simple words consisting of disyllabic morphemes, like

*dōngxī* 东西, thing; *mǎyǐ* 蚂蚁, ant; *húdié* 蝴蝶, butterfly; *pīli* 霹雳, thunder; *xièhòu* 邂逅, unexpectedly etc.

4.3. So far, no extensive statistical research into the length of the word in modern Chinese has been undertaken. The prevailing opinion, though, is that apart from a rather high amount of monosyllabic words, the majority of words in modern Chinese are disyllabic and trisyllabic.<sup>7</sup>

The average length of assimilated loans in our set according to our findings is 2.52 syllable, i. e. it is within the presumed limits of the usual or preferred length of words in modern Chinese. 94.52% assimilated loans in our set are monosyllabic to trisyllabic words. The average length of loans which we classified as unassimilated foreignisms, surpasses the presumed limits of the preferred length of Chinese words, it is 3.27 syllable. The percentage of disyllabic and trisyllabic unassimilated loans amounts only to 62%.

The majority of loans in Chinese, polysyllabic monomorphemic words, differ thus from native words composed mostly of monosyllabic root-morphemes, in the length of the morpheme. The length of the word and ensuingly the length of the morpheme seem to be indicative and decisive for the assimilation of a loan in Chinese.

4.4. This contrast between the usual length of morphemes of loan-words and native words appears, too, to be a significant factor which induces quite a number of loans, especially those of rather frequent occurrence and consisting of more syllables, to reduce their number.

The reduction in the number of syllables as one of the foremost techniques of morphemic adaptation of loans in modern Chinese consists either

<sup>7</sup> Cf. Wu Jingcun 吴竞存 (1954) gives the following data of statistical research into the preamble to the Chinese constitution: monosyllabic words 37.7%, affixed words 0.59%, loan-words 0.19%, compounds 61.4% (p. 131). On p. 133 after having mentioned that endocentric construction is the most prevailing one, he states that the majority of words of endocentric construction are disyllabic, next come trisyllabic words, words of four or more syllables being rather rare.

1. in the elision of the last or the last two syllables of the unassimilated longer shape of the loan, e. g.

*fǎxīstī* 法西斯, fascist, is more current than the longer alternative shape *fǎxīsidī* 法西斯蒂, similarly “romantic” is more current in the reduced shape *làngmàn* 浪漫, rather than in the longer alternative shape *làngmàndīkè* 浪漫蒂克

This technique is very wide-spread in the adaptation of the units of measure. The monosyllabic shape is always preferred to the longer alternative shapes, e. g.

*kǎ* 卡, calorie (instead of *kǎlùlī* 卡路里); *lè* 勒, lux (instead of *lèkèsī* 勒克司); *kè* 克, gramme (instead of *kèlánmǔ* 克兰姆); *mǐ* 米, metre (instead of *mǐtū* 米突).

or 2. in the direct creation of a monosyllabic replica of the foreign model. All the names of chemical elements were coined in this way, e. g.

*lù* 氯, Chlorum; *dī* 碲, Tellurium; *bì* 铋, Bismuthum; *lǎo* 铈, Rhodium etc.

4.5. There is a tendency to adapt loans in Chinese more or less arbitrarily, regardless of the morphemic structure of the model as bimorphemic or polymorphemic compounds. Apparently, this is a symptom of the endeavour to solve the discrepancy between polysyllabic loans as simple words and polysyllabic native compounds. This tendency goes hand in hand with one of the techniques of graphic adaptation, i. e. the conditioned choice of all the graphs recording the shape of the loan (ct. 3.3.). Only those loans that are recorded by graphs contiguous in meaning to the meaning or denotation of the loan-word can be analysed without regard to the morphemic structure of the model. If their constituents are in a construction customary for the constituents of Chinese compounds, they may be considered as compounds and their constituents as morphemes, e. g.

the loan *bēngdài* 绷带, bandage, can be analysed as a determinative compound composed of a verbal morpheme *bēng* 绷, to bind, and a nominal head *dài* 带, a tie. It is the same structural pattern as that of native determinative compounds of the type V + N, such as *wòchē* 卧车, sleeping car, *ránliào* 燃料, combustible (burning matter) etc. The construction of the loan *diànnóng* 佃农, tenant, is the same.

The loan *kàobèilún* 靠背轮, coupling, can be regarded as a determinative compound formed after the pattern (V + O) + N (to lean against the back + wheel). Cf. native determinative compounds such as *bàojǐngjī* 报警机, siren (to announce warning + instrument), *xītiěshí* 吸铁石, magnet (to attract iron + stone) etc.

This subordination of loans to the structural patterns of native Chinese compounds is indicative of the tendency to accommodate the loans to the lexical system of modern Chinese. This technique of morphemic adaptation, though, due to its intricate dependence upon the graphic record cannot become very productive.

**5.1.** Borrowing in Chinese is further restricted by *difficulties in the adaptation of loan-words to native word-classes*.

It is rather symptomatic that the overwhelming majority of loan-words in Chinese are nouns, their share is 97.10 % of our set. Of the other word-classes, only adjectives are represented in our set, they amount only to 2.31%. The few borrowed adjectives cannot function as predicatives which is a relevant grammatical feature of native Chinese adjectives. They can function only as attributes. As predicatives they have to be used with the copula. The only exception is the adjective *módēng* 摩登, modern, the predicativeness of which proves its complete assimilation. There are no verbs borrowed from Indoeuropean languages in Chinese, other word-classes with single exceptions of unassimilated foreignisms are not represented either.

The well-known fact that nouns, in contradistinction to other word-classes, are easily borrowed, stands out more clearly in modern Chinese. The more modification of the underlying form a word requires when entering into syntactic constructions and the greater the differences in the mode of these modifications between the giving and the borrowing language, the lesser is the probability of borrowing. The borrowing of nouns in modern Chinese is called forth, first of all, by the practical necessity of denotation, but the circumstance that Chinese nouns do not require modifications in form when entering into syntactic constructions, no doubt, greatly facilitates their borrowing. The predicativeness of Chinese adjectives makes the borrowing of adjectives which are marked for their nominal character in the giving languages, more complicated. The differences in the temporal systems and the systems of verbal aspects and their formal expression in the giving languages, for instance English or Russian on the one hand, and in Chinese on the other hand, make the borrowing of verbs impracticable.

**6.1.** The last linguistic factors having a bearing upon the low adaptability of loans to the Chinese lexical system to be mentioned are the *restrictions in their word-forming ability and their ensuing isolation in the Chinese lexical system*.

The adaptability of a loan-word to the lexical system of the borrowing language is reflected in its word-forming ability. In Chinese, loans in general are not very active in this respect. A line, though, has to be drawn between unassimilated and assimilated loans. Some of the former can form only hybrid compounds of the explicative type which are preferred and semantically more distinct doublets identical in meaning with the borrowed shape, while a part of the latter can enter freely both into hybrid compounds and free word-groups.

**6.2.** As hybrid compounds of the explicative type we denote hybrid words consisting of a borrowed constituent and provided with a native explicative constituent. Due to the presence of the latter constituent the hybrid word is semantically specified and ranged with a certain native lexical class. These hybrid creations are rather numerous in modern Chinese, as a lot of borrowed shapes lack the desired degree of semantic distinctness. When being provided with a native constituent, they become more acceptable for the Chinese lexical system.

Some of the foreign models, then, are introduced into Chinese only as bound morphemes. They may occur as heads of determinative compounds, in which case the differential meaning is expressed by a native attribute, e. g.

*jiǔbā* 酒吧, bar (Chin. alcohol + Engl. bar); *lǐngdài* 领带, tie (Chin. neck + Engl. tie)

or as attributes to a native head. In this case the relation of the borrowed and the native constituent usually is that of species to genus, e. g.

*píjiǔ* 啤酒, beer (Engl. beer + Chin. alcohol); *xiāngbīnjiǔ* 香槟酒, Champagne (Fr. champagne + Chin. alcohol); *bālěiwǔ* 芭蕾舞, ballet (Fr. ballet + Chin. dance); *sànményú* 萨门鱼, salmon (Engl. salmon + Chin. fish)

Loan-words which are easily classified as belonging to a certain lexical class, very often get assimilated not in the borrowed, but in the hybrid shape. In this case the borrowed morpheme is transformed into the attribute to a native head. The free form of the borrowed shape is used only as a rare doublet, e. g.

*kāisīmíróng* 开司米绒 (Engl. cashmere + Chin. wool), *kāisīmí* 开司米, cashmere; *jípǔchē* 吉普车 (Engl. jeep + Chin. car), *jípǔ* 吉普, jeep; *shādingyú* 沙丁鱼 (Engl. sardine + Chin. fish), *shāding* 沙丁, sardine; *láifùqiāng* 来复枪 (Engl. rifle + Chin. gun), *láifù* 来复, rifle

The word-forming ability of these unassimilated loans usually does not go beyond the formation of hybrid compounds of the explicative type.

**6.3.** Only those loans and borrowed morphemes which are stabilized in their phonemic and graphic shapes, very frequent in occurrence and not longer than three syllables, are comparatively active in forming compounds and free word-groups. Their word-forming ability is a symptom of the high degree of their assimilation, and the word-clusters they form witness their firm position in the lexical system of modern Chinese, e. g.

*kāfēidòu* 咖啡豆, coffee beans; *kāfējù* 咖啡具, coffee-set; *kāfēihú* 咖啡壶, coffee-pot; 熟咖啡 *shú kāfēi*, roasted coffee; *shēng kāfēi* 生咖啡, green coffee

*cǎiméi kāngbàiyīn* 采煤康拜因, cutter loader; *kāngbàiyī jiàshīrén* 康拜因驾驶人, combine-driver

Most productive are monosyllabic morphemes denoting chemical elements, e. g.

*xīfèi* 矽肺, silicosis; *měikuàng* 镁矿<sup>+</sup>, magnesium light; *wúkuàng* 钨矿<sup>+</sup>, wolfram ore

and reduced morphemes denoting geographic names, e. g.

*yīng* 英, English (reduced from *yīngjǐlǐ* 英吉利), forms the following compounds: *yīngguó* 英国, England; *yīngyǔ* 英语, *yīngwén* 英文, the English language; *yīnglǐ* 英里, English mile; *yīngcún* 英寸, inch; *yīngchǐ* 英尺, foot etc.

**7.1.** The linguistic factors of the low adaptability of loans to the Chinese lexical system are of two kinds. To the first kind belong the closed character of the Chinese

phonemic system and the phonoideographic character of Chinese writing. Although these superficially seem to be the most serious impediments for large-scale importation of foreign words, they are not of permanent and unchangeable nature. The possible reform of writing in China may affect the Chinese phonemic system and make it more responsive to outer influences.

The factors of the second kind appear to be of graver importance, as they involve the morphemic structure of Chinese words and native patterns of word-formation. Here belong the differences in the morphemic structure of native Chinese words and adapted loans, difficulties in the adaptation of loans to native Chinese word-classes and their restricted word-forming ability. The peculiarities of the morphemic system, the steadiest constituent part of the Chinese language, are likely to exert permanent influence and impede borrowing from typologically different languages to a significant degree.

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# CONTRIBUTIONS TO THE STUDY OF LOAN-WORDS AND HYBRID WORDS IN MODERN CHINESE <sup>1</sup>

**Abstract:** *In the 20th century, modern Chinese had to solve the problematic question of improving its lexical system, which was rather unsuitable for the needs of modern civilization. This paper is the first in a series of three studies presenting our extensive investigation of borrowing and hybridization. The series attempts to describe loan-words and hybrid words in modern Chinese borrowed from European languages, their types, and characteristic properties, their modes of adaptation, and their position in the lexical system. After a brief introduction to the typology of lexical innovations outside the immediate scope of the present paper, we present the semantic fields of loan-words in modern Chinese. The fourteen established semantic fields form two distinct groups according to the ratio of assimilated and unassimilated loans. The aim is to show the limits of borrowing (and to a lesser also hybridization) emerging from the characteristics of the linguistic system and to explain why the Chinese had to adopt other ways of forming replicas of foreign models.*

**Key words:** *Modern Chinese, Chinese lexicon, borrowing, loan-words, semantic fields*

## INTRODUCTION

### 1. Innovations in the lexical system of a language created under the influence of another language

The lexical systems of individual languages are very easily liable to mutual influence and interference. This fact is not only facilitated by the arbitrary nature of the linguistic form which is independent of its meaning, but also directly stimulated by the denotative, especially terminological and expressive needs of individual languages.

The borrowing of a lexical unit is very often the most comfortable way of denoting a new thing or a new institution, formerly not known to a linguistic community. If this procedure proves to be inconvenient, the language reproduces a certain foreign model or forms a new lexical unit on its impulse by applying the usual native word-formation patterns.

Examining the methods used in the formation of various innovations in the lexical system of a language and their relation to the discoverable foreign models

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<sup>1</sup> This is the first of a series of three papers in which we shall discuss borrowing and hybridization as methods of lexical improvement in modern Chinese. (A more detailed presentation of the studied problems is offered in the introduction under the heading "Scope of the present research".) In the present paper we publish the introduction to the whole series and the first chapter. In the introduction we submit a synopsis of our views on the types of induced lexical innovations in general and suggest some of the problems involved in modern Chinese. The first chapter of the series is devoted to the description of semantic fields of loans in modern Chinese. The basis of the present series is my Czech CSc. thesis "*Příspevky ke studiu výpůjček a hybridních slov v moderní čínštině*", defended in the Oriental Institute, Prague, in September 1966.

(i. e. to what extent they are or they are not replicas of possible models), we can differentiate the following types of induced innovations:

### **1) Phonemic loans<sup>2</sup>**

The meaning and the phonemic shape of a word of the giving language is taken over by the borrowing language; simultaneously the phonemic shape of the borrowed unit is adapted to the phonemic system of the borrowing language.

### **2) Graphic loans**

The graphic shape together with the meaning of a word of the giving language is introduced into the borrowing language. The phonemic shape of this loan is formed on the basis of the phonemic system of the borrowing language according to the phonemic values which the applied graphs possess, irrespective of the phonemic shape of the model. This technique of borrowing is possible only between languages using ideographic writing where the meaning of the morpheme is not entirely dependent on the intermediary function of its phonemic shape, but can be displayed directly by the grapheme.

### **3) Hybrid words (hybrids)**

These are innovations made up of borrowed and native constituents; they are either counterparts of foreign models or independent creations showing the ability of the borrowing language to use borrowed constituents in forming new words.

### **4) Loan-translations**

These are innovations introduced into the lexical system of the borrowing language as direct replicas of certain models; there is a direct correspondence between the morphemes of the model and the morphemes of the new-coined equivalent, or to put it in another way, the morphemes of the model are replaced by the morphemes of the borrowing language.

### **5) Semantic loans**

A semantic loan accords the meaning of a foreign word to an existing word of the borrowing language which may be either synonymous or similar in form with the foreign word. In the former case it is an instance of a "loan-synonym", in the latter case of a "loan-homonym". The outcome is not a new word, but a polysemy of an existing word.

### **6) Induced new-creations**

These are words newly formed according to the usual word-formation patterns of a given language. Their coinage, though, is induced by a foreign word which serves

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<sup>2</sup> This term is coined and used only in contradistinction to "graphic loans". Unless there is a special reason, we shall use the usual terms "loan-word or loan".

as an inspiration, not as a direct model. Induced new-creations, in contradistinction to loan-translations, are not morphemic replicas of foreign models.

Loans and hybrids represent one category of innovations created on the impulse of a foreign language, the category of borrowed words. Their common characteristics is the importation of foreign morphemes. (In case of graphic loans it is the importation of foreign graphemes and sememes.) Loan-translations, semantic loans and induced new-creations form another distinct category – they all consist of native morphemes which are, thanks to the existence of a foreign model and the denotative need of the borrowing language, used in formation of new words or acquire a new meaning. It is not very suitable to denote them as borrowed words even in the broader sense of this term. Notwithstanding, both of these two categories of induced innovations have several features in common: a) the necessity of filling a gap in the lexical system of a given language, b) the existence of a discoverable model which served either as a direct inspiration or as an indirect impulse for the coinage of the respective word, c) the introduction of a new meaning into the lexicosemantic system of a given language.

Due to intercommunication of linguistic communities and interference of different lexical systems, the above types of induced innovations<sup>3</sup> are present in various forms and various quantities in all living languages (with the exception of graphic loans which are limited to languages using phonoidiographic writing). The target language of our research, modern Chinese, is no exception.

## **2. Scope of the present research**

In the 20th century, thanks to the strong impact of the West, the establishment of new socioeconomic conditions and the greater access to modern science, modern Chinese had to solve the difficult question of improving its lexical system which was rather unsuitable for the needs of modern civilization.

The purpose of this and the following two papers is to present our investigations on borrowing and hybridization in modern Chinese, which though secondary in importance, are not altogether insignificant mechanisms of improvement in the lexical system of this language. The aim of these investigations is to offer a detailed description of loan-words and hybrid words in modern Chinese borrowed from European languages, of their types and characteristic properties, of their modes of adaptation and of their position in the lexical system. In order to present our lexical material and to give sufficient support to the conclusions drawn, we shall start with the presentation of the semantic fields of loan-words in modern Chinese.

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<sup>3</sup> This scheme is outlined for the purpose of suggesting that the basic types of lexical innovations created under the influence of another language, are present in different forms in various types of languages; it is naturally sketched out rather roughly and in general lines only. More detailed schemes were elaborated by other linguists, let us mention only the recent publications which we took into consideration: L. Deroy, *L'emprunt linguistique* (1956); E. Haugen, *The Analysis of Linguistic Borrowing* (1950); we due some of the used terms, such as "loan-synonym", "loan-homonym" etc. to this most inspiring paper); the review of H. Gneuss, *Lehnbildungen und Lehnbedeutungen im Altenglischen*, Erich Schmidt Verlag 1955 by E. Hagen (1956) etc.

We shall try to show why borrowing, and to a lesser degree also hybridization, were not acceptable on a large scale for the linguistic system of Chinese and why it had to adopt other ways of forming replicas of foreign models and of creating its terminological systems.

Before proceeding to the main purpose of our study, we wish to give a brief sketch of the remaining methods applied in the creation of induced lexical innovations in modern Chinese, in order to suggest how these methods rely upon the native word-formation patterns and to indicate that the whole problem of word-formation in modern Chinese, no matter whether a foreign model is discoverable or not, should be studied as a uniform complex.

Studies in loan-words and hybrid words are dominated by specific problems which are rather distinct from problems concerning the study of words constituted by native morphemes, and can thus represent a rather closed field of research which should precede the overall investigation of coining modern terminology in Chinese and provide the desired general approach.

### 3. Lexical innovations outside the immediate scope of the present paper

#### 1) Graphic loans

Thanks to the common usage of phonoideographic script, the borrowing of the graphic shape of a lexical unit from Japanese proved to be a very feasible way of improving modern Chinese terminology in politics, economics and science. The effectiveness of this technique of borrowing is strengthened by the general agreement in the morphemic structure of the word in Japanese and Chinese.

There are numerous instances of graphic loans in modern Chinese from Japanese without any, or any essential change in the morphemic shape of the borrowed unit. Only a Chinese phonemic shape is supplied. In other respects, graphic loans are treated as “ready-made” units, regardless of whether they were originally

1. Japanese coined words, e. g. *kokufuku*, Chin. *kèfú* 克服, to overcome, to conquer; *tetsuzuki*, Chin. *shǒuxù* 手续, procedure.

2. Chinese words borrowed by Japanese and introduced back to modern Chinese in a new meaning, e. g. *bungaku*, Chin. *wénxué* 文学, literature (original Chinese meaning: literary talent, literary acquirement, cf. *The Four Books, Confucian Analects* by James Legge (2001, I, p. 238); *kosai*, Chin. *jiāoji* 交际, social intercourse, to associate with (original Chinese meaning: to welcome someone with presents, cf. *The Works of Mencius* (Legge 2001, II, p. 379)

3. Japanese loan-translations of foreign, especially English models, e. g. *chōtanpa*, Chin. *chāoduǎnbō* 超短波, Engl. ultra-short waves; *zentai*, Chin. *qiántī* 前提, Engl. premise

4. Japanese new-creations, e. g. *hōteishiki*, Chin. *fāngchéngshì* 方程式, equation; *kakkan*, Chin. *kèguān* 客观, objective

5. Japanese phonemic loans from European languages, especially English, e. g. *gasu*, Chin. *wǎsī* 瓦斯, Engl. gas; *kurabu*, Chin. *jùlèbù* 俱乐部, Engl. club; *konkurīto*, Chin. *hùnníngtǔ* 混凝土, Engl. concrete

A detailed study of graphic loans in Chinese should concentrate primarily upon two topics:

- a) the agreements (or possible disagreements) in the structure of the borrowed units and of native Chinese words and Chinese new-creations,
- b) the general character of phonoideographic writing, especially the reevaluation of the complicated relation of the graphic structure, the meaning and the phonemic value of a graph.<sup>4</sup>

## 2) Loan-translations

In modern Chinese the mechanism of reproducing a foreign model by means of native morphemes is one of the main ways of amplifying the lexical system. One to one correspondence between the morphemes of the model and the replica, though, is far from general. The form of the replica is subject to various modifications. The purpose of these modifications evidently is to attain a desired semantic clarity and to assimilate these new-coined lexical units to the usual native word-formation patterns. Let us discuss at least some of the procedures of modification:

1. in comparison to the model, the replica is extended by one lexical morpheme, e. g.

*mótiānlóu* 摩天楼, skyscraper (meaning of Chin. morphemes: *mó* 摩 – to touch, *tiān* 天 – sky, *lóu* 楼 – building); *qiáopái* 桥牌, bridge (*qiáo* 桥 – bridge, *pái* 牌 – cards); *lìxīnjī* 离心机, centrifuge (*lì* 离 – to leave, *xīn* 心 – center, *jī* 机 – machine); *zhǎngzhuàngyè* 掌状叶, folium palmatum (*zhǎng* 掌 – palm, *zhuàng* 状 – form, *yè* 叶 – leaf); *jiémó* 结膜, conjunctiva (*jié* 结 – to connect, *mó* 膜 – membrane); *wèixīng* 卫星, satellite (*wèi* 卫 – to guard, *xīng* 星 – star)

Without the added lexical morpheme, the equivalent

- a) would be semantically deficient and could be confused with existing words, e. g. *qiáopái* 桥牌, cards, in contradistinction to *qiáo* 桥, bridge (structure spanning a water-flow); *jiémó* 结膜, conjunctiva in contradistinction to *jié* 结, to connect,
- b) would not be meaningful, e. g. a form like \**zhǎngyè* 掌叶 would not express a clear-cut meaning,

- c) could not perform the desired syntactic function, e. g. the construction *mótiān* 摩天 is a verb-object construction (to reach to the sky) and cannot perform the nominal function; similarly *lìxīn* 离心, to leave the center; these constructions have to be transformed into attributes to the added nominal morphemes.

2. the sequence of morphemes is rearranged in order to be transformed into a verb-object construction which is favoured in modern Chinese, e. g.

<sup>4</sup> Recently some Chinese linguists engaged in the study of Japanese loans in modern Chinese, e. g. cf. two papers by Wang Lida 王立达 in *Zhongguo yuyan* 中国语言 [Chinese Language], *Xiandai hanyu zhong cong riyu jielai de cihui* 现代汉语中从日语借来的词汇 [Loans from Japanese in Modern Chinese] (1958) and *Cong goucifa shang bianbiebuliao riyu jieci* 从构词法上辨别不了日语借词 [Loans from Japanese Cannot Be Distinguished by Word-Formation] (1958). Quite an exhaustive survey of Japanese loans is offered by Gao Mingkai 高名凯 and Liu Zhengtan 刘正琰 in *Xiandai hanyu wailaici yanjiu* 现代汉语外来词研究 [Study of Loan-words in Modern Chinese] (1958, pp. 79–98).

*shūdiànxian* 输电线, electrical supply line (*shū* 输 – to supply, *diàn* 电 – electricity, *xiàn* 线 – line); *jíníqì* 集泥器, mud collector (*jí* 集 – to gather, to collect, *ní* – mud, *qì* 器 – machine); *pòbīngchuán* 破冰船, ice breaker (*pò* 破 – to break, *bīng* 冰 – ice, *chuán* 船 – boat)

These replicas are attributive compounds; the verb-object construction is in attributive relation to a nominal morpheme which corresponds either to a lexical (line) or to a derivational (-or, -er) morpheme of the model.

3. polymorphemic constituents are reduced to monomorphemic, e. g.

*lěngzhàn* 冷战, cold war (*zhànzhēng* 战争, war is reduced to *zhàn* 战); *dàimíngcí* 代名词, pronomen, pronoun (*dài* 代 – to substitute, *míng* 名 – noun, *cí* 词 – word) is usually used in the reduced form *dàicí* 代词

The study of loan-translations in modern Chinese cannot be performed without a detailed comparison with the procedures applied in the formation of new-coined compounds, both inspired and uninspired by foreign models. Only this detailed comparison whose prerequisite would be a thorough description of the types of Chinese compounds, could show whether the mechanism of loan-translation has affected in any way the word-formation patterns of modern Chinese.

### 3) Semantic loans

In modern Chinese these have not yet been subjected to closer scrutiny, undoubtedly due to the lack of etymological insights into the Chinese lexical system. Etymological research in Chinese is seriously encumbered by the intricate relation between the meaning of a word and the structure of the respective graph(s). The importance of the etymology of a graph is largely overestimated and often confused with the etymology of the lexical meaning.

Notwithstanding, the extension of polysemy of lexical units via semantic loan in modern Chinese is one of the ways of innovation of the lexical system. In this respect, the influence of European languages seems to be almost negligible, the impulses are mostly supplied by Japanese.

In many cases, though, it is disputable whether the respective issue is an instance of semantic loan (i. e. a loan-homonym), e. g. *xìng* 性, meaning “character”, “nature of a thing” under the influence of Japanese acquired also the meaning of “sex, sexual”<sup>5</sup>, or an instance of borrowing of an original Chinese word in a new meaning (see ‘Graphic Loans’). We prefer the latter instances to be denoted as graphic loans, as the etymological meaning of the word is either obsolete or completely out of use.

As regards European languages, only English and in the last two decades also Russian, supplied impulses for extensions of polysemy of Chinese words. All of these extensions, needless to say, belong to the category of loan-synonyms, e. g.

<sup>5</sup> This example is mentioned by Wang Li 王力 in *Hanyushi gao* 汉语史稿 [An Outline of the History of the Chinese Language] (1958, p. 572).

*tóuděng* 头等, first grade, under the influence of Engl. first rate acquired the transferred meaning “utmost, supreme”, as *tóuděng zhòngyào* 头等重要, of utmost importance

*zhuàngtài* 状态, state, under the influence of Engl. state (of aggregation) or eventually Russ. sostojaniye is used also as a term in physics, e. g. *gùtǐ zhuàngtài* 固体状态, solid state, *yětǐ zhuàngtài* 液体状态, liquid state

*tūjī* 突击, to make a sudden attack, under the influence of Russ. udarnyj, udarnik has acquired the meaning of “shock-work”, e. g. *tūjī gōng rén* 突击工人, shock-worker; *wǒmen děi tūjī yíxià* 我们得突击一下, we must do a bit of shock-work

the adjective *yánzhòng* 严重, meaning, 1. dangerous, critical, 2. respectable, under the influence of Russ. ser’joznyj, serious, has also acquired the signification “serious, important”, e. g. *hěn yánzhòngde wèntí* 很严重的问题, a very serious question; *yánzhòngde kùnnan* 严重的困难, serious difficulties

#### 4) Induced new-creations

In modern Chinese the majority of equivalents of special terms are formed according to the usual native word-formation patterns. As a rule, they are compounds, very often of endocentric construction. Sometimes, it is very hard to differentiate a direct loan-translation from a new-coined compound which is not a direct replica of the model, but uses morphemes synonymous to those of the possible models. A common characteristics of these induced new-creations, no matter whether they use morphemes synonymous to those of the model or not, is their descriptive nature. The lexical morphemes are chosen and organized into a construction in a form of a concise explanation of the meaning of the word which provided the impulse for their creation. From this point of view, these lexical units can be denoted as “descriptive creations”. Direct impulses for descriptive creations are very often provided by international compound words.

A considerable amount of these descriptive creations use morphemes synonymous to those of the model, but their morphemic shapes are highly divergent, both in construction and the number of constituent morphemes. We prefer their classification as induced new-creations than as loan-translations, e. g.

*biànxíngchóng* 变形虫, amoeba (from Greek amoibē, a change) (*biàn* 变 – to change, *xíng* 形 – form, *chóng* 虫 – insect); *guóyǒuhuà* 国有化, nationalization (*guó* 国 – country, nation, *yǒu* 有 – to have, to possess, *huà* 化 – suffix denoting the change of state); *jiànglínjié* 降临节, advent (*jiànglín* 降临 – to come down, to approach, *jié* 节 – holiday)

The form of the majority of descriptive creations is completely independent of the construction and the meaning of the morphemes of the model, e. g.

*shōuyīnjī* 收音机, wireless (*shōu* 收 – to receive, *yīn* 音 – sound, *jī* 机 – instrument), a loan-translation *wúxiàndiàn* 无线电 is in frequent use, too (*wú* 无 – not to have, *xiàn* 线 – wire, *diàn* 电 – electricity); *huízhǔǎnqì* 回转器, flywheel (*huízhǔǎn* 回转 – to revolve, *qì* 器 – instrument), in contradistinction to a loan-translation *fēilún* 飞轮 (*fēi* 飞 – to fly, *lún* 轮 – wheel); *qiánshuǐtǐng* 潜水艇, submarine (*qián* 潜 – to submerge, *shuǐ* 水 – water, *tǐng* 艇 – boat); *xíngróngcí* 形容词, adjective (*xíngróng* 形容 – to describe, *cí* 词 – word); *dǎzìdiànbào* 打字电报机, teleprinter (*dǎzì* 打字 – to type, *diànbào* 电报 – wire, *jī* 机 – machine); *wànwùǒulínglùn* 万物有灵论, animism (*wànwù* 万物 – 10,000 things, *yǒu* 有 – to have, *líng* 灵 – soul, *lùn* 论 – theory)

As already mentioned, the study of induced new-creations cannot be separated from the study of loan-translations and words newly coined in modern Chinese in the last few decades. A synchronic description of these lexical units requires a series of detailed studies from different aspects of this complex field of the Chinese lexical system.

## I. SEMANTIC FIELDS OF LOAN-WORDS IN MODERN CHINESE

### 1. Reasons for grouping loan-words in modern Chinese into semantic fields

The semantic fields<sup>6</sup> of a language have to be understood not as universal, once for all established entities, but as entities liable to permanent variations both in structure and extent. One of the factors causing these variations is the mutual contact of lexical systems of different languages.

Loan-words can be grouped into semantic fields of a special kind which constitute enclosures in the lexicosemantic system of the borrowing language. On one side, these fields are autonomous and independent of the semantic organization of the borrowing language, on the other side, they enter as supplementary elements into the existing semantic fields stimulating their change.

As regards the presentation and description of loan-words in modern Chinese, we hold this method, accordingly applied, as highly convenient, as it facilitates the examination of a series of questions concerning various aspects of Chinese loans. Other methods of presenting the assembled loans (e. g. phonetic or graphic arrangement, according to the source language etc.) appear to be too one-sided for our purpose. The classification of loan-words into semantic fields enables us to investigate simultaneously

1. which semantic fields of modern Chinese were open to borrowing
2. which semantic fields were newly introduced into modern Chinese
3. the amount of loan-words in individual semantic fields
4. which languages furnished loan-words in individual semantic fields

<sup>6</sup> A survey of the various views on this semantic theory and their critical evaluation is offered by S. Ullmann (1951, p. 152–170). See also H. Kronasser (1953, p. 133–139).

5. the proportion of loans of the international and of the isolated type<sup>7</sup>
6. the position of loan-words in the lexical system of modern Chinese and the degree of their assimilation (i. e. which loans we consider assimilated and which we consider unassimilated)<sup>8</sup>

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<sup>7</sup> By international loans we understand words of common origin, agreeing both in meaning and form (i. e. their phonemic shape is similar and their graphic presentation, under the condition that the same system of writing is used, is similar too), existing in the lexical systems of more than two languages of different language families, some of which are world languages. – As isolated loans we denote such loans which pass from the source language to one, rarely to several languages. They are very often native words of the source language, they do not possess the migrating character and have not attained the international standing.

<sup>8</sup> The differentiation of assimilated and unassimilated loans is essentially based upon the degree of phonemic, graphic and morphemic adaptation.

Assimilated loans basically comply with the system and word-classes of the borrowing language (still, they usually have specific features of their own, e. g. unusual combinations of phonemes and graphemes, they do not completely agree with the paradigms etc.). They are usually able to form new words in the borrowing language.

The degree of adaptation of unassimilated loans (foreign words, Fremdwörter) is minimum or none. The speakers tend to observe foreign pronunciation, but nevertheless, the word is subject to variations and the usual result is partial or total phonemic substitution. The degree of graphic and morphemic adaptation is usually very low (or none) due to low frequency.

The above differentiation between assimilated and unassimilated loans is presented only on general lines. The naturalization of loans in various languages has to be viewed from different angles and the criteria of differentiation adjusted accordingly.

In modern Chinese, when trying to classify a loan as assimilated or unassimilated, we took into consideration several aspects, some of which we have to confess, bear the marks of subjective evaluation. This insufficiency could not be avoided due to difficulties which the present author can hardly overcome, such as the incomplete standardization of modern Chinese, the absence of dictionaries of acknowledged standard standing etc. Our classification is a first attempt in this field and as such it does not claim perfection.

Our criteria were the following:

1. the form of the loan-word – with words longer than three syllables the probability of assimilation is markedly smaller,
2. the stability of the phonemic and graphic shape of the loan-word; in case of variations in the shape we took into consideration whether one of the alternative shapes is preferred,
3. the presence or absence of a doublet (which we took only as an auxiliary criterion; as we shall see later, a rather great amount of loan-words possess doublets, and in some cases both forms are in parallel use),
4. the activity of the loan-word, i. e. its ability to form hybrid compounds,
5. the current familiarity with the loan-word and its denotation in present-day China.

We judged this

a) by the presence of the respective loan-word among the excerpts and in the manuscript of the medium *Czech-Chinese Dictionary* (letters A–S), compiled by the lexicographic team of the Oriental Institute in Prague. This source has the advantage of having been checked by our Chinese informants, in the first place by Mrs. Zhang Jingyu-Rotterová (native of Shanghai, university education), to a great extent also by Mrs. Li Daijun-Hejzlarová (native of Wuhan, university education), Mrs. Wang Ruzhen-Vochalová (native of Tianjin, university education) and Mrs. Guan Mingzhe-Janoušová (native of Peking, incomplete secondary education) and

## 7. the formation of doublets, their types and relations to loan-words

**2. Arrangement of semantic fields**

The set of loans which we present assorted into 14 semantic fields has the character of a representative set – 345 loan-words are included here. Phonemic and graphic alternative shapes are not given in an exhaustive way and are not counted as separate forms.

Altogether we have collected 650 loans, including the names of chemical elements and foreign monetary units borrowed from European languages. Personal and geographic names, naturally, are not included in this amount. Our set corresponds or rather slightly surpasses in number the loans from European languages given by Gao Mingkai and Liu Zhengtan in their “*Study of Loan-words in Modern Chinese*”.

In the tables of individual semantic fields we do not include loans which are used only in a certain dialect. Unassimilated loans which were used in a limited period of time are given only as illustrative specimens, so that we could offer evidence for our conclusions. There are about 10 rather current and assimilated loans which did not fit into any semantic field. As their number is very limited, the various aspects of our investigations could not have been influenced in a significant way. They are words like *yōumò* 幽默, humour, *shāfā* 沙发, sofa, *yǐndé* 引得, index, *túténg* 图腾, totem etc.

In the tables of loans arranged according to semantic fields we give the borrowed form in Chinese characters<sup>9</sup>, followed by its classification as

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partly by the staff of the Lexicographic Department of the Linguistic Institute of the Chinese Academy of Sciences in Peking,

b) by the occurrence of the respective loan-word in *Hanyu pinyin cihui* 汉语拼音词汇 [Chinese Phonetic Dictionary] (1963), compiled by the lexicographic team of the Chinese Committee for the Reform of Writing which has, as compared to other dictionaries, a rather normative character, especially as regards the choice of entries,

c) on the basis of our subjective evaluation and knowledge supported by personal experience and observation of usage of various anonymous speakers, mostly in intellectual milieu, in Peking in the years 1953–1958, 1959–1960.

The frequency of occurrence in the text has not been taken into consideration due to its inadequacy as a criterion. Texts of scientific character may contain a high percentage of certain loans, while other loans, like exotic and culinary expressions etc. have a minimum chance of occurrence in a written record.

<sup>9</sup> Due to technical difficulties and in order to save space, we omit the English transcription and the abbreviation of the used sources where the respective form is to be found which was indicated in my thesis in Czech. Except the sources mentioned in note 8 and the study of Gao Mingkai and Liu Zhengtan, we have also consulted:

Zhang Qingyuan 张清源: *Cong xiandai hanyu wailaiyu chubu fenxi zhong dedaode ji dian renshi* 从现代汉语外来语初步分析中得到的几点认识 [Some Knowledge Gained from the Preliminary Research of Loans in Modern Chinese] (1957),

*Wu si yilai hanyu shumian yuyande bianqian he fazhan* 五四以来汉语书面语言的变迁和发展 [The Changes and Development of the Modern Chinese Literary Language since May 4th Movement], by the staff of the Chinese Department of Pedagogical Institute (1959),

I	international loan
IS	isolated loan
A	assimilated loan
U	unassimilated loan

Then follow the alternative and graphic shapes, if any. The form after the semi-colon is the doublet to the borrowed form. It is provided with one of the following abbreviations, designating its characteristics:

N	new-creation
H	hybrid form
G	graphic loan
NA	native word (usually of older standing than the loan itself)
NC	new character (limited to some doublets in chemistry)
L	loan-translation

Finally, we enter the model in the form of the supposed source language.<sup>10</sup> In case of two possible source languages, our guiding principle was the phonemic shape of the model<sup>11</sup> and in dubious cases, we took into account also social and historical facts (e. g. small probability of direct borrowing from languages in no direct contact with Chinese).

### 3. Semantic fields and their specific features

According to the ratio of assimilated and unassimilated loans, the 14 semantic fields established by us<sup>12</sup>, form two distinct groups:

Group I: Semantic fields where the number of assimilated loans exceeds 50% of the total amount of loans, i. e. semantic fields where loan-words are essentially stabilized

Group II: Semantic fields where assimilated loan-words do not surpass 30% of the total amount of loans, i. e. semantic fields where loan-words are not acceptable for the lexical system of modern Chinese

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*Jianming yinyue cidian* 简明音乐词典 [A Concise Dictionary of Music] (1957).

<sup>10</sup> In order to save space we again omit the abbreviation of the source language which is easily to be seen from the form of the model. In case of a Russian model, we had to use, due to technical difficulties, Latin alphabet.

<sup>11</sup> Words borrowed from English or through the mediation of English have been checked with *English Pronouncing Dictionary* by D. Jones (1958).

<sup>12</sup> Gao Mingkai and Liu Zhengtan who have also investigated the semantic distribution of loans, give 28 semantic fields. As they do not distinguish between loans and hybrids in their lexical set and also include loans from Asian languages and graphic loans from Japanese, their semantic distribution of loans is rather misleading. The semantic fields of graphic loans from Japanese are not in overall agreement with those of loans from European languages. In fields, like “philosophy”, “economics”, “culture, education, publishing and physical culture”, “psychology”, “mathematics” and “diplomacy” the majority of loans are graphic loans from Japanese. In the semantic field “law” all loans come from Japanese. We are of the opinion that it is better to keep loans in Chinese supplied by the two main sources, Japanese and European languages, apart.

To group I belong the following semantic fields:

1. medicine and pharmacy	90.2% assimilated loans
2. physics	80% assimilated loans
3. weapons	71.4% assimilated loans
4. Christianity	66.6% assimilated loans
5. tissues and clothings	63.6% assimilated loans
6. literature and art	62.5% assimilated loans
7. machines, implements and means of transport	56.3 % assimilated loans
8. food and beverages	56% assimilated loans

To group II we place the following semantic fields:

9. chemistry	30% assimilated loans
10. music and dance	23% assimilated loans
11. politics, economics and philosophy	19% assimilated loans
12. measures and weights	16.6% assimilated loans
13. animals and plants	15.3% assimilated loans
14. snobisms	12.5% assimilated loans

## GROUP I.

### 1) Medicine and pharmacy

1. *ānbù* 安瓿 (I, A), *ānpǔ'ěr* 安浦耳 (U) ampoule
2. *āntibīlín* 安替比林 (I, A) antipyrine
3. *āpǔmǎfēi* 阿朴吗啡 (I, A) apomorphine
4. *āsīpíling* 阿斯匹灵 (I, A), *āsīpíling* 阿司匹灵 (U) aspirine
5. *ātuōpīn* 阿托品 (I, A) atropine
6. *bēngdài* 绷带 (I, A) bandage
7. *bābītuō* 巴比妥 (I, A) barbitol
8. *kěkǎyīn* 可卡因 (I, A), *kějiāyīn* 可加因 (U) cocaine
9. *kětīyīn* 可提因 (I, A), *kědàiyīn* 可待因 (U) codeine
10. *kāfēiyīn* 咖啡因 (I, A) caféine
11. *kědisōng* 可的松 (I, A) cortison
12. *dàimǎtuō'ér* 代马妥儿 (I, A) dermatol
13. *xīmǎgélùobīn* 希玛格洛宾 (I, U); *xuèhóngsù* 血红素 (N) haemoglobin
14. *hèniyà* 赫尼亚 (I, A); *shànqì* 疝气 (NA) hernia
15. *hǎiluòyīn* 海洛因 (I, A); *báimiàn'r* 白面儿 (NA) heroin
16. *hé'ěrméng* 荷尔蒙 (I, U); *jī'sù* 激素 (N) hormone
17. *xiēsīdǐlǐ* 歇斯底里 (I, A), *xiēsīdǐlǐ* 歇私的里, *xiēsīdélǐ* 歇私德里 (U) hystérie
18. *yīnsùlín* 胰岛素 (I, U); *yídǎosù* 胰岛素 (N) insulin

19. *kǎtā* 卡他 (I, A); *yánzhèng* 炎症 (NA) katarrh
20. *lǔmǐnà* 鲁米那 (I, A) luminal
21. *mǎfēi* 吗啡 (I, A) morphia
22. *núfóukǎyīn* 奴佛卡因 (I, A) novocaine
23. *yāpiàn* 鸦片 (I, A); *yángyān* 洋烟 (N) opium
24. *pǎnníxīlín* 盘尼西林 (I, A) *pèiníxīlín* 配尼西林 (U); *qīngméisù* 青霉素 (N) penicillin
25. *bǎibùshèng* 百布圣 (I, A) pepsin
26. *bēnbābǐtuō* 苯巴比妥 (I, A) phenobarbital
27. *pǔlūkǎyīn* 普鲁卡因 (I, A) procaine
28. *pǐlāmǐdòng* 匹拉米洞 (I, A) pyramidon
29. *kuíníng* 奎宁 (I, A) quinine, *guílínnà* 贵林那 (U) quinquina; *jīnjīnàshuāng* 金鸡纳霜 (H)
30. *léimǐfēng* 雷米封 (I, A) ramifon
31. *lìsuǒ'ěrjīn* 利锁耳金 (I, A) resorcin
32. *shā'ěrfǎ'ěrsàn* 沙尔法尔散 (I, A) salvarsan
33. *shāndàonián* 山道年 (I, A), *shāndūníng* 珊笃宁 (U) santonin
34. *sànlìtōng* 散利通 (I, A) saridon
35. *xiūkè* 休克 (I, A) shock
36. *shìdíníng* 士的宁 (I, A); *mǎqiánzǐsù* 马钱子素 (NA) strychnin
37. *dānníng* 单宁 (I, A), *dānníng* 丹宁 (U) tannin
38. *dīngjǐ* 丁几 (I, U); *diǎnjiǔ* 碘酒 (H) tincture
39. *fánshìlín* 凡士林 (I, A), *huáshèlín* 华摄林 (U); *ruǎnlà* 软蜡 (NA) vaseline
40. *fèilúonà* 肥罗那 (I, A) veronal
41. *wéitāmìng* 维他命 (I, A); *wéishēngsù* 维生素 (N) vitamin

## 2) Physics

1. *ānpéi* 安培 (I, A) ampère
2. *bā* 巴 (I, A) bar
3. *kǎlùlǐ* 卡路里, *kǎ* 卡 (I, A), *jiālùlǐ* 加路里 (U) calorie
4. *kùlún* 库仑 (I, A) coulomb
5. *bèi'ěr* 贝耳, *bèi* 贝 (I, A) bell
6. *dá yīn* 达因 (I, A) dyne
7. *dàinàmìsī* 代纳密斯 (I, U); *lìxué* 力学 (G) dynamics
8. *àinà'ěrjī* 爱纳尔基 (I, U); *néngliàng* 能量 (N) energy
9. *ěrgé* 尔格 (I, A), *ègé* 厄格 (U) erg
10. *yǐtài* 以太 (I, A); *néngméi* 能媒 (N) ether
11. *fǎlā* 法拉 (I, A), *fǎlātè* 法拉特 (U) farad
12. *gāosī* 高斯 (I, A) gauss
13. *hēnglì* 亨利, *hēng* 亨 (I, A) henry
14. *hèzī* 赫兹, *hé* 赫 (I, A), *hèzhī* 赫芝 (U); *zhōu* 周 (NA) hertz
15. *yīhóng* 伊洪 (I, U); *lízǐ* 离子 (N) ion
16. *jiāo'ěr* 焦耳, *jiāo'ěr* 焦尔 (I, A), *zhū'ěr* 朱尔 (U) joule

17. *jīluówātè* 基罗瓦特 (I, U); *qiānwǎ* 千瓦 (H) kilowatt
18. *liú míng* 流明 (I, A) lumen
19. *lèkèsī* 勒克司, *lè* 勒 (I, A) lux
20. *màikèsiwéi* 麦克斯韦, *mài* 麦 (I, A) maxwell
21. *mó lè* 摩勒 (I, U); *fēnzǐ* 分子 (N) molecule
22. *nǐhóng* 霓虹 (I, A); *nǐhóngdēng* 霓虹灯 (H) neon
23. *ōu mǔ* 欧姆 (I, A) ohm
24. *fú tè* 伏特 (I, A) volt
25. *wǎ tè* 瓦特, *wǎ* 瓦 (I, A) watt

### 3) Weapons

1. *bó láng níng* 勃朗宁 (I, A), *bǔ láng níng* 卜朗宁 (U); *bó láng níng qiāng* 勃朗宁枪 (H) Browning
2. *kǎ bīn* 卡宾 (I, A); *kǎ bīn qiāng* 卡宾枪 (H) carbine
3. *dámǔdámǔ* 达姆达姆 (IS, U); *dámǔdámǔdàn* 达姆达姆弹 (H) dum dum bullet
4. *jī luó dīng* 吉罗丁 (I, U); *duàn tóu tái* 断头台 (N) guillotine
5. *kǎ qiū shā* 喀秋莎 (IS, A), *kǎ qiū shā* 卡秋莎 (U); *huǒ jiàn pào* 火箭炮 (N) Kati-usha
6. *lái fù* 来复 (IS, A); *lái fù qiāng* 来复枪 (H) rifle
7. *tǎn kè* 坦克 (I, A); *tǎn kè chē* 坦克车 (H) tank

### 4) Christianity

1. *ā mén* 阿们 (I, A) amen
2. *ān qí'ér* 安琪儿 (I, A); *tiān shǐ* 天使 (NA) angel
3. *yī diàn* 伊甸 (I, U); *lè yuán* 乐园 (NA) Eden
4. *mí sa* 弥撒 (I, A) Missa
5. *sā dān* 撒但 (I, A) Satan
6. *wéi kè'ěr* 维克尔 (I, U) vicar

### 5) Tissues and clothings

1. *āng é lā* 安格拉 (I, U) angora
2. *kāi sī mǐ* 开司米, *kāi sī mǐ* 开四米 (I, A), *kè sī mǐ* 克司米 (U); *kāi sī mǐ róng* 开司米绒 (H) cashmere
3. *gē bié dīng* 戈别丁 (I, A) gaberdine
4. *huò mǔ sī běn* 霍姆斯本 (IS, U) homespun
5. *jiǎ kè* 甲克 (I, A), *jiǎ kè* 夹克 (U) jacket
6. *kǎ bù lóng* 卡布龙 (IS, U) kapron
7. *kǎ jī* 卡叽 (I, A), *kǎ qí* 卡其 (U) khaki
8. *máo sī lún* 毛丝纶 (I, A) muslin
9. *ní lóng* 尼龙 (I, A) nylon
10. *bù lā jī* 布拉及, *bù lā jī* 不拉及 (IS, U); *lián yī qún* 连衣裙 platije
11. *xī lóng* 西龙 (IS, U) silon

## 6) Literature and art

1. àiměide 爱美的 (I, U); àihào zhě 爱好者 (N) amateur
2. bālògē 巴洛哥 (I, A); bālògēshì 巴洛哥式 (H) baroque
3. kǎtōng 卡通 (IS, A); huódòng huàpiàn 活动画片 (N) cartoon
4. kǎobèi 考贝 (I, A) copy
5. tuījiā dàng 颓加荡 (I, U); tuífèi pài 颓废派 (N) decadent
6. àishuō 爱说 (I, U); suíbǐ 随笔 (NA) essay
7. fùlìtōng 阜利通 (I, U); xiǎopǐnwén 小品文 (N) feuilleton
8. gēdíkè 哥蒂克 (I, A); gētèshì 哥特式 (H) gothic
9. móter 模特儿 (I, A); móxíng 模型 (U) model
10. méngtài qí 蒙太奇 (I, A) montage
11. mǎsàikè 马赛克 (I, A) mosaic
12. làngmànshǐ 浪漫史 (I, A); luómànshǐ 罗漫史, luómàn sī 罗曼司 (U) romance
13. làngmàndíkè 浪漫蒂克, luómàndíkè 罗曼蒂克 (I, U), làngmàn 浪漫 romantic
14. shānglǎitǐ 商籁体 (I, A); shísihángshī 十四行诗 (N) sonnet
15. sīfēnkè sī 司芬克斯, sīfēnkèshì 斯芬克士, sīfēnkèshī 斯芬克狮, sīfēnkè sī 斯芬克司 (I, U) sphinx
16. tèlúbādūo'ěr 特鲁巴多尔 (I, U) troubador

## 7) Machines, implements and means of transport

1. kāimǎilā 开麦拉 (I, U); ànxiāng 暗箱 (N) camera
2. kàobèilún 靠背轮 (IS, U); líhéqī 离合器 (N) coupling
3. dàinàmó 代那模 (I, U); fādiànjī 发电机 (N) dynamo
4. yǐnqīng 引擎 (IS, A); fādòngjī 发动机 (N) engine
5. jǐpǔ 吉普 (I, A); jǐpǔchē 吉普车 (H) jeep
6. Kēdá 柯达 (I, A) Kodak
7. kāngbàiyīn 康拜因 (I, A); kāngbàiyīnjī 康拜因机 (H), liánhéjī 联合机 (N) kombajn
8. mǎikēfēng 麦克风 (I, U); kuòyīnqī 扩音器 (N) microphone
9. mǎdá 马达 (I, A); fādòngjī 发动机 (N); mótuō 摩托 (A) motor
10. mótuōkǎ 摩托卡 (IS, U); qìchē 汽车 (N) motor car
11. bāngpǔ 帮浦 (I, U), bèng 泵 (A); chōushuǐjī 抽水机 (N), shuǐbèng 水泵 (H) pump
12. léidá 雷达 (I, A) radar
13. sībīlìng 司必令 (I, U); tánhuáng 弹簧, fātiáo 发条 (N) spring
14. délǜfēng 德律风 (I, U); diànhuà 电话 (G) telephone
15. délǜwéixióng 德律维雄 (I, U); diànshì 电视 (G) television
16. fá 阀 (IS, A), fán'ěr 凡尔 (U); qimén 汽门 (N) valve

## 8) Food and beverages

1. péigēn 培根 (IS, U); xiánròu 咸肉 (NA) bacon
2. báituō 白脱 (IS, U); huángyóu 黄油 (N) butter

3. *báilándì* 白兰地 (I, A), *bólándì* 勃兰地 (U); *báilándijiu* 白兰地酒 (H) brandy
4. *jíshì* 吉士 (IS, A) cheese
5. *qiǎokèlì* 巧克力 (I, A), *qiǎogélì* 巧格力, *qiǎogǔlì* 巧古力 (U); *qiǎokèlítáng* 克力糖 (H) chocolate
6. *xuējiā* 雪茄 (I, A); *xuējiāyān* 雪茄烟 (H) cigar
7. *kěkǒukélè* 可口可乐 (I, U) Coca Cola
8. *kěkè* 可可 (I, A) cocoa
9. *kāfēi* 咖啡 (I, A) coffee
10. *kālì* 咖哩 (I, U) curry
11. *lièbā* 裂巴, *hēilièbā* 黑列巴 (IS, U); *hēimiànbāo* 黑面包 (NA) chleb
12. *gǔlāshì* 古拉士 (IS, U) gulash
13. *kāwǎsī* 喀瓦斯, *kēwǎshì* 可瓦士 (IS, U) kvas
14. *mójiā kāfēi* 摩加咖啡 (I, A) mocca coffee
15. *bōdǎ* 波打 (I, U) porter
16. *bùdīng* 布丁 (I, A) pudding
17. *shālāzǐ* 沙辣子 (I, A), *sālā* 撒拉 (U) salad
18. *sānmíngzhì* 三明治 (I, U); *jiànròu miànbāo* 夹肉面包 (N) sandwich
19. *shāding* 沙丁 (I, A); *shādingyú* 沙丁鱼 (H) sardine
20. *shèlibié* 舍利别 (I, U); *shuǐguōzhī* 水菓汁 (NA) sirup
21. *sūdǎ* 苏打 (I, A), *sūdǎ* 苏达, *sūdǎ* 苏答 (U); *sūdǎshuǐ* 苏打水 (H) soda
22. *tǔsī* 土司 (IS, U), *kǎomiànbāo* 烤面包 (NA) toast
23. *wéi'ěrmùtè* 维尔木特 (I, A), *wài'ěrmùtè* 外尔木特 (U); *wéi'ěrmùtèjiǔ* 维尔木特酒 (H) vermouth
24. *fútejia* 伏特加 (I, A); *éguó shāojiǔ* 俄国烧酒 (N) vodka
25. *wēishìjī* 威士忌 (I, A), *wēishìkai* 威士开, *huīsīkè* 灰司克 (U) whisky

## GROUP II.

### 9) Chemistry

1. *ǎxītáilín* 阿西台林 (I, U); *yíquē* 乙炔 (N) acetylene
2. *ǎ'ěrke'ěr* 阿尔科尔 (I, U); *jiǔjīng* 酒精 (N) alcohol
3. *ǎlìshàlín* 阿里杀林 (I, U); *qiǎnsù* 茜素 (N) alizarine
4. *āmóniyà* 阿摩尼亚 (I, U); *ān* 氨 (NC) ammonia
5. *ānlín* 阿尼林 (I, U); *bēn'ān* 苯胺 (N) aniline
6. *āndimóní* 安的摩尼 (I, U); *tí* 锍 (NC) antimony
7. *biànxīnì* 遍西尼 (I, U); *bēn* 苯 (NC) benzene; *biànsū'ēn* 遍苏恩, *piānchén* 偏陈, *pénchún* 盆纯 (U) benzene
8. *kǎbōlándēng* 卡波兰登 (I, U); *tànhuàxī* 碳化矽 (N) carborundum
9. *sàilùfēn* 赛璐吩 (I, U); *bōlìzhǐ* 玻璃纸 (N) cellophane
10. *sàilùluò* 赛璐珞 (I, A), *sàilùlù* 赛璐璐, *xiěliúluòyǐtè* 写留珞以特 (U) celluloid
11. *sàilùlùsī* 赛留珞斯 (I, U); *xiānwéisù* 纤维素 (N) cellulose
12. *gēluófāngmǔ* 哥罗仿姆, *gēluófāng* 哥罗仿 (I, U); *sānlǚjiǎwán* 三氯甲烷, *lǜfāng* 氯仿 (N) chloroform
13. *dīdīti* 滴滴涕 (I, A) DDT

14. *dùlālǔ* 杜拉铝 (I, A); *yìnglǔ* 硬铝 (H) duralumin
15. *dàinàměituō* 代那美脱, *dàinàmàitè* 代那麦特 (I, U) dynamite
16. *yítuō* 以脱 (I, U); *yǐmí* 乙醚 (N) ethyl
17. *yítuólín* 以脱林 (I, U); *yǐxī* 乙烯 (N) ethylene
18. *fú'ěrmǎlín* 福尔马林 (I, A); *jiǎquánshuǐ* 甲醛水 (N) formalin
19. *gésìlín* 格士林 (I, U); *qīngqìyóu* 轻气油 (N) gasoline
20. *gèlǐsīlín* 各里司林 (I, U); *gānyóu* 甘油 (N) glycerine
21. *lìdīmòsī* 立低莫斯 (I, U); *shírui shìzhǐ* 石蕊试纸 (N) litmus
22. *láisū'ěr* 来苏尔, *láisū* 来苏 (I, A), *láishā'ěr* 来沙尔, *lìsuǒ'ěr* 利锁尔 (U) lysol
23. *miètǎn* 灭坦 (I, U); *jiǎwán* 甲烷 (N) methane
24. *nígǔdīng* 尼古丁 (I, A) nicotine
25. *āxùn* 阿巽 (I, U); *chòuyǎng* 臭氧 (N) ozone
26. *bālāfēn* 巴拉芬, *bālāfēi'ēn* 巴拉斐恩 (I, U); *shílā* 石蜡 (NA) paraffin
27. *shèláikè* 舍来克 (I, A); *yánggānqī* 洋干漆 (N) shellac
28. *sūdǎ* 苏打 (I, A), *sūdǎ* 苏答 (U); *tànsuānnà* 碳酸钠 (N) soda
29. *sītì'ālin* 司替阿林 (I, U); *yìngzhǐ* 硬脂 (NA) stearin
30. *fánlìsī* 凡立司 (I, A); *fánlìshuǐ* 凡立水 (H), *gānxìngyóu* 干性油 (N) varnish

## 10) Music and dance

1. *sàiluò* 赛洛 (I, A); *dīyīn dàtíqín* 低音大提琴 (N) cello
2. *shěngbǎi'ěr* 省摆尔 (I, U) cymbal
3. *bāsōng* 巴松 (IS, U); *dīyīnxiāo* 低音箫 (N), *bāsōngguǎn* 巴松管 (H) basson
4. *fúliùtè* 弗柳特 (I, U); *héngdí* 横笛 (N) flute
5. *kǎfútǐèr* 卡弗铁那 (I, U) cavatina
6. *kālǎlǐnàtí* 卡拉理纳提 (I, U); *kèlāguǎn* 克拉管 (H), *shùdí* 竖笛, *dānhuánguǎn* 单簧管 (N) clarinetti
7. *kē'ěrmǎtí* 柯尔纳提 (I, U); *hàotǒng* 号筒 (N) cornetti
8. *jiālúopǔ* 加罗普 (I, A); *jiālúopǔwǔ* 加罗普舞 (H) gallop
9. *jítā* 吉他 (I, A); *liùxiánqín* 六弦琴 (N) guitar
10. *lǐlā* 里拉, *lǐlā* 利拉 (I, U); *shùqín* 竖琴 (NA) lira
11. *màndùlín* 曼独林 (I, A), *màntuólín* 曼陀林, *màntèlín* 曼特林 (U) mandolin
12. *ǒubó* 欧勃 (I, A), *ǒubó* 欧伯 (U); *shuānghuánguǎn* 双簧管 (N) oboe
13. *pàisītúlái'ěr* 派斯秃莱尔 (I, U) pastorale
14. *pīyànuò* 披亚诺, *pīyénà* 披耶那 (I, U); *gāngqín* 钢琴 (N) piano
15. *píkèluó* 皮可罗 (I, U); *gāoyīndí* 高音笛 (N) piccolo
16. *bō'ěrkǎ* 波尔卡 (I, A), *pō'ěrkǎ* 坡尔卡 (U); *bō'ěrkǎwǔ* 波尔卡舞 (H) polka
17. *shāshífēng* 沙士风 (I, U); *sàkèguǎn* 萨克管 (H) saxophone
18. *shuònádà* 朔拿大, *suōnàtā* 梭那他 (I, U); *zòumíngqǔ* 奏鸣曲 (N) sonata
19. *shēngfēngní* 生风尼 (I, U); *jiāoxiǎngyuè* 交响乐 (N) symphony
20. *tāngpúqián* 汤溥铃 (I, U); *shǒugǔ* 手鼓 (NA) tambourine
21. *tǎlǎntèlā* 塔兰忒拉 (I, U); *tǎlǎntáilā wǔqǔ* 塔兰台拉舞曲 (H) tarantella
22. *tíngbō* 停波 (I, U); *sùdù* 速度 (NA) tempo
23. *tíyōubǎ* 提优把 (I, U); *dīyīn dàlǎba* 低音大喇叭 (N) tuba

24. *fányàlín* 凡亚林, *fànyǎlíng* 梵哑铃, *wài'ǎolín* 外奥林 (I, U); *xiǎotíqín* 小提琴 (N) violin
25. *fēi'ōlóng* 费喔龙 (I, U); *dàtíqín* 大提琴 (N) violon
26. *huá'ěrzi* 华尔兹 (I, U); *huá'ěrziwǔ* 华尔兹舞 (H), *yuánwǔqǔ* 圆舞曲 (N) waltz

## 11) Politics, economics and philosophy

1. *yàtǎijī* 亚太基, *àotǎijī* 奥塔基 (I, U); *zìzhì* 自治 (G) autarkie
2. *bǎnkè* 版克 (I, U); *yínháng* 银行 (G) bank
3. *bù'ěrshíwéikè* 布尔什维克 (I, A), *bào'ěrzhāwéikè* 鲍尔扎维克 (U) bol'shevik
4. *bēigé* 杯葛 (I, U); *dǐzhì* 抵制 (N) boycott
5. *bēngdé* 崩得 (I, U) Bund
6. *bù'ěrqiáoyà* 布尔乔亚 (I, U); *zíchǎnzhě* 资产者 (N) bourgeois
7. *bù'ěrqiáoyàfàn* 布尔乔亚犯, *bù'ěrqiáoyàqí* 布尔乔亚齐 (I, U); *bù'ěrqiáoyà jiējí* 布尔乔亚阶级 (H), *zíchǎn jiējí* 资产阶级 (N) bourgeoisie
8. *shā'ěr* 沙尔 (I, U); *shāhuáng* 沙皇 (H) tsar
9. *kāshidé* 喀士德 (I, U) caste
10. *qīkè* 乞克 (I, U); *zhīpiào* 支票 (N) check
11. *kāngménnísmù* 康门尼斯姆 (I, U); *kāngménzhūyì* 康门主义 (H), *gòngchǎnzhūyì* 共产主义 (G) communism
12. *kāngmínníssītè* 康闵尼斯特, *kāngmínníssītè* 抗民尼斯特 (I, U); *gòngchǎndǎngyuán* 共产党员 (N) communist
13. *gāngbáidù* 刚白度 (I, U); *máibàn* 买办 (N) comprador
14. *kǔtiédá* 苦铁达, *kǔtuīdǎ* 苦推打 (I, U); *zhèngbiàn* 政变 (N) coup d'état
15. *qiēkǎ* 切卡 (IS, U) Tcheka
16. *démóklāxī* 德谟克拉西 (I, U); *mínzhǔ* 民主 (G) democracy
17. *díyànàdīkè* 狄亚纳蒂克 (I, U); *biànzhèngfǎ* 辩证法 (G) dialectic
18. *dīkètūiduō* 狄克推多, *dīkètūiduō* 迪克推多 (I, U); *dúcaizhě* 独裁者 (G) dictator
19. *dùnmǎ* 杜马 (IS, U) Duma
20. *túnbing* 屯并 (I, A) dumping
21. *àikāngnuòmǐ* 爱康诺米, *yīkānglǎomǐ* 伊康老米 (I, U); *jīngjì* 经济 (G) economy
22. *fǎxī* 法西斯 (I, A), *fǎxīdì* 法西斯蒂 (U) fascisti
23. *fèimínìeshīmǔ* 费弥涅士姆 (I, U); *nǚquánzhǔyì* 女权主义 (N) feminism
24. *gàishitàibǎo* 盖世太保, *géshādǎpū* 格杀打扑, *gàisitàbō* 盖斯塔波 (I, U) Gestapo
25. *jī'ěrdé* 基尔德 (I, U) guild
26. *gāoshìpōlín* 高士泼林 (I, U); *guójiā jìhuàjú* 国家计划局 (N) Gosplan
27. *yúmángnídé* 虞芒尼德 (I, U); *réndào* 人道 (NA) humanité
28. *yìdéwòluójí* 意德沃罗基 (I, U); *yìshì xíngtài* 意识形态 (N) ideology
29. *yīnfā rèxióng* 印发热兇 (I, U); *tōnghuò péngzhàng* 通货膨胀 (N) inflation
30. *yīntiēlìgēngzhūyì* 印贴列根追亚 (I, U); *zhīshì fēnzǐ* 知识分子 (N) intelligentsia
31. *yīngtè'nàxióngnà'ěr* 英特那雄那尔 (I, U); *guójì* 国际 (G) international

32. *xiōnggē'ěr* 兇哥尔 (I, U) Junker
33. *kǎisǎ* 恺撒 (IS, U) Kaiser
34. *kǎtè'ěr* 卡特尔 (I, A), *kǎtái'ěr* 卡台尔, *kǎtè'ěr* 卡忒尔, *kǎdé'ěr* 卡德尔 (U) kartell
35. *kē'ěrhuǒzhī* 科尔火支 (I, U); *jítí nóngzhuāng* 集体农庄 (N) kolchoz
36. *kāngmíntuán* 康民团 (I, U); *gòngchǎn guójí* 共产国际 (N) komintern
37. *kāngmìshā* 康密沙 (I, U); *zhèngzhì wěiyuán* 政治委员 (N) komissar
38. *kāngshāmó'ěr* 康沙模尔 (I, U); *gòngqīngtuán* 共青团 (N) Komsomol
39. *kāngcǎi'ēn* 康采恩 (I, A), *kāngchè'ēn* 康彻恩, *kāngzài'ěr* 康载尔 (U) konzern
40. *luóji* 逻辑 (I, A); *lùnlǐxué* 论理学 (G), *míngxué* 名学 (N) logic
41. *mèngshíwéikè* 孟什维克 (I, A), *ménsàiwéikè* 门赛维克 (U) menshevik
42. *mísāngsuǒluópǔ* 蜜桑索罗普 (I, U); *yànshìzhě* 厌世者 (NA) misanthrope
43. *nàcuì* 纳粹 (I, A) Nazi
44. *nàpǔ* 纳普 (IS, U) NEP
45. *nàipǔ* 耐普 (IS, U) NEPman
46. *bālimén* 巴力门 (I, U); *yìhuì* 议会 (G), *yìyuàn* 议院, *guóhuì* 国会 (N) parliament
47. *bāliya* 巴力亚 (I, U) pariah
48. *pèishēngtè* 配生忒 (I, U); *bǎifēnlǜ* 百分率 (N) percent
49. *fēiluòsuǒfēi* 菲洛索菲 (I, U); *zhéxué* 哲学 (G) philosophy
50. *bólxìtiāndé* 伯理璽天德 (I, U); *zǒngtǒng* 总统 (N) president
51. *pǔluòliètǎliya* 普罗列塔利亚, *pǔluòliètǎliyàtè* 普罗列太利亚特 (I, U); *pǔluò jiējí* 普罗阶级 (H), *wúchǎn jiējí* 无产阶级 (G) prolétariat
52. *pǔluòliètǎlín* 普罗列太林 (I, U); *wúchǎnzhě* 无产者 (G) proletarian
53. *sūfēisītè* 苏斐斯特 (I, U); *guībìàn xuépài* 诡辩学派 (N) sophist
54. *sūwéi'āi* 苏维埃 (I, A) soviet
55. *sàwéiléngtiē* 萨维稜贴 (I, U); *zhǔquán* 主权 (N) sovereignty
56. *xīndíkāi* 辛狄开 (I, A), *xīndíkǎ* 新迪卡, *xīndíjiā* 辛迪加, *xīndíjiā* 新狄加, *xīndíkè* 新狄克 (U) syndicat
57. *tuīkènuòkèlǎxī* 推克诺克拉西 (I, U); *jìshùzhǔyì* 技术主义 (N) technocracy
58. *diànnóng* 佃农 (IS, U) tenant
59. *tàdōu* 拓都 (I, U); *quánbù* 全部 (NA) total
60. *dùwǎlǐxī* 杜瓦里希 (IS, U); *tóngzhì* 同志 (N) tovarishch
61. *tuōlǎsī* 托辣斯 (I, A) trust
62. *āidiměidùn* 哀的美顿, *āidiměidūn* 哀的美敦 (I, U); *āidiměidùnshū* 哀的美顿书 (H), *zuìhòu tōngdié* 最后通牒 (G) ultimatum
63. *wūtuōbāng* 乌托邦 (I, A); *lǐxiǎngguó* 理想国 (N) Utopia

## 12) Measures and weights

1. *àikè* 爱克 (I, U); *yīngmǔ* 英亩 (H) acre
2. *ǎ'ěr* 阿尔 (I, U); *gōngmǔ* 公亩 (N) are
3. *pǔshì'ěr* 浦式耳 (I, U) bushel
4. *kāibó'ér* 开勃儿 (IS, U) cable

5. *kèlā* 克拉 (I, A), *kālātè* 卡刺特 (U) carat; *kāi* 开 (A) (about gold)
6. *shēngdikèlánmǔ* 生的克兰姆 (I, U); *lǐkè* 厘克 (H) centigramme
7. *shēngdilituō'ěr* 生的立脱尔 (I, U); *lǐshēng* 厘升 (N) centilitre
8. *shēngdimǐtū* 生的米突 (I, U); *lǐmǐ* 厘米 (H) centimètre
9. *qiǎotèlún* 巧特仑 (IS, U) chaldron
10. *tèkākèlánmǔ* 特卡克兰姆 (I, U); *shí kè* 十克 (H) décagramme
11. *tèxīkèlánmǔ* 特西克兰姆 (I, U); *fēnkè* 分克 (H) décigramme
12. *tèxīlītūō'ěr* 特西立脱尔 (I, U); *fēnshēng* 分升 (N) décilitre
13. *tèxīmǐtū* 特西米突 (I, U); *fēnmǐ* 分米 (H) décimètre
14. *huādāng* 花当 (IS, U) fathom
15. *fútuō* 幅脱 (IS, U); *yīngchǐ* 英尺 (H) foot
16. *fěngtuō* 讽脱 (IS, U); *ébàng* 俄磅 (H) funt
17. *jiālún* 加仑 (IS, U) gallon
18. *kèlánmǔ* 克兰姆 (I, U), *kè* 克 (A) gramme
19. *kèkǎ* 克卡 (I, A) grammecalorie
20. *gēluó* 哥罗, *gē* 哥 (IS, U) gross
21. *hǎikètūō'ǎ'ěr* 海克脱阿尔, *hé dǎ'ěr* 合搭尔 (I, U); *gōngqīng* 公顷 (N) hectare
22. *yīnzhì* 因制 (IS, U); *yīngcùn* 英寸 (H) inch
23. *qǐluókèlánmǔ* 启罗克兰姆 (I, U); *gōngjīn* 公斤 (N) kilogramme
24. *qǐluómǐtū* 启罗米突 (I, U); *gōnglǐ* 公里 (N) kilomètre
25. *nuòtuō* 诺脱 (IS, U); *hǎilǐ* 海里 (NA) knot
26. *lītūō'ěr* 立脱尔, *lītū* 立突 (I, U); *gōngshēng* 公升 (N) litre
27. *mǐtū* 米突, *màidāng* 迈当 (I, U), *mǐ* 米 (A); *gōngchǐ* 公尺 (N) mètre
28. *mǐlún* 密仑 (I, U); *wēimǐ* 微米 (H) micron
29. *mài'ěr* 迈尔 (I, U); *yīnglǐ* 英里 (H) mile
30. *nuòtuōlǐ'ěr* 诺脱理尔 (I, U); *hǎilǐ* 海里 (NA) nautical mile
31. *mǐlǐkèlánmǔ* 密理克兰姆 (I, U); *háokè* 毫克 (H) miligramme
32. *mǐlǐlītūō'ěr* 密理立脱尔 (I, U); *háoshēng* 毫升 (N) mililitre
33. *mǐlǐmǐtū* 密理米突 (I, U); *háomǐ* 毫米 (H) milimètre
34. *àngsī* 盎斯 (I, U); *yīngliǎng* 英两 (H) ounce
35. *pǐntuō* 品脱 (IS, U) pint
36. *bàng* 磅 (I, A) pound
37. *pǔtè* 普特 (IS, U) pud
38. *kuātuō* 夸脱, *kuàiyātè* 块雅特 (IS, U) quart
39. *dūn* 吨 (I, A) ton
40. *fútuóluó* 浮驼罗 (IS, U) viedro
41. *fùsītè* 阜斯特 (IS, U); *élǐ* 俄里 (H) viersta
42. *yīyà* 依亚 (I, U); *yīngmǎ* 英码 (H) yard

### 13) Animals and plants

1. *āmí bā* 阿米巴 (I, A); *biànxíngchóng* 变形虫 (N) amoeba
2. *yànjí jià* 亚尼架 (I, U) arnica
3. *bōkètǐlǐyà* 拨克替里亚 (I, U); *xìjūn* 细菌 (L) bacteria

4. *kějīā* 可加 (I, U) coca
5. *gōngdù'ěr* 公度尔 (I, U) condor
6. *jīyīn* 基因 (I, U); *yíchuán yīnzǐ* 遗传因子 (N) gene
7. *qílāfū* 其拉夫 (I, U); *chángjǐnglù* 长颈鹿 (N) giraffe
8. *hūbù* 忽布 (IS, A); *píjiǔhuā* 啤酒花 (H) hop
9. *gènggélú* 更格卢 (I, U); *dàdàishǔ* 大袋鼠 (N) kangaroo
10. *mǎlín* 马林 (IS, U); *mǎlínguǒ* 马林果 (H) malina
11. *éiliěfū* 俄列夫 (I, U); *gǎnlǎn* 橄榄 (NA) olive
12. *tǐsù* 体素 (IS, U); *zǔzhī* 组织 (N) tissue
13. *dànbāgū* 淡巴菰 (I, U); *yāncǎo* 烟草 (N) tobacco

#### 14) Snobisms

1. *yàdiū* 亚丢 (I, U); *zàijiàn* 再见 (N) adieu
2. *pú'ōu* 仆欧 (I, U); *fúwùyuán* 服务员 (N) boy
3. *dá'ěrlíng* 达尔玲 (IS, U); *qīn'ài de* 亲爱的 (NA) darling
4. *fèi'èpōlái* 费厄泼赖 (I, U) fair play
5. *jìngdé'ěrmǎn* 竞得尔曼, *jiāntóumán* 尖头鳗 (I, U); *xiānsheng* 先生 (NA) gentleman
6. *hāluō* 哈啰 (I, U); *wèi* 喂 (NA) hallo
7. *hēiqībǎndēng* 黑漆板登 (IS, U); *zhàngfu* 丈夫 (NA) husband
8. *sāidewù'ér* 塞得物儿 (I, U); *jiézuò* 杰作 (NA) chef d'oeuvre
9. *yānshipīlíchún* 烟士披利纯 (I, U); *línggǎn* 灵感 (NA) inspiration
10. *kāisī* 开司 (IS, U); *wēn* 吻 (NA) kiss
11. *mìsī* 密斯, *mìsī* 蜜司 (IS, U); *nǚshì* 女士, *xiǎojiě* 小姐 (NA) Miss
12. *mìsītè* 密斯特, *mìsītūō* 密斯脱 (IS, U); *xiānsheng* 先生 (NA) Mr.
13. *mìxī* 蜜昔司, *mìxī* 密昔司 (IS, U); *fūren* 夫人 (NA) Mrs.
14. *módēng* 摩登 (I, A); *shímáo* 时髦 (N) modern
15. *àofēisī* 奥非斯 (IS, U); *bàngōngshì* 办公室 (N) office
16. *bìkènièkè* 辟克涅克 (I, U); *yěcān* 野餐 (N) picnic
17. *pūkè* 扑克 (I, A) poker
18. *shālóng* 沙笼 (I, A); *kètīng* 客厅 (N) salon
19. *sīkèlùbù* 司克路步, *sīkèpō* 司克泼 (IS, U); *liángxīn fāxiàn* 良心发现 (NA) scruple
20. *shēngdīmèntè* 生的闷特 (I, U); *róngyì gǎnshāng* 容易感伤 (NA) sentimental
21. *xuēsīdài* 雪丝黛 (IS, U); *jiěmèi* 姐妹 (NA) sister
22. *sīdīkè* 司的克 (IS, U); *shǒuzhī* 手枝 (NA) stick
23. *táitóu* 抬头 (I, U); *chēnghu* 称呼 (NA) title
24. *yěsī* 也司 (IS, U); *shìde* (NA) 是的 yes

### 1) Medicine and pharmacy

Borrowed medical terms are not very numerous. The most usual procedure is to form induced new-creations according to English and Latin models. On the other hand, most of the names of medicines retain borrowed international forms; pharmacy thus appears to be the only branch of science which accepted international terms on large scale.

### 2) Physics

Loans in physics are not very frequent. The only consistent exception are the names of various physical units, appellatives derived from personal names. Their form is usually short – 2–3 syllables and thus acceptable for the lexical system of modern Chinese. Some forms are reduced to the first syllable.

### 3) Weapons

Names of weapons of European origin are known in Chinese mostly in their borrowed form. The creation of native doublets is rather exceptional, but hybrid doublets are very frequently in parallel use with the borrowed forms.

### 4) Christianity

Borrowed forms denoting notions from the realm of Christianity have a longer tradition in Chinese than other loans from Western languages. The initial stages of their penetration are connected with the activity of the first missionaries in the second half of the 16th and 17th century. Although the first missionaries were mostly Italians, Frenchmen and Spaniards, the loans in our set which are the most common and assimilated ones, seem to point rather to English and Latin models. The specific features of these loans are their phonemic and graphic stability and the absence of native doublets. Older Chinese expressions, occasionally used as doublets, do not possess the connotation of Christian religion (e. g. *lèyuán* 乐园<sup>13</sup>, paradise).

### 5) Tissues and clothings

The majority of loans of foreign tissues and clothings have become assimilated in modern Chinese, as they are usually bisyllabic or trisyllabic forms. Doublets, both new-creations and hybrids, are only exceptional.

### 6) Literature and art

The names of literary forms, as a rule, have not become assimilated. Some terms from the field film-photography have kept the borrowed forms. The names of styles of architecture are used both in borrowed and hybrid forms.

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<sup>13</sup> Chinese characters appearing in the tables and occurring again later in the text will be provided with a broken index marking the number of the semantic field and the serial number of the entry. This refers both to graphic shapes of loans and of their doublets. Editors' note: Chinese characters were added to the text in the current collection of studies.

### 7) Machines, implements and means of transport

The names of machines and implements invented in Western countries were borrowed exclusively from English; except bisyllabic forms, they were usually substituted by descriptive creations or graphic loans from Japanese.

### 8) Food and beverages

The names of various kinds of food-stuffs and beverages were borrowed from English, as they are either of English origin or were introduced into China due to contact with the Anglo-Saxon world. The names of some specific products were supplied by Russian. The beverages are very often known both in the borrowed and hybrid forms. As regards the loans of various kinds of food-stuffs, the creation of doublets, with several exceptions, did not meet with success, sometimes only older native forms are used instead.

### 9) Chemistry

The loans in chemistry can be divided into two groups: the denotations of chemical substances and compounds and the denotations of chemical elements.

Some of the international forms of chemical compounds were borrowed mostly from English. In most cases, they were substituted by new-creations. In general, the names of various chemical compounds were created directly according to English terminological patterns. In isolated cases, monosyllabic forms and simultaneously also new phonoideograms were formed. Occasionally, obsolete characters were also used (e. g. the character *bēn* 苯, originally denoting, according to the *Kangxi dictionary*, “a luxuriant vegetation” has been used for “benzine”).

The denotations of chemical elements represent one semantic field where Chinese had to adopt the method of borrowing. The prevailing monosyllabic character of Chinese lexical morphemes has called for morphemic adaptation of chemical elements in a manner characteristic for the adaptation of loans in Chinese in general – the reduction in the number of syllables. To be exact, the names of chemical elements are actually loans of the first, exceptionally of the second syllable of their Latin models. The borrowed syllable, naturally, is liable to phonemic adaptation. (The most marked alterations are the omission of the first, in some cases of the second member of the consonantal cluster and the substitution of the vowel.)

The creation of the graphic shapes for these borrowed forms was comparatively easy. On the basis of analogy to older phonoideograms with the classifiers *qì* 气, vapour, *shí* 石, stone and *jīn* 金, metal new phonoideograms were formed. Those with the classifier *qì* 气 are used for gases, e. g. *yà* 氬, Argonium, *lǜ* 氯, Chlorum, *fú* 氟, Fluorurum, *dōng* 氡, Radon. Those with the classifiers *shí* 石 record metalloids, e. g. *péng* 硼, Borium, *xī* 硒, Selenium, *dī* 碲, Tellurium. Those with the classifier *jīn* 金 record metals, e. g. *lǚ* 鋁, Aluminium, *pí* 鉍, Beryllium, *sè* 銻, Caesium, *gè* 鉻, Chromium, *jiǎ* 鉀, Kalium, *bù* 鈾, Plutonium, *tài* 鈦, Titanium etc.

### 10) Music and dance

As regards the names of musical instruments, there is a vacillation between the borrowed forms and the new-coined denotations which are based on the names current in the domestic musical terminology. Musical forms the knowledge of which is to a certain extent restricted to musical circles only, have kept the borrowed forms. The names of foreign dances usually possess also hybrid doublets which are, as a rule, more current than the borrowed forms.

### 11) Politics, economics and philosophy

The borrowing of terms of modern political life into Chinese was rather frequent in the twenties. The majority of these terms were borrowed from English, there are also terms borrowed from French and German and last, but not least from Russian. Most of these terms are trisyllabic or even polysyllabic words and as such do not agree with the preference for shorter – mono- to trisyllabic words in modern Chinese. In the majority of cases these loans were substituted by new-creations and graphic loans from Japanese. Hybrid doublets which were occasionally coined, have not become stabilized either. Only terms which denote foreign political notions and institutions are used in the borrowed form. These are mostly terms of Russian and German origin.

### 12) Measures and weights

Measures and weights of the decimal system were borrowed into Chinese from French. English and Russian supplied only names of units used in these countries. They are used in Chinese as unassimilated foreign words and are sometimes substituted by hybrid forms whose first morpheme denotes the respective country and the second morpheme a Chinese unit of corresponding length or volume (e. g. *yīnglǐ* 英里, mile, *élǐ* 俄里, verst, *yīngmǎ* 英码, yard).

The borrowed forms of the units of the decimal system were, due to their length, unacceptable for modern Chinese. Only the denotations of several basic units, reduced to the first syllable, became assimilated (e. g. the bisyllabic adapted form *mǐtū* 米突, metre, has been reduced to *mǐ* 米; similarly the trisyllabic form *kèlánmǔ* 克兰姆, gramme, has been reduced to *kè* 克). The foreign forms of higher units were substituted by native equivalents with the attribute *gōng* 公, public (e. g. *gōngshēng* 公升, litre, *gōngjīn* 公斤, kilogramme, *gōnglǐ* 公里, kilometre etc.). As regards lower units, there are comparatively stabilized bisyllabic forms the first morpheme of which denotes the place of the unit on the scale, the second morpheme is a borrowed morpheme of a basic unit of the decimal system or its stabilized native equivalent (e. g. *lǐkè* 厘克, centigramme, *háomǐ* 毫米, milimetre, *fēnshēng* 分升, decilitre etc.).

### 13) Animals and plants

Into this field we also group some isolated biological terms which have been all substituted by native doublets. Only very few names of animals and plants have

been borrowed and they are all treated as foreign words. In some cases descriptive creations are used instead.

#### **14) Snobisms**

Snobbish expressions have to be treated as a special group of loans in Chinese. The reasons are the following: they were actually superfluous; in most cases there existed a synonymous native word, the loan-word was only supposed to express a temporary fashion or taste, as well as the admiration for foreign habits. With the very few exceptions, they have not become assimilated and do not occur in the written language. Last, but not least, their knowledge was restricted to the bourgeois and intellectual world of the big cities, especially Shanghai and Kanton which had contact with foreign countries. In some cases the borrowing had a certain justification, as the native Chinese word did not express the same connotation as the English or French model. The greatest part of these snobbish expressions are social titles, modish expressions of art and psychology. After 1949 these expressions were altogether obliterated, only very few which were not completely bound upon a certain social milieu, had the possibility of assimilation.

Further, we shall discuss briefly the characteristic features of loans in three other semantic fields. We refrain from compiling lists of these loans, as it is technically impossible to make them complete, besides, plentiful examples are easy to find in special manuals or even standard texts.

#### **Foreign monetary units**

The names of foreign monetary units were introduced into Chinese as a new semantic field. They were usually borrowed directly from the language representing the community using the respective currency (e. g. *shēngdìxīmǔ* 生地西姆, Italian centesimo, *shēngdīmǔ* 生地母, Spanish céntimo, *liěwǎ* 列瓦, Bulgarian lewa, *zīluótí* 兹罗提, Polish zloty). In most cases they were adapted and stabilized as bisyllabic or trisyllabic words (e. g. *fǎláng* 法郎, franc, *gēbǐ* 戈比, kopeika, *kèluóqīn* 克罗钦, Groschen). The proof of their stabilization is the comparative steadiness of their phonemic and graphic shapes and the absence of alternative shapes. Usually, only units used in several countries possess, for the sake of differentiation, alternative shapes (e. g. crown, used in Czechoslovakia has the shape *kélāng* 克朗, while Norwegian and Danish crown use besides the alternative shape *kèluónà* 克罗纳 and Swedish crown the shape *kélún* 克伦). Due to their rather low frequency, these loans are to be considered foreign words. The formation of doublets is very exceptional (e. g. *měijīn* 美金 or *měiyuán* 美元 is more frequent than the loan *tāilā* 他拉, American dollar).

#### **Geographic names**

Geographic names, with the exception of a small number of loan-translations, are borrowed into Chinese in their native form or through the mediation of the English form (e. g. *àodìlì* 奥地利, Austria, *jiékèsīluòfákè* 捷克斯洛伐克, Czechoslovak,

*fēnlán* 芬兰, Finnland, *xiōngyáli* 匈牙利, Hungary, *nuówēi* 挪威, Norway, *bōlán* 波兰, Poland, *wéiyěna* 维也纳, Vienna etc.). The mediating function of English in this case may be explained by greater popular knowledge of the geographic term in its English form in general or by the fact that China got acquainted with the geography of the West thanks to the British influence. In contradistinction to borrowed personal names, the adapted phonemic and graphic shapes of geographic names (with the exception of the rather less current ones) are more stabilized. The names of countries and cities are known in the borrowed form; as regards the names of continents, the hybrid doublet is preferred; the names of mountains and rivers very often possess hybrid forms with the explicative morphemes *shān* 山, mountain and *hé* 河, river.<sup>14</sup>

### Personal names

Names of non-Chinese personalities (with the exception of those from the countries using ideographic writing which are borrowed by means of their graphic shape) are liable to phonemic adaptation which causes sometimes difficulties in their identification. The phonemic and graphic shapes of foreign personal names in Chinese are generally less stabilized than loans in other semantic fields (e. g. *yàlǐshiduōdé* 亚里斯多得, *yàlǐshiduōdé* 亚里士多得, Aristotle, *hēigé'ér* 黑格尔, Hegel [from German], *hēizhǐ'ér* 黑智儿 [from Engl.], *shūběnhuá* 叔本华, *zuǒbiānhé'ái* 佐边荷埃, Schopenhauer).

Certain regularities can be observed only in the transcription of Russian personal names, especially of some of their formatives, e. g. -skij is transcribed always by the same characters *sījī* 斯基 (*tuósītūōyēfūsījī* 陀思妥耶夫斯基, Dostoyevsky), -kin or -gin is transcribed as *jīn* 金 (*àonièjīn* 奥涅金, Onegin), -v as *fū* 夫 (*fǎjiéyēfū* 法捷耶夫, Fadeyev), -na (also in other feminine names) as *nà* 娜 (*ānnà kāliènnà* 安娜·卡列尼娜, Anna Karenina).

## 4. Conclusions

### General observations

Surveying closely the nature of the semantic fields described above and the lexico-semantic character of the assembled loans, we find that

1. Modern Chinese has not absorbed, with the exception of pharmaceutical terms, the international scientific terminology, names composed of Latin and Greek constituents, especially linguistic forms which have the nature of description of the denotatum (usually compound words) which are easy to translate or to imitate;

2. Modern Chinese is ready to accept international scientific terms, under the condition that the forms of the loans are short and have the nature of signs (usually simple primary words) and as such are difficult to analyse and to imitate on the basis of correspondence between the morphemes of the model and of the equivalent to be coined (e. g. *xiūkè* 休克, shock, *kātā* 卡他, catarrh);

<sup>14</sup> Instances of these hybrid creations will be discussed in the third part of our study which is going to deal specially with hybrid words.

3. Modern Chinese is willing to assimilate international names of various units of measure, especially physical units, appellatives derived from personal names, and units of length, weight etc. which are easily adapted by reduction in the number of syllables (e. g. *kè* 克, gramme, *mǐ* 米, metre, *kǎ* 卡, calorie etc.);

4. Modern Chinese readily accepts technical loans, as

a) names of special foreign products, instruments, culinary expressions (an exception, compared to other languages, in the category of the so called exoticisms, are the names of animals and plants which do not, as a rule, become assimilated in the borrowed form),

b) expressions connected with foreign ways of life (styles of architecture, dances, musical forms, Christian expressions, political institutions);

5. New semantic fields which have the nature of separate entities, can be incorporated into the lexical system of modern Chinese. The expressions in these newly introduced semantic fields, like foreign monetary units, foreign geographic and personal names, chemical elements can be hardly substituted by native equivalents, notwithstanding, they are felt as foreign words, with the exception of chemical elements which were subjected to morphemic adaptation;

6. Modern Chinese refuses loan-words with a distinct connotation limited to a certain social class, like snobbish expressions; here, rather a strong pressure of public opinion and a regulating function of the language policy play a decisive part.

### **Sources of loans**

English is, no doubt, one of the principal sources of loan-words in modern Chinese. Loans, both native English words and words introduced into Chinese thanks to the mediating function of English account for 69.85% of our set (not counting English monetary units). This is undoubtedly the consequence of the privileged position of Great Britain in the Far East in the second half of the 19th and in the 20th century when China took serious interest in Western thought and science. As we have seen, English appears to be the principal source of loans in all the investigated semantic fields. Some imported geographic terms which reveal the English form as their model witness that the knowledge of geography, too, has been intermediated by English. English also furnished a series of technical terms, names of machines, various implements, weapons and means of transport. Loans from English can be also found in spiritual domains, yet their predominance here is not so striking. Sometimes, it is very hard to differentiate, for instance, in music, to what extent loans were borrowed directly from Italian and to what extent English played the role of a go-between. As regards the expressions of every-day life, English supplied names of various tissues, meals and beverages, most of them of English origin. A set of loans that had no counterpart in loans from other languages, are the snobbish expressions which are the witnesses of the deep influence the English way of life exercised upon the Chinese intellectuals and higher and middle classes.

None of the Western languages can match English as a source of loans in modern Chinese. A certain amount of loans comes from French, they represent 13.04% of our

set. They include some political and literary terms. These loan-words date probably from the period after the first world war, when a lot of Chinese students and artists stayed in France. French, too, offered the names of units of the decimal system which did not get assimilated due to their length.

Loans from German comprise only 3.4% of our set. These are only several terms of political economy and some names of German institutions, especially from the period of Nazi rule.

Italian supplied several musical terms (some of them, though, probably indirectly), they represent only 3.18% of our set.

Russian supplied 8.40% of our set. In Manchuria where the Russian and Chinese linguistic community got into direct contact, some Russian words of every-day life, like parts of garments, meals etc. were borrowed into Chinese. Most of them got assimilated only in Manchuria, some of them penetrated into modern colloquial Chinese. Russian as the language of the first socialist country furnished also some terms of modern politics, especially the names of some soviet political institutions.

### International and isolated loans

The percentage of international loans in the semantic fields described above amounts to 83.47%.

Loans of the isolated type are in absolute minority. The models of these loans are

1. names of various products and food-stuffs (e. g. cheese, butter, hop, platije etc.)
2. technical terms not used in international scale (e. g. rifle, cartoon, engine, tenant etc.)
3. names of measures and weights used in certain countries only (e. g. bushle, cable, fathom, pud, verst etc.)

Loans in modern Chinese, both international and isolated, as we have seen, are mostly special terms. Borrowing then, was called forth by a need-filling motive, i. e. by the practical necessity to denote a new thing, a new institution. These loans do not belong to the general vocabulary of modern Chinese.

International loans of the descriptive type very seldom become assimilated. The tendency of their substitution by descriptive new-creations or graphic loans from Japanese, also of descriptive type, is especially strong. Let us mention several examples of these substitutions:

The loan *yīnsùlín* 因素林, insulin is replaced by the descriptive creation *yídǎosù* 胰岛素, “extract from pancreatic islets”; the loan *kāngbàiyīn* 康拜因, combine (harvester) is used together with the doublet *liánhéjī* 联合机, a complex machine; *suōnàtā* 梭那他, sonata has the doublet *zòumíngqǔ* 奏鸣曲, “musical composition with play and response”; the loan for television, *délǜwéixióng* 德律维雄, has been completely substituted by a descriptive creation coined in Japanese, *diànshì* 电视, “electric vision”; similar is the case of *pǔluóliètǎliyà* 普罗列塔利亚, proletariat which has been substituted by the graphic loan *wúchǎn jiējí* 无产阶级, “a class not possessing any estates” etc.

When explaining this phenomenon, beside the general linguistic causes of the comparatively negative attitude of modern Chinese to borrowing, which we shall discuss later, we have to take into account the following:

International loans of the descriptive type, when borrowed into Chinese, lose their descriptive nature. The loss of the meaning of sememes caused by their transition into a different semantic system is supported and stressed by the ideographic character of Chinese writing which cannot be displayed in this particular case. Besides, when forming new words, modern Chinese prefers creations of the descriptive type in general. Thus, the creation of descriptive doublets is influenced by the tendency of subordinating lexical innovations to the usual word-formation patterns.

### **Position of loan-words in the lexical system**

If we take the assembled set of loans as a representative sample, its quantitative analysis may point out some facts which seem to be characteristic of the position of loan-words in the lexical system of modern Chinese. Nevertheless, the numerical data to follow, will have to be taken as approximative values only, as the considered set of loans is not exhaustive and besides, in our choice and evaluation, we could not avoid a certain subjective attitude, as mentioned in note 8.

In our set of loan-words, 145 words, i. e. 42.02% are classified as assimilated loans, while 200 words, i. e. 57.98% are considered unassimilated loans. The latter are either used by speakers who have a higher education or are familiar with a special branch of knowledge, or they have been completely replaced by doublets.

The amount of loans in modern Chinese is very low. Even the percentage of assimilated loans in our set has not surpassed, according to our findings, 50% of the total. One of the factors which evidently has a bearing upon this fact and which can be corroborated by the statistical data offered by our set, is the difference between the length of the model and consequently of the loan-word, too, and the usual length of a word in modern Chinese.

So far, no extensive statistical research of the length of a word in modern Chinese has been undertaken, the prevailing opinion, though, is that apart from a rather high amount of monosyllabic words, the majority of words in modern Chinese are bisyllabic or trisyllabic.<sup>15</sup>

The average length of assimilated loans is 2.25 syllable.<sup>16</sup> That means that it is within the limits of the usual or preferred length of words in modern Chinese. 94.52% assimilated loans in our set are monosyllabic to trisyllabic words.

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<sup>15</sup> Wu Jingcun 吴兢存, the author of the paper *Lun xiangxinshi* 论向心式 [On Endocentric Construction] (1954) gives the following data of statistical research of the preamble to Chinese constitution: monosyllabic words 37.7%, affixed words 0.59%, loan-words 0.19%, compounds 61.4% (p. 131). On p. 133 after having mentioned that the endocentric construction is the most prevailing one, he states that the majority of words of endocentric construction are bisyllabic, next come trisyllabic words, words of four or more syllables being rather rare.

<sup>16</sup> In case of difference in the number of syllables between alternative shapes, we took into account the rather current shape only. When there are two alternative shapes, a monosyllabic

The average length of loans which were classified as unassimilated, surpasses the limits of the preferred length of Chinese words, it is 3.27 syllable. There are no unassimilated monosyllabic loans, bisyllabic and trisyllabic loans amount to 62%. There are even loans 5–6 syllables long.

The overwhelming majority of loan-words in modern Chinese are nouns, their share is 97.10% of the total amount. As regards other word-classes, only adjectives are present in our set, they amount only to 2.31%. They can function as attributes, as predicates, with the exception of the adjective *módeŋ* 摩登, modern, they have to be used with the copula. Other word-classes (with the exception of unassimilated loans – hallo, yes) have not been found.

A well known fact that nouns, in contradistinction to other word-classes, are easily borrowed, is thus even more corroborated in the case of modern Chinese. The more modification of the underlying form a lexical unit requires when entering into a syntactic construction and the greater the differences in the mode of modifications between the giving and the borrowing language, the lesser is the probability of borrowing. The borrowing of nouns in modern Chinese is called forth, before all, by the practical need of denotation, nevertheless, the fact that Chinese nouns do not require modifications in form when entering into syntactic constructions greatly facilitates their borrowing. The predicative character of Chinese adjectives is an impediment for borrowing of adjectives. The differences in the functional mechanisms of the verb in Chinese and in the giving languages (English, eventually Russian) (i. e. the differences in the temporal systems, verbal aspects and their formal expression) made the borrowing of verbs practically impossible.

The degree of assimilation of a loan-word is characterized by its activity which manifests itself in its capability to form hybrid compounds. Unassimilated, foreign words are able to form only hybrid compounds of the explicative type which are rather preferred and semantically more distinct doublets identical in meaning with the borrowed form. Monosyllabic to trisyllabic assimilated loans can enter as bound morphemes into hybrid compounds of a new meaning.

### Loan-words and their doublets

The creation of doublets to loan-words as a lexical phenomenon has not the same standing in all languages. A rather frequent creation of native doublets can be regarded as a signal of the inadaptability of loans to the lexical system of the borrowing language. The coexistence of a loan and a doublet, however, is only temporary. In general, there are two principal possibilities: either one of the lexical units becomes stabilized or the meanings of these two units get differentiated and thus, their relation grows loose.

In modern Chinese the creation of doublets, both to assimilated and especially to unassimilated foreign words is very frequent. At the same time, there is quite a number of indispensable unassimilated loans which do not, due to their low fre-

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and a bisyllabic one, both used (as in the case of units of measure), we counted with both shapes.

quency, possess any doublets, e. g. *dàinàměituō* 代那美脱, dynamite, *wéikè'ér* 维克尔, vicar etc.

The creation of a doublet in modern Chinese appears, however, to be only an acknowledgement of the indispensability of the loan-word and a manifestation of the effort to incorporate the borrowed meaning into the semantic system. Decisive for the assimilation of the loan-word is not the absence of a doublet, but their mutual relation. There are three possibilities:

1. A certain balance can be obtained between the borrowed form and the doublet, e. g. *jítā* 吉他 and *liùxiánqín* 六弦琴, guitar have approximately the same frequency. The same are the cases of *mǎdá* 马达 and *fādòngjī* 发动机, motor and of *wéitāng* 维他命 and *wéishēngsù* 维生素, vitamin.

2. The doublet is less current than the loan and as such is more or less superfluous in the lexical system, e. g. the loan *yāpiàn* 鸦片, opium is more current than *yángyān* 洋烟; the effort to substitute the loan *luóji* 逻辑, logic by a graphic loan from Japanese *lùnlíxué* 论理学 or by a native creation *míngxué* 名学 did not meet with success; *wūtuōbāng* 乌托邦, utopia is more current than the native *lǐxiǎngguó* 理想国, ideal state which does not render the respective connotation.

3. The doublet has substituted the loan-word which is still in use, but with minimum frequency. This is usually the case of longer loans when a descriptive creation is easy to coin or when a graphic loan from Japanese, very often of the descriptive type, appears to be more acceptable, e. g. a descriptive creation *kuòyīnqì* 扩音器, microphone (literally: an instrument for spreading sound) has substituted the borrowed form *màikēfēng* 麦克风; similar is the case of *shēngfēngnǐ* 生风尼, symphony which has been replaced by the descriptive creation *jiāoxiǎngyuè* 交响乐; the graphic loan *lìxué* 力学, dynamics, a Japanese coined loan-translation, has substituted the loan *dàinàmǐsī* 代纳密斯; similarly *āidīměidùn* 哀的美顿/ *āidīměidùn* 哀的美敦, ultimatum had to give way to the graphic loan *zuìhòu tōngdié* 最后通牒 (literally: the last dispatch, announcement).

Only in the third case which is, though, the most current one, the existence of a doublet can be considered a symptom of the low degree of assimilation of the loan-word.

A special kind of balance is maintained between loans and hybrid doublets of the explicative type. Usually, both forms are used, yet the hybrid form is preferred thanks to its semantic distinctness and marked appurtenance to a certain word-class. Nevertheless, there are cases when most of the speakers prefer the borrowed form to the hybrid form, as in the case of *tǎnkè* 坦克 and *tǎnkèchē* 坦克车, tank, *qiǎokèlì* 巧克力 and *qiǎokèlìtáng* 巧克力糖, chocolate.

According to our findings, an overwhelming majority of unassimilated loans, i. e. 79.5% possess doublets, only 41 unassimilated loans, i. e. 20.5% are without doublets. The percentage of assimilated loans with doublets is surprisingly high, too, it amounts to 40.42%. Only 87 assimilated loans, i. e. 59.58% do not have any doublets. The rather high percentage of doublets to assimilated loans is to be accounted to hybrid doublets which are very common with borrowed names of weapons, machines, food-stuffs, beverages, musical forms etc.

The most numerous type of doublets are descriptive new-creations, next come hybrid doublets. The cases when an older native word is used together with the borrowed form are quite numerous, too. The number of graphic loans used as doublets is not insignificant, either. The creation of new characters is common with chemical terms only. Exact loan-translations as doublets are very exceptional.

There are cases when a borrowed form possesses two doublets, most usually a hybrid form and a descriptive new-creation. The hybrid doublet which was formed in order to range the loan-word with a certain class of native words (e. g. *pǔluó jiējí* 普罗阶级, proletariat, *kāngménzhūyì* 康门主义, communism, *huá'ěrzǐwǔ* 华尔兹舞, waltz) as a transient and semantically indistinct form had to give way to a native or Japanese descriptive creation (in our case to *wúchǎnjiējí* 无产阶级, *gòngchǎnzhǔyì* 共产主义 and *yuánwǔqǔ* 圆舞曲). There are also cases when a native creation displaced a borrowed Japanese form (e. g. the native *yìyuàn* 议院 or *guóhuì* 国会 is more used than the graphic loan *yìhuì* 议会, parliament).

The high percentage of borrowed forms with doublets supplies evidence to the effect that the lexical system of modern Chinese directly calls for the creation of lexical units which would be in agreement with the native word-formation patterns. On the basis of statistical enquiry we find out that the excessive length of borrowed forms appears to be one of the principal linguistic reasons for the creation of doublets, a further linguistic reason, as already mentioned, is the overall preference for descriptive creations. In general, it can be said that loan-words whose length agrees with the usual length (1–3 syllables) of native words, do not unconditionally require the creation of doublets. As regards longer loans, only those either of a very low frequency or of a rather high frequency (e. g. *bù'ěershíwéikè* 布尔什维克, bolshevik, *mèngshíwéikè* 孟什维克, menshevik) do not possess doublets.

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<sup>17</sup> Editors' note: Unfortunately, we could not trace back the exact edition of the book used by Z. Heřmanová that The Commercial Press published. For this reason, we revised the quotes cited in the text according to the more recent edition of Legge's *Four Books*.

## CONTRIBUTIONS TO THE STUDY OF LOAN-WORDS AND HYBRID WORDS IN MODERN CHINESE II

**Abstract:** *The second paper of the series discusses the four significant aspects of loan adaptation. The primary attention is paid to the phonemic adaptation that, together with the graphic adaptation, represents an indispensable condition of incorporating the loans into the lexical system of modern Chinese. The following issues are addressed: the number of phonemes and their distinctive features; substitution of consonants, semivowels, vowels, and diphthongs; adaptation of consonant clusters and closed syllables. The graphic adaptation describes the issues arising from the transfer between two types of writing systems. Two of them are investigated in greater detail: semantically motivated choice of graphs in some loans and fluctuation in the graphic shape of a loan. As for the morphemic adaptation, the paper summarizes the techniques that result in the assimilation of words and their similarities with the native words. Semantic adaptations are mentioned only briefly, considering the main objective of this paper. Based on the investigation of the four types of adaptations, the study describes the characteristics of loans in modern Chinese and explains the causes of their comparatively low number. It is concluded with suggestions for the standardization of loans.*

**Key words:** *Modern Chinese, loan-word, phonemic adaptation, graphic adaptation, morphemic adaptation*

### II. ADAPTATION OF LOAN-WORDS IN MODERN CHINESE

In the second part of our paper we wish to discuss all the pertinent aspects of adaptation of loans in modern Chinese, i. e. phonemic, graphic, morphemic and semantic ways of adaptation. Phonemic and graphic adaptation as indispensable conditions of incorporating the loans into the lexical system of modern Chinese will be investigated in greater detail. As regards morphemic adaptation we shall attempt, first of all, to sum up the techniques which result in the assimilation of loans and in their similarities with the types of native words. Semantic adaptation which is the least important aspect of adaptation in our case, will be mentioned only briefly.

The conclusions drawn from the investigations of the techniques of adaptation of loans in modern Chinese should elucidate the following important questions concerning lexical borrowing in modern Chinese:

1. What are the characteristic features of loans in modern Chinese
2. What are the causes of the comparatively low number of loans and of the negative attitude of modern Chinese towards borrowing
3. What should be the principles of standardization of loan-words

## 1. Factors having a bearing upon the adaptation of loans

The resulting shape of a loan is influenced both by external and internal factors.

By external factors we understand the ways of borrowing which are determined by extralinguistic facts. By internal, i. e. linguistic factors we mean the restrictions imposed upon the adaptation of loans by the phonemic, morphemic and graphic system of the borrowing language. These will be the main object of investigation in the individual chapters on adaptation.

As regards external factors, they refer mainly to

- a. The auditive (oral) or visual way of borrowing
- b. The direct borrowing into the standard language or indirect borrowing via a dialect

In the case of loans in modern Chinese these two principal external factors are very often rather hard to put completely apart. Both in the case of the auditive and the visual way of borrowing we have to take into account the inaccurate and unreliable mastery of the standard Peking pronunciation by speakers who might be regarded as initiators of loans.

### a. Auditive and visual way of borrowing

The majority of loans in our set give evidence in favour of the auditive way of borrowing, i. e. on the basis of the knowledge of the pronunciation of the model. As regards intellectual loans, we can assume with a reasonable degree of probability that both ways of borrowing, the auditive and the visual one, were applied jointly, i. e. that the knowledge of the pronunciation of the model, very often imperfect, was combined with the knowledge of its spelling acquired by reading.<sup>18</sup> The shapes of only a minority of loans point to the visual way of borrowing, i. e. on the basis of the knowledge of spelling, not supported by the knowledge of pronunciation.

The following loans from English can serve as examples of the auditive way of borrowing:

*lai-fu* 来复 – *raifl* (rifle); *tsia-k'ŕ* 甲克, 夹克 – *dʒækɪt* (jacket); *tiŋ-tʂi* 丁几 – *t'ɪŋktʃə* (tincture); *tai-na-mei-t'uo* 代那美脱 – *dainəmaɪt* (dynamite); *fan-ja-lin* 凡亚林, *wai-au-lin* 外奥林 – *vaiəlɪn* (violin)

As examples of the second case, i. e. the combination of the auditive and visual way of borrowing, the following intellectual loans can be quoted:

*pa-li-mən* 巴力门 – *p'a:ləmənt* (parliament); *tr-mo-k'ŕ-la-ʂi* 德漠克拉西 – *dimokrəsi* (democracy); *ti-k'ŕ-t'uei-tuo* 狄克推多, 迪克推多 – *dikt'eitə* (dictator); *k'a-t'ʊŋ* 卡通 – *ka:t'u:n* (cartoon); *pa-luo-kr* 巴洛哥 – *bərouk* (baroque)

The visual way of borrowing can be demonstrated by the following loans:

<sup>18</sup> This way of borrowing is denoted by E. Haugen as “pseudo-oral” in contradistinction to the wholly oral one (without the knowledge of spelling or its disregard) and the non-oral one (based upon the knowledge of spelling and its interpretation according to the spelling conventions of the borrowing language). See his review of the study by A. Stene, *English Loan Words in Modern Norwegian* (1949, p. 65).

*p'in-t'uo* 品脱 – *p'aint* (pint); *ni-luŋ* 尼龙 – *nailɔn* (nylon); *xɿ-ər-məŋ* 荷尔蒙 – *hɔ:moun* (hormone); *kuŋ-tu-ər* 公度尔 – *k'ɔndɔ* (condor); *wei-k'ɿ-ər* 维克尔 – *vike* (vicar)

In the last three cases it is difficult to decide finally whether the phonemic shape of the loan points to an imperfect knowledge of pronunciation or rather to the visual way of borrowing. We are in favour of the latter explanation, as there are instances of oral borrowing of loans with the final -ə, such as

*t'a-la* 他拉 – *dɔlə* (dollar); *mo-t'uo* 摩托 – *moutə* (motor); *luo-la* 罗拉 – *roulə* (roller)

In cases of two different readings of the model, the loan, too, possesses sometimes two different phonemic shapes, e. g.

*təiəu-ər* 焦耳, 焦尔 – *dʒu:l*, *tʂu-ər* 朱尔 – *dʒu:l* (joule); Shangh.<sup>19</sup> *uəʔ-s-ki* – *wiski*, *huəʔ-s-k'ə* 灰司克 – *hwiski* (whisky)

Several alternative phonemic shapes of certain loans indicate insufficient knowledge of pronunciation or vacillation between the auditive and visual way of borrowing, e. g.

*piən-si-ni* 遍西尼, *piən-su-ən* 遍苏恩, *p'iən-tʂ'ən* 偏陈 – *benzi:n* (benzine, benzene)

From the above examples it is to be seen clearly that loans were introduced into modern Chinese on the basis of both their oral and graphic shapes, and that the knowledge of the spelling of the model was usually supported by that of its pronunciation. As the latter knowledge was not always reliable, it is in some cases very difficult to decide whether the loan was borrowed orally or visually.

## b. The mediating function of dialects

In modern Chinese the loans were introduced into the standard language (*putonghua* 普通话)<sup>20</sup> either directly or through a dialect. In most cases it was the Shanghai dia-

<sup>19</sup> Dialectal pronunciation is given according to *Quanguo zhuyao fangyanqu fangyin dui-zhaobiao* 全国主要方言区放音对照表 [Comparative Tables of Dialectal Pronunciation of China's Main Dialectal Areas], compiled by the research team of the secretariat of the Research Committee for the Reform of Chinese Writing (1954).

<sup>20</sup> The denotation *putonghua*, common language, is of a more recent date than the borrowing of the considered loans into modern Chinese (from the twenties onwards). In 1956 this language was defined, after complex linguistic research, as “the standard language with the phonemic system of Pekingese as its phonemic basis, with the lexical system of Northern Chinese as its lexical basis and with the grammar of model literary works written in *baihua* 白话 as its grammatical norm.” (See Guo Wuyuan Guanyu Tuiguang Putong Huade Zhishi 国务院关于推广普通话的知识 [The Directives of the State Council on the Promulgation of the Common Language], 1956, p. 2). The majority of loans then, if we want to use the older term, were borrowed into *beifang guahua* 北方官话, Northern Mandarin which is identical with Northern Chinese and whose phonemics, though not forming a uniform system, basically agrees with the phonemic system of Pekingese.

lect which played the role of a go-between, as its contact with the Western world was rather close and its prestige among the non-Mandarin dialects considerably high.

There are other dialects which borrowed words from English directly, but these loans, not counting some rare exceptions, were limited to the borrowing dialect only. The loans from English in the Cantonese dialect can serve as typical examples. Although they are rather numerous, they enjoy only regional importance, e. g.

*si-tan* 士担 – *stæmp* (stamp); *tæk* 则, *tɛ'ik* 赤 – *tʃæk* (check); *si-to* 士多 – *stoo:* (store); *ta-sən* 打臣 – *dʌzn* (dozen); *tɛəm* 占 – *dʒæm* (jam); *po* 波 – *bo:l* (ball)

If the phonemic shape of the loan-word in Chinese is very remote from the shape of the model and there exists a corresponding phoneme or a corresponding phoneme combination is permissible in standard Chinese, the mediating function of a dialect should be taken into consideration. In these cases the introduction of the loan into the standard language proceeds in two phases:

1. In the phase of a phonemic loan created according to the phonemic system of the borrowing dialect

2. In the phase of a graphic loan, i. e. the stabilized graphic shape of the loan borrowed by a dialect is passed into the standard language and its phonemic shape is created here according to the phonemic values of the applied graphs.

In the second phase then, the same mechanism is applied as in the case of borrowing from Japanese. The whole procedure is completely analogous to that of borrowing of words which themselves in Japanese are loans from other languages. The result is that the loan which in Japanese or in the dialect was a more or less exact reproduction of the foreign model, differs now owing to the two phases of borrowing, quite considerably in its phonemic shape from the foreign model. Let us compare an example from Japanese with some examples of loans borrowed through the Shanghai dialect:

*wa-sʃ* 瓦斯 – *gæs* (gas) is a loan of the Japanese *gasu*, a direct loan from English could take the shape of *\*ka-sʃ*; *soufə* (sofa) has in standard Chinese the shape *sa-fa* 沙发 thanks to the Shanghai shape *sa-fa*, while a possible shape in standard Chinese would read *\*sou-fa*. Similar are the cases of *sa-tiŋ* 沙丁 – *sa:di:n* (sardine), in Shanghai dialect it reads *sa-tiŋ*, a possible shape nearer to the model would be *\*sa-tiŋ*; of *k'au-pei* 考贝 – *k'ɔpi* (copy), Shangh. *k'ɔ-pe?*, *\*k'r -pi*; of *xua-ər-tsʃ* 华尔兹 – *wɔ:ls* (waltz), Shangh. *ua-ər-z*, *\*wo-ər-tsʃ* etc.

The borrowing of some loans in two phases causes great difficulties in the study of the procedures of borrowing. If we bear in mind that the majority of loans were introduced orally, so that it is almost impossible to eliminate all the influences of the dialectal pronunciation, we have to draw the conclusion that some recurrent correspondences between the phonemes of the model and their substitutes in the replica can be considered in terms of approximate values only.

## 2. Phonemic adaptation

Phonemic adaptation of loans in modern Chinese was studied only as regards loans borrowed from English. As loans from other languages are not too numerous, we would not be able to follow the modes of substitution of all the phonemes of the respective giving language.

Phonemic adaptation consists, first of all, in the substitution of the phonemes of the model by the phonemes of the borrowing language. Viewed from this angle, the term “phonemic substitution” would be more suitable, yet notwithstanding this, we hold the broader denotation “phonemic adaptation” to be more adequate. Beside the substitution of phonemes, there are other procedures of recoding active in the phonemic adaptation, such as the elision of consonants, the epenthesis of vowels, a different segmentation of syllables, the introduction of tones etc.

Lexical units when being introduced into the borrowing language are, as a rule, subject to two phases of variations: used as foreign words they are first modified phonetically by individual speakers, more or less according to their familiarity with the pronunciation of these units in the giving language. Only when they are finally adopted and incorporated into the lexical system of the borrowing language, they undergo total phonemic substitution and other procedures of recoding. In modern Chinese the first phase is not as distinct as in other languages. As soon as the borrowed lexical unit is to be recorded by the Chinese graphic system, total phonemic substitution and recoding have to take place immediately as the character, being a minimum graphic unit, can record only a syllable, i. e. a phoneme combination permissible in modern Chinese. The preceding phase of phonetic modifications is possible only in case of speakers with a certain command of the foreign language (in its graphic form the lexical unit is still recorded by the foreign system of writing).

When confronting the Chinese and the English phonemic systems, we would like to draw attention to several phonemic phenomena which in various degrees and measures cause restrictions in the borrowing of words and call forth certain modes of adaptation. These are

1. The number of phonemes
2. Their distinctive phonetic features
3. The restrictions of phonemes in membership and sequence which manifest themselves in
  - a. The low ability of isolation of Chinese phonemes and the ensuing impossibility of their appearing outside the permitted combinations
  - b. The strictly fixed structure of the Chinese syllable and the ensuing restrictions of phonemes and phoneme combinations as regards their membership in the initial, medial and final position of the syllable.

### Number of phonemes and their distinctive phonetic features

When comparing the Chinese and the English phonemic systems, we find that neither the differences in the number of phonemes nor those in their distinctive

phonetic features appear to be most important factors determining the final shape of the loan-word.

As regards the number of phonemes there are no striking differences between the English and the Chinese phonemic systems. Both Chinese and English have 22 consonant phonemes and 2 semivowels /Chin. *p, p', t, t', k, k'; f, s, s, z, z, x; ts, ts', ts, ts', te, te'; m, n, n, j, w, j*; Engl. *p, b, t, d, k, g; f, v, θ, ð, s, z, ʃ, ʒ, r, r; ʃ, ʒ; m, n, n; j, w, j*/. There are in Chinese 7 vowel phonemes, possessing altogether 11 allophones which are in complementary distribution /i [i, ɿ, ɿ]; e [ɛ, ə]; a [a, a]; o; u; y; ə/. In English there are 7 short and 6 long vowels /i/, i, e, æ, a:, ɔ, ɔ:, u, u:, ə, ə/. Chinese has 9 diphthongs and 4 triphthongs /ai, ei, au, ou; ia, ie, ua, uo, ye; uai, uei; iau, iou/. The repertory of English diphthongs is very rich, here we list only 11 diphthongs which are the most frequent ones /ei, ai, ou, au, oi, iə, uə, eə; ɪə, ʊə, ʊi/.<sup>21</sup> (In our set of loan-words we did not find sufficient exemplification even for the substitution of these diphthongs.)

As far as the distinctive phonetic features go, we hold as most essential for the creation of the replica of the model the manner of forming the closure and the point of articulation in the oral cavity, the contrast of aspiration and that of voice as regards consonants; with the vowels it is the tongue-height, the tongue-advancement and the lip position.<sup>22</sup>

A comparison of Chinese and English phonemes reveals that there are only 9 consonant phonemes with a corresponding manner of forming the closure and a very near point of articulation /f, s, m, n, ŋ; Chin. *p, t, k* and Engl. *b, d, g*/. As the vowels go, only /i/ and /u/ are very similar, the English phonemes /ə/ and /a:/ have corresponding counterparts in the Chinese allophones [ə] and [a].

The creation of the phonemic replica of the English model by substituting Chinese phonemes characterized by different distinctive phonetic features is made possible by the following two processes:

1. Phonemic polarization, i. e. identification of the acoustic effects of the Chinese and English phonemes different in their articulation.

<sup>21</sup> As regards the number and the distinctive phonetic features of Chinese phonemes we were guided by *Xiandai hanyu* 现代汉语 [Modern Chinese] (1958), compiled by the staff of the faculty of the Chinese language and literature of the Peking university and by K. Ohnesorg and O. Švarný, *Études expérimentales des articulations chinoises* (1955). The system of phonetic notation we use is essentially the one of the former reference-work, the only alteration we introduced is the differentiation between [ə] and [a] (in combination with u and ŋ).

With regard to English, we referred to B. Trnka, *Rozbor nynější spisovné angličtiny* [Analysis of Modern Literary English] (1962, esp. p. 13); and mainly D. Jones, *An Outline of English Phonetics* (1956). As regards English vowels, because of the slight disagreement between the two authors, we were guided by D. Jones, *English Pronouncing Dictionary* (1958).

<sup>22</sup> We shall leave the acoustic and genetic aspects of distinctive phonetic features aside, as the considerations in terms of articulatory phonetics are, as far as purpose of finding correlations between the phonemes of the model and those of the replica is concerned, fully sufficient. Besides, the phonemic system of Chinese was described adequately only in terms of articulatory phonetics.

2. Simultaneous compensation of the articulatory effects of English phonemes by the nearest possible articulatory coefficients of the Chinese phonemes.<sup>23</sup>

The corresponding phonemes characterized by different articulatory features, in the mind of speakers who initiated the borrowing, are held as identical in expression and equivalent in function.

### **Phoneme substitution<sup>24</sup>**

Our general observation is that there is not, as a rule, a one to one correspondence between the English phonemes and their Chinese substitutes, that is to say, the pertinent phonemes and their allophonic variations are not substituted in a uniform way in all their occurrences. Variations in the modes of substitution are largely dependent upon the contiguous phonemes of the model and the combinatorial possibilities of Chinese phonemes; yet there are variations which might be explained by any of these factors.

### **A. Substitution of consonants**

#### **Plosives**

As regards English and Chinese plosives the manner of forming the closure and the point of articulation are basically identical. Chinese does not possess the contrast of voice which is distinctive for the English phonemic system. On the other hand, it is the contrast of aspiration which is distinctive in Chinese, while in English it is a non-distinctive feature. (Unvoiced plosives are followed by a puff of breath only in a stressed position.) The result is that Chinese when borrowing from English does not have the corresponding means of expressing the distinctive contrast of voice. There is then a tendency to compensate this contrast by that of aspiration, which is especially conspicuous in the substitution of English voiced plosives. While English unvoiced plosives are substituted both by aspirated and unaspirated homorganic Chinese plosives, English voiced plosives, with several exceptions, are substituted by Chinese homorganic unvoiced unaspirated plosives.

There are following possibilities of substitution of plosives:

1. The English unvoiced unaspirated plosive in a non-stressed position or in a consonant cluster is substituted
  - a. by a Chinese unaspirated plosive, e. g.

<sup>23</sup> A detailed exposition of the concept of phonemic polarization and compensation is offered by W. Belardi and N. Minissi (1962, p. 96 and 31)

<sup>24</sup> Ours is not a first attempt at observing the patterns of phoneme substitution. See Gao Mingkai and Liu Zhengtan, (1958, p. 145ff). When discussing the "phonemic creation" of loans, the authors study also correspondences between English and Chinese phonemes. But the established correspondences do not seem to be quite reliable, as the authors did not eliminate the loans borrowed through the Shanghai dialect. Besides, they did not try to explain the conditioned character of some of the modes of substitution.

*ni-ku-tiŋ* 尼古丁 – *nikəti:n* (nicotine); *po-li-ɕi-t'iɛn-tr* 伯理玺天德 – *prezident* (president); *sɿ-ti-k'r* 司的克 – *stik* (stick)

b. less frequently by a Chinese aspirated plosive, e. g.

*k'ai-sɿ-mi* 开司米, 开四米 – *kæfmiə* (cashmere); *t'uo-la-sɿ* 托辣斯 – *trʌst* (trust)

2. The English aspirated plosive in a stressed position is substituted by a Chinese homorganic plosive, both aspirated and unaspirated. None of these modes of substitution is conditioned; both are equally frequent, e. g.

*p'u-k'r* 扑克 – *p'oukə* (poker); *pu-tiŋ* 布丁 – *p'udiŋ* (pudding); *t'u-t'əŋ* 图腾 – *t'outəm* (totem); *tiŋ-tɕi* 丁几 – *t'ɪŋktʃə* (tincture); *k'r-k'r* 可可 – *k'oukou* (cocoa); *kuŋ-tu-ər* 公度尔 – *k'ɔndo* (condor)

3. The English voiced plosive is substituted by a Chinese homorganic unvoiced unaspirated plosive, e. g.

*pei-k'r* 杯葛 – *boikət* (boycott); *tai-na-mo* 代那模 – *dainəmoʊ* (dynamo); *kau-ər-fu* 高尔夫 – *gɒlf* (golf)

4. When a velar plosive is followed by *i*, the substituted consonant is always palatalized, as the combination of a velar plosive with a high front vowel is not permissible in Chinese, e. g.

*k'a-tɕi* 卡叽 – *k'a:ki* (khaki); *tɕi-t'a* 吉他 – *git'a:* (guitar)

## Fricatives

As regards fricatives there is a regular tendency to substitute the English, both voiced and unvoiced (breathed) fricatives by Chinese homorganic unvoiced fricatives or by fricatives with an adjacent point of articulation. If the fricative is followed by a high front vowel, the substitute is a palatalized one.

## Labio-dental fricatives *f* and *v*

are both substituted in Chinese by the unvoiced *f*, e. g.

*fu-ər-ma-lin* 福尔马林 – *fə:məlin* (formalin); *fu-t'r* 伏特 – *voult* (volt)

If *v* is followed by *i*, it is usually substituted by the bilabial semivowel *w*, as the combination of *f* with the following high front vowel is not permissible in standard Chinese. It is very well possible that these loans were borrowed through the Shanghai dialect, where the combination /*vi*/ is permitted. In the case of direct borrowing into standard Chinese the adaptation *vi* > *wei* is the nearest possible substitution anyway, e. g.

*wei-k'r-ər* 维克尔 – *vikə* (vicar); *wei-t'a-miŋ* 维他命 – *vitəmin*, *vaitəmin* (vitamin)

**Apico-dental fricatives  $\theta$  and  $\delta$** 

are not sufficiently exemplified in our set. The breathed  $\theta$  is usually substituted by  $t'$ , e. g.

*i-t'ai* 以太 – *i:θə* (ether); *i-t'uo* 以脱 – *əθil* (ethyl)

The substitution of  $\delta$  in combination with the following *i* as dorsopost-alveolar  $\delta$  is represented in our set by one example only:

*fa-ɕin*, Shangh. *fa-ɕiəŋ* 法新 – *fa:ðiŋ* (farthing)

**Apico-alveolar fricatives  $s$  and  $z$** 

are both substituted by the Chinese homorganic fricative  $s$ , e. g.

*su-ta* 苏打, 苏达, 苏答 – *soudə* (soda); *mau-sɿ-luən* 毛丝纶 – *mɔzlin* (muslin)

If these fricatives are followed in the model by *i*, they are substituted by the palatalized  $\mathfrak{s}$ , e. g.

*tr-mo-k'r-la-ɕi* 德谟克拉西 – *dimokrəsi* (democracy); *ɕin* 锌 – *ziŋk* (zinc)

If these fricatives in the adapted shape of the loan in standard Chinese are substituted by  $\mathfrak{s}$ , it shows either

1. that the loan was borrowed through the Shanghai dialect, e. g.

*sa-tiŋ* 沙丁, Shangh. *sa-tiəŋ* – *sɑ:di:n* (sardine); *tɕi-sɿ* 吉士, Shangh. *dʒ'i:z* – *tʃi:z* (cheese)

or 2. that the phonemic adaptation was influenced by the graphic shape of the loan, e. g.

in one of the graphic shapes of the loan *sɿ-fən-k'r-sɿ* 斯芬克狮 – *sfiŋks* (sphinx) the character *sɿ* 狮, lion was chosen deliberately.

**Palato-alveolar fricative  $ʃ$** 

is in Chinese substituted by a similar apico-prepalatal fricative  $\mathfrak{ʃ}$ , e. g.

*ʃr-lai-k'r* 舍来克 – *ʃəlæk* (shellac).

In case the following vowel must be substituted by a high front vowel or by a rising diphthong with an initial front element, because the combination with a vowel more similar in articulation to the vowel of model is not permissible, the substitute is a palatalized one, e. g.

*ɕiu-k'r* 休克 – *ʃɔk* (shock)

**Apico-postalveolar fricative  $r$** 

is regularly substituted in the initial and intervocalic position by the Chinese lateral *l*, e. g.

*laŋ-man-ti-k'r* 浪漫蒂克 – *rəmæntik* (romantic); *pa-la-fən* 巴拉芬 – *p'ærəfin* (paraffin)

**Glotal fricative *h***

is regularly substituted by the Chinese velar fricative *x* whose point of articulation is rather near to that of the English fricative, e. g.

*xr-ər-məŋ* 荷尔蒙 – *hɔ:moun* (hormon)

**Affricates**

The modes of substitution of affricates are analogous to those of fricatives. Although Chinese possesses a wider range of affricates, the English affricates *tʃ* and *dʒ* are usually substituted only by the retroflex affricate *ʈʂ*, e. g.

*jin-ʈʂɿ* 因制 – *intʃ* (inch); *ʈʂu-ər* 朱尔 – *dʒu:l* (joule)

Only if the affricate is followed by *i* or the following vowel is replaced by *i* or a rising diphthong (triphthong) with an initial front element, both the voiced and unvoiced affricates are substituted by palatalized affricates. The choice of an aspirated or unaspirated affricate is not conditioned in any way, e. g.

*tiŋ-tʂi* 丁几 – *t'ɪŋktʃə* (tincture); *tʂ'iau-k'ɾ-li* 巧克力 – *tʃɔkəlɪt* (chocolate); *tʂi-p'u* 吉普 – *dʒi:p* (jeep); *tʂia-k'ɾ* 甲克, 夹克 – *dʒækɪt* (jacket); *tʂ'i-la-fu* 其拉夫 – *dʒɪra:f* (giraffe)

**Nasals and laterals**

The substitution of the nasals *m*, *n* and of the lateral *l* in the initial or intervocalic position causes no difficulties in Chinese, as the manner and the point of articulation of these consonants are basically identical in the two languages. Their substitution in the final position of a syllable, though, is a little complicated due to the restrictions in the combinations in the Chinese phonemic system. This will be discussed separately later.

The Chinese nasals *m* and *n* regularly correspond to the English *m* and *n* respectively, e. g.

*mo-təŋ* 摩登 – *mɒdən* (modern); *ni-luŋ* 尼龙 – *nailɒn* (nylon); *a-ni-lin* 阿尼林 – *ænili:n* (aniline)

The lateral *l* in the initial position is always substituted by its Chinese homorganic parallel, e. g.

*luo-tʂi* 逻辑 – *lɒdʒɪk* (logic); *lai-su-ər* 来苏尔 – *laisɔl* (lysol)

English consonant phonemes, especially in the initial and intervocalic position, are substituted, if possible, by Chinese consonant phonemes with an identical point of articulation and identical manner of forming the closure (plosives, nasals, lateral, some fricatives /*f*, *s*/); if there does not exist in Chinese a corresponding phoneme conforming in these two distinctive phonetic features, a Chinese phoneme conforming in the manner of forming the closure and differing slightly in the point of articulation is chosen as a substitute (some fricatives /*f* > *s*, *ʃ*; *h* > *x*, *ʃ*; affricates). Some plosives /*k*, *g*/, fricatives and affricates are regularly replaced by palatalized substitutes. The contrast of voice is expressed either with a weak accentuation only (plosives) or is not expressed at all (fricatives, affricates). The choice of an aspirated

or unaspirated Chinese consonant is in most cases, it seems, more or less arbitrary (the vacillation in the choice can be best shown by alternative shapes of some loans, e. g. *tɕ'iau-k'r-li* 巧克力, *tɕiau-k'r-li* 巧格力, chocolate; *paŋ-p'u*, *p'aŋ-p'u* 帮浦, pump. The same vacillation is to be found exceptionally, even if the consonant in the model is a voiced one, e. g. *k'r-t'i-jin* 可提因, *k'r-tai-jin* 可待因, codeine).

## B. Substitution of semivowels

The substitution of semivowels in Chinese is a comparatively easy matter.

The English voiced labiovelar semivowel *w* has a regular parallel in the Chinese bilabial *w*, e. g.

*wa-t'r* 瓦特 – *wɔt* (watt)

When the loan is introduced through the Shanghai dialect, there corresponds to the semivowel *w* of the model the velar fricative *x*, e. g.

*xua-ər-tsɿ* 华尔兹, Shangh. *ua-ər-z* – *wɔ:ls* (waltz)

The English voiced palatal *j* is regularly substituted by the Chinese homorganic semivowel, e. g.

*jou-mo* 幽默 – *hju:mə* (humour)

The Chinese shape of the loan Utopia, *ju:t'oupjə*, *wu-t'uo-paŋ* 乌托邦 is exceptional and witnesses a visual way of borrowing in one of the non-mandarin dialects /*wu* < *u*/ combined with the effort to create a graphic shape which would be meaningful and in agreement with the etymological meaning of the model (*wu* is used instead of the homophonous *wu* 无, not to have, *t'uo* – to entrust, *paŋ* – state, place).

## C. Substitution of vowels

The modes of substitution of English vowel phonemes in Chinese are considerably complicated, as the choice of the respective Chinese vowel is totally dependent upon the preceding or the following consonant. Thus it happens that, even if there exist in the Chinese phonemic system vowels phonetically similar to those of the English model, they do not appear in many cases in the shape of the replica. Very frequently, too, monophthongs are substituted by diphthongs. This again is caused by the distribution of monophthongs and diphthongs in the Chinese phonemic system.

Here, we can exemplify only some of the most frequent modes of substitution which however, are far from possessing the nature of general rules.

### High front vowels *i:* and *i*

1. In an open syllable and in the medial position of a syllable, if preceded by a consonant which in Chinese can be followed by *in*, *iŋ*, *i:*, *i* > *i*, e. g.

*tɕi-p'u* 吉普 – *ɕɕi:p* (jeep); *tɕi-t'a* 吉他 – *git'a* (guitar); *a-ni-lin* 阿尼林 – *ænili:n* (aniline); *ni-ku-tiŋ* 尼古丁 – *nikəti:n* (nicotine)

2. In the medial position of a syllable, if preceded by a consonant which cannot be followed in Chinese by *in*, *iŋ*, *i* > *ə*, e. g.

sɿ-fən-k'ɾ-sɿ 司芬克斯, 斯芬克司 – *sfiŋks* (sphinx)

3. In the initial position of a syllable, *i* > *ji*, e. g.

*jin-tr* 引得 – *indeks* (index)

4. When *i* is preceded in the English model by *w*-, *f*-, *v*-, which are replaced in Chinese by consonants that cannot be combined with *i*, *i* > *ei*, e. g.

*wai-k'ɾ-ər* 维克尔 – *vikə* (vicar); *k'a-fei* 咖啡, Shanghai. *k'a-fi* – *k'ɔfi* (coffee)

### Higher mid front vowel *e*

1. In an open Chinese syllable *e* > *ɾ*, e. g.

*jin-tr* 引得 – *indeks* (index)

2. In the medial position of a syllable, when followed by *n*, *e* > *ə*, *iɛ*, e. g.

*a-mən* 阿们 – *a:men* (amen); *tiən-nuŋ* 佃农 – *t'enənt* (tenant)

3. In the initial position of a syllable, when followed by a nasal, *e* > *ji*, e. g.

*jin-tɕiŋ* 引擎 – *endʒin* (engine)

### Lower mid front vowel *æ*

1. In an open syllable, when forming a syllable by itself or when followed by a nasal, *æ* > *a*, e. g.

*pa-la-fən* 巴拉芬 – *p'ærəfin* (paraffin); *a-ni-lin* 阿尼林 – *ænili:n* (aniline); *lan-mən-sɿ* 浪漫史 – *rəmæns* (romance); *t'an-k'ɾ* 坦克 – *t'æŋk* (tank)

2. When preceded in Chinese by a palatalized consonant, *æ* > *ia*, e. g.,

*tɕia-k'ɾ* 甲克, 夹克 – *dʒækɪt* (jacket); *tɕia-luən* 加仑 – *gælən* (gallon)

### Low back vowel *ɑ:*

1. As a rule, especially in an open syllable, *ɑ:* > *a*, e. g.

*pa-li-mən* 巴力门 – *p'ɑ:ləmənt* (parliament)

2. If preceded in Chinese by a palatalized consonant, *ɑ:* > *ia*, e. g.

*ɕyɛ-tɕia* 雪茄 – *siɡɑ:* (cigar)

Loans, where *ɑ:* > *ai*, were most probably introduced through the Shanghai dialect, in which *a* when preceded by a plosive corresponds to the diphthong *ai* in the phonemic system of Pekingese, e. g.

*p'ai-k'ɾ* 派克 – *p'ɑ:kə* (parker); *p'ai-sɿ* 派司 – *p'ɑ:s* (pass, in a play of cards)

### Lower mid back vowels *ɔ* and *ɔ:*

1. In an open syllable *ɔ* and *ɔ:* > *u* or *uo* according to the rules of combinations of the preceding Chinese consonant, e. g.

*mo-təŋ* 摩登 – *mədən* (modern); *p'o-ta* 波打 – *p'ɔ:tə* (porter); *luo-tɕi* 逻辑 – *lɔdʒik* (logic)

If in the adapted shape of the loan-word in standard Chinese ɔ and ɔ: are replaced by *a* or *au*, the loan was borrowed through the Shanghai dialect, e. g. *k'a-fei* 咖啡, Shangh. *k'a-fi* – *k'ɔfi* (coffee); *ma-fei* 吗啡, Shangh. *ma-fi* – *mɔ:fiə* (morphia); *k'au-pei* 考贝, Shangh. *k'ɔpə?* – *k'ɔpi* (copy).

2. If ɔ forms a syllable by itself, it is substituted by *ɾ*, e. g.

*ɾ-liɛ-fu* 俄列夫 – *ɔliv* (olive)

### Mid back vowel ʌ

The substitution of this vowel is in Chinese on the whole irregular. In those syllables which in Chinese are adapted as open ones, we find *a* and the diphthongs *ai* and *au*, e. g.

*t'uo-la-sɿ* 托辣斯 – *trʌst* (trust); *ai-ti-mei-tuən* 哀的美顿, 哀的美敦 – *ʌl-timeitəm* (ultimatum); *mau-sɿ-luən* 毛丝纶 – *mʌzlin* (muslin)

In syllables with a final nasal we find *ɑ* and *uə*, e. g.

*paŋ-p'u* 帮浦 – *p'ʌmp* (pump); *t'uən* 吨 – *t'ʌn* (ton)

### High back vowels *u* and *u:*

are regularly substituted by the Chinese *u*, e. g.

*pu-tiŋ* 布丁 – *p'udiŋ* (pudding)

### Central vowels *ə*: and *ə*

1. In an open syllable *ə* > *a*, e. g.

*lei-ta* 雷达 – *reidə* (radar); *pa-luo-kr* 巴洛哥 – *bərouk* (baroque)

When preceded by a labial, *ə* can be also substituted by *o*, e. g.

*jou-mo* 幽默 – *hju:mə* (humour)

2. In an open syllable, when preceded by a velar, *ə:* and *ə* > *ɾ*, e. g.

*xɾ-ni-ja* 赫尼亚 – *hə:njə* (hernia); *tɕ'iau-k'ɾ-li* 巧克力 – *tʃkəlɪt* (chocolate)

3. When followed by a nasal, *ə* > *ə*, *uə*, e. g.

*mo-təŋ* 摩登 – *mɔdən* (modern); *ai-ti-mei-tuən* 哀的美顿, 哀的美敦 – *ʌl-timeitəm* (ultimatum)

The choice of the substituted Chinese vowel is, as we have seen, to a great extent determined by the restrictions in combinations of Chinese consonant and vowel phonemes.

If possible, a vowel articulated with approximately the same or a very near position of the tongue (i. e. both tongue-height and tongue-advancement) is chosen as a substitute, e. g. *i:*, *i* > *i*; *u:*, *u* > *u*; *ə* > *a*.

In case there does not exist in the Chinese phonemic system a vowel phonetically similar to that of the English model, the compensation by a vowel with approximately

the same tongue-height and different tongue-advancement is preferred, e. g.  $\text{e} > \text{r}$ ;  $\text{a} > \text{a}$ ; a vowel articulated with approximately the same tongue-advancement and different tongue-height is a less frequent choice, e. g.  $\text{o} > \text{o}$ ,  $\text{r}$ .

As regards the position of the lips (rounded, unrounded), the substituted vowels usually agree in this respect with those of the model, but it is not an absolute condition, cf.  $\text{o} > \text{r}$ .

The length of English vowels is not expressed in Chinese at all; both short and long vowels have common substitutes.

The vowels in the adapted shapes of loans in Chinese keep a full tonality. According to the *Chinese Phonetic Dictionary* there occur no atonic syllables in the loan-words. The retroflex vowel  $\text{ər}$  is always pronounced in loan-words as a separate syllable, e. g. *an-tə'i-ər* 安琪儿, angel, *fu-ər-ma-lin* 福尔马林, formalin. The only exception is the loan *mo-t'rr* 模特儿, model where the retroflex pronunciation of the vowel can be regarded as a sign of progressive assimilation of this loan.

## D. Substitution of diphthongs

In our set of loans we do not find enough support for describing the modes of substitution of all the English diphthongs, especially of the rising ones. We shall limit ourselves only to those modes of substitution which occur rather frequently.

### Falling diphthongs

*ei* 1. In an open syllable  $> \text{ei}$ , e. g.

*lei-ta* 雷达 – *reidə* (radar)

2. When forming a syllable by itself  $> \text{ai}$ , e. g.

*ai-k'r* 爱克 – *eikə* (acre)

3. When followed by a nasal  $> \text{a}$ , e. g.

*an-tə'i-ər* 安琪儿 – *eindʒl* (angel)

*ai* is on the whole substituted regularly by *ai*, e. g.

*lai-su-ər* 来苏尔 – *laisol* (lysol); *xai-po* 海波 – *haipou* (hypo)

*ou* 1. in an open syllable either  $> \text{u}$ , e. g.

*t'u-t'əŋ* 图腾 – *t'outəm* (totem); *su-ta* 苏打 – *soudə* (soda)

or  $\text{o}$ ,  $\text{r}$ ,  $\text{uo}$ . This mode of substitution is partly arbitrary, partly determined by the restrictions in combinations of the preceding consonant, e. g.

*mo-t'uo* 摩托 – *moutə* (motor); *k'r-k'r* 可可 – *k'oukou* (cocoa); *p'i-ja-nuo* 披亚诺 – *p'ja:nou* (piano)

2. If it forms a syllable by itself  $> \text{ou}$ , e. g.

*ou-po* 欧勃, 欧伯 – *oubou* (oboe)

*au* We have only the exemplification with the following nasal */aun/*, which is substituted by the Chinese */aŋ/* e. g.

*paŋ* 磅 – *p'aund* (pound); *aŋ-sɿ* 盎司 – *auns* (ounce)

*ɔi* The substitution of this diphthong seems to be irregular. It is represented in our set mainly by *uo* and *ei*, e. g.

*sai-lu-luo* 赛璐珞 – *seljuloɪd* (celluloid); *pei-kr* 杯葛 – *boɪkət* (boycott)

*iə* is usually substituted by the monophthong *i*, e. g.

*k'ai-sɿ-mi* 开司米, 开四米 – *kæfmiə* (cashmere)

The diphthongs *uə*, *ɛə* are not exemplified in our set.

As regards rising diphthongs, only *iə* is represented in our set. It is substituted by *iɛ*, e. g.

*ja-p'ien* 鸦片 – *oup'iəm* (opium)

When we find *ei* in the adapted shape of the loan-word in the standard language, its presence is due to the mediating function of the Shanghai dialect, e. g.

*ma-fei* 吗啡, Shangh. *ma-fi* – *mɔ:fiə* (morphia)

Because of insufficient exemplification it is not possible to determine the general tendencies in the modes of substitution of English diphthongs; when there exists in the Chinese phonemic system a diphthong phonetically similar to the English one, it appears in open syllables when this substitution conforms to its rules of combinations with the preceding consonants /*ai* > *ai*; *ei* > *ei*/; a rather frequent way of substitution is to use a Chinese monophthong which is similar in articulation to the peak of the English diphthong /*ou* > *o*, *ɹ*; *au* > *a*/; singularly there also occurs a monophthong which is near in articulation to the less prominent member of the English diphthong /*ou* > *u*/.

### The restrictions of Chinese phonemes in membership and sequence and the ensuing modes of adaptation

Of the factors which influence the phonemic shapes of loan-words in modern Chinese in a significant way we hold as most decisive the restrictions of Chinese phonemes in membership and sequence. The differences in number and in distinctive phonetic features of Chinese and English phonemes cannot explain, as we have seen in the preceding chapter, the high degree of phonemic adaptation to which the loans are liable in modern Chinese.

We have found that there exist in the Chinese phonemic system phonemes (allophones) phonetically similar to the English ones, but very frequently they cannot appear in the phonemic shapes of loans due to their strictly limited distribution. The phoneme in Chinese as a minimum distinctive unit of the expression system is characterized by its restricted autonomy, is very strictly bound to its environment in the syllable, cannot be isolated and put into other combinations than the permitted ones.<sup>25</sup>

<sup>25</sup> In other languages it is a rather common phenomenon that loans differ from native words both by the repertory of phonemes and by their functional usage. Cf. the original description

The structure of the Chinese syllable is also very strictly fixed and does not allow exceptions in the membership of phonemes in the initial, medial and final position. The most important restriction in this respect having a bearing upon the adaptation of loans is that consonants, except *n* and *ŋ*, cannot appear as finals in Chinese syllables.

When considering the various possible restrictions in the Chinese phonemic system which can influence the final shapes of loans we find most relevant the restrictions in the following aspects:

A. Restrictions in the combination consonant + consonant – the Chinese phonemic system does not admit consonant clusters; this calls for various modes of adaptation of consonant clusters.

B. Restrictions in the combination vowel (diphthong) + consonant – the Chinese phonemic system has abolished closed syllables (except syllables closed by *n* and *ŋ*); this leads to the necessity of adapting the closed syllables of the model.

C. Restrictions in the combination consonant + vowel (diphthong) which are pertinent for the choice of the vowel (diphthong) or the consonant (palatalization); the consequences of these restrictions have been already discussed above when the substitutions of individual phonemes, especially vowels, were analysed.

### **A. Adaptation of consonant clusters**

When borrowing words in the shape of which there are clusters of two or three consonants, the respective syllable has to be segmented in Chinese in a different way, i. e. a syllabic juncture has to be formed between the respective consonants or one of them has to be elided. The syllabic juncture has to be formed in accordance with the permissible phoneme combinations and with the fixed structure of the Chinese syllable. In principle, there are three possibilities of adapting consonant clusters:

- 1) The insertion of epenthetic vowels between the members of the cluster
- 2) Elision of one, as a rule, of the second member of the cluster
- 3) Forming of a syllabic juncture after the first member of a final cluster nasal (liquid) + unvoiced consonant and adding a paragogic vowel after the second member. The paragogic vowel forms thus together with the unvoiced consonant a parasitic syllable.<sup>26</sup>

#### **1) An epenthetic vowel**

is inserted in Chinese into the following consonant clusters:

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of this phenomenon in a study by V. Mathesius prepared for publication in 1943, *Cizí slova se stanoviska synchronického* [Foreign Words from the Synchronic Point of View], in *Čeština a obecný jazykozpyt* [The Czech Language and General Linguistics], (1947, esp. pp. 97–99); some examples are to be found also in L. Deroy (1956, pp. 87–91) in the discussion on the borrowing of phonemes. See also a detailed research of different phonemic systems in one language by C. C. Fries and K. L. Pike (1949, pp. 29–50).

<sup>26</sup> The adding of vowels in the adapted shapes of loans from English has been described, e. g. in Japanese. See Sanki Ichikawa (1930, pp. 182–183) and D. Carr (1951, pp. 13–25).

a. In clusters of two members composed of a sibilant and an unvoiced labial, alveolar or velar /s + p, f, t, k/, and epenthetic  $\gamma$  is inserted after the sibilant, e. g.

*a-sɿ-p'i-liŋ* 阿斯匹灵, 阿司匹灵 – *æspiri:n* (aspirin); *sɿ-fən-k'ɾ-sɿ* 司芬克斯, 斯芬克司 – *sfiŋks* (sphinx); *sɿ-t'i-a-li:n* 司替阿林 – *stiəri:n* (stearin)

In case that *s* is adapted in standard Chinese as *ʂ* (mostly in loans borrowed through the Shanghai dialect), the epenthetic vowel is  $\imath$ , e. g.

*wei-sɿ-tɕi* 威士忌 – *wiski* (whisky)

In clusters of three members composed of a sibilant + *pr*, *tr*, *kr*, an epenthetic vowel is added after the sibilant: another epenthetic vowel is inserted after the second member of the cluster and *r* is substituted as usually by the lateral *l*, e. g.

*sɿ-pi-liŋ* 司必令 – *sprɿŋ* (spring); *sɿ-k'u-li:n* 司库林 – *skri:n* (screen)

The condition for the choice of the epenthetic vowel is a similar position of articulation to that of the preceding consonant.

b. In clusters composed of a labial, alveolar, velar or sibilant /b, p, f, t, k, g, s, z/ followed by a liquid /r, l/ the inserted epenthetic vowel usually has a similar position of articulation to that of the first member, of the cluster. *r* and *l* are in initial clusters adapted as *l*, in final clusters they are substituted by the retroflex vowel *ər*. The most frequent epenthetic vowels are *u* and *o* following labials, *ɾ* following alveolars and velars,  $\imath$  ( $\imath$ ) following sibilants. *t* can be also followed by the diphthong *uo*. E. g.

*po-laŋ-niŋ* 勃郎宁 – *brauniŋ* (Browning); *fu-liou-t'ɾ* 弗柳特 – *flu:t* (flute); *t'uo-la-sɿ* 托辣斯, *trɒst* (trust); *tr-mo-k'ɾ-la-ɕi* 德谟克拉西 – *dimokrəsi* (democracy); *k'ai-po-ər* 开勃儿 – *k'aibl* (cable); *k'ɾ-li-sɿ-liŋ* 各里司林 – *glisəri:n* (glycerine); *mau-sɿ-luən* 毛丝纶 – *mazlin* (muslin)

**2) Elision** of the second member of the consonant cluster takes place in the following clusters:

a. In clusters composed of an alveolar or velar /t, k/ (labials are not exemplified in our set) followed by a trill /r/, the trill is elided, e. g.

*mai-k'ɾ-fəŋ* 麦克风 – *maikrəfoun* (microphone); *a-t'uo-p'in* 阿托品 – *ætɹəpin* (atropine)

b. In final clusters composed of a sibilant /s/ followed by an alveolar /t/ (labials and velars are not exemplified in our set), the alveolar is elided. The sibilant must be followed in Chinese by a paragodic  $\gamma$ , e. g.

*t'uo-la-sɿ* 托辣斯 – *trɒst* (trust)

As an exception, in longer words in which the final clusters are composed of a nasal and an alveolar, the alveolar can be also omitted, e. g.

*pa-li-mən* 巴力门 – *p'a:ləmən* (parliament)

c. In final clusters composed of a labial /f/ or alveolar /t/ (velar not exemplified) followed by a lateral /l/, the lateral is elided. The labial and velar must be followed by a paragodic vowel or diphthong, e. g.

*lai-fu* 来复 – *raifl* (rifle); *t'uo-tou* 拓都 – *t'outl* (total)

As an exception, the voiced alveolar is elided and the lateral is substituted by the retroflex vowel *ər*, e. g.

*an-tɕ'i-ər* 安琪儿 – *eindʒl* (angel)

### 3) A paragogic vowel

is added in Chinese to the following consonant clusters:

a. Nasal followed by a labial, alveolar, velar or sibilant /*m, n, ŋ + p, t, k, s/*. The nasal can figure as a final in Chinese syllables and so in this case it closes the penultimate syllable of the loan-word. The second member of the cluster is turned into the initial of the open parasitic syllable. The choice of the paragogic vowel is governed by the position of articulation and the rules of combinations of the preceding consonant. E g.

*paŋ-p'u* 帮浦 – *p'ʌmp* (pump); *p'in-t'uo* 品脱 – *p'aint* (pint); *t'an-k'r* 坦克 – *t'æŋk* (tank); *pən-sɿ* 本土 – *p'ens* (pence)

b. Lateral /*l*/ followed by a labial /*f*/ or a sibilant /*s/* (other English clusters of this type are not exemplified in our set); *l* is substituted by the retroflex vowel *ər* which forms a syllable. The second member of the cluster is turned into the initial of the ultimate parasitic syllable with a paragogic vowel as its final, e. g.

*kau-ər-fu* 高尔夫 – *gɒlf* (golf); *xua-ər-tʂ* 华尔兹 – *wɔ:ls* (waltz)

In clusters composed of a lateral followed by an alveolar, the lateral is usually elided and the alveolar is supplied with a paragogic vowel, e. g.

*fu-t'r* 伏特 – *vɒlt* (volt)

## B. Adaptation of closed syllables

The modes of adaptation of closed syllables in loans borrowed from English are governed by the type of the final consonant. They can be divided into three different groups: 1. syllables closed by a nasal, 2. syllables closed by a lateral, 3. syllables closed by a labial, alveolar, velar or sibilant.

### 1) Syllables closed by a nasal

As already stated, the only consonants which can be finals in Chinese syllables are *n* and *ŋ*. The syllables of the model closed by these two nasals do not cause any difficulties in adaptation, but sometimes the differentiation between the alveolar *n* and velar *ŋ* is not sufficient.

*n* is usually substituted by the Chinese *n*, e. g. *a-ni-lin* 阿尼林 – *ænili:n* (aniline), but it can be also substituted by *ŋ*, e. g. ); *k'a-t'uŋ* 卡通 – *k'atu:n* (cartoon). The reason for this underdifferentiation is that very often the respective syllable can be closed only by velar *ŋ*, e. g. *kɾ-piɛ-tiŋ* 戈别丁 – *gæberdi:n* (gaberdine); in some cases this substitution can be caused by the graphic adaptation, owing to the choice

of characters which render the shape of the loan meaningful, e. g. *wei-t'a-miŋ* 维他命 – *vitēmin* (vitamin) (*miŋ* – life).

*ŋ* is usually substituted by the Chinese *ŋ*, e. g. *t'uən-piŋ* 屯并 – *dʌmpɪŋ* (dumping), but it can be replaced also by the alveolar *n*, e. g. *fa-ɛin* 法新 – *fa:ðɪŋ* (farthing). This substitution usually suggests that the loan was probably introduced through the Shanghai dialect which has a velar *ŋ* in the corresponding syllable.

Final *m* can be substituted both by *n* and *ŋ*, e. g.

*ja-p'ien* 鸦片 – *oup'iem* (opium); *t'u-t'əŋ* 图腾 – *t'outəm* (totem)

## 2) Syllables closed by a lateral

The final lateral of the English model is usually substituted by the retroflex vowel *ər*, e. g. *a-ər-k'r-ər* 阿尔科尔 – *ælkəhɔl* (alcohol). There are also loans with two alternative shapes, one with the retroflex *ər* as the ultimate syllable and one where the final *l* is elided, e. g. *lai-su* 来苏, *lai-su-ər* 来苏尔 – *laisɔl* (lysol).

## 3) Syllables closed by a labial, alveolar, velar and sibilant

This group of syllables can be subdivided into syllables

a. With labial and sibilant finals

b. With alveolar and velar finals

The subgroup a. allows only one mode of adaptation, namely that of adding the paragogic vowel, while in the subgroup b. two modes of adaptation are possible: the adding of the paragogic vowel and the elision of the final consonant.

### Adding of a paragogic vowel

The choice of a paragogic vowel in the parasitic syllable is governed by the preceding consonant. Its position of articulation should be near to that of the consonant.

The paragogic vowel following labials is usually *u*, e. g.

*xu-pu* 忽布 – *hɒp* (hop); *ta-mu-ta-mu* 达姆达姆 – *dʌmdʌm* (dum-dum); *tɛ'i-la-fu* 其拉夫 – *dʒɪrɑ:f* (giraffe)

The substituted Chinese sibilants are followed either by *ɿ* or *ɿ*, e. g.

*ɛiɛ-liou-lu-sɿ* 赛留路斯 – *seljʊlɔs* (cellulose); *tɛi-sɿ* 吉士 – *tʃi:z* (cheese)

Alveolars and velars are usually followed by *ɹ*, e. g.

*wa-t'ɹ* 瓦特 – *wɒt* (watt); *sɹ-lai-k'ɹ* 舍来克 – *ʃælæk* (shellac)

The alveolar *t* can be also followed by the diphthong *uo*, e. g.

*tai-na-mei-t'uo* 代那美脱, *dainəməit* (dynamite)

Elision of the alveolar and velar final can be exemplified by the following loans:

*sa-la* 撒拉 – *sæləd* (salad); *tɛia-k'ɹ* 甲克, 夹克 – *dʒækɪt* (jacket); *k'ɹ-ta* 柯达 – *k'oudæk* (kodak)

Some loans vacillate between two alternative shapes, a longer shape with a paragogic vowel and a shorter shape without the final consonant, e. g.

*pie-liou-lu-i-tr* 写留路以特 – *seljuld* (celluloid) and *sai-lu-luo* 赛璐珞; *k'a-la-t'r* 卡刺特 – *k'æret* (carat) and *k'r-la* 克拉.

As a rule, the shorter shape gets assimilated, as it resembles more the current type of native words, especially in the number of syllables.

## Conclusions

The validity of conclusions ensuing from the present investigation of phonemic adaptation goes beyond loans borrowed into Chinese from English. As suggested by our lexical material, these conclusions can be applied to all loans taken over from European languages. The study of contacts of the Chinese phonemic system with the phonemic system of another language offers the following observations concerning the character of the former:

1. The closed character of the Chinese phonemic system supported by the Chinese graphic system, the minimum unit of which, the phonoideogram, can record only a syllable, does not allow

a. The borrowing of foreign phonemes and their incorporation into the Chinese phonemic system

b. The changes in the functional usage of phonemes (the application of phonemes outside their permissible combinations, the changes of allophones into phonemes)

2. The impermeability of the Chinese phonemic system prevents the coexistence of two or more phonemic systems in the speech of Chinese monolinguals.<sup>27</sup> Such coexistence is possible only in the idiolects of partly bilingual speakers when they utter foreign quotations, foreign names etc., while monolingual speakers are bound by the Chinese graphic shapes which determine also the oral shapes of these foreign elements.

3. The assimilation of loan-words has not called forth qualitative changes in the Chinese phonemic system, but it affects the frequency of certain syllables which occur in native words only rarely. The most remarkable is the rise in frequency of such syllables as *k'ä*, *k'ä* and *k'ä*.

*kä* 咯 – in the native lexical stock only as onomatopoeia of cracking and crunching; in loan words this syllable (written by a new character) appears quite often, e. g. *k'a-fei* 咖啡, coffee, *k'a-li* 咖喱, curry

<sup>27</sup> The impermeability of the Chinese phonemic system is to be taken, naturally, only in relation to contact with phonemic systems of other languages, not as an absolute postulate. In the speech of Chinese speakers with no reliable knowledge of the standard pronunciation we can observe various admixtures and relics of the phonemic pattern of their native dialects and other dialects they may have mastered.

As pointed out by C. C. Fries and K. L. Pike (1949, p. 49), coexistent phonemic systems may include among other types “special segments of an interjectional type” etc. Although the Chinese phonemic system has not been subjected to closer scrutiny in this respect, we wish to stress that it appears to be far from impermeable here. It is well known that Chinese interjections may use either phonemes and allophones which cannot otherwise function as syllables or unusual phoneme combinations (cf. *o* 喔, expressing sudden understanding, *ε*, *ei* 诶, 欸 – consent, *o-io* 喔唷 – admiration or pain etc.).

*kā* 喀 – as a native word only in the meaning “to set something free from the throat or the gullet”; in loans it is a rather frequent syllable (written by a different character), cf. *k'a-t'uŋ* 卡通, cartoon; *k'a-tai* 卡叽, khaki; *k'r-k'a-jin* 可卡因, cocaine; *k'a-lu-li* 卡路里, calorie etc.

*kā* 喀 appears in loans only, especially in those taken over from Russian, e. g. *k'a-te'iou-sa* 喀秋莎, katiusha; *k'r-wa-sʃ* 喀瓦斯, kvas

Similarly also the syllable *ā*; in native words it figures only as a noun-prefix (mostly atonic); in loan-words it is a very frequent syllable, cf.

*a-p'u-ma-fei* 阿朴吗啡, apomorphine; *a-si-t'ai-lin* 阿西台林, acetylene; *sʃ-t'i-a-lin* 司替阿林, stearin; *a-t'uo-p'in* 阿托品, atropine; *a-mi-pa* 阿米巴, amoeba; *a-la-po* 阿刺伯, Arabia; *a-kən-tiŋ* 阿根廷, Argentine etc.

*ní* – current dictionaries give 11–12 graphs most of which record only a syllable or a morpheme with a very low frequency (*ní* 泥, mud being the only rather frequent one). In loan-words this syllable is recorded by the graph *ní* 尼 (not occurring in native words, only in an older loan *ní-ku* 尼姑, nun and cognate words), e. g.

*ni-ku-tiŋ* 尼古丁, nicotine; *a-ni-lin* 阿尼林, aniline; *a-mo-ni-ja* 阿摩尼亚, amonia; *ni-luŋ* 尼龙, nylon; *ni-po-ər* 尼泊尔, Nepal; *ni-teia-la-kua* 尼加拉瓜, Nicaragua

As far as the phonemic shapes of loans are concerned, we would like to stress two characteristic features:

1. The phonemic shapes of some loans after having been adapted in Chinese, are rather remote from the shape of the model. The reasons for the dissimilarities are to be sought in

a. Some modes of substitution caused by the non-existence of phonetically similar phonemes and the need of their compensation, but above all, in some modes of adaptation enforced by the restrictions in membership and sequence of the Chinese phonemic system (as described above).

b. Different segmentation of syllables in the adapted shapes of loans, so that they may differ from their models in the number of syllables, sometimes even without due reason, e. g.

*i-ja* 依亚 – *ja:d* (yard) (the usual adaptation would be *\*ja* or *\*ja-t'r*); *t'i-jou-pa* 提优把 – *tju:bə* (tube) (*\*tiou-pa*) etc.

c. Some unnecessary “distortions” in the shape of loans, e. g.

*a-əyan* 阿巽 (Shangh. *a-siæ*) – *ouzoun* (ozone) (a possible shape would be *\*ou-suən* or *\*ou-su-ən*) etc.

2. The phonemic shapes of loans in modern Chinese are, in general, not very stabilized. Only very rarely can several alternative shapes of one loan be attributed to different readings of the model; a more common cause is a multiple borrowing, either both auditive and visual, or even more frequently repeated auditive borrowing caused by imperfect knowledge of the pronunciation of the model and by the effort to form the replica as exactly as possible, sometimes also borrowing in different places.

As a rule, one of the alternative shapes is preferred to all the other ones which are usually discarded. Cf. the following examples of alternative phonemic shapes the first of which is the only current one:

*pai-lan-ti* 白兰地, *po-lan-ti* 勃兰地, brandy; *pa-la-fən* 巴拉芬, *pa-la-fei-ən* 巴拉斐恩, paraffin; *tə'iau-k'r-li* 巧克力, *tə'iau-ku-li* 巧古力, chocolate; *fan-ja-lin* 凡亚林, *fan-ja-lin* 梵哑铃, *wai-au-lin* 外奥林, violin; *suei-mən-t'ing* 水门汀, *sai-mən-t'uo* 塞门脱, *ɕi-min-t'u* 士敏土, cement.

### 3. Graphic adaptation

All loans taken over into Chinese, except those coming from languages using phon-ideographic writing, have to be transferred into a completely different system of writing. From this point of view we would be entitled to speak of a total graphic substitution.

Phonemic and graphic adaptation of loans in Chinese though, are in close interdependence. The record of syllables which could be possibly segmented, no matter whether the loan was taken over in the visual or auditory way, is limited by the existence of a suitable graph – the Chinese phonoideographic writing, recording a syllable as a minimum unit, does not provide for the record of other phoneme combinations than the permitted ones.

The ideographic character of Chinese writing exerts influence not only on the formation of the graphic shapes of loans, but also on their assimilation. The majority of phonoideograms which amount to 90% of the Chinese characters, are in definite, though very loose, semantic relation to the recorded morpheme. This semantic relation cannot be established between the borrowed morpheme and the graph whose meaning is incorporated in its graphic shape. Thus the Chinese characters recording loans turn into conventional graphic signs recording the phonemic shape of a certain syllable, completely devoid of any semantic relation to the recorded shape. So it can happen that Chinese speakers not familiar with the loan see in its graphic shape a sequence of isolated graphs which do not render a clear-cut meaning or appear to be quite nonsensical.

#### The conditioned choice of graphs in some loans

An effort to solve the discrepancy between the ideographic character of Chinese graphs and its loss in the graphic shape of loans is to be observed in the choice of suitable graphs contiguous in meaning to the meaning or denotation of some loan-words. Most often, the selection of only one graph can be conditioned in this way. The amount of loans where this auxiliary technique can be applied is very limited and moreover, this artificially established semantic relation is very remote and inaccurate.

Let us quote some examples of

a. loans the entire graphic shape of which is either in an artificial semantic relation to their meaning or renders the shape of the loan meaningful:

*diànnóng* 佃农, tenant (the meaning expressed by Chinese graphs: to take a lease of land, farmer); *bēngdài* 绷带, bandage (to bind, a tie); *àiměidí* 爱美的, amateur (the one who loves what is beautiful); *kàobèilún* 靠背轮, coupling (a wheel leaning against the back); *máosīlún* 毛丝纶, muslin (wool, silk, silk thread); *kěkǒukélè* 可口可乐, Coca Cola (can, mouth, can, delight); *nǐhóng* 霓虹, neon (rainbow, rainbow); *sànlìtōng* 散利通, saridon (to disperse, profit, pain); *wéitāmíng* 维他命, vitamin (to uphold other's life)

b. loans in the graphic shape of which one graph is in artificial semantic relation to their meaning or denotation:

*tuōlāsī* 托辣斯, trust (*tuō* 托 – to entrust); *mótèr* 模特儿, model (*mó* 模 – model, form); *tuòdōu* 拓都, total (*dōu* 都 – all); *jípǔ* 吉普, jeep (abbr. general purpose; *pǔ* 普 – general) *yǐndé* 引得, index (*yǐn* 引 – to guide); *túténg* 图腾, totem (*tú* 图 – picture); *sīfēnkèshī* 斯芬克狮, sphinx (*shī* 狮 – lion); *shīmǐntǔ* 士敏土, cement (*tǔ* 土 – earth); *hēilǐèbā* 黑列巴, Russ. chleb, black bread (*hēi* 黑 – black); *bùlājī* 布拉及, Russ. platije, frock (*bù* 布 – cloth).

### Graphs regularly recording certain syllables; creation of new graphs

Some graphs, usually those with a very low frequency in native words, are used in loan-words to record certain syllables regularly. This tendency to apply some graphs as exclusive conventional signs for the record of certain syllables is very clear in quite a number of cases, but on the whole, the choice of graphs in loan-words is largely arbitrary – one and the same syllable is quite often written by several graphs.

The syllable *k'ɾ* is usually recorded by the character *k'ɾ* 克, it appears mostly in the final or medial position of a word. In the initial position the graph *k'ɾ* 可 is more frequent. Compare the graphic shapes of such loans as

jacket 甲克, 夹克, poker 扑克, shock 休克, tank 坦克, vicar 维克尔, chocolate 巧克力, gramme 克兰姆, cocaine 可卡因, 可加因, codeine 可提因, 可待因 etc.

The syllable *pə* is usually recorded by the same character, cf.

paraffin 巴拉芬, 巴拉斐恩, baroque 巴洛哥, basson 巴松, Paris 巴黎, Panama 巴拿马 etc.

The same is the case of the syllable *tɪŋ*, cf.

pudding 布丁, sardine 沙丁, gaberdine 戈别丁, tincture 丁几, nicotine 尼古丁 etc.

The syllable *lin*, especially in the final position of the loan-word, is also recorded by the same character, cf.

aniline 阿尼林, penicillin 盘尼西林, 配尼西林, vaseline 凡士林, 华摄林, glycerine 各里司林, mandolin 曼陀林, 曼独林, 曼特林 etc.

The syllable *k'a* is also recorded by a restricted number of older graphs 喀, 卡 and a newly created graph 咖. Some examples were already quoted.

The writing of syllables *a* and *ni* is uniform, too. (Cf. examples above).

The characters *ja* 亚, *er* 尔, *si* 斯, 司 also occur in loans very frequently. Some loans, especially the frequent and assimilated ones, are written by newly created characters:

1. “Pseudophonoeograms” with a classifier 口 which denotes that the character is used exclusively in loan-words, e. g. *ma* 吗, *fei* 啡, *k’a* 咖 (morphia 吗啡, coffee 咖啡), *tuən* 吨, ton

2. Phonoideograms; chemical elements are all written by specially created characters (cf. 铬, 钾, 钚, 钛), here also belong the characters *pan* 镑, pound with the classifier “gold”, denoting the monetary unit and that with the classifier “picul” 磅, denoting the unit of weight.

### Alternative graphic shapes of loans

A characteristic feature of modern Chinese is a large quantity of homophonous syllables which are recorded by different graphs. The choice of a character for the record of a certain syllable being largely arbitrary, the adapted phonemic shapes can be expressed by several graphic shapes. The vacillation in the graphic shape of a loan is, as a rule, confined to one character, cf. the alternative graphic shapes of the following loans:

tannin 单宁, 丹宁; oboe 欧勃, 欧伯; Browning 勃郎宁, 卜郎宁; Russ. platije 布拉及, 不拉及; joule (*tsia-u-ər*) 焦耳, 焦尔

The vacillation in the choice of a graph in graphic shapes of some loans shows that only the record of the segmental phonemes is relevant, while the choice of suprasegmental phonemes appears to be more or less arbitrary. The evidence to this effect is supplied by some alternative graphic shapes where the vacillation in the choice of a graph reveals also the vacillation in the choice of the tone, e. g.

*tsiä-k’r* 甲克, *tsiä-k’r* 夹克, jacket; *su-tä* 苏打, *su-tá* 苏达, 苏答, soda; *li-la* 里拉, *li-la* 利拉, lira (both musical instrument and monetary unit)

Graphic and phonemic alternative shapes of loans in modern Chinese disclose the lack of uniformity in the techniques of adaptation. At the same time they point out the urgent necessity of their standardization.

### 4. Morphemic adaptation

Foreign words composed of lexical or lexical and grammatical morphemes and subordinate to the paradigms of the giving language, are introduced into Chinese as units not analysable into smaller individually meaningful elements and not liable to morphemic variations. They enter into syntactic constructions thanks, above all, to the fixed word-order in Chinese. Foreign morphemes when transferred into the Chinese lexical system, lose their meaning and decline into syllables. Loan-words in Chinese, then, regardless of the number of their syllables, turn into monomorphemic units. Cf.

the compound word “microphone” can be analysed as consisting of two meaningful components micro + phone, while in Chinese the form *màikèfēng* 麦克风, is not further analysable as regards meaning, the segments of this form are only syllables. The same is the case with the borrowed forms such as *bù'ěrshíwéikē* 布尔什维克, *bo'lshe/vik*, *démòkèlāxī* 德谟克拉西, *demo/cra/cy*, *dīkètūiduō* 狄克推多, 迪克推多 *dictat/or* etc.

In this respect loan-words in Chinese resemble native simple words consisting of bisyllabic morphemes, like

*dōngxī* 东西, thing; *mǎyǐ* 蚂蚁, ant; *húdié* 蝴蝶, butterfly; *qīngtíng* 蜻蜓, dragonfly; *pīli* 霹雳, thunder; *fǎngfú* 仿佛, like, similar to; *xièhòu* 邂逅, unexpectedly etc.

As an exception, some models were borrowed into Chinese in their plural forms. E. g.

*běnsht* 本土, pence (sg. penny); *kālālínàtí* 卡拉理纳提, it. clarinetti (sg. clarinetto).

In these cases only the lexical meaning of the form is pertinent, its grammatical meaning is quite irrelevant (when plurality is to be expressed, the usual Chinese markers have to be used).

### Reduction in the number of syllables

As shown above (see Novotná 1967, pp. 644–645), the average length of assimilated loans is 2.52 syllable, of the unassimilated ones 3.27 syllable. Loans as monomorphemic words differ thus from native words composed mostly of monosyllabic morphemes, in the length of the morpheme.

The contrast between the usual length of morphemes of loan-words and native words appears to be a significant factor which induces quite a number of loans, especially those of rather frequent occurrence and consisting of more syllables, to reduce their number.

The reduction in the number of syllables, as one of the techniques of morphemic adaptation,<sup>28</sup> consists either

1. in the elision of the last or the last two syllables or
2. in the transfer of the meaning of the model to the first syllable of the adapted shape and omission of all the following syllables.

1. The last or the last two syllables are omitted in trisyllabic or longer loans. These loans usually possess two alternative shapes; as a rule, only the shorter one becomes assimilated. It should be differentiated between one of the techniques of phonemic

<sup>28</sup> A similar procedure is to be observed in the assimilation of Buddhist loans borrowed from Sanskrit, e. g. Buddha was borrowed in several alternative phonemic and graphic shapes like *fútú* 浮屠, 浮图, *fótú* 佛陀, *fótuó* 佛陀 etc., which were all reduced to the monosyllabic shape *fó* 佛. The same was the case of the loan *ní* 尼, nun (reduced from *bīqūnī* 比丘尼) and others.

adaptation, the elision of the final alveolar and velar (cf. above) and a purposeful shortening of the borrowed shape, e. g.

the loan *fǎxīstī* 法西斯蒂, fascist, became assimilated in the reduced shape *fǎxī* 法西斯; *làngmàndīkè* 浪漫蒂克 is current in the reduced shape *làngmàn* 浪漫

2. Morphemic adaptation consisting in the creation of a monosyllabic shape is usual in two groups of loans:

a. Names of chemical elements which are borrowed directly as monosyllables

b. Names of units of measure of frequent occurrence and single technical loans.

The units of measure usually have two alternative shapes, a bisyllabic or a trisyllabic one and a monosyllabic one which is preferred especially in combination with a numeral, e. g.

*kǎlùlǐ* 卡路里, calorie is reduced to *kǎ* 卡; *lèkèsī* 勒克司, lux to *lè* 勒; *màikèsíwéi* 麦克斯韦, maxwell to *mài* 麦; *kèlánmǔ* 克兰姆, gramme, *èrshísìkè* 二十四克, 24 gr; *hēnglì* 亨利, henry, reduced to *hēng* 亨; *wǎtè* 瓦特, watt reduced to *wǎ* 瓦; *mǐtū* 米突, metre, *sān mǐ bù* 三米布, 3 m of cloth; *fán'ér* 凡尔, valve, reduced to *fá* 阀

### A tendency to adapt loans as bimorphemic or polymorphemic compounds

Loans recorded by graphs contiguous in meaning to the meaning or denotation of the loan-word can be analysed without regard to the morphemic shape of the model. If their components are in such a construction that is customary for the members of Chinese compounds, there is a possibility to consider them as compounds and their components as morphemes, e. g.

*làngmànshǐ* 浪漫史, romance can be analysed as a bimorphemic compound the first morpheme of which, *làngmàn* 浪漫, is in attributive relation to the nominal morpheme *shǐ* 史, history. Similarly, an attributive relation can be established between the components of the loan *sīfēnkeshī* 斯芬克狮, sphinx (a lion of the type “*sīfēnkè*” 斯芬克.) The construction of these loans is the same as that of hybrid determinative compounds of the explicative type (to be discussed in the third part of this study), the attribute of which is a borrowed monomorphemic component and the head a native lexical morpheme.

The loan *hēilìebā* 黑列巴, Russ. chleb, bread, can be analysed as a determinative compound composed of the native attribute *hēi* 黑, black and a borrowed head *lìebā* 列巴.

The loan *bēngdài* 绷带, bandage, can be analysed as a determinative compound, composed of a verbal morpheme *bēng* 绷, to bind, and a nominal morpheme *dài* 带, a tie. (Cf. native determinative compounds of the type V + N, such as *wòchē* 卧车, sleeping car, *ránliào* 燃料, combustible (burning matter) etc.). Similar is the construction of the loan *diànnóng* 佃农, tenant (farmer taking a lease of land).

The construction of the loan *àiměide* 爱美的, amateur (to love beauty + *de* 的) is analogous to that of the nominal compounds of the type (V + O) + nominal formative *de* 的; cf. *sòngxinde* 送信的, postman (the one who brings letters), *màibàode* 卖报的, newspaper-boy (the one who sells newspapers).

The loan *kāobèilún* 靠背轮, coupling can be regarded as a determinative compound of the type (V + O) + N (to lean against the back + wheel). Cf. the construction of native determinative compounds such as *bàojīngjī* 报警机, siren (to announce warning + instrument), *xītiěshí* 吸铁石, magnet (to attract iron + stone) etc.

The techniques of morphemic adaptation (reduction in the number of syllables, accommodation to the structural patterns of native compounds) reveal the tendency to make the loans similar in construction to native words and the effort to incorporate them into the lexical system of modern Chinese. The described techniques of morphemic adaptation though, can be applied to a minority of loan-words only. Loans adapted in one of the above ways enjoy a much higher probability of assimilation.

## 5. Semantic adaptation

As a rule, only one of the meanings of a polysemic model is borrowed into Chinese, e. g. the word index which in English has a diverse scale of meanings (1. forefinger, 2. pointer showing measurements, 3. guiding principle, 4. alphabetical list of subjects with references, 5. exponent in algebra, 6. furnish with index) has been borrowed into Chinese (*yǐndé* 引得) only in the meaning “alphabetical list of subjects with references”.

Similarly the loan *kǎobèi* 拷贝, copy, denotes in Chinese only a film-copy, i. e. it is a specification of the first meaning (reproduction of writing, picture etc.) of the polysemic English model.

The borrowing of more than one meaning of a polysemic model is rather exceptional in Chinese. If that is the case, a doublet created for one of the meanings gradually completely replaces the borrowed shape, e. g.

soda denotes in English 1. one of the compounds of sodium in common use, esp. sodium carbonate or bicarbonate, 2. soda water. This polysemy is preserved in Chinese, too, but sodium carbonate is generally denoted by the new-coined doublet *tànsuānnà* 碳酸钠.

The loan *móter* 模特儿, model, was borrowed into Chinese in two meanings only, 1. representation in three dimensions of proposed structure; here the new-creation *móxíng* 模型 is more common, 2. person who poses for artists; for the meaning “show-room model” Chinese uses the phrase *shízhūāng móter* 时装模特儿. Other English meanings of this word (figure in clay, wax, to be reproduced in other material; design, style of structure etc.) have not been borrowed.

Sometimes we can observe in Chinese an effort to differentiate the various shades of meaning of the model by diverse phonemic and graphic shapes of the loan, e. g.

*mǎdǎ* 马达 denotes motor, while *mótuō* 摩托 means engine-driven machine; carat as a measure of weight of precious stones has the shape *kèlā* 克拉 or *kèlātè* 卡刺特, for the measure of purity of gold only the shape *kāi* 开 is used.

Some monetary units, too, are differentiated by their phonemic and graphic shapes, e. g.

the Yugoslav dinar has the shape *dínà'ěr* 狄那尔; the Iranian and Iraqi dinar, too, have different graphic shapes, *dínà* 地那, 底那 etc.

Changes in the meaning of loans or their stylistic variations after borrowing have not been observed.

## **6. Characteristic features of loans in modern Chinese**

Features characterizing loan-words from the synchronic point of view as a special lexical set in the lexical system of a language are not universal, they vary from one language to another.

As regards loans from European languages in modern Chinese, we consider the following features to be characteristic:

1. Vacillation in their pronunciation which manifests itself in the frequent creation of alternative phonemic shapes.
2. Vacillation in their graphic record which manifests itself in the frequent creation of alternative graphic shapes; some rare graphs are used quite often.
3. Loans as simple words have a greater number of syllables than native simple words (with the exception of loans adapted as monosyllabic).
4. The morphemes of loan-words, in contradistinction to monosyllabic (or bisyllabic) morphemes of native words, are polysyllabic.
5. The unusual morphemic shapes of loan-words and their semantic indistinctness frequently call for the creation of hybrid doublets of the explicative type.
6. The prevailing majority of loans are nouns.
7. Loans usually denote phenomena and objects of foreign origin, they are marked by their terminological character.

## **7. The causes of the comparatively low number of loans in modern Chinese**

The amount of loan-words borrowed by a language can be determined or restricted both by social and linguistic factors.

Although social factors cannot be neglected in the case of modern Chinese, they do not seem to play a decisive role. The Chinese language policy does not support large-scale lexical borrowing, its attitude towards this way of improvement of the lexical system is quite critical, but not altogether negative. This reserve though, is not dominated by purist tendencies, but rather by the appreciation that loans owing to their difference in shape from native words are not easily accepted by the general public.

The principal causes determining the comparatively small number of international elements in the Chinese lexical system are to be sought mainly in linguistic factors. The following ones appear to be most significant:

1. The restrictions of Chinese phonemes in membership and sequence; the impermeability of the Chinese phonemic system.
2. The ideographic character of the Chinese writing which does not facilitate the record of desirable phonemic combinations<sup>29</sup> and requires a certain semantic relation between the graph and the recorded morpheme.
3. The difference between the monosyllabic character of the morphemes of native words and the polysyllabic character of the morphemes of loans leading to the discordance between the prevalent type of native words (simple monosyllabic words or polysyllabic compound words) and the type of loan-words (simple polysyllabic words).
4. Difficulties in adaptation of loan-words to native lexical and grammatical classes (the prevalent majority of loans are nouns, the few borrowed adjectives are restricted in their predicative function).
5. Loan-words are restricted as regards their possibilities of word-formation and thus rather isolated in the lexical system of modern Chinese.

From the above linguistic factors it is to be seen clearly that the restrictions imposed upon borrowing by the linguistic system of modern Chinese are of such a nature that they would lead to serious difficulties even if the Chinese language policy were aimed at the internationalization of the lexical system.

## 8. The standardization of loans in modern Chinese and its perspectives

The lack of uniformity in loans in modern Chinese calls for their standardization. The guiding principle of standardization of loans in modern Chinese should be the degree of assimilation and the frequency of occurrence of the borrowed shape; its relation to the shape of the model, the etymology of the model and other principles should be considered secondary,<sup>30</sup> as they involve aspects outside the linguistic system of Chinese.

The most important problems in standardization of loans in modern Chinese are the following ones:

1. If the loan-word possesses a doublet, which of the shapes should be preferred.
2. If the loan-word has several alternative phonemic and graphic shapes, which of them should be chosen as the standard one.

<sup>29</sup> If a language has at its disposal a more feasible system of writing, its lexical system becomes more open disregarding the typological differences between the borrowing and the possible giving languages. This can be best seen in Japanese where the syllabic writing katakana enables the recording of loans borrowed from European languages. In *Riyu wailaiyu cidian* 日语外来语词典 [A Dictionary of Loans in Japanese] (1964), the author Tang Senlin 唐森霖 collected 18,000 items borrowed from European languages. We cannot take this amount as an absolute figure, as the majority of these items appear to be unassimilated, occasional loans, but it can still corroborate the point at issue.

<sup>30</sup> Some Chinese authors unduly ascribe to these aspects a very high importance, cf. the discussion of standardization of loans by Gao Mingkai and Liu Zhengtan (1958, pp. 178–188).

In the former case it is necessary to consider the relation of the loan-word and its doublets and treat with preference the shape which is more frequent or more similar to native words. In most cases it is the native creation, the graphic loan from Japanese or the hybrid doublet which meet this requirement. On the other hand due attention should be paid to such loans which are more frequent in occurrence than their newly created doublets.

In the latter case again, the preference of some of the alternative phonemic and graphic shapes is decisive. In case of phonemic alternative shapes, a shape that is nearer to the model has a better chance to be chosen as the standard one, e. g.

the standard shape of the unit of energy, erg, *ə:g* is *ər-kr* 尔格, it is more frequent on the one hand and on the other nearer to the model; the alternative shapes *r-kr* 厄格 and *ai-kr* 爱格 are used very rarely.

Sometimes, only the current usage of the phonemic shape regardless of the degree of its similarity to the model is relevant for standardization, e. g.

*shāndàonián* 山道年, santolin is more current than *shāndǔníng* 珊笃宁 and so it should be considered as standard.

As regards loans which were adapted morphemically by reducing the number of their syllables, the shorter shape is usually taken as standard, e. g.

*làngmàn* 浪漫, romantic, *kǎ* 卡, calorie, *mǐ* 米, metre

In loans possessing two alternative shapes, the one adapted as bimorphemic is usually preferred, e. g.

*làngmànshǐ* 浪漫史, romance is preferred to *làngmànsī* 浪漫司

If in future the Chinese language will be written by an alphabetic system of writing, lexical borrowing will be greatly facilitated. There will be no substantial difficulties in expressing the phonemic shape of the model; it will be possible to record unusual phoneme combinations, to introduce new phonemes or to change allophones into phonemes – the Chinese phonemic system will have the opportunity to become more open. The observance of the phonemic shape of the model will be the basic principle of phonemic adaptation; some loans already borrowed will have the chance of “phonemic readaptation” in order to resemble the foreign model more closely.<sup>31</sup> It is quite possible that after the reform of writing the Chinese lexical system will attain a much higher degree of internationalization.

To be continued

<sup>31</sup> A very interesting experiment or rather the first step towards this new phase of standardization of loans is undertaken in the *Chinese Phonetic Dictionary* which gives the loans in two shapes:

1. in the shape written in the Latin alphabet either according to the shape of the model or slightly graphically adapted in order to present the pronunciation of the model more exactly,
2. in the phonemic shape adapted in Chinese and transcribed by Latin alphabet (according to the graphic shape written in Chinese characters).

There are loans in this dictionary where the graphic shape of the model is completely observed (we keep the official *pinyin* romanization), e. g.

model, *móter*; valve, *fán'ěr*; vaselin, *fánshílín*; ounce, *àngsī*; browning, *bólāngníng*; guitar, *jítā* etc.

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In the majority of cases (in 70 out of 114) the graphic shape of the model has been changed. The changes are very slight, e. g.

y > i *brandi*, *báilándi*; *nilon*, *nílóng*

c > k *chocolate*, *qiǎokèlì*; *kartoon*, *kǎtōng*

c > s *sigar*, *xuējiǎ*; *sellofan*; *sàilùfēn*

Digraphs are usually abolished, e. g.

*klorofom*, *gēluófāng* (chloroform); *amonía*, *āmóniyà* (ammonia); *kartel*, *kǎtè'ěr* (Kartell)

The shape of some loans in this dictionary is a result of the compromise between the foreign and the Chinese form, e. g.

*logi*, *luóji* (logic); *kāfēi*, *kāfēi* (coffee); *utopang*, *wūtuōbāng* (Utopia) etc.

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## CONTRIBUTIONS TO THE STUDY OF LOAN-WORDS AND HYBRID WORDS IN MODERN CHINESE III

**Abstract:** *The third paper of the series focuses on a lexical set that takes an intermediate place between borrowed and native words. After explaining the concept of hybridization, it provides a detailed analysis of the three fundamental types of hybrids: explicative hybrids, in which case the native constituent is being attached to the borrowed part lacking semantic clarity; loan-blends composed of a borrowed part and a part substituted by a native component; independent hybrids inspired by the analogy to native words rather than by the existence or construction of foreign models. Moreover, the relation between borrowed and native constituents is examined, word-formation patterns characteristic for each type and its subtypes are determined, and their position in the Chinese lexicon in terms of stability is discussed. In conclusion, the paper summarizes the arguments why hybrid words should be considered an autonomous lexical set in the modern Chinese lexicon.*

**Key words:** *Modern Chinese, hybrid word, explicative hybrid, loan-blend, independent hybrid*

### III. HYBRID WORDS IN MODERN CHINESE

#### 1. The concept of hybridization and the types of hybrids in general

The concept of hybridization may be understood both in the broad and the narrow sense. The former understanding of this term includes all combinations of heterogeneous lexical constituents, i. e. native and borrowed root-morphemes and word-formatives in one word, while the latter refers only to such combinations of native and borrowed constituents which involve a discoverable foreign model.<sup>32</sup> We adhere to the broader understanding of the concept of hybridization, as it offers complete leisure to investigate the behaviour of borrowed constituents, not only as regards the mechanism of their importation and assimilation, but also as regards their word-forming ability in the borrowing language.

Notwithstanding, the comparison of hybrid words with their presumed foreign models is vital for their typological classification. Our attempt at the establishment of fundamental types of hybrid words as they occur in the lexical systems of typologically different languages is essentially based on the following criteria:

- a. the existence of a discoverable foreign model

<sup>32</sup> The former view which appears to be more widespread is generally applied, for instance, in the analysis of the hybrid character of the English lexical stock. Cf. O. Jespersen (1923, pp. 103–110, 121–124); O. Poldauf (1958, p. 149) etc. The latter view is shared by American descriptivists. Cf. C. F. Hockett (1959, p. 412) and E. Haugen (1950), who prefer in this narrow sense the denotation “loanblend” presumably suggested by E. Haugen. For the use of this term later in the text we are indebted to these authors.

- b. comparison with native words of a corresponding construction
- c. comparison with loans assimilated in the borrowing language.

It is beyond the scope of this paper to present and analyse in detail the types of hybrid creations which can be found in typologically different languages. Every language may create a variety of subtypes which reflect its word-formation patterns: in languages where derivation is preferred to composition we find a richer variety of hybrid derivatives than of hybrid compounds and vice versa. It appears, though, that there are three fundamental types of hybrid creations which can be classified on the basis of the above criteria. They are present in typologically different languages and seem to represent a universal pattern of hybridization. They are:

A. Explicative hybrid creations, or explicative hybrids; semantically rather indistinct loans are provided with lexical constituents of the borrowing language and thus explained as regards their meaning and ranged with native lexical classes.

B. Loan-blended hybrid creations, or loan-blends; these are innovations introduced into the lexical system of the borrowing language by joint application of the mechanisms of phonemic borrowing and loan-translating, i. e. a part of the model is borrowed and another part is replaced by a native constituent.

C. Independent hybrid creations, or independent hybrids; these are words formed of borrowed and native constituents according to the word-formation patterns of the borrowing language, not being a direct replica of a foreign model.

The relations of the above three types of hybrid creations to the foreign model, schematically, not counting various possible subtypes, are the following:

- A.  $L_1 \ a_1 \quad \sim L_2 \ a_1 + b_2$
- B.  $L_1 \ a_1 + b_1 \quad \sim L_2 \ a_2 + b_1$   
 $\quad \quad \quad \sim L_2 \ a_1 + b_2$
- C.  $L_1 \ x \text{ (or } 0) \quad \sim L_2 \ a_1 + b_2$   
 $\quad \quad \quad \sim L_2 \ a_2 + b_1$

### **A. Explicative hybrids**

These hybrid creations are denoted by some linguists as foreignisms attached to their native equivalents.<sup>33</sup>

From the genetic point of view, the technique of formation of these hybrid words is just the reverse one. The native constituent which is being attached to the borrowed constituent lacking semantic clarity, possesses identificational character; the differential meaning is expressed by the borrowed constituent. The attached native constituent is either a synonym differing in the range of denotational meaning (very often the relation of the constituents is that of species to genus) or an equivalent of identical denotational meaning with a slightly different connotation.

In the former case these hybrid creations have the nature of asyntactic compounds of attribute-and-head-construction, e. g.

<sup>33</sup> Cf. L. Deroy (1956, p. 228): "Parfois le pérégrinisme est associé à son équivalent autochtone dans un seul mot composé."

Germ. *Damhirsch*, fallow deer (< Lat. damma + Germ. Hirsch – in contradistinction to Rothirsch, Edelhirsch); Engl. *peajacket*, sailor's short overcoat of coarse woollen cloth (< MDutch pee, coarse cloth and clothings made thereof + Engl. jacket); in Vietnamese, the sequence of the borrowed and native constituents is the reverse one: *nhà ga*, railway station (< Vietn. nhà, house + Fr. gare), *xe buýt*, bus (< Vietn. xe, car + Fr. (auto)bus).

In the latter case they can be considered as copulative compounds, e.g.

Germ. *Lugenwiese*, meadow (< Russ. lug, meadow + Germ. Wiese); Hung. *micisapka*, a soft cap with peak (Germ. Mütze + Hung. sapka, both meaning cap); Engl. *greyhound* (< Isl. grey, dog + Engl. hound, dog for chase)

Explicative hybrid compounds, both determinative and copulative, are more closely associated with phonemic loans than the other two types of hybrid creations. The mechanism of their introduction into the borrowing language is that of phonemic loans, their hybrid form is caused by the need of a native explicative and identificational constituent. Their sporadic occurrence marks them as an unproductive type of hybrid creations.

## B. Loan-blends

These lexical innovations presuppose a morphemically analysable model, a part of which is adopted by the borrowing language and another part substituted by a native constituent. They can be divided according to their resulting structure in the borrowing language into

1. loan-blended compounds, composed of two lexical constituents, usually root-morphemes, a borrowed and a native one

2. loan-blended derivatives, composed of lexical constituents and derivational affixes, both borrowed and native, the relation of which is determined by the structure of the model

1. The hybrid character of the loan-blended compounds is sometimes quite conspicuous, sometimes it is obscured due to the considerable degree of phonemic adaptation the borrowed constituent has undergone. E. g.

Czech *sebekritika*, selfcriticism (in contradistinction to borrowed *autokritika*, most probably inspired by the Russian model *samokritika*); Czech *vánoce*, Christmas (< Germ. Weih/nachten); Czech *ba/vlna*, cotton (< Germ. Baum/wolle); Vietn. *bán líp*, free sale (< Vietn. bán, to buy + Fr. (vente) libre).

2. As regards loan-blended derivatives the most usual combinations are those of a. Borrowed lexical constituents with derivational suffixes, e. g.

the infinitive inflexion of verbs borrowed into Czech and Polish from French and German is substituted by the native one: Czech *abon/ovati* < abbon/er, *abgéb/ovati se* < sich abgeb/en; Polish *blam/ować* < blâm/er, *etabl/ować*, < établ/ir,

- b. Native constituents with borrowed prefixes which modify the lexical meaning, e. g. in Roumanian the Romance negative prefixes are substituted by the Slavonic ones: *ne/putintă*, inability (< im/potentia), *ne/sănătate*, illness (< in/sanitas), the French model *ex-roi* has inspired the creation of Engl. *ex-king*, Germ. *Exkönig*, Dan. *ex-konge*, Span. *exrey*, Czech *exkrál* etc.

These hybrid creations inspired by a foreign model occupy an intermediate position between loan-words and loan-translations. Their hybrid nature is determined by the necessity of their subordination to the paradigms of the borrowing language. The substitution of the second constituent of compounds, in case of substitution of the first constituent the morphemic adaptation of the second one, the substitution of derivational suffixes of derivatives and other possible procedures all serve this purpose. From the synchronic point of view loan-blended hybrid creations have no specific distinctive features which would set them apart from the most productive type of hybrids, independent hybrid creations.

### **C. Independent hybrids**

The leading motive for the creation of these hybrids is not the inspiration by a foreign model, but the necessity of forming new words of borrowed constituents in analogy to the native or assimilated borrowed words. Again, they can be divided into

1. hybrid compounds, composed of native and borrowed lexical constituents
2. hybrid derivatives, composed of borrowed and native lexical constituents and derivational affixes

1. Hybrid compounds created independently of borrowed constituents assimilated in the borrowing language and of native constituents are usually of determinative construction. The attribute of the compound is the former constituent, the head the latter, e. g.

Germ. *Aktiv/kohle*, activated carbon (in analogy to *Holz/kohle*, charcoal, *Knochen/kohle*, bone charcoal); in Czech the borrowed morpheme *auto-* enters into a series of compounds in analogy to borrowed compounds like *autobus*, *motor-coach*, *autostop*, *hitchhiking*, *autostráda*, *motor-highway* etc. Cf. *auto/dílna*, *auto/opravna*, car repair shop, *auto/doprava*, car transport, *auto/nehoda*, car accident etc.

2. The structure of hybrid derivatives is most usually the following one:  
a. Native lexical constituent provided with a borrowed derivational suffix. Here the analogy plays a very important part. The word-forming ability of the borrowed suffix proves its high degree of assimilation, e. g.

in Czech we find the noun-forming suffix *-ista* denoting agents in the noun *housl/ista*, violinist, because this suffix figures in the borrowed nouns denoting players of other musical instruments, e. g. *cell/ista*, cellist, *kytar/ista*, guitarist, *trumpet/ista*, trumpeter etc. It would be superfluous to quote the plentiful examples of the combinations of lexical constituents of Germanic

origin with Romance suffixes in English, like *-able* (*bearable, eatable, salable*); *-ance* (*forbearance, furtherance*); *-ment* (*merriment*) etc.

b. Borrowed lexical constituent with a native derivational suffix. The derivatives built with native suffixes on borrowed stems again witness the progressive assimilation of the borrowed constituents. Here the role of analogy to native words of the same construction cannot be neglected. E. g.

in Czech the adjective-forming suffix *-ovský* imparts the meaning of “similar to, acting like”: *fotr/ovský*, old-foggisch (< Germ. Vater) (cf. *otc/ovský* fatherly, *strejc/ovský* (< *strejc*, uncle), acting like an old man etc.)

c. Borrowed prefix modifying the lexical meaning of a native lexical constituent, again in analogy to assimilated loan-words, e. g.

the creation of the Czech adjective *extra/jemný*, very fine is inspired by borrowed adjectives such as *extra/ordinární*, *extra/vagantní*. Cf. also Germ. *extra/fein*, very fine, *Extra/ausgabe*, special edition, *Extra/zug*, special train. Recently the prefix *anti-*, denoting opposition and contrast, has become very productive in Russian and Czech. Cf. Russ. *anti/částica*, Czech *anti/částice*, anti-element; *anti/mir*, *anti/svět*, anti-world; *anti/rasskaz*, *anti/povídka*, anti-tale etc.

The independent creation of hybrids is made possible by the progressive assimilation of borrowed lexical constituents and word-formatives, so that they become productive in the borrowing language, no matter whether they were borrowed as parts of words or as free units.

As regards hybrid derivatives an important role is played by the systematizing tendency present in the linguistic systems, i. e. the tendency of grouping words into lexical classes characterized by the identity of word-formatives which facilitates the combination of a native stem with a borrowed word-formative and of a borrowed stem with a native word-formative.

On the other hand the creation of hybrid compounds is directed by the preference of word-composition in some languages in general (e. g. in German) or by the conciseness of this type of word-formation (e. g. in Czech hybrid compounds are usually preferred as doublets to long word-groups, cf. *auto/škola*, driving school x *škola pro řidiče automobilů*, school for car-drivers).

The frequency and stability of hybrid words in the lexical system of a language is influenced, needless to stress, by its immanent disposition to borrowing. The frequency of the three fundamental types of hybrids varies from language to language, but in general it can be said that the least represented type in all languages are explicative hybrids. Loan-blends occur more often, independent hybrid creations are most common, especially in languages with a high amount of borrowed word-formatives. To conclude, hybrid creations are formed in agreement with the peculiarities of the borrowing language and from the synchronic point of view they are an integral part of its lexical stock.

## **2. Types of hybrid words in modern Chinese and their specific features**

If we classify our set of hybrids according to the mentioned criteria, we find that the three fundamental types, i. e. explicative hybrids, loan-blends and independent hybrid creations, are all present in modern Chinese.

Explicative hybrids are more numerous than in other languages, they amount to 19.6% out of 592 hybrids in the narrow choice which served us as a basis for the analysis of each of the fundamental types. Loan-blends take 52.4% of our set, independent hybrid creations 28%.<sup>34</sup>

The object of our further study is a detailed analysis of the three fundamental types of hybrids in modern Chinese, the description of subtypes and investigation of the relation between the borrowed and native constituents.

### **A. Explicative hybrids**

In modern Chinese they agree with explicative hybrids in other languages in the following characteristic properties:

1. their model is a simple word
2. they are nouns
3. they are always compounds, according to the relation between the constituents either
  - a) determinative, or
  - b) copulative

#### **a. Determinative compounds**

According to the position of the borrowed and native morpheme they can be divided into two types:

Type I.  $a_1 + b_2$

Type II.  $b_2 + a_1$

Type II. is not exemplified in Indoeuropean languages, in modern Chinese it is also rather rare.

The principal cause of hybridization is the same in the case of both types – the borrowed nominal morpheme, either monosyllabic or polysyllabic, is semantically indistinct and requires further specification by a native nominal constituent.

#### **Type I.**

The native constituent serves as the head of the endocentric determinative compound. Its meaning is wider than that of the borrowed morpheme which is turned into the attribute, expressing differential meaning. Most usually, the relation of the two constituents is that of species to genus, e. g.

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<sup>34</sup> Actually, their share is far higher, as hybrid creations composed of borrowed geographic names and native morphemes, denoting nationalities, languages etc. and formed according to recurrent patterns could not have been assembled in an exhaustive way, neither was it our intention.

*tàngēwǔ* 探戈舞, tango (a dance of the type “tango”); *shādingyú* 沙丁鱼, sardine (a fish of the species “sardine”); *xiāngbīnjiǔ* 香槟酒, Champagne (a wine of the sort “Champagne”).

The determinative construction of these compounds is judged by the syntactic position of their constituents and their meaning; the most important marker of the determinative relation in modern Chinese, the formative *de* 的 cannot be inserted into these tight constructions.

The creation of this type of explicative hybrid compounds is undoubtedly influenced, besides the lack of semantic distinctness, by the tendency of accommodating nouns to the most productive pattern of Chinese nouns, i. e. the attribute-and-head endocentric construction N + N.<sup>35</sup>

These explicative hybrid compounds are identical in construction with one of the subtypes of determinative nominal compounds, cf.

*dàlǐhuā* 大理花, dahlia and *méiguīhuā* 玫瑰花, rose, *mǔdānhuā* 牡丹花, peony; *ā'ěrtàishān* 阿尔泰山, Altai and *kūnlúnshān* 昆仑山, mount Kunlun; *yǒujiālìshù* 有加利树, eucalyptus and *pípāshù* 枇杷树, loquat.

These two types of determinative compounds agree in the following characteristic features:

1. The first member of the construction, the attribute, is a bisyllabic (in hybrid compounds also polysyllabic) nominal morpheme, as a rule not recurrent in other compounds; it is usually capable of free occurrence (that of hybrid compounds not always) in the same meaning without the explicative constituent.

2. The second member of the construction, the head, has an explicative function; it denotes substance.

3. The semantic relation of the constituents is that of species to genus.

4. The formative *de* 的 cannot be inserted between the constituents of the compound.

The constituents of this type of determinative hybrid compounds can be both free nouns<sup>36</sup> and bound nominal morphemes. The following combinations of free and bound constituents are possible:

1. A borrowed morpheme, most usually bisyllabic, rarely polysyllabic or monosyllabic, not capable of free occurrence, is in determinative relation to

a. a native free monosyllabic morpheme, e. g.

*sāményú* 萨门鱼, salmon (< Engl. salmon + Chin. *yú* 鱼, fish); *fálánróng* 法兰绒, flannel (< Engl. flannel + *róng* 绒, wool); *lāgǔròu* 拉古肉, ragout (< Fr. ragoût + *ròu* 肉, meat); *tàifēitáng* 太妃糖, toffee (< Eng. toffee + *táng* 糖, sweet); *Kèlǐmùlǐngōng* 克里姆林宫, Kremlin (*gōng* 宫, palace); *píjiǔ* 啤

<sup>35</sup> According to the findings of Lu Zhiwei 陆志韦, nouns formed according to this pattern take 21% out of 30,000 entries in *Guoyu cidian* 国语辞典 [Dictionary of Vernacular Chinese]. Cf. *Hanyude goucifa* 汉语的构词法 [Word-Formation in Chinese] (1957, p. 19).

<sup>36</sup> Free nouns, though, enter into these compounds in the quality of bound morphemes; their free character is restricted by the tightness of the construction.

酒, beer (< Engl. beer + *jiǔ* 酒, alcohol); *fénfēng* 焚风, Föhn (< Germ. Föhn + *fēng* 风, wind).

b. a native bound monosyllabic morpheme, e. g.

*fùgéqǔ* 赋格曲, fugue (< It. fuga + *qǔ* 曲, song, melody); *bālěiwǔ* 芭蕾舞 (< Fr. ballet + *wǔ* 舞, dance); *lúnbāwǔ* 伦巴舞, rumba (< Span. rumba + *wǔ* 舞, dance); *tòupíngjī* 透平机, turbine (< Eng. turbine + *jī* 机, machine);

c. a native bisyllabic free noun, e. g.

*lièzījīngwǔqǔ* 列兹京舞曲, lezginka (< Russ. lezginka + *wǔqǔ* 舞曲, dance music).

2. A borrowed constituent, usually bisyllabic or polysyllabic, capable of free occurrence, is in determinative relation to

a. a native free monosyllabic morpheme, e. g.

*shādingyú* 沙丁鱼, sardine (< Engl. sardine + *yú* 鱼, fish); *kábīnqiāng* 卡宾枪, carbine (< Engl. carbine + *qiāng* 枪, gun); *shāfāchuáng* 沙发床, sofa (< Engl. sofa + *chuáng* 床, bed); *níhóngdēng* 霓虹灯, neon (< Engl. neon + *dēng* 灯, lamp); *xuējiāyān* 雪茄烟, cigar (< Engl. cigar + *yān* 烟, cigarette); *gāo'ěrfūqiú* 高尔夫球, golf (< Engl. golf + *qiú* 球, ball); *āidiměidūnshū* 哀的美敦书, ultimatum (< Eng. ultimatum + *shū* 书, letter);

b. a native bound monosyllabic morpheme, e. g.

*juéshìyuè* 爵士乐, jazz (< Engl. jazz + *yuè* 乐, music); *huá'ěrzīwǔ* 华尔兹舞, waltz (< Engl. waltz + *wǔ* 舞, dance); *kāngbàiyīnjī* 康拜因机, combine harvester (< Russ. kombajn + *jī* 机, machine);

c. a native bisyllabic free noun, e. g.

*juéshìyīnyuè* 爵士音乐, jazz (< Engl. jazz + *yīnyuè* 音乐, music); *bō'ěrkǎwǔqǔ* 波尔卡舞曲, polka (< Czech polka + *wǔqǔ* 舞曲, dance music); *bù'ěr-qíáo'yàjiējí* 布尔乔亚阶级, bourgeoisie (< Fr. bourgeois + *jiējí* 阶级, social class).

Some of the explicative constituents are recurrent in this type of determinative hybrid compounds, e. g.

*wǔ* 舞 – dance, *qǔ* 曲 – song, *jiǔ* 酒 – alcohol, *qiāng* 枪 – gun, *chē* 车 – car, *wǔqǔ* 舞曲 – dance music, *jiējí* 阶级 – social class etc.

Consequently, determinative hybrid compounds may be grouped into lexical classes with identical explicative constituents.

Sometimes, the number of syllables of the borrowed constituent can be reduced, e. g. *pūfěn* 扑粉, powder (in cosmetics) (< Engl. powder + *fěn* 粉, powder). This reduction is usual in cases of long borrowed constituents; the borrowed constituent is no more capable of free occurrence in the reduced shape, e. g.

the loan *kālǎlínàtí* 卡拉理纳提, clarinet has a more frequent hybrid doublet *kèlāguǎn* 克拉管 (reduced shape + *guǎn* 管, flute).

Two foreign models similar in phonemic shapes may merge into homophones and homographs after adaptation in Chinese. In this case, the attached explicative constituent performs differential function, e. g.

*tàiwùshìhé* 泰晤士河, the river Thames in contradistinction to *tàiwùshìbào* 泰晤士报, Times *hé* 河 – river, *bào* 报 – papers); *misaqǔ* 弥撒曲, mass (as a musical form) in contradistinction to *mísashū* 弥撒书, missal (*qǔ* 曲 – song, *shū* 书 – book) etc.

Some foreign models may be regarded as possessing a certain degree of multiple meaning. In this case the shades of meaning are expressed by different explicative constituents, e. g.

*huá'ěrzīwǔ* 华尔兹舞, waltz (a dance) and *huá'ěrzīwǔqǔ* 华尔兹舞曲, waltz (dance-music).

## Type II.

The reason for the creation of this rather rare type of hybrid explicative compounds, besides the effort to do away with semantic indistinctness, is the endeavour to avoid possible homonymy with native words. The head of these compounds is a monosyllabic, always bound borrowed morpheme which is provided with a native attribute. The attribute may be either a free or a bound monosyllabic morpheme, e. g.

*jiǔbā* 酒吧, bar (< *jiǔ* 酒, alcohol + Engl. bar); *lǐngdài* 领带, tie (< *lǐng* 领, neck + Engl. tie); *chētāi* 车胎, *chēdài* 车带, tyre (< *chē* 车, car + Engl. tyre); *lúntāi* 轮胎, *lúndài* 轮带 (< *lún* 轮, wheel + Eng. type) (the morpheme *dài* 胎 means in Chinese also girdle, tape, strip) etc.

## b. Copulative compounds

These are not very numerous in modern Chinese. They consist of borrowed monosyllabic nominal morphemes which are provided with native monosyllabic nominal morphemes of the same meaning. Their construction is considered coordinative because of the synonymy of the constituents. The borrowed morpheme is never free in modern Chinese, the explicative native morpheme may be either free or bound, e. g.

*kǎchē* 卡车, lorry (< Engl. car + *chē* 车, car); *shāhuáng* 沙皇, czar (< Russ. car' + *huáng* 皇, emperor); *kǎpiàn* 卡片, card (< Engl. card + *piàn* 片, strip).

## Stabilization of explicative hybrids

In comparison with loan-words explicative hybrid creations occupy a firmer position in the Chinese lexical system. Their substitution by native doublets is less frequent. Of the factors favouring their stabilization, the specific features of their structure are in the first place, mainly the presence of the native explicative constituent which makes them similar in construction to native endocentric compounds N + N, and the usually low number of syllables of the borrowed morpheme.

As shown by the above examples, the majority of the borrowed constituents are bisyllabic or monosyllabic, so that the hybrid compound is mostly trisyllabic (determinative compounds) or bisyllabic (determinative and copulative compounds). In this case the probability and possibility of their stabilization is the greatest, as they correspond in form to the most frequent type of native nouns, attribute-and-head endocentric constructions.

Polysyllabic explicative hybrid compounds are very often substituted by loan-translations and descriptive creations, e. g.

the loan-translation *liánhéshōugējī* 联合收割机, combine harvester is more frequent than *kāngbàiyīnjī* 康拜因机; *huá'ěrzǐwǔ*, waltz is in parallel use with the new-creation *yuánwǔqǔ* 圆舞曲; *zīchānjiējī* 资产阶级, bourgeoisie has completely displaced the hybrid *bù'ěrqíàoyàjiējī* 布尔乔亚阶级.

Only such polysyllabic compounds that are not frequent in occurrence and denote specific foreign products get assimilated in the hybrid form. Here belong, for instance, explicative hybrids denoting foreign dances, e. g. *bō'ěrkǎwǔ* 波尔卡舞, polka; foreign products, e. g. *báilándìjiǔ* 白兰地酒, brandy etc. and before all geographic names which cannot be substituted by native doublets.

The semantic fields of explicative hybrid creations in modern Chinese roughly correspond to those of loan-words. They denote in the first place various objects such as tools, weapons, tissues, food and beverages of foreign fabrication, western musical forms and dances and biological terms.

## B. Loan-blends

The division of loan-blends into compounds and derivatives applies to modern Chinese as well.

Loan-blended compounds which are the most represented type of hybrid words in modern Chinese, reflect the basic specific feature of Chinese word-formation, the preference of lexico-syntactic means in coining words. As the creation of words by morphemic means is by far subsidiary in Chinese, derivatives are only a secondary type of loan-blends.

### a. Loan-blended compounds

In relation to the foreign model and according to the pattern of arrangement of borrowed and native constituents loan-blended compounds in Chinese can be divided into the following four types:

- |                            |                              |
|----------------------------|------------------------------|
| I. $L_1 a_1 + b_1$         | $\sim L_2 a_1 + b_2$         |
| II. $L_1 a_1 + b_1$        | $\sim L_2 a_2 + b_1$         |
| III. $L_1 a_1 + b_1 + c_1$ | $\sim L_2 a_2 + b_1 + c_2$   |
| $L_1 a_1 + b_1$            | $\sim L_2 (b_2 + a_1) + c_2$ |
| IV. $L_1 a_1 + b_1$        | $\sim L_2 (c_2 + a_1) + b_2$ |
|                            | $\sim L_2 (a_1 + c_2) + b_2$ |

**Type I.**

These are endocentric determinative compounds, the head of which is a native morpheme and the attribute a borrowed morpheme. Their models can be 1. derivatives, 2. compound words, 3. word-groups.

If the model is a derivative, its root-morpheme is borrowed into modern Chinese and its derivational morpheme is substituted by a Chinese lexical morpheme, either free or bound, e. g.

*tānkèbīng* 坦克兵, tank/ist (*bīng* 兵 – soldier); *tuōlājī* 拖拉机, tract/or (< Russ., *jī* 机 – machine); *dūnjí* 吨级, *dūnwèi* 吨位, ton/age (*jí* 级 – degree, *wèi* 位 – place, position).

Very often, the derivational morphemes of the model are replaced by Chinese monosyllabic or bisyllabic constituents recurrent both in these hybrid compounds and newly coined determinative compounds. Because of their productiveness these constituents show symptoms of suffixation, but it would be premature to treat them directly as suffixes, as they partly keep their lexical meaning and their tonality and in some cases are capable of free occurrence.

The following lexical constituents of this type occur in loan-blends:

*zhǔyì* 主义, meaning theory, usually corresponds to the suffix -ism

*jiào* 教, a bound morpheme meaning religion; it corresponds also to the suffix -ism, but only in nouns denoting various religions and religious teachings

*pài* 派, denoting a group of people sharing the same opinion or an individual adherent to a certain movement; it usually corresponds to the suffixes -ism, -ist

*fēnzǐ* 分子, which is a bound constituent denoting an individual belonging to a certain group, very often it expresses negative evaluation; it corresponds to the suffix -ist

*xué* 学, a bound morpheme occurring in the names of scientific disciplines; it corresponds to English suffixes -ology, -y, -ic, -istics etc.

*shì* 式 (*shìde* 式的), which is a constituent of attributives and renders the meaning “of a certain kind, type, form, style”; it corresponds to the suffixes -ish, -ic of English models.

Loan-blends composed of borrowed constituents and the above recurrent semantic formatives, no matter whether any of their constituents can be free in other constructions, cannot be extended by the formative *de* 的. Let us give some examples:

*zhǔyì* 主义: the borrowed constituent very often is a proper name, mostly personal, sometimes local, e. g. *dá'ěr wén zhǔyì* 达尔文主义, darwinism; *mǎ'ěr sà sī zhǔyì* 马尔萨斯主义, malthusianism; *mǎ k sī zhǔyì* 马克思主义, marxism; *mèng dé'ěr zhǔyì* 孟德尔主义, mendelism; *shā wén zhǔyì* 沙文主义, chauvinism; *xī xióng zhǔyì* 西雄主义, Zionism; *dá dá zhǔyì* 达达主义, dadaism;

*làngmànzhūyì* 浪漫主义, romanticism; *xīndīkāizhūyì* 辛狄开主义, syndicalism; *nàcuīzhūyì* 纳粹主义, nazism.

*jiào* 教: *yóutàijiào* 犹太教, judaism; *jīdūjiào* 基督教, Christianity; *jiā'ěrwénjiào* 加尔文教, Calvinism.

*pài* 派: *ānnàbādàpài* 安那巴达派, anabaptists; *dádàpài* 达达派, dadaists, *béigépài* 杯葛派, boycottists.

*fēnzǐ* 分子: *fǎxīfēnzǐ* 法西斯分子, fascist; *nàcuīfēnzǐ* 纳粹分子, nazist.

*xué* 学: *jǐhéxué* 几何学, geometry; *luójìxué* 逻辑学, logic; *tuòpūxué* 拓扑学, topology; *sīlāfūxué* 斯拉夫学, slavistics and analogically other philological disciplines, like *tūjuéxué* 突厥学, turkology etc.

*shì* 式 (*shìde* 式的): *bólātúshìde* (*liàn'ài*) 柏拉图式的 (恋爱), Platon/ic (love); *gētèshìde* (*gōng*) 哥特式的 (拱), Goth/ic (arch); *luómǎshì* (*yìshù*) 罗马式 (艺术), Roma/n (art); in some cases the morpheme *shì* 式 has the character of an explicative constituent, e. g. *tāngmǔshìqiāng* 汤姆式枪, tommy gun; *làgūpíshìzúqiú* 辣古皮式足球, rugby football etc.

In some of these compounds we can observe reduction in the number of syllables of the borrowed constituent, typical of morphemic adaptation of loans in Chinese, e. g.

*tuōpài* 托派, trockist (Russ.); *mǎlièzhūyì* 马列主义, marx-leninism (instead of the excessively long unreduced shape *mǎkèsīlièníngzhūyì* 马克思列宁主义) etc.

No matter whether the foreign model is a compound or a word-group, the technique of the creation of the replica in Chinese is the same. The lexical unit in question is analysed as to consist of two meaningful constituents – the constituent denoting the character of the lexical unit is borrowed (or has been already borrowed and assimilated in the Chinese lexical system), the constituent denoting substance is translated or replaced by a synonymous Chinese lexical constituent. The Chinese replicas are determinative endocentric compounds with a native head and a borrowed attribute.

Let us quote some examples of loan-blended compounds which are replicas of foreign compounds:

*kēluóbǎn* 珂罗版, collo/type (*bǎn* 版 – type, block for printing); *sūdàshuǐ* 苏打水, soda-water (*shuǐ* 水 – water); *mótuōchē* 摩托车, motor-cycle (*chē* 车 – car); *mótuōchuán* 摩托船, motor-boat (*chuán* 船 – boat); *kěkěshù* 可可树, cocoa-tree (*shù* 树 – tree); *dísà'ěrjī* 狄赛尔机, Dieselmotor (*jī* 机 – machine); *jiànqiáo* 剑桥, Cambridge (*qiáo* 桥 – bridge) etc.

The names of some measuring instruments, too, are formed according to this pattern. The object of measurement is a physical unit borrowed into Chinese, the head of the determinative compound is the native morpheme *jì* 计 (measuring device) or *biǎo* 表 (chart, meter), e. g.

*fútèjì* 伏特计, voltmeter; *ānpéijì* 安培计, *ānpéibiāo* 安培表, ampèremètre; *kùlúnjì* 库仑计, coulombmeter; *kǎjì* 卡计, calorimeter etc.

In the case of word-groups, the borrowed constituent, the attribute, is either a common or a proper noun. If there is in the model a grammatical marker of the determinative construction, it is naturally omitted in Chinese.

The attributes are very often chemical names, e. g.

*diǎnjiǔ* 碘酒, tincture of iodine (*diǎn* 碘 corresponds to the second syllable of the word iodine, *jiǔ* 酒 – alcohol); *dānningsuān* 单宁酸, tannic acid (*suān* 酸 – sour, acid); *dámǔdámǔdàn* 达姆达姆弹 or reduced *dámǔdàn* 达姆弹, dum dum bullet (*dàn* 弹 – bullet, shell) etc.

The proper nouns as attributive members of fixed word-groups may be both personal and local. The construction of loan-blended compounds denoting geological formations conforms, too, to this pattern, e. g.

*běنشēngdēng* 本生灯, Bunsen's burner (*dēng* 灯 – lamp); *tuōlèméixì* 托勒玫系, Ptolemy system (*xì* 系 – system); *rúlùèlì* 儒略历, Julian calendar (*lì* 历 – calendar); *láidùnpíng* 来顿瓶, Leyden bottle (*píng* 瓶 – bottle); *pǔlǔshìlán* 普鲁士蓝, Prussian blue (*lán* 蓝 – blue); *dàolínzhǐ* 道林纸, Dowling paper (*zhǐ* 纸 – paper); *huá'ěrjiē* 华尔街, Wall street (*jiē* 街 – street); *lādīngqū* 拉丁区, Quartier Latin (*qū* 区 – area, district); *zhūluójì* 侏罗纪, jurassic period, *hánwǔjì* 寒武纪, cambrian period (*jì* 纪 – period) etc.

If the model is a fixed word-group with a graphic sign (as a rule a letter of Greek or Latin alphabet) as its attribute, the current pronunciation of the graphic sign is expressed by a corresponding phonemic shape and the head is translated, e. g.

*ǎ'ěrfǎ shèxiàn* 阿尔法射线,  $\alpha$  rays (*shèxiàn* 射线 – rays); *àikèsī guāng* 爱克斯光 (*guāng* 光 – light), *àikèsī shèxiàn* 爱克斯射线, X rays etc.

Although these constructions cannot be extended in Chinese by attributive markers, both their meaningful constituents are highly autonomous and their native head usually is capable of free occurrence. For this reason, we prefer to consider them as fixed word-groups.

The same is the case of lexical units consisting of a polysyllabic borrowed attribute and a native bisyllabic head, capable of free occurrence. The formative *de* 的 can be inserted into these constructions, but this extension is not common, e. g.

*sūwéi'āi nóngzhuāng* 苏维埃农庄, sovchoz (< Russ. abbr. sov/ětskoje choz/ jajtvo); *hālélí huìxīng* 哈雷彗星, Halley's comet etc.

## Type II.

These loan-blended compounds are also endocentric. The head of the construction is borrowed, the attribute is a native morpheme equivalent in meaning to the attributive constituent of the model. These constructions, too, cannot be extended by the formative *de* 的. The foreign models can be 1. compounds, 2. fixed word-groups, 3. prefixed words.

In Chinese replicas of foreign compounds, the head of the construction, the borrowed morpheme, very often is a loan already assimilated in modern Chinese. The native attributive constituent, both monyllabic and bisyllabic, is capable of free occurrence, e. g.

*shuǐbèng* 水泵, water-pump (*shuǐ* 水 – water); *yóubèng* 油泵, oil-pump (*yóu* 油 – oil); *bīngqílín* 冰淇淋, *bīngjīlín* 冰激淋, *bīngqíling* 冰淇淋, ice-cream (*bīng* 冰 – ice, *qílín* 淇淋/ *jīlín* 淇淋/ *qíling* 淇凌 is a bound borrowed form of the word cream, it possesses three phonemic and graphic alternative shapes); *ānquánfá* 安全阀, safety valve (*ānquán* 安全 – safe, safety, *fá* 阀 is a reduced borrowed form of the Engl. valve); *píngguǒpái* 苹果排, apple-pie (*píngguǒ* 苹果 – apple); *diànzifútè* 电子伏特, electrovolt (*diànzǐ* 电子 – electron) etc.

Here also belongs a specific group of loan-blended compounds of physical units. The native morphemes with numerical or quantitative meaning denote the position of the borrowed unit in the decimal system, e. g.

*qiānwǎ* 千瓦, kilowatt (*qiān* 千 – thousand); *qiānkèīmǐ* 千克米, kilogrammètre (*kè* 克 and *mǐ* 米 are reduced shapes of the respective units); *zhào'ōumǔ* 兆欧姆, megohm (*zhào* 兆 – million); *háomǐ* 毫米, milimètre (*háo* 毫 – minutest part); *háo'ān* 毫安, miliampère (*ān* 安 – reduced shape of *ānpéi* 安培, ampère) etc.

Fixed word-groups as models are most frequently geographic names; their first member is a lexical constituent, mostly adjective, which can be easily translated, the second member, a proper name, can be introduced into Chinese only in the borrowed form. These two-member constructions in Chinese are fixed and cannot be extended by attributive markers, e. g.

*zhōngyàxià* 中亚细亚, Central Asia; *xīnxīlán* 新西兰, New Zealand; *shèngyuēsè* 圣约瑟, San José; *báilélúósī* 白俄罗斯, White Russia (< Russ. Běłaja Rus'); *dàbùlièdiǎn* 大不列颠, Great Britain<sup>37</sup> etc.

The borrowed constituent of loan-blended geographic names provided with a native monosyllabic attribute denoting the four cardinal points, position etc. is usually reduced to the first, exceptionally to the second syllable, e. g.

*xī'ōu* 西欧, West Europe; *běiměi* 北美, North America; *xīdé* 西德, West Germany (< West-deutschland); *zhōng'ōu* (*shíjiān*) 中欧 (时间), central European (time); *dì'ē* 帝俄, czarist Russia (< Russ. carskaja Rus') etc.

Some loan-blended lexical units created in Chinese in imitation of foreign word-groups, have also the character of fixed word-groups. Their extension by the formative *de* 的 is possible, but they are used only in the non-extended form, e. g.

*zuīgāo sūwéi'ái* 最高苏维埃, Supreme Soviet (< Russ. verxovnyj sovět).

<sup>37</sup> If the geographic name in the original form is a compound, its construction in Chinese is the same as that of the above examples, e. g. *nánsīlāfū* 南斯拉夫, Yugoslavia.

The prefixes of foreign models are substituted by Chinese lexical morphemes which are recurrent in analogous constructions. These semantic formatives keep their full tonality, but usually are not capable of free occurrence. The following constituents correspond regularly to foreign prefixes in loan-blended compounds:

**fǎn** 反, meaning originally contrary, incorrect; in modern Chinese as a free verb – to be against, to rebel; it corresponds to the prefixes anti-, counter- etc. and occurs in compounds which frequently enter as attributive members mostly without the formative *de* 的, into fixed word-groups, e. g.

*fǎnfǎxī* (liánméng, dòuzhēngzhě) 反法西斯 (联盟, 斗争者), antifascist (league, fighter); *fǎnmǎkèsī* (sīxiǎng) 反马克思 (思想), antimarxist (ideology); *fǎntǎnkè* (pào, léi) 反坦克 (砲, 雷), antitank (artillery, mine).

**fēi** 非, a negation in classical Chinese, now only as a bound morpheme meaning “incorrect”; it corresponds to negative prefixes such as a-, in-, non-, Russ. ne- and occurs only in hybrid adjectives, e. g.

*fēiluójí* 非逻辑的, illogical; *fēibù'ěrshevikè* 非布尔什维克的, non-bolshevist (< Russ. ne-bolševistskij).

**fàn** 汎 (泛), a bound morpheme meaning “universal, general”; because of its meaning and phonemic shape it is used as the equivalent of the prefix pan-, e. g.

*fàn'ōu* (liánméng) 泛欧 (联盟), panEuropean (coalition).

### Type III.

These loan-blends are created in imitation of foreign nouns which can be analysed as to consist of:

- a. bound lexical constituent or prefix + (root-morpheme + suffix)
- b. lexical constituent + phil

a. The bound lexical constituent or prefix is substituted by a synonymous Chinese lexical morpheme or a recurrent semantic formative. It is in determinative relation to the head of the construction which is a derivative. The root-morpheme of the derivative is borrowed, only *zhǔyì* 主义, -ism and *fēnzǐ* 分子, -ist may occur as equivalents of its suffixes, e. g.

*xīn//mǎ'ěrsàsī/zhǔyì* 新马尔萨斯主义, neo//malthusian/ism; *xīn//nàcuì/fēnzǐ* 新纳粹分子, neo//naz/ist; *jiǎ//mǎliè/zhǔyì* 假马列主义, pseudo//marx/ism; *qián//lāfēi'ěr/zhǔyì* 前拉斐尔主义, pre//raphael/ism; *fēi//lièníng/zhǔyì* 非列宁主义的, non//lenin/ist; *fàn//rì'ěrmàn/zhǔyì* 汎日耳曼主义, pan//German/ism; *jiàoquán//fǎxī/zhǔyì* 教权法西斯主义, Klerikal//fasch/ismus (*jiàoquán* 教权 – power of the clergy); *shèhuì//dǎ'ěrwén/zhǔyì* 社会达尔文主义, Sozial//darwin/ismus (*shèhuì* 社会 – society) etc.

b. The technique of the creation of the replica to nouns with the constituent -phil fully conforms to the word-formation procedures of modern Chinese. The meaning of the constituent -phil, “adherent, lover of something” is transformed into a verb + object relation, i. e. into the construction of the verb *qīn* 亲, to love with the borrowed

constituent denoting nationality, reduced to the first syllable. The V + O construction, in order to function as a noun, enters into determinative construction with the nominal head *pài* 派, a group of people or an individual supporting a certain view, e. g.

*qīnyīng/pài* 亲英派, Anglo/phil; *qīn'é/pài* 亲俄派, Russo/phil etc.

#### Type IV.

This is a singular type of endocentric compounds corresponding to foreign models; its characteristic feature is that one of its constituents is a hybrid word already assimilated in the Chinese lexical system, e. g.

*jiǔbājiān* 酒吧间, barroom (explicative hybrid *jiǔbā* 酒吧, bar + *jiān* 间, room);  
*tuōlājīzhàn* 拖拉机站, tractor station (< Russ. traktornaja stancija; a loan-blend *tuōlājī* 拖拉机 + *zhàn* 站, station).

#### b. Loan-blended derivatives

As shown by our material, the colligability of borrowed morphemes with native Chinese suffixes is very limited. Consequently, loan-blended derivatives are not a well-defined and numerous type of hybrid words. Besides, the view as to which of the Chinese word-formatives should be treated as suffixes, is far from uniform in Chinese linguistics. Of the formatives which colligate with borrowed morphemes, the following ones in a certain degree display features of suffixes:

noun-suffixes, denoting agents: *zhě* 者, *jiā* 家 and *shǒu* 手; noun- and adjective-suffix *xìng* 性, expressing the idea of abstractness; noun- and verb-suffix *huà* 化, expressing the change of state,<sup>38</sup> e. g.

*wátuōbāngzhě* 乌帮邦者, utopist; *yōumòjiā* 幽默家, humorist; *tǎnkèshǒu* 坦克手, tankist; *luójìxìng* 逻辑性, logic, logicity.

Only the suffix *huà* 化 is in loan-blended derivatives rather productive. It corresponds to the English verb-suffixes -ize, -ify (or Fr. -iser, -ifier, Germ. -isieren, -ifizieren, Russ. -izirovat', -ificirovat') or noun-suffixes -ization, -ification (-isation, -ification, -isierung, -ifizierung, -izacija, -ifikacija).<sup>39</sup> The borrowed morpheme is very often a geographic or ethnic name, e. g.

<sup>38</sup> Our evaluation of these formatives which are in modern Chinese mostly tonal, as suffixes, is based upon a) their progressive delexicalization and b) their incapability or very restricted capability of free occurrence. This view is shared e. g. by Wang Li (1958, pp. 232, 313); Ding Shengshu and others (1963, pp. 220, 224), etc.

<sup>39</sup> In Chinese lexicology the suffix *huà* is usually held for a verb-suffix; cf. Wang Li (1958, p. 313) which is far from accurate. Words provided with this suffix can function as a) subjective verbs, e. g. *nàge guójiā kuài fǎxìsīhuàle* 那个国家快法西斯化了, that state will turn fascist very soon, b) objective verbs, e. g. *bǎ hànzi lādīnghuà* 把汉字拉丁化, to introduce Latin alphabet instead of Chinese characters, c) nouns, both as heads and attributes of free word-groups, e. g. *hànzide lādīnghuà* 汉字的拉丁化, latinization of Chinese characters; *ōuhuà, rihuàde wèntí* 欧化、日化的问题, the question of Europeanization and japanization.

*rì'ěrmànhuà* 日耳曼化, Germanize (germanisieren), Germanization; *ōuhuà* 欧化, Europeanize, Europeanization; *gàihuà* 钙化, calcify, calcification.

Very frequently, it is difficult to differentiate which of these hybrid creations were formed as replicas of foreign models and which in analogy to loans from Japanese and new-creations formed with this suffix, cf.

*lādīnghuà* 拉丁化, latinization; *fǎxīshīhuà* 法西斯化, fascization; *mótuōhuà* (*shī*) 摩托化 (师), motorized (division) x *mínzhǔhuà* 民主化, democratization; *diànqìhuà* 电气化, electrification; *yībānhuà* 一般化, generalization etc.

### Stabilization of loan-blends

Loan-blends, like explicative hybrid creations are much more stable in the Chinese lexical system than loan-words. Their substitution by loan-translations and new-creations takes place, though, in a not negligible number of cases; the reason for this is far less their difference in form from native words than the general predilection for descriptive creations and the endeavour to achieve semantic distinctness. Cf.

*ānnàqízhǔyì* 安那其主义, anarchism is replaced by the more perspicuous loan-translation *wúzhèngfǔzhǔyì* 无政府主义; *dàmínzúzhǔyì* 大民族主义 is preferred to *shāwénzhǔyì* 沙文主义, chauvinism; *jiāobǎn* 胶版 is more used than *kēluóbǎn* 珂罗版, collotype; the names of measuring instruments, too, are more common in the descriptive than in the hybrid form: *fútèjì* 伏特计 and *diànyǎjì* 电压计 (*diànyǎ* 电压 – electric tension), voltmeter; *kǎjì* 卡计 and *rèliàngjì* 热量计 (*rèliàng* 热量 – quantity of heat), calorimeter.

The creation of these doublets is undoubtedly furthered by the ideographic character of Chinese writing which requires an agreement or at least correlation between the meaning of the graph and the recorded morpheme, which is hardly to be achieved in borrowed morphemes. Despite the negative function of Chinese characters in this respect, loan-blends were fully assimilated in the Chinese lexical system, as

1. Modern Chinese could not completely discard a considerable amount of international words which were difficult to express by native lexical means.

2. Thanks to joint application of the mechanisms of phonemic borrowing and morphemic substitution the form of loan-blends is not in sharp contradiction with the usual form of native words; the native morphemes present in the form of loan-blends offer the possibility of approximate semantic classification and easy syntactic application of the respective lexical unit.

3. Foreign lexical morphemes and affixes are substituted by classes of native morphemes and semantic formatives displaying an affix-like tendency, which occur frequently in native words (e. g. *jī* 机, machine, *jì* 计, measuring device, *pài* 派, group of people sharing the same opinion, *zhǔyì* 主义, -ism, *fǎn* 反, contrary, etc.).

The graphic shapes of borrowed morphemes in loan-blends are more steady than the graphic shapes of loan-words; this is a further proof of the high degree of their assimilation.

In contradistinction to explicative hybrids which are denotations of tools, various objects and foreign musical forms, loan-blends in modern Chinese belong to semantic fields which assemble notions of ideology and natural science – the most represented semantic fields are politics, philosophy, culture, physics, geology and chemistry.

### C. Independent hybrids

The direct creation of hybrids, inspired by the analogy to native words rather than by the existence or construction of foreign models, is in modern Chinese essentially restricted to hybrid compounds. The subsidiary character of word-derivation which is reflected, as we have seen, in the scarce creation of loan-blended derivatives, is even more corroborated by the impossibility of unrestricted colligability of borrowed morphemes with native suffixes. Besides, no foreign suffixes (with the few exceptions of suffixes borrowed in the graphic way from Japanese) have been introduced into Chinese.

The independent creation of hybrid compounds in modern Chinese demonstrates the stabilization of certain borrowed morphemes and their indispensability. As a lexical set these hybrid compounds are restricted both as regards their word-formation patterns and their word-class. They are always of endocentric determinative construction and cannot be extended by the formative *de* 的; the head of the construction is a native lexical morpheme, the attribute a borrowed nominal constituent. With few negligible exceptions, they are all nouns.

According to the nature of the borrowed constituent they can be divided into two specific groups:

- a. hybrid compounds the attribute of which is a borrowed common noun
- b. hybrid compounds the attribute of which is a borrowed proper noun

a. The borrowed common noun which can be the attribute of a hybrid compound usually is an assimilated monosyllabic or bisyllabic loan-word of high frequency of occurrence. The native head of the compound can be either a free or a bound morpheme, e. g.

*kāfēijīng* 咖啡精, coffee-extract; *kāfēitáng* 咖啡糖, coffee-sweets; *kāfējù* 咖啡具, coffee-set; *kāfēihú* 咖啡壶, coffee-pot (cf. native compounds *chájù* 茶具, tea-set, *cháhu* 茶壶, teapot); *kāfēisède* 咖啡色的, of coffee colour (cf. colours in Chinese and patterns of their syntactic application); *tǎnkètǎ* 坦克塔 (tank + pagoda), turret; *tǎnkélǚ* 坦克旅, tank brigade (cf. *zhuāngjiǎlǚ* 装甲旅, armoured brigade).

Very often, the attribute of the compound is a name of a chemical element, e. g.

*xīfèi* 矽肺, silicosis (silicon + lungs); *měiguāng* 镁光, magnesium light; *wúkuàng* 钨矿, wolfram ore.

The attribute of the compound can also be a hybrid word stabilized in modern Chinese, but these cases are very rare, e. g.

*píjiǔhuā* 啤酒花, hop (explicative hybrid beer + flower).

b. Proper, mostly geographic nouns figure as attributes in nouns denoting nationalities, countries and languages; these hybrid compounds are formed in analogy to native compounds with productive morphemes such as *rén* 人, man, *guó* 国, country, *yǔ* 语, language, *wén* 文, literature.

The hybrid compounds with the morpheme *rén* 人 denote members of a certain ethnic group, nationality, city inhabitants etc. (Cf. native compounds such as *gōng-rén* 工人, worker, *jūnrén* 军人, soldier, *hēizhǒngrén* 黑种人 or *hēirén* 黑人, negro where the morpheme *rén* 人 characterizes members of a certain social or ethnic group, people performing certain occupation etc.). The borrowed proper nouns are most often borrowed from English, e. g.

*youtàirén* 犹太人, Jew; *yīndì'ānrén* 印第安人, Red Indian; *jībūsàirén* 吉卜赛人, gypsy; *sīlāfūrén* 斯拉夫人, Slav; *nuówēirén* 挪威人, Norwegian (< Norway); *xiōngyálirén* 匈牙利人, Hungarian (< Hungary); *yádiānrén* 牙典人, the inhabitant of Athenes; *bólinrén* 柏林人, the inhabitant of Berlin etc.

If the borrowed constituent due to its excessive length should differentiate the hybrid compound from native words formed according to the same pattern, in order to make it correspond to the prevalent bisyllabic or trisyllabic form of Chinese words,

1. the number of syllables of the borrowed constituent is reduced, e. g.

*yīngměirén* 英美人, Anglo-American.

2. the morpheme *rén* 人 is attached to the name of the continent or country which itself is hybrid, e. g.

*yàzhōurén* 亚洲人, Asiatic, is more current than *yàxiyàrén* 亚细亚人; the same is the case of *àozhōurén* 澳洲人 and *àodàliyàrén* 澳大利亚人, Australian; *yīngguórén* 英国人, English has completely replaced the long shape *yīngjīlirén* 英吉利人; cf. also *fǎguórén* 法国人 and *fālǎnxīrén* 法兰西人, French; *éguórén* 俄国人 and *éluósīrén* 俄罗斯人, Russian.

The current names of the continents are hybrid compounds composed of the first, exceptionally of the second syllable of the loan and the morpheme *zhōu* 洲, continent, island, e. g.

*yàzhōu* 亚洲, Asia (instead of *yàxiyàzhōu* 亚细亚洲); *ōuzhōu* 欧洲, Europe (instead of *ōuluóbāzhōu* 欧罗巴洲) etc.

The names of countries which occur most frequently, are created according to the same pattern. The borrowed morpheme is reduced to the first, exceptionally to the second syllable and is provided with the native morpheme *guó* 国, country (presumably in analogy to *zhōngguó* 中国, China). E. g.

*yīngguó* 英国, England; *fǎguó* 法国, France; *éguó* 俄国, Russia; *déguó* 德国, Germany (< Deutsch); *àoguó* 奥国, Austria (names of other countries in Chinese are loans, e. g. *fēnlán* 芬兰, Finland, *bólán* 波兰, Poland etc.).

The pattern for the creation of the names denoting various languages is analogous, too. The borrowed morpheme is provided with the morpheme *yǔ* 语, signifying both the spoken and written form of the language in question, or the morphemes

*wén* 文, denoting only its written form and *huà* 话, denoting only its spoken form (cf. native compounds *hànyǔ* 汉语, Chinese, *wàiwén* 外文, foreign language, *báihuà* 白话, spoken Chinese etc.). E. g.

*hélányǔ* 荷兰语, *hélánwén* 荷兰文, *hélánhuà* 荷兰话, Dutch; *xiōngyáliyǔ* 匈牙利语, *xiōngyáliwén* 匈牙利文, *xiōngyálihà* 匈牙利话, Hungarian etc.

If the noun denoting the respective country has a hybrid form with a reduced borrowed morpheme, the language, too, uses a reduced hybrid form, e. g.

*yīngyǔ* 英语, *yīngwén* 英文, English (instead of the long *yīngjīliyǔ* 英吉利语); *fǎyǔ* 法语, *fǎwén* 法文, French; *déyǔ* 德语, *déwén* 德文, German; *éyǔ* 俄语, *éwén* 俄文, Russian.

Except these cases there are some other nouns denoting languages which use the reduced shape, e. g.

*yīnnǐyǔ* 印尼语, Indonesian (instead of the long *yīndùnìxīyǎyǔ* 印度尼西亚语, also *yīnní* 印尼, Indonesia); *jiéyǔ* 捷语, *jiéwén* 捷文, Czech is as current as *jiékèyǔ* 捷克语, *jiékèwén* 捷克文 (cf. *zhōngjié guānxì* 中捷关系, Sino-Czech relations etc.).

The morpheme *huà* 话 is in this case attached to the hybrid noun denoting the country. These nouns are used only in the colloquial, e. g.

*fǎguóhuà* 法国话, French; *déguóhuà* 德国话, German etc.

The reduced morphemes denoting countries are stabilized as autonomous morphemes and can enter into compounds as constituents expressing differential meaning. The foreign units of length are formed in this way, e. g.

*yīnglǐ* 英里, mile; *yīngchǐ* 英尺, foot; *yīngcùn* 英寸, inch; *élǐ* 俄里, verst in contradistinction to Chinese units *lǐ* 里, *chǐ* 尺, *cùn* 寸.

An analogous process of reduction in the number of syllables, such as we have observed in the geographic names, takes place also in personal names. They are reduced to the first syllable and provided with the morpheme *shì* 氏, family. They form the attributive constituents of fixed word-groups, e. g.

*shèshì wēndùjì* (*hánshǔbiào*) 摄氏温度计(寒暑表), Celsius' thermometer; *bèishì liàngāngfǎ* 贝氏炼钢法, Bessemer process etc.

The types of independent hybrid creations, viewed from the position of the borrowed morpheme are the following:

I.  $a_1 + b_2$

II.  $(a_1 + b_2) + c_2$

$a_1$  is a borrowed morpheme which may be reduced to a monosyllabic shape. The form of the synonymous lexical unit in the language  $L_1$  which supplied the loan (most usually English), may contain the respective loan  $a_1$  or may be completely different, e. g.

*xīfèi* 矽肺 ("siliconic lungs"), silicosis; *élǐ* 俄里 ("Russian mile"), verst; *pījiǔhuā* 啤酒花 ("beer-flower"), hop, etc.

As can be observed from the above examples, most of the independent hybrid creations are formed of morphemes denoting geographic names. This is naturally reflected in their semantic distribution. The majority of independent hybrid creations are nouns denoting nationalities, languages, countries and continents, foreign units of length etc. Next come nouns containing chemical elements and some not very numerous names of food-stuffs and objects.

### The colligability of hybrid compounds with native suffixes

Agential suffixes *zhě* 者, *jiā* 家 and *shǒu* 手 can be affixed to loan-blended compounds. The verb- and noun-suffix *huà* 化, whose colligability with borrowed morphemes is, as we have seen, comparatively great, can be attached to hybrid compounds only exceptionally. Foreign models most probably served as impulses for the colligation of loan-blended compounds with native suffixes, but the resulting construction of these words is not parallel with that of the model; they are actually derivatives formed of hybrid compounds already assimilated in the Chinese lexical system and as such belong to the fundamental type of independent hybrid creations.

The agential suffix *zhě* 者 colligates only with compounds with the constituent *zhǔyì* 主义, -ism (and corresponds to the English agential suffix -ist), e. g.

*fǎxìsìzhǔyìzhě* 法西斯主义者, fascist; *mǎkèsìzhǔyìzhě* 马克思主义者, marxist; *shāwénzhǔyìzhě* 沙文主义者, chauvinist etc.

The agential suffix *jiā* 家 can be regularly affixed to compounds containing the constituent *xué* 学, denoting scientific disciplines (it corresponds to English suffixes -ian, -ist etc.), e. g.

*luójìxuéjiā* 逻辑学家, logician; *rì'ěrmànxuéjiā* 日耳曼学家, Germanist etc.

The agential suffix *shǒu* 手, too, colligates with loan-blended compounds, but is not very productive, e. g.

*tuōlājīshǒu* 拖拉机手, tractorist; *mótuōchēshǒu* 摩托车手, motor cyclist etc.

The suffix *huà* 化 colligates with hybrid compounds only very rarely. These words seem to be new-creations not yet well established in the Chinese lexical system, e. g.

*měiguóhuà* 美国化, Americanize.

### Word-groups composed of borrowed and native constituents

Assimilated loans which are capable of free occurrence in modern Chinese, can enter together with native words into fixed and free word-groups.

Determinative fixed word-groups, although they can be extended by the marker of determinative relation, the formative *de* 的, got stabilized without this formative and as such are not formally marked from compounds. Their constituents, especially their native head, in contradistinction to constituents of hybrid compounds, are always polysyllabic, e. g.

*qiǎokèlì diǎnxīn* 巧克力点心, chocolate cake; *kāngbàiyīn jiàshīrén* 康拜因驾驶员, combine-driver; *bālěiwǔ nǚyǎnyuán* 芭蕾舞女演员, ballet-dancer etc.

In independent hybrid compounds the loan functions only as the attributive constituent, while in free and fixed word-groups it can also function as the head of the construction. It is determined by various attributes, adjectives, nouns, V + O constructions and others, e. g.

*shú kāfēi* 熟咖啡, roasted coffee; *shēng kāfēi* 生咖啡, green coffee; *shízhuāng móter* 时装模特儿, showroom model; *cǎiméi kāngbàiyīn* 采煤康拜因, cutter loader etc.

Both independent hybrid compounds and free and fixed word-groups with borrowed constituents prove that the respective loans, most usually bisyllabic and trisyllabic, or reduced to monosyllabic shapes, are completely assimilated in the Chinese lexical system.

### 3. Hybrid words as an autonomous lexical set in modern Chinese

Hybrid words in modern Chinese may be considered as a to a certain extent autonomous lexical set which takes an intermediate position between borrowed and native words. Although they have some features in common with these two lexical sets, they are characterized by specific features of their own.

As a conclusion of our analysis we wish to sum up

- a. specific features characteristic for hybrids as an autonomous lexical set,
  - b. their relation to loan-words,
  - c. their relation to native Chinese words.
- 
- a. The properties which are typical of hybrid creations in modern Chinese express not only their peculiarities, but also their restrictions. They are the following:
    1. Hybridization in modern Chinese is a word-forming technique which stands near to lexical borrowing, but thanks to the presence of native constituents hybrid creations are easily ranged with native lexical classes.
    2. Hybrid creations in Chinese are compounds, exclusively endocentric, in the majority of cases determinative, exceptionally copulative.
    3. The prevailing majority of hybrids are nouns; only compounds with lexical morphemes which show symptoms of prefixation function as adjectives; hybrid verbs can be created only by means of the suffix *huà* 化.
    4. The colligability of hybrids with native suffixes is very low.
    5. Hybrid words in general are not easily substituted by native lexical units, because they are internationalisms, words denoting certain specific products, geographic names etc.
  - b. If we compare hybrids with loan-words in modern Chinese, we find that
    1. Hybrid creations are more stabilized and more acceptable for the lexical system of modern Chinese than loan-words.

2. The form of the borrowed morpheme of hybrid words is usually shorter than the form of loan-words, most often 1–2 syllables, rarely 3 syllables, only exceptionally more.

3. The borrowed morphemes of hybrid words are liable to the same procedures of phonemic and graphic adaptation as morphemes of loan-words; in a lot of cases they are identical.

4. The phonemic and graphic shapes of hybrids are more uniform than those of loans.

5. Hybrid creations (especially of the explicative type) very often substitute loan-words; if both forms are used as doublets, the probability of standardization of the hybrid form is far higher.

c. The comparison of hybrid and native words in Chinese reveals that

1. Hybrid words strive for agreement with native words in form, both in the number of syllables (morphemes of longer words of high frequency of occurrence are reduced) and in construction (attribute-and-head endocentric construction).

2. Hybrid words containing certain lexical constituents (e. g. *wǔ* 舞, dance, *qǔ* 曲, melody etc.) or semantic formatives with symptoms of suffixation (e. g. *zhǔyì* 主义, -ism, *fēnzǐ* 分子, -ist etc.) can be ranged with native classes of words containing identical constituents.

3. Morphemes of hybrid words may differ from morphemes of native words in the number of syllables – the borrowed constituent, disregarding the number of syllables, is always monomorphemic.

4. Graphs recording borrowed constituents are mere conventional graphic signs without any conditioned semantic relation to the recorded morpheme.

To conclude, the presence of the three fundamental types of hybrids (explicative hybrid creations, loan-blends and independent hybrid creations) in modern Chinese supports the assumption about the existence of a universal pattern of hybridization in typologically different languages. Hybrids in modern Chinese reflect the preference for word-composition – their prevailing majority, regardless of the structure of the foreign model, are compounds; derivatives are very rare. In contradistinction to other languages, hybrids in Chinese are composed either of two lexical constituents, a borrowed and a native one, or a borrowed lexical constituent and a native word-formative. The combination of a native lexical constituent with a borrowed word-formative which can be encountered in other languages, is not possible in modern Chinese. Besides, Chinese hybrid creations, unlike in other languages, are more or less restricted to nouns. The number of hybrids belonging to other word-classes (adjectives, verbs) is insignificant.

## CONCLUSIONS

The research into loan-words and hybrids in modern Chinese shows that the linguistic system of modern Chinese puts to these ways of lexical innovation a series of obstacles and restrictions. As regards the improvement of the lexical system and the creation of terminological systems in various branches of science the coinage of words of native lexical morphemes, either as direct replicas of foreign models or as new-creations, is far more suitable and acceptable for the linguistic system of modern Chinese. Notwithstanding, despite the comparatively low number of loans and hybrids in modern Chinese, their introduction into the lexical system, especially into certain semantic fields, was unavoidable.

In comparison to loan-words, hybrid words in modern Chinese are far more stabilized; as a technique of borrowing, hybridization is more serviceable in the Chinese lexical system.

It is not out of the question that if in future Chinese will be recorded by a more effective writing system, i. e. alphabetic spelling, its lexical system will be more open to outer influences and will be able to adopt a greater amount of international elements.

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# COINAGE AND STRUCTURE OF ECONOMIC TERMS IN MODERN CHINESE

**Abstract:** *The turn of the 20th century in China was characterized by changes in political, economic, and cultural life. These changes were inevitably accompanied by a need to enrich the Chinese lexical system. This paper takes economic terms as an example and investigates the techniques applied in creating the new terminological system. The analyzed sample includes 1,150 lexical units of one-word and multiword units chosen proportionally from different branches of economics. In principle, economic terms in modern Chinese, similarly to terms in other branches of sciences, are created: 1) by borrowing the foreign phonemic or graphic shape, 2) by reproduction of foreign models using native word-formation procedures, and 3) as native new-creations coined either independently or induced by foreign models. Moreover, the paper argues that the technique of phonemic reproduction of foreign models, popular in European languages, has not been widely applied because of linguistic factors. Thus, the internationalization of Chinese scientific terminology is not based on the direct borrowing of Greco-Latin terms but has to be understood as an imitation of them by the native word-formation procedures applying morphemes more or less corresponding to the meaning of those of the presumed models.*

**Key words:** *Modern Chinese, lexical system, creation of new terminology, economic terms, word-formation procedures*

## 1.1 Introduction

The development of a society and changes in its economic structure and social establishment put new requirements on the respective linguistic system. If a language is to perform adequately its communicative function, a large-scale innovation in its means of expression, first of all in its lexical system, has to take place.

The language situation in China at the turn of the 20th century can be compared to a certain degree with the periods in Europe when the literary standards of various national languages were being constituted. This comparison, though, due to the specific character of the Chinese situation (revolutionary changes in the political, economic and cultural life of a population of several hundred million) is a very general one and in many respects inaccurate.

The classical literary language *wenyan* 文言 occupied a privileged position in all Chinese literature and official written communication for almost two thousand years. In sharp contradistinction there is the vernacular language *baihua* 白话 which has been used in popular epic literature since the 12th–13th century. Since the end of the 19th century a number of scholars have been aware of the necessity of changing this unmanageable situation. In this period the classical literary language stagnated to the point of failing to perform its communicative function even in official documents. The vernacular *baihua* was not at this time, however, refined and equipped for a manifold communicative function, and it was in any case ignored and rejected by official and

governing circles. Slogans such as “let the script approach the language” were coined, the well-known reformer Liang Qichao (1873–1929) made an effort to publish a government newspaper in the vernacular *baihua* and numerous attempts at reforming the Chinese script appeared. It was not until the democratic May 4th Movement of 1919 that the traditions of the literary vernacular were acknowledged and contemporary spoken Chinese was introduced into literature. The penetration of the spoken language into the daily press and into official and business documents required an even longer and more complicated process – it was successfully accomplished only after the foundation of Chinese People’s Republic in 1949. However, since 1930, the spoken language has been consistently used in political documents and newspapers in the liberated areas under the administration of the Chinese Communist Party.

The new literary language which was being constituted on the basis of the contemporary spoken language had a very important goal: the creation of the written norm and its codification, including the stabilization and diffusion of the standard pronunciation, the standardization of the grammatical system and enrichment and systemization of the lexical stock. Not even at present can the task of standardizing modern Chinese be considered as being fully accomplished. Within the framework of innovation and systemization of the lexical stock it was necessary to create special terms in various branches of science, as well as expressions specific for the intellectual language. Terms used in branches of science highly developed in old China (medicine, botany, traditional phonology, etc.) reflected traditional conceptions and as such were almost of no avail for the purposes of modern research. Their forms could not serve as models for modern large scale terminological coinage. This circumstance enabled and facilitated a purposeful application of word-formation procedures best suited to the language type of modern Chinese. The technique of phonemic reproduction of foreign models and the resulting internationalization of special terms have not been widely applied because of linguistic factors (including the specific character of the Chinese graphic system)<sup>1</sup> and not because of any purist tendencies or reasons of prestige. The technique of borrowing naming units stabilized in Japanese by means of their graphic shape proved to be quite efficient. This method, however, could be used only on a limited number of naming units of key importance in individual branches.

Modern Chinese has devised and widely applied the word-formation procedure of reproduction of foreign lexical models by means of native morphemes on the basis of the usual native word-formation patterns. The internationalization of Chinese scientific terminology has to be understood in this sense, not as the direct borrowing of Greco-Latin terms common in modern European languages, but as an imitation of them by the native word-formation procedures applying morphemes more or less corresponding in meaning to those of the presumed models. This technique of morphemic reproduction of foreign models has had invaluable advantages, the greatest being the possibility of a general application of the principle of motivation of naming units and the easy incorporation of these units into the Chinese lexical system.

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<sup>1</sup> Cf. Novotná 1968, pp. 321–322; 1967b, pp. 103–118.

## 1.2 The Character of the Lexical Material under Scrutiny

For a close investigation of the procedures of formation of special terms we have chosen as a model sample selected terms from economics. We consider economic terms to be a typical section of special terminology which makes it possible to examine the general character of word-formation procedures in modern Chinese, as well as the specificity of their application on the one hand, and the impact of some extralinguistic factors on the other.

The lexical set under scrutiny includes 1,150 lexical items of one-word and multiword units chosen proportionally from the following branches of economics: 1. political economy (selected basic terms, terms concerning ownership and its forms, capital, reproduction, value); 2. exchange of goods (trade and commerce, import – export); 3. finance; 4. production and its management. The lexical material under analysis is quite representative with regard to its sources – for the most part it was selected from the excerpts assembled for the compilation of the *Czech-Chinese dictionary* prepared by the lexicographic team of the Oriental Institute of the Czechoslovak Academy of Sciences (here the source were daily papers and special periodicals, text-books and Chinese dictionaries of representative character), it was supplemented by suitable entries from *Jianming duiwai-maoyi cidian* 简明对外贸易辞典 [A Concise Dictionary of Foreign Trade] (1959) (provided by the translation of *Kratkij vnešnetorgovyy slovar'*, 1954) and entries from *Vocabulaire méthodique chinois-français à l'usage des interprètes* (1971).

## 2.1 Sources of Economic Terms in Modern Chinese

The necessity of creating terminological systems in the individual branches arose at the turn of the 20th century when China became involved in the general upsurge of technical and scientific progress and became a suitable market for world trade. Inside the country, too, the need of reorganizing the socio-economic structure was felt.

As regards the source and to a certain extent the period of coinage<sup>2</sup>, the creation of economic terms can be stratified as following:

1. The borrowing of terms, mostly one-word units, by means of their graphic shape from Japanese. These so-called graphic loans<sup>3</sup> have been introduced on a large scale into Chinese in the years 1899–1911 and to a lesser degree until 1930–1940. This technique of the formation of terms was applied in economics more extensively than in other branches of science. It was used in the first place with economic terms of key importance and with terms used in finance and banking.

These terms, thanks to their morphemic structure, word-formation patterns applied and their descriptive character fully corresponded to the requirements of the

<sup>2</sup> Naturally, the time of coinage of individual terms can be estimated only very roughly, unless a large-scale excerption of sample texts with a precise datation is undertaken.

<sup>3</sup> As regards the creation of these terms in Japanese, cf. Novotná (1967a, pp. 616–617).

lexical system of the new literary language just in the process of formation. Let us quote some examples:

*cáichǎn* 财产 (< Jap. *zaisan*), property; *cáizhèng* 财政 (< *zaisei*), finance; *wēijī* 危机 (< *kiki*), crisis; *dānwèi* 单位 (< *tani*), unit; *dìng'é* 定额 (< *teigaku*), quota; *qǐyè* 企业 (< *kigyō*), business, enterprise; *shāngpǐn* 商品 (< *shōhin*), goods; *shīyè* 失业 (< *shitsugyō*), unemployment; *zībēn* 资本 (< *shihon*), *zījīn* 资金 (< *shikin*), capital (the native new-creation *mǔcái* 母财, lit. mother property, coined by the well-known translator and language innovator Yan Fu (1853–1921) has not survived); *pòchǎn* 破产 (< *hasan*), bankruptcy, to go bankrupt; *zhòngcái* 仲裁 (< *chūsai*), arbitration; *pèigěi* 配给 (< *haikyū*), to distribute, to assign; *jīngjìxué* 经济学 (< *keizaigaku*), economics; terms coined by Yan Fu *jìxué* 计学 (*jì* 计 – plan, to count, *xué* 学 – science) and by Liang Qichao *shēngjìxué* 生计学 (*shēng* 生 – life) and *píngzhǔnxué* 平准学 (*píng* 平 – level, *zhǔn* 准 – correct) have not been adopted; *bólanhuì* 博览会 (< *hakurankai*), borrowed in the meaning “exhibition”, at present used in a more restricted meaning “trade fair”; *jiāohuàn-jiàzhí* 交换价值 (< *kōkan kachi*), exchange value; *zībēn-yǒuji-gòuchéng* 资本有机构成 (< *shihon yūki kōsei*), organic structure of capital.

## 2. Terms created by various techniques of reproduction of foreign models

a. from English, rarely German or French<sup>4</sup>: general terms of capitalist economy, trade, transport and banking; the time of the creation of these terms can be placed into the period between late twenties up to the present time, a partial decrease being noted after 1950. A number of one-word units belong here, although multiword units prevail, e. g.

*jìngjià* 净价 (< Engl.), net price; *xìnyòngzhèng* 信用证 (< Engl.), letter of credit; *kāilì-zhàngù* 开立帐户 (< Engl.), open account; *bèi dòngjié de cúnkuǎn* 被冻结的存款 (< Engl.), frozen account; *yǒuxiàn-gōngsī* 有限公司 (< Engl.), limited liability company; *lìjī jiāohuò* 立即交货 (< Engl.), immediate delivery; *duōbiān-màoyì* 多边贸易, *shuāngbiān-màoyì* 双边贸易 (< Engl.), multi- and bilateral trade; *shèngyú-jiàzhí* 剩余价值 (< Germ. Mehrwert), surplus value;

b. from Russian: general terms of political economy, especially socialist economy, foreign trade and production management. These terms were coined mostly after 1930 and especially in the fifties. Except for a small number of one-word units, these are mostly multiword units, e. g.

<sup>4</sup> When ascertaining the possible foreign model, we took into account its form, the meaning of its constituents and the resulting reproduction in modern Chinese, as well as the intensity of contacts with the respective linguistic community. Other considerations (e. g. the origin of the term) were secondary. In case of a common or similar form in several world languages the choice of the model obviously is not completely free from arbitrariness.

*tūjīshǒu* 突击手 (< Russ. ударник), shock-worker; *jīngjì-hésuàn* 经济核算 (< Russ. хозрасчёт), chozrasčot; *jìhuà-jīngjì* 计划经济 (< Russ. плановое хозяйство), planned economy; *wǔnián-jìhuà* 五年计划 (< Russ. пятилетний план), five-year plan; *shèhuìzhǔyì-jìngsài* 社会主义竞赛 (< Russ. социалистическое состязание), socialist competition; *héllìhuà-jìànyì* 合理化建议 (< Russ. рационализаторское предложение), rationalization proposal; *jìnchūkǒu-xǔkězhèng* 进出口许可证 (< Russ. разрешение на ввоз или вывоз товаров), import and export licence; *wùzhì-jìshù-jīchǔ* 物质技术基础 (< Russ. материально-техническая база), material and technical base.

3. Native new-creations, coined either entirely independently or induced by foreign models. They usually are descriptive naming units conforming to native word-formation patterns. Except for terms denoting specific Chinese phenomena, it may be duly presupposed that all of these new-creations contain at least a vague inspiration by a foreign notion or transfer its meaning. The majority of Chinese economic terms are native new-creations, having been coined since the beginning of the 20th century, especially from the twenties to the present time. Terms from various branches of economic activity can be quoted as examples:

*gōngchǎng* 工厂, factory; *pāimài* 拍卖, auction (lit. clapping sale); *suǒyǒuzhì* 所有制, ownership; *gōngyǒuzhì* 公有制, public ownership; *sīyǒuzhì* 私有制, private ownership; *hùzhùzǔ* 互助组, mutual-aid team (esp. in Chinese farming and agriculture); *zhuānli quán* 专利权, patent (lit. right of exclusive use); *pīfā-shāngyè* 批发商业, wholesale trade; *chéngpī-shēngchǎn* 成批生产, mass production; *liándài-shàngbānzhi* 连带上班制, three work-shifts (lit. a system of linking the beginnings of work-shifts); *bǎihuò-gōngsī* 百货公司, department store (lit. company of hundred goods); *wúrén-shòuhuò-shāngdiàn* 无人售货商店 (lit. a store with no persons selling goods) or *zìdòng-shāngdiàn* 自动商店 (lit. automatic store), self-service; *gōng-sī héyíng qīyè* 公私合营企业, enterprise with a combined private and capitalist management.

## 2.2 The Technique of Creating Economic Terms

In principle, economic terms in modern Chinese, similarly to terms in other branches of sciences, are created:

1. by borrowing the foreign a. phonemic, or b. graphic shape (phonemic and graphic loans);
2. by the reproduction of foreign models by means of native word-formation procedures: a. exact replicas (traditionally called loan-translations), b. partial replicas of the so-called explicative type, c. approximate replicas (traditionally called loan-renditions)<sup>5</sup>;
3. as native new-creations coined either independently or induced by foreign models.

<sup>5</sup> Cf. Heřmanová-Novotná (1975).

## 2.2.1 Loans

### 2.2.1.1 Phonemic

Although in the twenties a number of economic terms were introduced into Chinese by the technique of the reproduction of the phonemic shape of a foreign model, the borrowed terms usually were not assimilated and stabilized, since they were mostly trisyllabic or polysyllabic monomorphemic words, restricted in their word-forming ability and lacking transparent semantic features in their form. Only a very limited number of phonemic loans have been fully assimilated, mostly because of their bi- or trisyllabic forms, or thanks to the choice of suitable graphs contiguous in meaning to the meaning or denotation of the loan itself (thus making the shape of the loan artificially “motivated”), e. g.

*kǎtè'ěr* 卡特尔 (< Germ. Kartell), cartel; *kāngcǎi'ēn* 康采恩 (< Germ. Konzern), concern; *xīndīkāi* 辛狄开 (< Fr. syndicat), syndicate; *tūnbìng* 屯并 (< Engl.), dumping (characters for “to store up, to collect”, “to absorb”); *diànnóng* 佃农 (< Engl.), tenant (characters for “to take a lease on land”, “farmer”).

### 2.2.1.2 Graphic

Graphic loans from Japanese, mostly nouns, have been easily incorporated into the lexical system of modern Chinese, thanks to their predominantly bisyllabic forms, the identity in meaning of the corresponding morphemes in Japanese and Chinese and the ensuing descriptive character of the naming units and their semantic transparency. Thus, graphic loans have been able to display an effective word-forming ability. They can easily enter as both heads and attributes into the construction of endocentric word-groups, either two- or multiword units. Very often, these naming units with a graphic loan as one of their members, are induced syntagmatic replicas of models occurring commonly in European languages, e. g.

the graphic loan *yínháng* 银行 (Jap. *ginkō*) enters freely as head into two-word units denoting various types of banks, e. g. *gǔfèn-yínháng* 股份银行, joint-stock bank (*gǔfèn* 股份 – shares); *xìndài-yínháng* 信贷银行, credit bank (*xìndài* 信贷 – credit); *fāxíng-yínháng* 发行银行, issuing bank (*fāxíng* 发行 – to issue); *tiēxiàn-yínháng* 贴现银行, discount bank (*tiēxiàn* 贴现 – to discount in cash); *dīyā-yínháng* 抵押银行, mortgage bank (*dīyā* 抵押 – to pledge, to mortgage); it can also function as attribute in two-word units, e. g. *yínháng-lǐlǜ* 银行利率, bank-rate etc.

Some terminological nouns taken over from Japanese have also acquired in modern Chinese a verbal function. Their meaning, as a rule, has become more general and stabilized in the neutral language style. These graphic loans may function both as free units or as constituents of compounds, e. g.

*jízhōng* 集中 (Jap. *shūchū*, concentration), to concentrate, to amass, concentration; *jízhōng zīběn* 集中资本, to concentrate capital; *jízhōng lìliang* 集中力量, to concentrate forces; *jízhōngyíng* 集中营, concentration camp

*péicháng* 赔偿 (< Jap. *baishō*, compensation), to compensate, compensation:  
*péicháng sǔnshī* 赔偿损失, to compensate for losses; *péichángfèi* 赔偿费,  
 compensation, compensation fee.

### 2.2.2 Reproductions of Foreign Models,

whether exact, partial or approximate replicas, can be classified as morphemic or syntagmatic according to the resulting form of the new-creation in Chinese (compound or word-group). The new-creation need not correspond structurally to the structure of the model – compounds are often reproduced as word-groups, derivatives usually as compounds, less frequently word-groups as compounds etc. In morphemic reproductions native morphemes (or words) are applied as semantic and structural equivalents of the constituents of the foreign model; in syntagmatic reproductions are applied as such native words, as well as assimilated loans, especially graphic ones (they correspond to words and exceptionally to morphemes of the model).

#### 2.2.2.1 Exact Reproductions,

traditionally called loan-translations, display a direct correspondence between the constituents of the model and the Chinese replica. The construction of the model and the relationship of its constituents are imitated as systematically and as exactly as possible.

#### Morphemic Reproductions

The most frequently reproduced types are one- or two-word naming units with an attributive relationship of constituents. The resulting constructions in Chinese are attributive compounds with monosyllabic (morphemes or word-type units) or bisyllabic (word-type units) constituents. The constituents of Chinese replicas, regardless of whether they can occur freely in other constructions or not, enter into these compounds as bound constituents, e. g.

N monos – N monos: *jījià* 基价 (< Engl.), basic price

V or Adj monos – N monos: *kāijià* 开价 (< Engl. or Russ. начальная цена), initial price; *jìngjià* 净价 (< Engl.), net price

N bis – N monos: *láodòngrì* 劳动日 (< Russ. трудодень), working day (unit of labour)

#### Syntagmatic Reproductions

Nominal terminological word-groups, two- or multi-word units with an attributive relationship of constituents, are reproduced in Chinese mostly as fixed word-groups, also with an attributive relationship of constituents. The attribute of the foreign model is most frequently reproduced by means of a noun, less frequently by a verb or adjective, e. g.

N bis – N bis: *jīngjì zhànxiàn* 经济战线 (< Russ. экономический фронт), economic front; *wùzhì-fúli* 物质福利 (< Russ. материальное благополучие), material prosperity

(N bis – N bis) – N bis: *wùzhì-jìshù-jīchǔ* 物质技术基础 (< Russ. материально-техническая база), material and technical base

V, Adj bis – N bis: *zhīfù-xiéding* 支付协定 (< Engl.), payment agreement; *jiǎndān-xiézuò* 简单协作 (< Engl.), simple cooperation

Adj bis – Nom word-group: *yōngsù-zhèngzhì-jīngjìxué* 庸俗政治经济学 (< Germ. or Russ.), vulgar political economy

#### 2.2.2.2 Partial Reproductions of the Explicative Type

When reproducing the structure of the foreign model, a lexical morpheme is added to the Chinese replica. Its function is to complement, to explain or augment semantic precision and to render the replica grammatically operative, i. e. to arrange it with a certain word-class or lexical type.

The explicative morpheme of both morphemic and syntagmatic constructions following the reproduced part of the replica is most frequently a nominal one. It determines its word-class, e. g.

*děngjiàwù* 等价物 (< Engl.), equivalent; (*děngjià* 等价 – the same value, expl. m. *wù* 物 – thing, matter); *bǎoxiǎnxiāng* 保险箱 or *bǎoxiǎnguì* 保险柜 (< Engl.), safe (*bǎoxiǎn* 保险 – safe, adj., expl. m. *xiāng* 箱 – box, or *guì* 柜 – case); *liánhéchǎng* 联合厂 (< Russ. комбинат), complex factory (*liánhé* 联合 – to combine, expl. m. *chǎng* 厂 – factory); *zhīfù-pínghéngbiǎo* 支付平衡表 (< Engl. or Russ. платёжный баланс), balance of payments (*zhīfù* 支付 – to pay, *pínghéng* 平衡 – balanced, expl. m. *biǎo* 表 – list, chart)

Explicative morphemes inserted into or prefixed to the structure of the morphemic or syntagmatic replica add, as a rule, only semantic precision or determine a closer specification, e. g.

*jiàmùbiǎo* 价目表 (< Engl.), price-list (*jià* 价 – price, expl. m. *mù* 目 – item, *biǎo* 表 – list, chart); *jiāohuò-rìqī* 交货日期 (< Engl.), date of delivery (*jiāo* 交 – to hand over, to deliver, expl. m. *huò* 货 – goods, *rìqī* 日期 – date, term); *zhòngshāngzhūyì* 重商主义 (< Fr.), mercantilism (expl. m. *zhòng* 重 – to have respect for, *shāng* 商 – trade, *zhūyì* 主义 – ism); *jìjiàn-gōngzī* 计件工资 (< Engl.), piece-wage (expl. m. *jì* 计 – to count, *jiàn* 件 – piece, *gōngzī* 工资 – wage, pay).

#### 2.2.2.3 Approximate Reproductions,

traditionally called loan-renditions, do not display a direct correspondence between the constituents of the model and its Chinese replica, yet the comparison of the two constructions shows agreement in structural arrangements and in the meaning of constituents. This applies both to morphemic and syntagmatic reproductions.

While in exact reproductions morphemes fully synonymous to those of the foreign model are applied, in approximate reproductions only some of the morphemes are congruent or similar in meaning, e. g.

*chuándòngdài* 传动带 (< Engl.), running belt (*chuán* 传 – to pass over, to transfer, *dòng* 动 – to move, *dài* 带 – belt, strip); *yùndān* 运单 or *yùnhuòdān* 运货单 (< Engl.), bill of freight (*yùn* 运 – to transport, *huò* 货 – goods, *dān* 单 – bill, chart); *fēn-gōnghuòrén* 分供货人 (< Engl.), subsupplier (*fēn* 分 – part, *gōng* 供 – to supply, *huò* 货 – goods, *rén* 人 – man); *yǒuxiàn-gōngsī* 有限公司 (< Engl.), limited liability company (*yǒuxiàn* 有限 – to be limited, *gōngsī* 公司 – company)

### 2.2.3 Native New-Creations,

whether formed quite independently or induced by foreign models are, as a rule, descriptive, motivated naming units. In induced new-creations the motivated character of the Chinese form is often based upon one of the semantic features of the transferred notion, or upon semantic features common to the form of the naming unit in a number of languages. The Chinese naming unit is usually arranged into the form of a concise description or explanation. In coining these new-creations, modern Chinese uses both native morphemes and assimilated loans in the usual or specified meaning, e. g.

#### One-Word Units

In compounds of the older type, coined most probably in the period 1899–1911, no predominant word-formation pattern may be observed. Rather numerous are nouns of endocentric construction, e. g.

N – N: *bēnjīn* 本金, principal (fin.); *hángshì* 行市, rate of exchange

Adj – N: *gōngsī* 公司, company

Quite rare are nouns of exocentric V – O construction, e. g.

*bàojià* 报价, offer, bid (*bào* 报 – to declare, to announce, *jià* 价 – price); in analogy *huánjià* 还价, counteroffer (*huán* 还 – to return).

Among new-creations of a more recent type trisyllabic compounds with monosyllabic nominal heads and attributes of various constructions are predominant, e. g.

(V – O) – N: *yǎnglǎojīn* 养老金, old age pension (*yǎng* 养 – to nourish, to care for, *lǎo* 老 – old, *jīn* 金 – fund); *xièhuògǎng* 卸货港, port of delivery (*xiè* 卸 – to discharge, *huò* 货 – goods, *gǎng* 港 – port)

N(V) bis – N: *xǔkězhèng* 许可证, licence (*xǔkě* 许可 – approval, permission, to sanction, *zhèng* 证 – certificate)

(Adv – V) – N: *hùzhùzǔ* 互助组, mutual-aid term (*hù* 互 – mutually, *zhù* 助 – to help, *zǔ* 组 – team, group)

Certain morphemes are recurrent as heads of nominal constructions. Thus economic terms may be said to constitute definite lexical classes. Some of these morphemes are specific, as regards their meaning, for economic terminology, others are commonly used in the coinage of terminological compounds in various branches of science. The application of these morphemes is a manifestation of the process of systemization of the newly coined scientific terms, i. e. an expression of reference to systemic appurtenance of the created terms. As examples of recurrent heads occurring in economic terms may be quoted the following morphemes:

-*shuì* 税, tax, duty, most frequently in construction with a nominal or verbal attribute; *gōngzīshuì* 工资税, wage tax; *shíwùshuì* 实物税, tax in kind; *jìnkǒushuì* 进口税, import duty; *suǒdéshuì* 所得税, income tax

-*dān* 单, list, bill, usually in construction with a verbal, adjectival or V – O construction attribute: *bǎoxiǎndān* 保险单, insurance policy; *míngxìdān* 明细单, specification; *fāhuòdān* 发货单 or *jiāohuòdān* 交货单, bill of delivery; *bàoguāndān* 报关单, customs declaration

-*fèi* 费, fee, duty, usually in construction with a verbal attribute: *yùnfèi* 运费, transport fee; *bǎoxiǎnfèi* 保险费, insurance premium; *dàilǐfèi* 代理费, commission fees

-*rén* 人, man, a morpheme very productive in the creation of agential nouns in modern Chinese; it is usually preceded by verbal attributes or attributes of V – O construction: *dàilǐrén* 代理人, broker, agent; *dàiyùnrén* 带运人, forwarder, forwarding agent; *tóubǎorén* 投保人, the insured; *fùkuǎnrén* 付款人, payer; *qǔkuǎnrén* 取款人 payee; *bàojiàrén* 报价人, bidder, tenderer

-*quán* 权, right, usually in construction with verbal attributes: *zhìpèiquán* 支配权, right of disposal; *suǒyǒuquán* 所有权, ownership; *zhuānmàiquán* 专卖权, sale monopoly

### Multiword Units

Their descriptive, explicative character appears to be more distinct.

Two-member nominal units of attribute and head construction, which is the most common type of terminological word-groups in modern Chinese, usually have as their attributes

a. nouns or nominal constructions, e. g.

*wàihuì-hángshì* 外汇行市, rate of exchange; *guójiā-yùsuàn* 国家预算, budget; *zhuānli quán-tèxǔ* 专利权特许, patent licence; *bǎihuò-shāngdiàn* 百货商店, department store (lit. a store of hundred goods)

b. verbs, e. g.

*chángfù-nénglì* 偿付能力, solvency (lit. ability of payment, restitution); *shīyè-jiùjīn* 失业救济金, unemployment relief (lit. relief fund (in) loss of employment)

c. V – O constructions, e. g.

*jiābān-shíjiān* 加班时间, over-time work (lit. time of added shift); *bújímíng-zhìpiào* 不记名支票, cheque to the bearer (lit. cheque without a noted name); *dào'àn-jiàgé* 到岸价格, C.I.F. (cost, insurance, freight, lit. price upon arrival at shore).

The construction of multiword nominal units is either

a. two-word unit preceded by a nominal attribute, e. g.

*dānwèi-chǎnpǐn-chéngběn* 单位产品成本, production costs per unit;  
*shèhuìzhūyì-jīngyíng-fāngshì* 社会主义经营方式, socialist form of economy

or b. a noun preceded by an attribute of a subject-predicate construction, e. g.

*gōng-sī héyíng qīyè* 公私合营企业, enterprise with a combined private and capitalist management (lit. public, private – together manage – enterprise);  
*dújiā-jīnglǐ-qīyuē* 独家经理契约, monopoly contract (lit. one firm – direct – contract); *chēxiāng-jāohuò-jiàgé* 车厢交货价格, F.O.R. (lit. freight car – deliver goods – price); *quánbù-fèiyòng-zàinèi-jiàgé* 全部费用在内价格, franco (lit. all charges included – price).

### Verbal Constructions

in economic terminology very frequently use syntactic constructions typical for the literary or classical style, e. g.

*píng xìnyòngzhèng fù kuǎn* 凭信用证付款, to pay by a letter of credit; *àn yùsuàn jīngyíng* 按预算经营, to direct economy according to a budget; *àn-láo-qǔ-chóu* 按劳取酬, to be rewarded according to (the amount) of work.

## 3.1 Characteristic Features of the Coinage of Economic Terms

Characteristic features of Chinese economic terms will be judged from the standpoint of the requirements generally put on specific terms: 1. semantic transparency and motivatedness, 2. systematic character and serviceability, 3. their linguistic form and its suitability, 4. accuracy and clarity and the ensuing necessity of unification and codification.

1. Modern Chinese – in contrast to a number of other languages – places in the foreground the requirement of semantic transparency of special terms, which consists in their motivated, descriptive form, i. e. in their ability to refer to the expressed notion by their formal structure. Regardless of the technique used in creating the term, i. e. reproduction of a foreign model, vague inspiration by it or usage of a native word in a specialized meaning, the striking majority of Chinese economic terms are of descriptive character. (Naturally, assimilated phonemic loans are non-motivated and the original descriptive form of some graphic loans from Japanese has been obscured.) The descriptive character of the terms is based either on the meaning of their constituents and their word-formation structure, i. e. on the choice of morphemes and their rela-

tionship in the case of compounds, or, in the case of multiword units, on the choice of constituent members, their inner relationship and organization, e. g.

*jièjù* 借据, obligation bond (*jiè* 借 – to borrow, *jù* 据 – document); *qīngsuàn* 清算 (*qīng* 清 – clear, *suàn* 算 – to count), to liquidate, clearing (general meaning “to count, to settle something with somebody”); *shēngchǎn-guòshèng* 生产过剩, surplus production (*shēngchǎn* 生产 – production, *guòshèng* 过剩 – to be in excess); *shāngpǐn-bàiwùjiào* 商品拜物教, fetishism of goods (*shāngpǐn* 商品 – goods, *bái* 拜 – to worship, *wù* 物 – thing, *jiào* 教 – religion); *zuò jìjiàngōng* 作计件工, to be paid by the piece (*zuò* 作 – to do, *jìjiàngōng* 计件工 – piece work).

2. An important presupposition of the effective functioning of terms is their systematic character, i. e. a. the requirement that terms of the same conceptual series be created by the same or at least similar word-formation procedures; b. their ability of combination with various word-formative constituents (recurrent lexical morphemes, affix-like word-formatives, affixes).

An important means of incorporation of terms into the Chinese lexical system is the recurrent application of certain lexical morphemes as heads of attributive compounds with a classifying function. These are morphemes such as *-shuì* 税, tax, duty, *-dān* 单, bill, list, *-biǎo* 表, list, chart, *-fèi* 费, fee, *-zhì* 制, system, *-pǐn* 品, object, *-chù* 处, place, *-rén* 人, man etc., as has already been mentioned in the section on native new-creations (cf. 2.2.3).

Another manifestation of the systematic character of economic terms is the constituting of a number of word-formation patterns, created either independently or by the free reproduction of foreign patterns, e. g.

*zài* 再, again – V (N) → N: *zài-shēngchǎn* 再生产 (< Engl.), reproduction; *zài-chūkǒu* 再出口, reexport; *zài-jìnkǒu* 再进口, reimport

*shèngyú* 剩余, surplus – N → N: *shèngyú-jìzhí* 剩余价值 (< Germ.), surplus value; *shèngyú-chǎnpǐn* 剩余产品, surplus product; *shèngyú-láodòng* 剩余劳动, surplus labour

*zhuān* 专, specially – V – *quán* 权, right → N: *zhuānliquán* 专利权, patent; *zhuānmàiquán* 专卖权, sale monopoly; *zhuānyíngquán* 专营权, operational monopoly

*chāo'é* 超额, to surpass, the quota – N → N: *chāo'é* 超额 – V → V: *chāo'é-lìrùn* 超额利润, excessive profit; *chāo'é-jiǎnglì* 超额奖励, unplanned reward; *chāo'é-wánchéng* 超额完成, to overfulfill; *chāo'é-shēngchǎn* 超额生产, to produce in surplus.

Some patterns are unstable, e. g.

N(V) – *zǒng'é* 总额 → N: *zǒng* 总 – N(V) – *é* 额 → N (*zǒng* 总 – total, *é* 额 quota): *màoyì-zǒng'é* 贸易总额 or *zǒng-màoyì'é* 总贸易额, total volume of trade; *tóuzī-zǒng'é* 投资总额 or *zǒng-tóuzī'é* 总投资额, total volume of investments.

The serviceability of the term consists in its ability to combine with other members in new terminological units. The majority of Chinese economic terms may enter into nominal constructions of the word-type and word-group type both in the function of attributes and heads, e. g.

*jīngjì* 经济, economy; *jīngjìqū* 经济区, economic region; *jīngjìzhàn* 经济战, economic battle; *jīngjì-fāzhǎn* 经济发展, economic development; *jīngjì-zhèngcè* 经济政策, economic policy; *jīngjì-tǐxì* 经济体系, economic system; *zìrán-jīngjì* 自然经济, natural economy; *guómín-jīngjì* 国民经济, national economy; *shèhuìzhǔyì-jīngjì* 社会主义经济, socialist economy

*bǎoxiǎn* 保险, to insure; *bǎoxiǎnfèi* 保险费, insurance premium; *bǎoxiǎndān* 保险单, insurance policy; *bǎoxiǎn-gōngsī* 保险公司, insurance company; *jībīng-bǎoxiǎn* 疾病保险, health insurance; *shèhuì-bǎoxiǎn* 社会保险, social security.

3. The basic pattern for creating economic terms in Chinese is the attribute and head construction. The heads of compounds, mostly bisyllabic, are usually nominal morphemes; word-groups have as their heads, as a rule, bisyllabic nouns or verbs in the nominal function. The word-class of attributes varies, they may be N, Adj, V; the heads of word-groups can be of complex structure with various types of relationships of their members. Such nominal constructions fully comply with the word-formation rules of modern Chinese and its preference of attribute and head constructions. However, the precise conditions determining the choice of the carriers of lexical meaning, either morphemes (the term appears then in the form of a one-word naming unit) or stabilized bimorphemic compounds (the term acquires in this case the form of a two-word naming unit) cannot be stated unambiguously. This applies equally to the coinage of loan-creations and native new-creations. Most probably a series of factors are operating here, such as the ability of respective morphemes to enter into the structure of compounds, the effort to create a balanced two-member construction etc.

Let us compare the terminological series “price”: some units have been coined as one-word forms with the semi-bound morpheme *-jià* 价, others as two-word forms with the bisyllabic noun *jiàgé* 价格 as their member; there are even one-word and two-word variants, e. g.

N monos – *jià* 价  
*shìjià* 市价, market price

N bis – *jiàgé* 价格  
*shìchǎng-jiàgé* 市场价格, market price

Adj monos – *jià* 价  
*jìngjià* 净价, net price

V monos – *jià* 价  
*shòujià* 售价, selling price  
 but: *língshòu-jiàgé* 零售价格, retail price (lit. in individual sale); since the verb *shòu* 售, to sell is determined by the numeral *líng* 零, zero, the rhythmical balance of the construction requires a bisyllabic head

V bis – *jiàgé* 价格  
*zhēngòu jiàgé* 征购价格, purchase price

*jiàgé* 价格 – N monos, bis  
*jiàgébiǎo* 价格表, price-list  
*jiàgé-zhǐshù* 价格指数, price index

V monos – O (*jià* 价)  
*jiǎnjià* 减价, to reduce prices

V bis – O (*jiàgé* 价格)  
 减低价格 *jiǎndī jiàgé*, to reduce prices

Multiword terminological units, compared with one-word units, are less economical and less serviceable. Therefore, a tendency towards univerbization may be also observed in modern Chinese. This tendency, similarly as in other languages, is typical for the colloquial language. By omitting constituents which are redundant for the meaning of the individual members of the naming unit, a two-word unit may be rearranged as a one-word unit, e. g.

*gōngzuò-xiàolǜ* 工作效率, effectivity of labour → *gōngxìào* 工效 (*gōng* 工 – labour, *zuò* 作 – to do, to work, *xiào* 效 – effectivity, *lǜ* 率 – measure);  
*gōngxiāo-hézuòshè* 供销合作社, supply cooperative → *gōngxìāoshè* 供销社 (*gōngxìāo* 供销 – to supply for sale, *hézuò* 合作 – to cooperate, *shè* 社 – company, society).

4. A necessary feature of the lexical units of a specific language register, terms, should be semantic accuracy, unequivocality and uniformity. Chinese terminology in various fields, though, is very unstable and vacillating. This is caused by the haste with which terminology has been created in the last three decades and the insufficient administrative management in the over-all application of terms and enforcement of their uniformity. Local research centres have been very often coining their own terminology in their field and the requirement of codification and uniformity accentuated in central scientific reviews and periodicals has been hardly put into practice, since a number of research fields do not have an institution with a right of decree. The ensuing difficulties in communication apply to economy in a lesser degree than to various fields in the technical sciences, probably due to its central administration and its ties to ideological sphere.

In spite of the fact that a great number of economic terms have become an integral part of the intellectual language and are used in publicistic style, thus being more involved into the process of unification and standardization underway at present in modern Chinese, a great amount of economic terms are far from being uniform.

This applies in the first place to the more specialized terms, such as from the fields of finance, banking, foreign trade, to a lesser degree to terms with a wider range of application. The vacillation in the shape of a term is manifested in the following respects:

### 1. Compounds

a. in the choice of morphemes, either synonymous or expressing a similar concept, e. g.

*xiànkǎn* 现款 (*xiàn* 现 – real, *kuǎn* 款 – amount), *xiànrén* 现钱 (*qián* 钱 – money), *xiànjīn* 现金 (< Jap. *genkin*, *jīn* 金 – gold), cash; *shōujù* 收据 (*shōu* 收 – to receive, *jù* 据 – document, acknowledgement), *shōutiáo* 收条 (*tiáo* 条 – ticket, card), receipt; *gǔpiào* 股票 (*gǔ* 股 – share, portion, *piào* 票 – ticket, bill), *gǔfèn* 股份 (*fèn* 份 – part, portion), share certificate, in two-word units usually only the variant *gǔfèn* 股份 is used, e. g. *gǔfèn-zīběn* 股份资本, joint stock, *gǔfèn gōngsī* 股份公司, joint-stock company; *yùdìngdān* 预定单 (*yùdìng* 预定 – to order, *dān* 单 – bill, list), *dìnghuòdān* 定货单 (*dìng* 定 – to order, *huò* 货 – goods), order, bill of order

b. in the form: bisyllabic versus trisyllabic or compound versus a two-word unit, e. g.

*fāpiào* 发票 (*fā* 发 – to issue, to send forth, *piào* 票 – ticket, bill), *fāhuòpiào* 发货票 (*huò* 货 – goods), invoice, in two-word units, in order to maintain the balance of the construction only the first variant is used, e. g. *fāpiào-jiàgé* 发票价格, invoice price, *fāpiào-míngxidān* 发票明细单, invoice specification; *bàncéngpǐn* 半成品 (*bàn* 半 – half, *chéng* 成 – to produce, to finish, *pǐn* 品 – object, article), *bànzhìpǐn* 半制品 (< Jap. *hanseihin*, *zhì* 制 – to produce, to manufacture), *bànzhì-chéngpǐn* 半制成品, semifinished product

### 2. Two-Word Units

a. in the choice of the bisyllabic attribute, or less frequently, of the head of the construction, if there exist synonyms (very often one or both of the variants use stabilized shapes taken over from Japanese), e. g.

*shōugòu-jiàgé* 收购价格, *gòumǎi-jiàgé* 购买价格 (< Jap. *kōbai*-), cost price; *màoyì-xiéding* 贸易协定 (< Jap. *bōeki*-), *shāngwù-xiéding* 商务协定 (< Jap. *shōryaku*-), commercial agreement; *jīnróng-zīběn* 金融资本 (< Jap. *kinyū*-), *cáizhèng-zīběn* 财政资本 (< Jap. *zaisei*-), financial capital; *liúdòng-zīběn* 流动资本 (< Jap. *-shihon*), *liúdòng-zījīn* 流动资金 (< Jap. *-shikin*), floating capital

b. in the choice of both members of the naming unit, e. g.

*gōngyīng-qīxiàn* 供应期限 (*gōngyīng* 供应 – to supply, *qīxiàn* 期限 – term), *jiāohuò-riqī* 交货日期 (*jiāo* 交 – to deliver, *huò* 货 – goods, *riqī* 日期 – date, term), date of delivery; *yáoyuǎn-kòngzhì* 遥远控制 (*yáoyuǎn* 遥远 – distant, remote, *kòngzhì* 控制 – to operate, to control), *yuǎnchéng-cāozuò* 远程操作 (*yuǎn* 远 – remote, *chéng* 程 – a stretch, *cāozuò* 操作 – to manage), *yuǎn-jùlí-cāozuò* 远距离操作 (*jùlí* 距离 – distance), long-distance control.

Because of semantic transparency these and similar variants (terminological synonyms) are interchangeable and therefore are still in current use. This may be explained by the reluctance to premature standardization.

Some terms created by the reproduction of foreign models have a number of different forms, reflecting the effort to attain precision and distinct delimitation of the term, either as regards a closer specification of the denoted phenomenon, e. g.

*wānglái-zhànghù* 往来帐户, current account (the method of settling payments within a certain period between firms by means of accounts with banks); *huòqī-cúnkuǎn-zhànghù* 活期存款帐户, current account (of an individual with a bank)

or as regards the attitude towards it and its evaluation, e. g.

*duiwài-màoyì-lǒngduǎnzhi* 对外贸易垄断制 (*lǒngduàn* 垄断 – to monopolize, peior.), monopoly of foreign trade (only about capitalist countries); *duiwài-màoyì-zhuānyíngzhì* 对外贸易专营制 (*zhuānyíng* 专营 – to administer exclusively), monopoly of foreign trade (only about socialist countries).<sup>6</sup>

The process of stabilization of economic terminology is far from being accomplished and some terms still possess more or less suitable variants, all in current use. A great number of terms, coined as variants, though, have replaced the less satisfactory original forms.

Substitution took place, for the most part, in cases of:

a. phonemic loans, whose shape was in contradiction to the requirement of creating naming units of descriptive character, e. g.

*bēigé* 杯葛 (< Engl.), boycott, now *dīzhì* 抵制; *qìkè* 气克 (< Engl.), cheque, now *zhīpiào* 支票

b. graphic loans from Japanese which were not acceptable for reasons of their morphemic or semantic structure, e. g.

*jièfāng* 借方 (< Jap. *karikata*), debtor; *dàifāng* 贷方 (< Jap. *kashikata*), creditor, lender; as the word-formation pattern with the morpheme *-fāng* 方, side, party has been felt as obsolete in modern Chinese, these units (with the exception of usage in specialized economic texts) have been substituted by new-creations formed according to a productive pattern with the morpheme *-rén* 人, man, i. e. *zhàiwùrén* 债务人, debtor, *zhàiquánrén* 债权人, creditor; instead of the word *gùyuán* 雇员 (< Jap. *kōin*), employee, which does not agree because of its semantic structure with socialist conception (*gù* 雇 – to hire, *yuán* 员 – member, person), a native new-creation *zhígōng* 职工 (*zhí* 职 – duty, office, *gōng* 工 – work) or *gōngzuò-rényuán* 工作人员, is used;

<sup>6</sup> Much to our regret we cannot indulge here into any complex considerations about the connotations of a great number of terms used in the social sciences, conditioned by extra-linguistic factors (e. g. ideological conceptions, historical traditions etc.). As regards Chinese terminology of the social sciences this would be a very useful study requiring the combined efforts of linguists, both experts in modern language and historical semasiology on the one hand and political scientists, experts in Chinese philosophy and sociology on the other.

c. induced creations whose form was rendered in an unsatisfactory way, e. g.

*liúshuǐzhàng* 流水帳 (*liú* 流 – to flow, *shuǐ* 水 – water, *zhàng* 帳 – account), current account, at present a native creation, more transparent by its semantic structure *wǎngláizhàng* 往来帐 (*wǎng* 往 – to go towards, *lái* 来 – to come to, i. e. to and from) is used instead.

A number of economic terms, especially those denoting basic notions of political economy, production, finance, are liable to a process of determinologization. This may be explained by their common use in the press and in various walks of social and political life. Such terms, especially those coined or assimilated as bisyllabic or trisyllabic compounds and two-member attributive word-groups, have become an integral part of the current lexical stock of both the written and the spoken forms of the contemporary standard language, e. g. the word *yínháng* 银行, bank has been substituted for the rather obsolete formative *-suǒ* 所 in the unit *chǔxù-yínháng* 储蓄银行 (instead of *chǔxùsuǒ* 储蓄所), savings bank. The noun *jīngjì* 经济, economy, economics has become so current as to acquire a predicative function in the meaning “economical, profitable”; e. g. *zhèyàng zuò bù jīngjì* 这样作不经济, this is not economical, profitable etc.

#### 4.1 Some Remarks on the Style of Economic Texts

A characteristic feature of economic texts in modern Chinese is, above all, the use of a special lexical set, a feature typical for specialized registers in all languages. Another prominent feature is the application of both the stylistic and the syntactic devices of literary Chinese, predominantly from the so-called official register, including expressions and grammatical features of the classical *wenyan*, long periods, complex attributes with various relationships of members, intricate compound and complex sentences, to a far greater degree than e. g. in the publicistic and journalistic register. These two registers consistently make use of the expressive devices of the colloquial language, which are far more accessible and intelligible for the mass-reader. Thus the style of economic texts more closely resembles that of scientific texts which commonly use the rigid written style in an effort to attain precision and conciseness. Naturally, the character and the purpose of the text has to be taken into consideration, the style of text-books on economics for the secondary school level or journalistic essays appears to be far simpler and more colloquial than that of theoretical studies or commercial treaties etc. A more detailed account, however, would have to be based on a more elaborate analysis of a number of texts of various purposes and levels, which the limited scope of this paper did not permit.

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# MORPHEMIC REPRODUCTIONS OF FOREIGN LEXICAL MODELS IN MODERN CHINESE

**Abstract:** *This paper is closely linked to the author's previous studies on the enrichment of the lexical system of Modern Chinese under the impact of foreign terminological systems. The aim is to present a systematic survey of loan words, i.e., lexical innovations that substitute the morphemes of foreign models with native morphemes and reproduce or imitate their morpheme arrangement using native word-formation patterns. Based on many examples, this paper offers a detailed classification of loan-words. According to the degree of exactness of the reproduction, they may be subdivided into exact (direct replicas of the foreign models with a one-to-one correspondence), partial (added by explicative morphemes that complement the new coinages), or approximate (imitate the structure of foreign models). Moreover, different word-formation patterns of the word-type and units of the word-group type can be distinguished. Briefly, the paper also mentions the so-called induced creations, i.e., new coinages, in which the original words serve only as an inspiration, not as a model to be copied.*

**Key words:** *Modern Chinese, lexical innovation, loan-creation, loan-translation, word-formation*

## 1.1 Introduction

The impact of Western languages has brought about a far-reaching enrichment of the lexical system of Modern Chinese since the last decades of the 19th century, especially as regards special terms in various branches of social activity, such as science, the arts and politics. Although the borrowing of foreign lexical units in general proves to be a very convenient way of denoting a new thing or a new institution, the Chinese language could not recur to this mechanism of lexical improvement in a decisive measure because of the low scale of adaptability of both its phonemic and morphemic systems and the ideographic character of its writing. Due to these limitations,<sup>1</sup> the Chinese lexical system preferred a large-scale adoption of the mechanism of morphemic substitution, i. e. reproduction of foreign lexical models by means of native morphemes on the basis of the usual native word-formation patterns.

In the Introduction to our study "Contribution to the Study of Loan-Words and Hybrid Words in Modern Chinese"<sup>2</sup> we have divided lexical innovations according to their relation to the discoverable foreign models into 1. phonemic loans, 2. graphic loans, 3. hybrids, 4. loan-translations, 5. semantic loans, 6. induced new-creations. Phonemic loans and hybrids of Modern Chinese have been subjected to closer analysis in the above study,<sup>3</sup> the other four types of induced lexical innovations

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<sup>1</sup> Analysed more in detail in our study "Contributions to the Study of Loan-Words and Hybrid Words in Modern Chinese", II (Novotná 1968: 321–322).

<sup>2</sup> Novotná 1967: 613–620.

<sup>3</sup> Parts I (Novotná 1967) and II (Novotná 1968) are devoted to phonemic loans, Part III

have been sketched only in their main features. The problem of the enrichment of the lexical system of Modern Chinese under the impact of foreign terminological systems and the importance of the ensuing qualitative changes still under way has led us to further investigations in this field.<sup>4</sup> The aim of the present paper, which is closely linked with our previous studies, is to present a more detailed analysis of loan-translations and to some extent of induced creations, to specify their relation to foreign models, and to attempt their typological classification and an analysis of their word-formative structures.

The complexity of this research has led to the decision to limit ourselves to a strictly synchronic conception of investigation; i. e. besides ascertaining possible foreign models, we shall not indulge in matters of etymological purport nor in attempts at verifying the first occurrence of the respective lexical units.

The lexical material assembled for the purpose of this research has confirmed our general observations presented in the “Contributions” in terms of their principal points; some conceptions, however, had to be revised and others further specified. One of the points confirmed is that the importance of transfers of meanings of European words upon words existing in Chinese (semantic loans) is negligible, both as regards the amount of these units and their influence upon the lexical system of Modern Chinese.<sup>5</sup> As research into graphic loans from Japanese,<sup>6</sup> a very important source of innovations in Modern Chinese, would require a different attitude – an ascertainment of the time and ways of borrowing (mostly visual) as well as an inquiry into the mechanism of the coinage of the respective lexical units in Japanese and their adaptability to the word-formation patterns in Modern Chinese, we do not intend at present to include this complex of lexical research in the framework of this paper. The impact upon the Chinese lexical system which has been studied is that exercised at a distance by Western languages, above all English and Russian, which has been more tangible than that of other languages, e. g. German and French, thanks to the closeness of contacts and the role in science and politics played by the respective linguistic communities.

## 1.2 The International Character of Morphemic Reproductions of Foreign Models

It would be far from precise to denote the influence of English or Russian upon Chinese as direct or immediate. Yet, thanks to the impact of these languages, Chinese has been incorporated into the “internationality” of terminological systems. This formulation, though, has to be understood in a specific sense.

The formation of special terms, especially those coined as loan-creations, including loan-translations, i. e. exact replicas of foreign models, and loan-renditions, i. e.

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(Novotná 1969a) to hybrids.

<sup>4</sup> Cf. our study “Affix-like Word-Formation Patterns in Modern Chinese” (Novotná 1969b).

<sup>5</sup> Cf. Novotná 1967: 618–619.

<sup>6</sup> For the essentials of the problems cf. *ibid.*: 616–617.

approximate replicas of such, may be said to possess an international character. The so-called international loan-creations, though built up of native morphemes, have an analogous word-formative structure and a common meaning in a number of languages. In scientific terminology in particular, the coinage of such lexical units is conceived as a conscious and purposeful act. With “international” loan-creations, at least in European languages, it is hard to ascertain which language was the source language, which served as an intermediary and which actually borrowed. These innovations of international standing probably are the results of bilingualism and multilingualism of the educated people in the past. Once the form consisting of at least two elements is set up and its meaning established in some languages, thanks to its feasibility and descriptive character, it can be easily imitated in others, e. g. ‘alternating current’, Fr. ‘courant alternatif’, It. ‘corrente alternata’, Germ. ‘Wechselstrom’, Czech ‘střídavý proud’ and ensuingly Chin. *jiāoliú-diànliú* 交流电流 (alternately flowing electric current); ‘wisdom tooth’, Fr. ‘dent de sagesse’, It. ‘dente di giudizio’, Germ. ‘Weisheitszahn’, Czech ‘zub moudrosti’, Chin. *zhīyá* 智牙 (wisdom + tooth); ‘point of departure’, Germ. ‘Ausgangspunkt’, Russ. ‘isxodnyj punkt’, Pol. ‘punkt wyjścia’, Czech ‘výchozí bod’, Chin. *chūfādiǎn* 出发点 (to go out + point).

These arguments in lexical patterns which are particularly intense in literary languages, are motivated by various reasons, e. g. they may be brought about by Latin and Greek elements which are present in a number of languages (cf. first example); they may be due to popular traditions and common ways of thinking (cf. the second and third examples). If the structure of the models, due to their descriptive character, is easily analysable, then Chinese, as well as other Oriental languages, has had in the past few decades no difficulty in imitating them. Thus, these languages have joined, to a certain extent, the “international mutuality” of terminological systems, which so far has been limited more or less to the area of Indo-European languages. The “international” character of Chinese lexical innovations, especially of scientific terms, has to be understood in this specific sense, i. e. as the usage of native morphemes in new designative functions corresponding to the meanings of foreign morphemes and their occurrence in word-formation patterns that can represent the structure of foreign models.

### 1.3 Definitions and Typological Classification of Loan-Creations

So far, there have been many attempts at a definition and typological classification of loan-creations. Some systems of classification have tended to be generally applicable; others were based predominantly on types of innovations encountered in a limited number of languages. The slight differences between various typological arrangements and the types and subtypes established are dependent mostly on the principal criterion chosen; sometimes, though, matters of terminology may play a certain role. The types and subtypes established in studies written in German usually are more minutely differentiated than those written in English and other languages, as the German linguistic tradition and the structural properties of German terminology facilitate more detailed subdivisions.

The substance of the mechanism of the morphemic reproduction of foreign models has been explained from various viewpoints.

B. Unbegaun, in his now classic study on loan-translations in the Slavonic languages,<sup>7</sup> explains this mechanism of borrowing by applying the notion of the “inner form”, i. e. the word-formative structure which is being taken over from the source language and filled with the native lexical material of the borrowing language.

To my knowledge, the most detailed classification of loans has been established by W. Betz and developed by H. Gneuss.<sup>8</sup> It rests upon a series of considerations ensuing one from another: Is the item native or borrowed (Lehnwort)? If borrowed, is it a loan-word (Lehnwort) or a loan-coinage (Lehnprägung)? Is the Lehnprägung a semantic loan (Lehnbedeutung) or a loan-creation (Lehnbildung)? A loan-creation may be an exact imitation of the model (Lehnübersetzung), a partial imitation (Lehnübertragung) or no imitation at all (Lehnschöpfung); Lehnwendung (loan-phrase) and Lehnsyntax (loan-syntax) are placed on the same level with loan-creations. This scheme, besides being too elaborate in its structural hierarchy, is not consistent enough. Moreover, it does not provide sufficiently for a morphemic analysis of the individual types. Lehnwendung and Lehnsyntax should be subordinated to loan-creation (Lehnbildung), as they do not differ in the principle of borrowing, but in their linguistic structure. It is questionable whether Lehnschöpfungen are “loans” at all, as, no direct effort at an imitation of the “inner form” of the model is involved.

Other German authors take W. Betz’s terminology as their starting point in principle and limit themselves either to the traditional opposition between Lehnbildung (distinguishing between Lehnübersetzung and Lehnübertragung, i. e. an exact and partial reproduction of the model) and Lehnbedeutung<sup>9</sup> or place Lehnwendung on parallel lines with these two established types (Lehnübersetzung, Lehnbedeutung and Lehnwendung).<sup>10</sup> According to Ch. Fleckenstein all kinds of calques must meet two conditions: the transfer of the structure of a foreign word and the borrowing of the meaning.<sup>11</sup> The difference between Lehnübersetzung and Lehnwendung is the formation of a new word in the former case and the application of existing words in combinations thus far unusual in the latter.<sup>12</sup>

The traditional line of opposition between loan-creation (Lehnbildung) and semantic loan (Lehnbedeutung) is followed also by O. Ladstätter who attempts a scheme basically applicable to the Chinese language. He departs from the usual German terminology in reflecting the “notional” aspect of borrowing: a) Begriffsentlehnungen divided into Lehnübersetzungen and Lehnschöpfungen (direct repro-

<sup>7</sup> Unbegaun 1932.

<sup>8</sup> Betz 1949; Gneuss 1955.

<sup>9</sup> Cf. e. g. Doberstein 1968: esp. pp. 277–278.

<sup>10</sup> Cf. e. g. Fleckenstein 1986: esp. p. 267.

<sup>11</sup> Ibid., pp. 267, 269.

<sup>12</sup> Ibid., p. 270.

ductions in contradistinction to free ones, not setting up approximate reproductions as a separate subtype); b) Begriffserweiterungen (i. e. semantic loans or extensions).<sup>13</sup>

American authors are more consistent in observing unified criteria.

U. Weinreich<sup>14</sup> differentiates between three cases of lexical interference: the transfer of morphemes from A language into B language; the usage of B morphemes in new designative functions on the model of A morphemes with whose content they are identified; the combination of both processes in the case of compound elements. These mechanisms are studied separately in simple words and compounds and phrases. Most pertinent for our study is the functioning of the second mechanism in compounds. Here, Weinreich differentiates between three types:<sup>15</sup>

a) loan-translations proper, in which the model is reproduced exactly, element by element; b) loan-renditions (*Lehnübertragungen*), in which the model compound only furnishes a general hint for the reproduction; c) loan-creations (*Lehnschöpfungen*), a term applied to new-coinages which are stimulated not by cultural innovations, but by the need to match designations available in a language in contact.

This differentiation between compounds reproducing foreign models in terms of equivalent native words does not seem to reflect the actual situation with precision. Beside loan-translations proper which reproduce foreign models more or less exactly element by element, any language creates approximate replicas (usually denoted as *Lehnübertragungen*), which deserve to be established as a subtype. (The examples quoted by U. Weinreich reveal that such replicas are actually meant within this subtype – if so, the definition is not exact.) Whether a new-creation meets the necessity of denoting a cultural innovation or of matching a designation so far alien to the respective language is purely a formal matter and should not qualify as a criterion. The term “loan-creation” would perhaps be more in its proper place if it were reserved for the generic notion of “*Lehnbildung*”, which includes the first subtypes (loan-translations and loan-renditions).

E. Haugen<sup>16</sup> classifies loans according to the extent of morphemic substitution: none, partial or complete. The type of interest to us are loan-shifts which show morphemic substitution without importation. As functional shifts of native morphemes, they include loan-translations<sup>17</sup> (plus syntactic substitutions) and semantic loans. If the morpheme arrangements of the model are reproduced, it is a case of

<sup>13</sup> Ladstätter 1967: 1–2; the promised continuation with the application of the above types to Chinese material and the establishing of specific features of Chinese loan-creations did not reach the present author.

<sup>14</sup> Cf. Weinreich 1963: 47.

<sup>15</sup> *Ibid.*, p. 51.

<sup>16</sup> Cf. Haugen 1950.

<sup>17</sup> E. Haugen finds this term questionable. Similarly, he prefers to consider all loans as “semantic loans”. The difference, according to him, is a purely formal one of whether the replica reproduces the phonemes of the model (loan-word) or the morphemes (loan-shift). Cf. his review of H. Gneuss, *Lehnbildungen und Lehnbedeutungen im Altenglischen* (Haugen 1956: esp. p. 764).

a loan-creation (exact or approximate), if not it is a question of a loan-extension.<sup>18</sup> In contradistinction to native creations which might be called spontaneous, creations stimulated by foreign models, but not their actual imitations, are induced. We find this denotation far more precise, as it reflects the actual process more exactly than the term “Lehnschöpfung” (applied by Betz and others). For its choice and application we are indebted to E. Haugen.

## 2.1 Classification of Loan-Creations in Modern Chinese

All lexical innovations in Modern Chinese which substitute the morphemes of foreign models by native morphemes and by means of native word-formation patterns reproduce or imitate their morpheme arrangements, may be subsumed under the denotation of “loan-creations”, or loan-translations<sup>19</sup> in the traditional terminology. According to the degree of exactness of the reproduction they may be subdivided into exact, partial and approximate.

Direct replicas of foreign models, with a one-to-one correspondence between the structural elements of the model and those of the equivalent constitute the subtype of exact loan-creations, or loan-translations proper. Despite the direct correspondence between the constituents, the construction of the replica may be rearranged, the order of morphemes changed in agreement with Chinese word-formation patterns.

Partial reproductions usually lack the neat correspondence between the constituents of the model and those of the equivalent. Either all or a part of the lexical morphemes of the model are substituted by native ones, but as the form is likely to be semantically or grammatically deficient, another lexical morpheme, or suffix-like formative enters into the construction in order to do away with this insufficiency. This added morpheme (or, rarely a unit of the word-type) may vaguely correspond to a word-formative morpheme of the model or may not possess a counterpart in its structure. As these morphemes “explain” or complement the new-coinages as regards their meaning, specify their grammatical functions. by ranging them with native lexical classes, we suggest to call these loan-creations explicative.<sup>20</sup>

As approximate loan-creations, or loan-renditions (Lehnübertragung) we classify such morphemic reproductions of foreign models which imitate their structure, freely reproducing the morpheme arrangements of the whole construction or of its parts, and apply morphemes synonymous to those of the model. A direct corre-

<sup>18</sup> Ibid., p. 764.

<sup>19</sup> We used this term in “Contributions” (Novotná 1967: 614 ff.) and in the monograph *Affix-like Word-Formation Patterns in Modern Chinese* (Novotná 1969b). A closer observation of Chinese lexical material has led us to appreciate E. Haugen’s objection to this term. In Modern Chinese it is perhaps more conspicuous than in other languages that these new-coinages are not “translations” in the strict sense of the term, but innovations which apply a rich scale of imitating procedures, as we shall try to demonstrate in an actual analysis of the Chinese lexical material.

<sup>20</sup> We prefer this term to “partial” or other possible synonyms. It has been proposed by us to express an analogous lexical procedure characteristic of the coinage of a part of the hybrid words in Modern Chinese, cf. Novotná 1969a.

spondence between the morphemes of the model and those of the replica can hardly be established, yet the comparison of the structure of the former and of the latter puts the direct inspiration beyond doubt.

Those new-creations of descriptive character, which satisfy denotative needs caused by the impulse of a foreign language that offers an indirect inspiration or a hint for the formation of a new word, without imposing on it its structure, are outside the immediate scope of loan-creations. Though not imitations of foreign models, they import their meaning and are coined under their impetus as their equivalents. As such, we find their denotation as “induced creations” most appropriate. They are opposed to full-fledged native creations of descriptive character only as regards the reasons or impulses for their formation. They will be mentioned in this study only cursorily, as they actually surpass the framework of it.

Objections might be raised that the conditioned character of the coinage of approximate loan-creations and induced creations is hard to prove, i. e. that they are products of polygenesis and as such are independent creations with identical meanings. This objection is easily dispensed with as regards approximate loan-creations – polygenesis is very improbable with lexical innovations, if their structural elements correspond and their constructions show agreements with the presumed models. Possible rearrangements of the structure, such as a change in the position of constituents, which is very frequent in Modern Chinese, cannot count as arguments. The proof of the conditioned character of induced new-creations, especially scientific terms, can easily be found outside the immediate sphere of their linguistic features, in the necessity of denoting a new notion, a new invention or a new institution which obviously – as shown by the development of science, politics, a way of life, etc. – could not have been of Chinese origin.

## **2.2 Analysis of Loan-Creations in Modern Chinese**

All loan-creations in Modern Chinese, i. e. exact, explicative and approximate, as well as induced creations, are compound or complex structures, either of the word-type or of the word-group type (mostly fixed word-groups). Their resulting construction in Chinese may not depend wholly on the structure of the model; foreign compound words may be reproduced as word-groups and vice versa.<sup>21</sup> This is motivated by the predilection for two-member constructions and the preference of attribute and head patterns and their productivity in Modern Chinese.

In all subtypes, in order to offer a more systematic survey, we shall classify our material into words and word-groups. Two possibilities may occur with word-groups: either all their members and their mutual relationship are the result of reproduction of foreign models, or only one of the members is coined on the impulse

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<sup>21</sup> A phenomenon not limited to loan-creations in Modern Chinese, but encountered in loan-creations in other languages as well. Cf. Fleckenstein (1968: 271): “Der Grund für die unterschiedliche Kalkierung deutscher Zusammensetzungen – bald durch eine Zusammensetzung, bald durch eine Wortverbindung – kann nur in der unterschiedlichen Produktivität der Zusammensetzung als Wortbildungsart im Russischen und im Deutschen liegen.”

of the model and enters into construction with ready-made Chinese lexical units chosen as equivalents of the other members of the model. While the construction of compound words is very often rearranged in agreement with native word-formation patterns, the arrangement and order of the members of fixed word-groups usually corresponds to that of the model in the case of a word-group.

An actual analysis substantiated on the basis of abundant lexical material will proceed according to the three subtypes established in 2.1, i. e. exact loan-creations (loan-translations proper), explicative loan-creations and approximate loan-creations (loan-renditions). Finally, induced creations will be given some attention. Comparisons of the structure of the presumed or possible model and of the new-coinage in Chinese will be attempted; if the structure of the model corresponds in a number of European languages, or the model is a scientific term of Latin or Greek origin varying in a number of languages only in its formal morphological features, the English form will be quoted for the sake of convenience; the lexical unit, though, might have been coined on the direct impulse of German, or possibly French, which were also largely used by Chinese scientists and other educated people in the first half of this century when the majority of the studied lexical innovations were coined. We are compelled to take the risk of this lack of precision and face the possible criticism, as, in the majority of cases, the form of the respective lexical unit being a common European creation, its first occurrence in Modern Chinese and its immediate source language are almost impossible to trace. This difficulty practically does not exist with words coined on the basis of Russian models which are comparatively easy to trace: mostly, they are terms denoting notions and institutions combined with the socialist policy, economy and way of life.

If useful to the presentation, units of the word-type within a subtype will be divided according to the number of constituent morphemes, i. e. into bisyllabic and polysyllabic creations. Within each subtype word-formation patterns will be analysed as to the relationship and word-class of the members of the construction. Lexical units with suffix-like formatives<sup>22</sup> will be treated separately. If a productive word-formation pattern is created, it will be specially pointed out.

The majority of Modern Chinese loan-creations represented in our lexical material are nouns; specimens of other word-classes encountered will also be analysed. Our set comprises over 700 different items. This number cannot be taken as indicative of the total amount of loan-creations in Modern Chinese, which is far higher. We concentrated predominantly only upon lexical innovations which form a part of the general vocabulary on the higher intellectual level, including commonly known special terms; we took into consideration to a larger extent only special terms pertaining to music, usually mediated through Italian or German, and to medicine,<sup>23</sup>

<sup>22</sup> They have not been included in their total extent, as sufficient material, both native and induced, has been analysed in our monograph *Affix-like Word-Formation Patterns* (Novotná 1969b).

<sup>23</sup> Our lexical material has been assembled from the following sources: *Hanyu pinyin cihui* 汉语拼音词汇 [Chinese Phonetic Dictionary] (1963), the manuscript of the *Czech-Chinese dictionary*, prepared by the lexicographic team of the Oriental Institute in Prague as regards

two branches of art and science introduced into China as specific Western creations (and as such very different from the traditional Chinese music and medicine) and thus serving as typical fields for the studied purpose.

### 2.2.1 Exact Loan-Creations

are the most represented subtype in our lexical material. They amount to 50% of the assembled set; exact loan-creations of the word-type number about 250. As the recurrent word-formation patterns show a rich scale of variants, an analysis of bisyllabic, trisyllabic and polysyllabic words will proceed separately. Fixed word-groups, which consist mostly of nouns preceded by various attributes, will be classified according to the construction of the attribute.

#### 2.2.2.1 Bisyllabic words

are, in the majority of cases, nouns of attribute and head construction. Recurrent patterns are those frequently applied in the formation of native nouns; those with a nominal head are represented most. They are built according to the following patterns:

1. N – N

a. F – F<sup>24</sup>

*mǎlì* 马力 (horse + power), horse-power; *wángshuǐ* 王水 (king + water), aqua regia; *gègāng* 铬钢 (chrome + steel), chrome-steel; *tiělù* 铁路 or *tiědào* 铁道 (iron + road), railway, railroad (probably < Germ. Eisenbahn); *qìqiāng* 气枪 (air + gun), air-gun; *gōuchóng* 钩虫 (hook + insect, worm), hookworm; *nǎiyá* 奶牙 (milk + tooth), milk-tooth – this pattern has been applied in the coinage of names of various kinds of teeth, e. g. *quǎnyá* 犬牙 (dog + tooth), canine tooth; *zhìyá* 智牙 (wisdom + tooth), dens sapientiae, wisdom tooth, etc.

b. B – F

*zúqiú* 足球 (foot + ball), football; *lánqiú* 篮球 (basket + ball), basketball; *mìyuè* 蜜月 (honey + month, moon), honeymoon

c. F – B

*qìzhěn* 气枕 (air + cushion), air cushion; *luǎnqiú* 卵球 (egg, germ + ball), egg ball; *gānyán* 肝炎 (liver + inflammation), hepatitis; accordingly other loan-creations in -itis, e. g. *nǎoyán* 脑炎 (brain + inflammation), encephalitis, etc.

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general items; all pertinent musical terms have been excerpted from *Jianming yinyue cidian* 简明音乐词典 [Concise Dictionary of Music] (1957), medical ones from *Yixue-mingci huibian* 医学名词汇编 [Dictionary of Medical Terms] (1958).

<sup>24</sup> By F (free) we denote such constituents which may occur in isolation; as members of the respective word-formation patterns they are naturally to be considered bound. B (bound) are such constituents which never occur in Modern Chinese in isolation, but only as members of complex lexical units.

d. B – B

*chílún* 齿轮 (tooth, cog + wheel), cogged wheel; *ěrjìng* 耳镜 (ear + mirror), auriscope; similarly other nouns in -scope, e. g. *hóujìng* 喉镜 (larynx + mirror), laryngoscope, etc.; *chíshí* 齿石 (tooth + stone), odontolith; by analogy, all nouns in -lith, e. g. *chángshí* 肠石 (intestines + stone), enterolith; *wèishí* 胃石 (stomach + stone), gastrolith; *gānshí* 肝石 (liver + stone), hepatolith; *dǎnshí* 胆石 (gall + stone), cholelith (the attribute may be a free noun)

2. V – N

a. F – F

*pǎodào* 跑道 (to run + way, road), runway; *qiēyá* 切牙 (to cut + tooth), incisor tooth [also a productive model, e. g. *móyá* 磨牙 (to grind + tooth), molar tooth, etc.]; *sāiyīn* 塞音 (to obstruct, to block + sound), occlusive consonant

b. F – B

*fēilún* 飞轮 (to fly + wheel), fly-wheel; *shìguǎn* 试管 (to test, to try + tube), test-tube; *bǔsè* 补色 (to complement + colour), complementary colour

c. B – F

*wòchē* 卧车 (to sleep + car), sleeping car

The combination B – B is not represented in our set.

3. Adj – N

These loan-creations are far less represented in our set than those formed according to the above two patterns. Only the following combinations of F and B are encountered:

a. F – B

*gāolú* 高炉 (high + furnace, stove), high furnace; *ànshì* 暗室 (dark + room), camera obscura; *zhícháng* 直肠 (straight + intestine), intestine rectum – accordingly other denotations of intestines, e. g. *mángcháng* 盲肠 (blind + intestine), intestine caecum, etc.

b. B – B

*chǐgǔ* 耻骨 (bashful + bone), os pubis

4. Loc<sup>25</sup> – N

*jiānnǎo* 间脑 (interspace, between + brain), interbrain

5. Determinative – N

*bànnqiú* 半球 (half + ball), hemisphere

6. N – suffix-like formative

*liàngzi* 量子 (quantity + suffix-like formative -zi 子), quant

<sup>25</sup> Loc – localizer; instead of using the traditional term “postposition”, we find it more convenient to apply this term of Yuen Ren Chao (1968: 620 ff.)

As examples of recurrent patterns can serve those with the suffix-like formative *-sù* 素, denoting biological agents:

*mùsù* 木素 (wood-), lignin; *rǔsù* 乳素 (milk-), lactein; *nǎosù* 脑素 (brain-), cerebrin; *huánsù* 环素 (circle-), cyclin; *dúsu* 毒素 (poison-), toxin; *làosù* 酪素 (cheese-), casein. (The lexical constituents are mostly B.)

Nouns with verbal heads:

1. N – V

*jiǎozhù* 脚注 (foot + to note, to make notes), footnote

2. Loc – V

*pàngzhù* 胖注 (side, by the side of + to note, to make an explanatory note), marginal note

3. N – Adj

The attribute may be either F, e. g.

*yèmáng* 夜盲 (night + blind), night blindness; *gèhuáng* 铬黄 (chrome + yellow), chrome yellow

or B, e. g.

*yǐsuān* 蚁酸 (ant + sour), formic acid; a productive pattern for denotations of other acids, e. g. *hésuān* 核酸 (nucleus + sour), nucleic acid, etc.; *sè máng* 色盲 (colour + blind), colour blindness

Other word-classes:

Verbs

1. Adj – V

*guǎngbō* 广播 (broad + to sow, to cast), broadcast

2. N – suffix-like formative *-huà* 化<sup>26</sup>

*bíhuà* 鼻化 (nose-), to nasalize; *chúnhuà* 唇化 (lip-), to labialize

3. Adj – suffix-like formative *-huà* 化

*tóng huà* 同化 (the same-), to assimilate; *yì huà* 异化 (different-), to dissimilate

Adjectives

1. Adj – V

*yuǎnshì* 远视 (far + to look, to see), far-sighted; the antonym *jìnshì* 近视 (near-), short-sighted

2. Pron – V

*zìdòng* 自动 (self + act), automatic (< Gr. acting by itself)

3. Loc – N

*zuǒyì* 左翼 (left + wing), left-wing, leftist; the antonym *yòuyì* 右翼, right-wing, rightist

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<sup>26</sup> Creations in *-huà* 化 also function as nouns. More about the functions of the formative *-huà* 化 (cf. Novotná 1969b: 98 ff).

#### 4. Determinative – N

*duōxíng* 多型 (many + form), polymorphic; a productive pattern, e. g. *duōhé* 多核 (many + nucleus), polynuclear, etc.

#### Adverbs

##### V – N (Obj.)

*fǎnshǒu* 反手 (to turn over + hand), backhand; *yuèwèi* 越位 (to surpass, to step over + position, side), offside

### 2.2.1.2 Trisyllabic Words

are almost exclusively nouns of attribute and nominal head construction. Both the recurrent and the isolated patterns according to which they are formed fully agree with the native ones. The models are more often word-groups than compounds. The bisyllabic attributes or bisyllabic heads may be ready-made native units. The resulting reproductions express notions so far alien in Modern Chinese.

The following patterns are recurrent:

#### 1. N bis – N

*zhíyèbìng* 职业病 (profession + disease), professional disease; *zhànfúyíng* 战俘营 (prisoner-of-war + camp), prisoner-of-war camp; *jīqìzhàn* 机器站 (machine + station), machinery plant (< Russ. mašinaja stancija); *ānquándài* 安全带 (safe, safety + belt), safety-belt; *yǎnjìngshé* 眼镜蛇 (spectacles + snake), spectacle-snake; *chūnǚdì* 处女地 (virgin + soil), virgin soil; *bōlǐtǐ* 玻璃体 (glass + body), corpus vitreum; *jiǎzhàngxiàn* 甲状腺 (shield-shape + gland), thyroid gland (< Gr. thyreoides, shield-shaped) – a productive model of compounds with the attribute meaning “in the shape of, -like”, e. g. *lízhàngjī* 梨状肌 (pear-shape + muscle), musculus piniformis; *zhǎngzhuàngyè* 掌状叶 (palm-shape + leaf), folium palmatum

#### 2. V bis – N

*bǎohùsè* 保护色 (to protect + colour), protective colour; *bǎoxiǎnsuǒ* 保险锁 (to secure + lock), safety lock; *bǎoshǒudǎng* 保守党 (to conserve, conservative + party), conservative party; *wǎngláizhàng* 往来账 (to go – to come + account), current account; *xiūzhèngbǎn* 修正版 (to revise + edition), revised edition; *pòlièyīn* 破裂音 (to explode + sound), explosive consonant; *huódòngshèn* 活动肾 (to move + kidney), movable kidney; *yízhídao* 移植刀 (to transplant, to implant + knife), implantation knife

#### 3. (V + N Obj) – N

*wúfèngguǎn* 无缝管 (not to have + seam-pipe), seamless pipe; *chǎnsèjūn* 产色菌 (to produce + colour-bacteria), chromogenic bacteria; *bǎojiàn-zhàn* 保健站 (to protect + health-station), sanitary station (< Russ. punkt zdravooxranenija); *fángyǔchóu* 防雨绸 (to protect against + rain-silk), water-proof silk

4. (Adj + N) – N

*héngwénjī* 横纹肌 (transverse + strip-muscle), striated muscle; *quánsèpiàn* 全色片 (whole + colour-film), panchromatic film

5. (N + Loc) – N

*shènshàngxiàn* 肾上腺 (kidney + above-gland), suprarenal gland; *shéxiàxiàn* 舌下腺 (tongue + below-gland), sublingual gland; *shìnnèiyuè* 室内乐 (room + inside-music), chamber music (< Germ. Kammermusik)

6. (Adj + Loc) – N

*zǐwàixiàn* 紫外线 (violet + outside-line, ray), ultra-violet rays; *hóngwàixiàn* 红外线 (red + outside-), ultra-red rays

7. (N + N Coord) – N

*wèigānyán* 胃肝炎 (stomach + liver-inflammation), gastrohepatitis; accordingly *chángwèiyán* 肠胃炎 (intestines + stomach-inflammation), enterogastitis, etc.

8. N – N bis

*sèdānbái* 色蛋白 (colour + white of an egg), chromoprotein; *wèixìbāo* 味细胞 (taste + cell), taste cell; similarly other kinds of cells: *máoxìbāo* 毛细胞, hair-cell; *mǔxìbāo* 母细胞, mother cell; *yèdàxué* 夜大学 (evening + university), evening courses (< Russ. večernij universitet)

9. V – N bis

*biyīnjié* 闭音节 (to close + syllable), closed syllable; by analogy *kāiyīnjié* 开音节, open syllable

Other word-formation patterns are applied in the creation of trisyllabic nouns only rarely, e. g.

(Adj + N) – N

*kūcǎorè* 枯草热 [dry + grass (= hay) -hot, fever], hay fever

(Adj + Adj Coord) – N

*hēibáipiàn* 黑白片 (black + white-film), black-and-white film (< Germ. schwarzweiß Film)

Adj – N bis

*wèishēngwù* 微生物 (tiny, little + organism), microorganism

(Loc + V) – N

*qiánlièxiàn* 前列腺 (before + to set up-gland), prostate gland

Trisyllabic loan-creations with nominal suffix-like formatives are quite numerous. Almost every suffix-like formative appears in replicas of foreign models. Only some of them produce recurrent patterns, e. g. *-sù* 素, biological agent

1. N – (N + sù 素)

*hédúsù* 和毒素 (nucleus- poison-), nucleotoxin; similarly *xuédúsù* 血毒素 (blood-), haematotoxin; *rǔdúsù* 乳毒素 (milk-), galactotoxin etc.

2. N bis + sù 素

*níngméngsù* 柠檬素 (lemon-), citrin; *shēngmíngsù* 生命素 (life-), biogen

3. V – (N or V + sù 素)

*héméisù* 合霉素 (to unite-mykes, mushroom-), syntomycin; *kàngdúsù* 抗毒素 (to oppose- poison-), antitoxin; *kàngshēngsù* 抗生素 (to oppose- to live, life-), antibiotic

4. Loc – (N or V + sù 素)

*nèiméisù* 内霉素 (inside-mykes, mushroom-), endomycin; *wàidúsù* 外毒素 (outside- poison-), exotoxin; *nèiróngsù* 内溶素 (inside- to dissociate-), endolysin

5. (N + N Coord) + sù 素

*jīnméisù* 金霉素 (gold-mykes, mushroom-), aureomycin; *liànméisù* 链霉素 (chain-), streptomycin

-kuáng 狂, mania

1. N bis + kuáng 狂

*sèqíngkuáng* 色情狂 (sexual desire-), erotomania; *qíngshūkuáng* 情书狂 (love- letter-), erotographomania; *gōngzuòkuáng* 工作狂 (work-), ergasiomania

2. V bis + kuáng 狂

*jìsuàнкуáng* 计算狂 (to count-), arithmomania; *shūxiěkuáng* 书写狂 (to write-), graphomania

-jì 剂, reagent

1. (V or Adj + N) + jì 剂

*shājūnjì* 杀菌剂 (to kill- bacteria-), bacteriocida; *tuōmáoqì* 脱毛剂 (to tear off + hair-), depilatoria; *qiángxīnjì* 强心剂 (strong + heart-), cardiotonics

2. (V + Adj) + jì 剂

*chúshījì* 除湿剂 (to remove + humid-), dehumidifier; *jiěchòujì* 解臭剂 (to remove + stinking-), deodorizer

zhě 者, agential

(V+N) + zhě 者

*gōngxuèzhě* 供血者 (to supply + blood-), blood donor; *dàijūnzhě* 带菌者 (to carry + bacteria-), bacteria carrier<sup>27</sup>

<sup>27</sup> Other isolated patterns can be found in our quoted monograph under the respective suffix-like formatives.

The only trisyllabic exact loan-creations other than nouns attested to in our lexical material are adverbs formed by means of the localizer *-shang* 上 (on, above) which developed under the influence of Western languages into an adverb-forming constituent, e. g.

Adj + *shang* 上

*jībēnshang* 基本上 (basis-), basically (< Russ. v osnovnom)

N + *shang* 上

*shíjìshang* 实际上 (reality-), practically, in reality

### 2.2.1.3 Polysyllabic Words

Polysyllabic exact loan-creations of morphological construction are not very numerous. They are nouns, mostly provided with suffix-like formatives or constituents, which show such a tendency. The rather limited number of items is created according to diverse patterns, e. g.

(N bis + N) – N

*xīnzàngxíng-yè* 心脏形叶 (heart + shape-leaf), folium cordatum

N polys + N

*shènshàngxiàn-yán* 肾上腺炎 (adrenal gland – an exact loan-translation itself + inflammation), adenitis

Nouns with suffix-like formatives

(N + N bis) + suffix-like formative

*rǔ-bìzhòngjì* 乳比重计 (milk + share, portion-), lactodensimeter

(V + N bis Obj) + suffix-like formative

*shā-yòuchóngjì* 杀幼虫剂 (to kill + larva-), larvicida; *róng-zǔzhīsù* 溶组织素 (to dissociate + tissue-), histolysin

N + (V bis + suffix-like formative)

*cháng-chōngxīqì* 肠冲洗器 (intestines + to wash-), enterocleaner

N tris + suffix-like formative

*húluóbosù* 胡萝卜素 (carrot-), carotene

N+ [Loc + (N + suffix-like formative)]

*lèi-nèidúsù* 类内毒素 (a kind of category + exact loan-creation endotoxin), endotoxoid

Adjective

(Pron + Pron) + N bis *de* 的

*zìwǒ-zhōngxīn de* 自我中心的 (self + I-centre), egocentric

### 2.2.1.4 Word-Groups

of Modern Chinese coined as exact counterparts of foreign models are, with few exceptions, fixed attributive constructions with nominal heads. They correspond to foreign fixed word-groups, less frequently to compounds. As a rule, ready-made native units enter into new combinations to render a new complex notion; some attributes, however, are newly coined in imitation of the structure of the attribute of the foreign word-group. Thus, the head of the word-group most usually is a native nominal compound, less frequently a loan-creation, either bisyllabic or polysyllabic; the attribute may be either a native compound, bisyllabic or polysyllabic, or a direct reproduction of the foreign attribute. While the reproduced compounds make use of native morphemes (in the case of polysyllabic creations, also of words) and apply them as structural and semantic counterparts of foreign constituents, reproduced word-groups use in this function native words or fixed combinations of constituents.

The classification according to the construction of the attribute appears to be the arrangement which offers the best possibility of an easy survey of the various attribute and nominal head constructions. The following constructions occur most frequently as attributes:

1. N bis (tris); a ready-made native unit, less frequently a loan-creation

*pàomò-bōli* 泡沫玻璃 (foam + glass), foam-glass; *tiáojiàn-fǎnshè* 条件反射 (condition + reflex), conditioned reflex; *huángsè-gōnghuì* 黄色工会 (yellow colour + trade-union), yellow trade-union (< Russ. želtyje profsojuzy), *héping-zhànxiàn* 和平战线 (peace + front), peace front (< Russ. mirovoj front); *héping-gòngchǔ* 和平共处 (peace + dwell together), peaceful coexistence; *jiējí-juéwù* 阶级觉悟 (class + consciousness), class-consciousness (< Russ. klassovojе soznaniye); *gémìng-yáolán* 革命摇篮 (revolution + cradle), cradle of revolution; *wèixīng-chéngzhèn* 卫星城镇 (satellite + town), satellite town; *tuóniǎo-zhèngcè* 鸵鸟政策 (ostrich + politics), ostrich politics; *jīngjì-dìlǐ* 经济地理 (economy + geography), economic geography; *bǐlì-dàibiǎozhì* 比例代表制 (proportion + system of representation), proportional representation; *sēngmào-xìbào* 僧帽细胞 (monk's cap + cell), mitral cell; *qiántīng-shénjīng* 前庭神经 (ante-room + nerve), nervi vestibuli; *liàngzǐ-lìxué* 量子力学 (quant + mechanics), quantum mechanics; *wéishēngsù-quēfábing* 维生素缺乏病 (vitamin- to miss + disease), vitamin deficiency, avitaminosis

2. V bis; a ready-made native unit

*yīngyòng-měishù* 应用美术 (to use, to apply + arts), applied arts; *liánhé-qīyè* 联合企业 (to combine; to unite + enterprise), combined enterprise; *zhǔdǎo-zhǔtí* 主导主题 (to lead, to head + motive), Germ. Leitmotiv; *bǎohé-diànliú* 饱和和电流 (to saturate + electric current), saturation current; *huódòng-wǔtái* 活动舞台 (to move + stage), movable stage

3. Adj bis (tris); a ready-made native unit, less frequently a loan-creation, coined specially to correspond to the attribute of the foreign word-group

*zìyóu-shìchǎng* 自由市场 (free + market), free market; *tōngyī-zhànxiàn* 统一战线 (united, unified + front), united front; *rénɡōng-hūxī* 人工呼吸 (artificial + to breathe), artificial breathing; *zhíyèxìng-pífūbìng* 职业性皮肤病 (profession + suffix-like formative *xìng* 性 – complexion + disease); professional dermatosis; *jiéyùxìng-wǔdǎobìng* 节律性舞蹈病 (rhythm + suffix-like formative *xìng* 性 – dance + disease), chorea rhythmica

4. Adj – N; an attributive construction usually coined to correspond to the attribute of the foreign model

*gāosù-líxīnjī* 高速离心机 (high + speed – centrifuge), high speed centrifuge; *quánzhī-nǎifěn* 全脂奶粉 (whole + fat – milk + powder), full-fat milk powder; *chángtú-diànhuà* 长途电话 (long + way – telephone), long-distance call; *dānhé-xìbāo* 单核细胞 (single + nucleus – cell), mononuclear cell; *yuánzhuō-huìyì* 圆桌会议 (round-table – conference, meeting), round-table conference

5. N – N; an attributive construction of two nominal morphemes usually coined to correspond to the attribute of the foreign model; the second morpheme means frequently “in the shape, form of”

*wǎngzhuàng-xìbāo* 网状细胞 (net + shape – cell), reticular cell; *guǎnshì-líxīnjī* 管式离心机 (tube + form – centrifuge); tube centrifuge

6. N – Loc; a native construction specially applied to correspond to the foreign attribute

*dìxià-tiědào* 地下铁道 (earth + under – railway), underground railway; *dǎng-nèi-shēnghuó* 党内生活 (party + inside – life), life inside the party (< Russ. vnutripartijnaja žizn’); *mùhòu-huódòng* 幕后活动 (curtain + behind – activity), activity from behind the scenes

7. Num – N; a construction applied specially to correspond to the foreign attribute

*shí'èrzhǐ-cháng* 十二指肠 (twelve + finger – intestine), intestinum duodenum; *sānchā-shénjīng* 三叉神经 (three + fork – nerve), nervus trigeminus; *wǔnián-jìhuà* 五年计划 (five + year – plan), five-year plan (< Russ. pjatiletnij plan) (and accordingly all long-term plans)

8. V – N; a verb-object construction created to meet the objective relationship of the members of the foreign attribute

*shūrǔ-xìbāo* 输乳细胞 (to transport + milk – cell), lactiferous cell; *gòucí-cíwèi* 构词词尾 (to form + word – word-suffix), word-formative suffix

Less usually the construction of the foreign attribute is rendered by a N – V construction without changing the order of the constituents, e. g.

*ròushí-zhíwù* 肉食植物 (meat + to eat – plant), carnivorous plant

The attributes of fixed word-groups coined as exact imitations of foreign models may be complex and consist of more than one member, e. g.

*chéngxiāng láodòng-rénmín liánméng* 城乡劳动人民联盟 (town + village – working people + union), union of the working people of towns and villages (< Russ. sojuz trudjaščixsja goroda i derevni)

## 2.2.2. Explicative Loan-Creations,

though not as abundantly represented in our lexical set as exact reproductions of foreign models, are rather numerous in Modern Chinese. The partial imitation of foreign models and the complementation by an explicative native morpheme is applied predominantly in the coinage of attributive nominal constructions both of the word-type and the word-group type. The explicative morpheme may either follow or precede the morpheme or construction which is the principal carrier of lexical meaning. In the former case, it may correspond to the suffix of the model; in the latter it does not possess any counterpart in the structure of the model at all. Creations with explicative constituents following the morphemes or constructions carrying the lexical meaning are more numerous. In units of the word-type, the explicative constituents usually are nominal, morphemes arranging the resulting constructions in certain lexical classes. Those preceding the principal carriers of lexical meaning are more frequently verbal morphemes expressing the activity specifying the function denoted by the respective noun.

### 2.2.2.1 Units of the Word-Type

Nouns with the explicative morphemes following the principal carriers of lexical meaning display quite a rich scale of recurrent patterns. The following attribute and head constructions are represented in our set by numerous examples:

#### 1. N (monos F, B; bis) – N

*hóngmó* 虹膜 (rainbow + tegument, membrane), iris; similarly *jiǎomó* 角膜 (corner-), cornea; *jílèniǎo* 极乐鸟 (paradise + bird), Paradisea; *yèqǔ* 夜曲 (night + melody, song), nocturno; by analogy *huàxiǎngqǔ* 幻想曲 (phantasy-), fantasia; *chuángē* 船歌 (boat + song), barcarola

#### 2. V (monos F, B; bis) – N

*wèixīng* 卫星 (to guard + star), satellite (< Lat. satellitum, guard); *jiànglínjié* 降临节 (to approach + feast), advent; by analogy also *fùhuójíé* 复活节 (to rise from the dead –), resurrection, Easter; *hézuòshè* 合作社 (to cooperate + company), cooperative; *chùshǒu* 触手 (to touch, to grip + hand), gripper; *chóngfùcí* 重复词 (to redouble + word), doublet; *jiémó* 结膜 (to connect + tegument, membrane), conjunctiva

This pattern is richly applied in the coinage of musical terms, e.g.

*zhènyīn* 震音 (to tremble + sound), tremolo; *mùgē* 牧歌 (to keep cattle out at grass + song), pastorella; *zòumíngqǔ* 奏鸣曲 (to resound + melody, song), sonata; *liànxíqǔ* 练习曲 (to practice –) etude; *huíxuánqǔ* 回旋曲 (to whirl, to

circle –), rondo; *jìnxíngqǔ* 进行曲 (to march –), march; *jīngguòjù* 经过句 (to pass + sentence), passage

3. Adj (monos F, B; bis) – N

*jiǎshēng* 假声 (false + voice), falsetto; *gōngshè* 公社 (common + company), commune; *chángshù* 常数 (constant + number), constant; *guǎngbǎn* 广板 (broad + rhythm); largo; by analogy *jíbǎn* 急板 (fast, rapid –), presto; *róubǎn* 柔板 (soft –), adagio etc; *huájqǔ* 滑稽曲 (humorous, comic + melody, song), burlesca

4. (V + N Obj) – N

*mótiānlóu* 摩天楼 (to touch + sky – building), sky-scraper; *fángfēnglín* 防风林 (to obstruct + wind – wood), breakwind; *shímíánzhèng* 失眠症 (to loose + sleep – illness), insomnia, sleeplessness; *wúmíngshì* 无名氏 (not to have + name – morpheme following the first names of famous persons), anonymous

5. (N + N Attr) – N

*biānmáolèi* 鞭毛类 (whip + hair – kind), Flagellata; *chúnwǔbìng* 唇舞病 (lip + dance – disease), labiochorea

Nouns of other constructions are encountered only rarely among this type of explicative loan-creations, e. g.

(N + V) – N

*diànjiěyè* 电解液 (current + to dissolve – liquid), electrolyte

(Loc + V) – N

*qiánzòuqǔ* 前奏曲 (before + to play – melody, song), prelude

(V + V) – N

*jiāoliúdiàn* 交流电 (to alternate + to flow – current), alternating current

V + N Obj

*chōngzhàng* 冲账 (to clear + account), clearing

Suffix-like formatives, too, occur as explicative constituents, e. g.

*líxīnjī* 离心机 (to leave + centre – machine), centrifuge; *shāwénjī* 杀蚊剂 (to kill + mosquito – reagent), mosquitocide; *tuīrèjī* 退热剂 (to withdraw + fever – reagent), antipyretic

On the other hand, some nouns coined by means of suffix-like formatives have to be provided with supplementary lexical morphemes to make their structure semantically expressive, e. g.

*lùguāngjì* 露光计 (to expose + light – measuring device), exposure-meter; *shīdùjì* 湿度计 (humid + degree –), hygrometer

Other word-classes occur within this type of explicative loan-creations only rarely, e. g.

Adj

Adv+N

*xiányàn de* 先验的 (before + experience), a priori

V

Pron + V

*dúchàng* 独唱 (alone + to sing), to sing a solo; *dúzòu* 独奏 (alone + to play), to play a solo

V + V

*bànchàng* 伴唱 (to accompany + to sing), to accompany (in singing); *bànzòu* 伴奏 (to accompany + to play), to accompany (on a musical instrument)

Explicative loan-creations with the added constituent preceding the principal carrier of lexical meaning are far less numerous. The added verbal morpheme denotes the activity specifying the function or shape of the respective noun; the nominal morpheme specifies the sphere referred to.

The most common pattern of creations with an explicative verbal morpheme is (V + N Obj) – N

*rǎnsètǐ* 染色体 (to dye + colour – body), chromosome; *shūluǎnguǎn* 输卵管 (to transport + egg – tube), oviduct; *fēnyèshēn* 分叶肾 (to divide + leaf – kidney), lobated kidney; *jiùshēngdài* 救生带 (to save + life – belt), life belt

V – O constructions are also encountered with creations provided with suffix-like formatives, e. g.

(V + N) – suffix-like formative

*bǐsèjì* 比色计 (to compare + colour – measuring device), colorimetr

(V + Adj) – suffix-like formative

*yànshīqì* 验湿器 (to examine + humid – instrument), hygroscope

The nominal explicative morpheme precedes nouns, e. g.

*yīnjiē* 音阶 (sound + scale), scale; *fùbìshēn* 腹壁肾 (abdomen + wall – kidney), mural kidney;

or adjectives, e. g.

*kǒuhóng* 口红 (mouth + red), lipstick (< Fr. rouge)

### 2.2.2.2 Units of the Word-Group Type

Explicative loan-creations of the word-group type are exclusively attribute and nominal head constructions. In the majority of cases, the explicative morpheme enters into the construction of the attribute to indicate a nearer specification or sphere referred to by the preceding lexical morpheme.

The only recurrent construction of the attribute is that of an adjectival morpheme followed by an explicative morpheme, e. g.

*chángwù-wěiyuánhui* 常务委员会 (permanent + matters – affairs + committee), permanent committee; *tóngzú-dúsù* 同族毒素 (the same + kind, group-toxin), isotoxin; *tóngzhì-yízhíshù* 同质移植术 (the same + quality-transplantation), isotransplantation; *ruǎnyīn-fúhào* 软音符号 and *yìngyīn-fúhào* 硬音符号 (soft; hard + sound-mark), Russ. mjagkij, tvjordyj znak

Explicative morphemes in other types of attributes also express a nearer specification of the preceding constituent, e. g.

Pron + N

*zìtǐ-xuèqīng* 自体血清 (self + body-serum), autoserum

Num + V

*èrhé-yuányīn* 二合元音 (two + combine-vowel), diphthong; by analogy *sānhé-yuányīn* 三合元音 (three + combine-vowel), triphthong

N + V

*rénchēng-dàicí* 人称代词 (person + to call-pronoun), personal pronoun

V + N Obj

*jíwù-dòngcí* 及物动词 (to reach + object-verb), transitive verb; *fǎnshēn-dàicí* 反身代词 (to turn over + body-pronoun), reflexive pronoun

The nominal head itself or some of its constituents may be joined as explicative constituents, e. g.

*xiǎobù-wǔqǔ* 小步舞曲 (small + step-dancing melody), menuet (< Lat. pas menus); *nánfāng-shíxìngxīng* 南方十字星 (south + cross-star), Southern Cross

Attributes provided with an explicative constituent preceding the nominal morpheme which is the principal carrier of lexical meaning are far less numerous. The explicative constituent is a verbal morpheme in objective construction with the following nominal morpheme. It expresses the manner of action, e. g.

*biāodiǎn-fúhào* 标点符号 (to indicate + point-mark), punctuation marks; *fángdú-miànjù* 防毒面具 (to prevent + gas-mask), gas-mask; *dúshū-liáofǎ* 读书疗法 (to read + book – way of treatment), bibliotherapy

### 2.2.3 Approximate Loan-Creations

or loan-renditions of our set as regards their number lag behind exact and explicative loan-creations. The reason may be the difficulty of differentiating between this type of lexical innovations and induced creations of descriptive character. When the structure of the new-creation shows only a vague resemblance to the structure of the model, its classification as an induced creation appears preferable. Among approximate loan-creations we include only those units in which the imitation of the structure of the foreign model is evidenced by the application of corresponding word-formative features, or at least by the usage of morphemes synonymous with those of the model. The units of the word-type show the tendency of being formed

according to recurrent patterns; those of the word-group type, due to the limited number of items assembled, did not permit the establishment of recurrent types.

### 2.2.3.1 Units of the Word-Type

can be divided into two groups: a) those which imitate the arrangement of the structure of the model and which at the same time use synonymous morphemes; b) those which only use synonymous morphemes.

The former are mostly nouns with the attributive relationship of constituents, formed according to the following native word-formation patterns:

1. N + N

*niánlún* 年轮 (year + wheel), annual ring, *xuèqiú* 血球 (blood + ball), blood corpuscle; *qìdài* 气袋 (air + pocket), air-bed

2. N + V

*diànshì* 电视 (electricity + to see), television

3. (V + N Obj) – N

*xiàngshēngcí* 象声词 (to be similar, to imitate + sound-word), onomatopoeia (< Gr. onoma, -atos, name, poieo, to create)

4. (Adj + N) – N

*yuánzhūbǐ* 圆珠笔 (round + object similar to a pearl-pen), ball-point pen

5. (Adj + V) – N

*dānxínglù* 单行路 (single + to go, to proceed-way), one-way street

6. (N + N Coord) – N

*liànqiújūn* 链球菌 (chain + ball-fungus), streptococcus (< Gr. streptos, chain; coccus, grain)

The latter, only with morphemes synonymous to those of the model, are for the most part also nouns. They correspond to models the structure of which is difficult to imitate due to its morphological arrangement (mostly nouns with word-formatives). The only productive model is

(Num + Adv) – V

applied in the creation of musical terms, e. g.

*èrchóngchàng* 二重唱 (two + repeatedly, again – to sing), duet (vocal); *èrchóngzòu* 二重奏 (two + again – to play on a musical instrument), duet (instrumental); *sānchóngchàng* 三重唱, *sānchóngzòu* 三重奏, trio; *liùchóngchàng* 六重唱, *liùchóngzòu* 六重奏, sextet etc.

Here also belong numerous scientific terms formed according to various patterns, e. g. (N + V Attr) – N

*yǐzǒugǎn* 蚁走感 (ant + to go-feeling), formication

(V + N) – N

*shìwǎngmó* 视网膜 (to see + net-membrane), retina

N + N bis

*hédànbái* 核蛋白 (kernel + white of an egg), nucleoprotein

(Adj + suffix-like formative) – N

*báihuàbìng* 白化病 (white + formative *-huà* 化, denoting the change of state – disease), albinism

Verbs, only singular creations of V – O construction, were inspired by nominal models, e. g.

*fáqiú* 罚球 (to punish + ball), (to perform) a penalty kick; *bìyùn* 避孕 (to evade + pregnancy), (to perform) contraconception

### 2.2.3.2 Units of the Word-Group Type

may correspond to foreign word-groups, to compounds and singularly to simple words. In the former case, beside using synonymous morphemes they imitate the arrangement of the structure of the foreign model; in the latter, the common feature is only the presence of synonymous morphemes or morphemes of the same meaning in the structure of the replica. In Chinese, this type of approximate loan-creations are attributive constructions with a nominal head, usually consisting of two members, less frequently of more. Some of the members are ready-made native words, others are coined on the impulse of the foreign model, e. g.

N bis + N bis

*yǔzhòu-fēichuán* 宇宙飞船 (cosmos + flying ship), space ship; *tiánjìng-yùndòng* 田径运动 (field + path-sport), field athletics; there are productive patterns which may be freely applied, e. g. *rìguāng-kǒngbù* 日光恐怖 (sun + light + terror), heliophobia; *xìngyù-kǒngbù* 性欲恐怖 (sexual desire-), erotophobia; the attribute of this pattern may be N (V) or V: *gōngzuò-kǒngbù* 工作公布 (work, to work –) ergasiophobia; *kǎoshì-kǒngbù* 考试恐怖 (to examine, examination-) examinophobia; *shūxiě-kǒngbù* 书写恐怖 (to write-), graphophobia

(Adj + N) – N bis

*ruǎntǐ-dòngwù* 软体动物 (soft + body-animal), mollusc

(V + Adj Obj) – N bis

*bǎojiàn-shìyè* 保健事业 (to protect + health-affairs), medical care (< Russ. zdravooxraneniye)

(N + Adj) – N bis

*máoxì-xuèguǎn* 毛细血管 (hair + thin-vessel), capillary

(N + N) – (V+N)

*zhōuji-ǎodàn* 洲际导弹 (continent + interspace – to guide, bullet), intercontinental guided missile

(V + V) + [(V+N) + suffix-like formative]

*jiāoliú-fādiànjī* 交流发电机 (to alternate + to flow – to produce + electricity + machine), alternating current generator

N tris + Adj

*wéishēngsù-yuán* 维生素原 (vitamin + first, original), provitamin

(N bis + N bis) – N bis

*shèngyú-jízhí-guīlǜ* 剩余价值规律 (the rest, remainder + value + rule), law of surplus value

Even fixed phrases may be used in equivalents of foreign models, e, g.

*wéi* 为... (+ N) *ér* 而... (+ N), to strive for... and ...

*wéi yìshù ér yìshù* 为艺术而艺术, l'art pour l'art

## 2.2.4 Induced Creations

As already mentioned in 2.1, induced creations as lexical innovations created on an impulse or due to a vague hint of foreign lexical units in order to fill a gap in the Chinese lexical system, without actually imitating the structure of foreign models, remain outside the immediate scope of this study.

Cultural innovations connected with the modern way of life, scientific terms and names of various technical innovations imported into China had to be attributed appropriate linguistic forms. The existence of a foreign model, very often an international compound word, supplied only the impulse for the coinage of a descriptive creation, formed usually as a concise explanation of the meaning of the respective word. The constructions of such induced creations make full use of the rich variety of native word-formation patterns. Together with full-fledged native creations they form the principal bulk of innovations in the lexical system of Modern Chinese. Preferably, they should be studied as an integral part of native lexical innovations.

Here, we want to point out the connection, though loose, that exists between forming these descriptive creations and the mechanism of morphemic reproduction of foreign models and to show that the range of word-formative patterns applied for the coinage of both loan-creations and induced creations corresponds to that of native creations. Because of space limitations we shall adduce only some representative examples of the most current word-formation patterns applied.

### 2.2.4.1 Units of the Word-Type

are principally nouns of attribute and head construction formed according to the following word-formation patterns:

1. V – N Attr or V – N Obj

*wéiyǔ* 谓语 (to call + locution), predicate; *chāqǔ* 插曲 (to insert + melody), intermezzo; *mílù* 迷路 (to stray + way), labyrinth (anat.), a V– O construction (to lose one's way) used in a specialized meaning as N

2. N – V

*diàntī* 电梯 (electricity + ladder), lift; *jiàndú* 箭毒 (arrow + poison), curare

3. (V + N Obj) – N

*qiánshuǐtǐng* 潜水艇 (to dip + water-boat), submarine; *biànxíngchóng* 变形虫 (to change + form-insect), amoeba; *tuōyīwǔ* 脱衣舞 (to take off + clothing-dance), strip-tease; *ānhūnqǔ* 安魂曲 (to calm, to appease + soul-melody), requiem

4. (N + N Attr) – N

*bìngyuánjūn* 病原菌 (disease + source-fungus), bacteria; *yāzuǐshǒu* 鸭嘴兽 (duck + mouth-animal), Ornithorhyncus anatinus

5. N – (Adj or Loc + N)

*nǚ-gāoyīn* 女高音 (woman-high + voice), soprano; *nǚ-dīyīn* 女低音 (-low-), alto; *nǚ-zhōngyīn* 女中音 (-centre-), mezzosoprano; the same for masculine voices: *nán-gāoyīn* 男高音 (man-high + voice), tenor, etc.

A high percentage of induced creations is formed by nouns practically with all suffix-like formatives. To adduce some examples of abstract nouns of scientific disciplines and doctrines:

-*xué* 学: *yīnwèixué* 音位学 (sound + place, position-), phonology; *xíng'ér-shàngxué* 形而上学 (above the form-), metaphysics

-*zhǔyì* 主义; *shíyòngzhǔyì* 实用主义 (to use-), pragmatism; *wánnéngzhǔyì* 万能主义 (10,000 + capability-), versatility

of concrete nouns of biological and other agents:

-*sù* 素: *bìngsù* 病素 (disease-) virus; *císù* 词素 (word-), morpheme of concrete nouns of implements and instruments:

-*qì* 器: *kuòyīnqì* 扩音器 (to spread + sound-), loudspeaker; *líhéqì* 离合器 (to separate + to connect-), coupling

-*jī* 机: *shēngjiàngjī* 升降机 (to raise + to lower-), lift; *liúshēngjī* 留声机 (to keep + sound), gramophone<sup>28</sup>

Verbs of V + O construction are only singular creations, e. g.

*xiāodú* 消毒 (to destroy + poison), to disinfect.

## 2.2.4.2 Units of the Word-Group Type

Induced attributive constructions with a nominal head, are composed of existing lexical units (native or induced) or native constituents which enter into new complex constructions to figure as equivalents of foreign compounds or word-groups, the notional content of which has been introduced into China.

<sup>28</sup> For examples with other formatives we have to refer the reader to our study *Affix-like Word-Formation Patterns* (Novotná 1969b).

The usual patterns applied are the following:

1. N bis + N bis (tris)

*zhōngdiǎn-cǎidài* 终点彩带 (end-point + coloured silk-ribbon), the tape;  
*jīngyuàn-zhéxué* 经院哲学 (establishment of classical learning + philosophy),  
 scholastics; *mílù-qīchúshù* 迷路切除术 (to stray + way (= labyrinth) – the  
 art of cutting away), labyrinthectomy

2. Adj bis (tris) + N bis (tris)

*lùtiān-diànyǐng* 露天电影 (expose + sky-cinema), open-air cinema; *hùnsēng*  
*-héchàngtuán* 混声合唱团 (mixed + voice – collective singing body), mixed  
 choir; *pēnqìshì-fēijī* 喷气式飞机 (to spirt + air + type-plane), jet plane

3. V bis + N bis (tris)

*zōnghé-dàxué* 综合大学 (to unite, to treat as a unity + university), polytech-  
 nic university; *tōngxùn-yuànshì* 通讯院士 (to correspond + member of the  
 academy of sciences), corresponding member (< Russ. člen korrespondent);  
*hángkōng-mǔjiàn* 航空母舰 (to fly in the air + mothership), aircraft carrier

4. (Num + Measure) + N bis

*sānduàn-lùnfǎ* 三段论法 (three + section-method of argument), syllogism.

### 3.1 Conclusions

The impermeability of the phonemic and morphemic systems of Modern Chinese did not allow an extensive influx of loans into its lexical system. The introduction of denotations of cultural innovations, political and scientific terms had to proceed via morphemic reproduction of foreign models supplied and mediated, in case of compounds of international standing, above all by English, rarely by other world languages such as German and French. Russian offered models and impulses for the creation of new terms connected with socialist policy and economy thanks to close contacts from the twenties till the early sixties.

The necessary precondition of the reproduction of the model in Modern Chinese is its easy analysability into constituent elements which enables their substitution by native morphemes or ready-made native words, either completely or partially. The degree of exactness of the morphemic reproduction depends on the gravity of obstacles posed by the model, i. e. on the distance between the morphemic structure of the model and the possibilities offered by the existing word-formation patterns of Modern Chinese. If the morphemic structure of the model cannot be imitated adequately element by element, Chinese has to recur to minor rearrangements in the construction of the equivalent, i. e. either to extend its form by means of another morpheme (or word) to make it semantically complete and assign to it the desired grammatical function (explicative loan-creations), or choose a native word-formation pattern not completely corresponding to that of the structure of the model (approximate loan-creations). Other adjustments are the change in the order of morphemes, the substitution of grammatical morphemes of the model by lexical morphemes or zero counterparts in the equivalent. Foreign compounds may be

rendered by equivalents of the word-group type or even vice versa, which is less frequent, foreign word-groups by compounds.

These procedures in the adaptation of reproductions of foreign models are the unavoidable results of the low scale of adaptability of the morphemic system of Modern Chinese which does not allow the penetration of other features of order and relationship between the morphemes than those permitted and firmly established in native word-formation patterns. This also entails the difficulties in the adaptation of loan-creations to native lexical and grammatical classes reflected in the scarcity of lexical innovations belonging to other word-classes than nouns. Nouns and nominal word-groups are widely imitated, naturally above all due to the obvious denotative needs which equally play their role in other languages, but also due to the comparative facility of their reproduction in terms of attribute and nominal head constructions, the preferred type of nominal patterns of Modern Chinese.

Due to the low scale of adaptability of its morphemic system, Chinese did not introduce any new word-formation patterns into its word-formative procedures; but partially solved the problems posed by the necessity of reproductions of foreign models by devising the method of adding explicative constituents. This procedure permits a large scale imitation of foreign models and the formation of equivalents in agreement with native word-formation patterns, thereby ensuring their semantic expressiveness.

In general, morphemic reproductions of foreign models in Modern Chinese, both exact and partial, offer a very feasible means of enrichment and improvement of the lexical system. The applied procedures impose no limitations on the number and range of new-creations; as their form does not differ from native lexical units, and does not offer any obstacles to their being recorded in phonoideographic script, these new-coinages are acceptable to the general public. The further creation of lexical innovations called forth by contact with the world outside China will undoubtedly proceed along this line, i. e. either foreign models will be reproduced more or less exactly or only their meaning will be imported and their form created independently as a descriptive creation according to native word-formation patterns.

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# CAN A GENERATIVE DICTIONARY BE USED AS A DIAGNOSTIC ONE?

**Abstract:** *Based on the author's personal experience with the compilation of the Czech-Chinese Dictionary, this paper attempts to provide an answer to the question asked in the title. Taking CCD as an example, it investigates the possible use of the bilingual dictionary by users outside the primary target group. Specifically, it explains how the dictionary intended in the first place as an aid in generating Chinese texts was effectively used by Chinese students of Czech as a diagnostic dictionary at the same time. First, it describes the lexicographic model elaborated by L. Zgusta and modified and applied by the lexicographic team of Oriental Institute in Prague. Afterward, it discusses two lexicographic strategies that appear to have played a decisive role in using CCD both in the generative and diagnostic functions. Last but not least, it also mentions the limitations of combining the two functions.*

**Key words:** *lexicography, bilingual dictionary, Czech-Chinese Dictionary, generative dictionary, diagnostic dictionary*

## 1. Introduction

The purpose of the present paper written to honour Prof. Dr. Ladislav Zgusta, DrSc., is to draw attention to the following problem: to what extent can a bilingual dictionary originally conceived as a tool for the native speaker of the source language to create texts in the target language also benefit the foreign user?

The 'passive' function of such an 'active' dictionary is, of course, restricted. The present paper discusses this problem with a focus on the *Czech-Chinese Dictionary (CCD)* of 40,000 entries compiled by the lexicographic team of the Oriental Institute in Prague (Praha: Academia, vols. I.–IX., 1974–84).

The lexicographic model of *CCD* is due mainly to L. Zgusta's linguistic erudition and special interest in semantics. With some modifications it was consistently applied in the whole corpus of *CCD* which was finished more than a decade after Zgusta's emigration to the USA. The elaborated system proved to be more versatile than the authors could foresee in the initial stages. A discussion of the points below may point out some particular features that are to be incorporated into the arrangement of bilingual dictionaries which are supposed to serve both native and foreign users.

## 2. Language universals and bilingual dictionaries of remote languages

Languages are the most effective tools of human communication ever invented; yet the fact that their use leads in many cases to the enslavement of their users is often disregarded. In this sense, then, dictionaries have immense power and influence. The customary mistaking symbols for reality may result in the tyranny of words, no matter how developed and refined the lexicosemantic system of a language may be. The

problem is the more acute when the lexicosemantic systems are confronted with all their specific features and asymmetry in both cultural and linguistic aspects. The task of a lexicographer working with two typologically different languages representing two distinct cultures is fortunately facilitated by research on language universals. This refers to the shared features of all natural languages as manifestations of the general character of human thought and psychology.

Lexical polysemy, one of the most important language universals, is organised in all natural languages in hierarchical structures. The fact that these structures can be systematically confronted in bilingual dictionaries of remote source and target languages shows that language universals play a decisive role in establishing lexical equivalents with different external forms.

### **3. Bilingual dictionaries: diagnostic and generative**

A bilingual dictionary, as a medium of contact between two distinct cultural entities, is a basic tool for students of the respective languages and for translators and interpreters. It facilitates translation in the broadest sense, i.e. the understanding of a text and the generating of one. In this function it is instrumental to both generalization and actualization of means of expression of the spoken and written form. The type of the bilingual dictionary is determined then by the goal for which it is compiled. A diagnostic ('passive') dictionary serves the understanding (diagnosis) of a text of the source language; a generative ('active') dictionary helps in translating a text from the source language into the target language and in creating (generating) a new text in the target language. (Cf. Zgusta 1975: 95–97)

Bezděk (1974: 165–166) points out that definition of diagnostic and generative dictionaries may imply that they are compiled for the benefit of foreign users. He argues, though, that due to the present wide interest in the study of languages, it is not only possible, but necessary to compile both these types of dictionaries also for the benefit of native users. In this case the arrangement of the dictionary should be more accomplished, as the native user may require a detailed knowledge of how his language is comprehended by members of other linguistic communities; or he may want to verify the correctness of his own presentation of the properties of his language in another language in which he is not fully proficient.

As regards the needs of a general native speaker it is sufficient to conceive a diagnostic dictionary as a list of equivalent word-entries. In the case of a generative dictionary it is desirable to include more word-combinations, phraseological units and even illustrative examples at sentence level. A sophisticated foreign user will expect in a diagnostic dictionary a maximum of word-entries, even from the periphery of the lexical system; he may be inclined, though, to excuse a certain vagueness in their explication.

### **4. The scope and double function of CCD**

The project of a bilingual dictionary of two remote languages, one or both of which are not languages of wider communication, may be considered an excessive luxury.

If both the generative and diagnostic purposes are adroitly combined, this argument becomes less strong.

In the case of the medium *CCD* both purposes were taken into consideration. The generative function and active performance of the Czech user in Chinese were taken as primary. The authors characterized at that time the scope of *CCD* in the following way:

As far as the general character of the dictionary under preparation is concerned, we intend it for the Czech user who has a basic knowledge of Chinese; although of course it will, simply by its existence, also help the Chinese user to read current Czech literature and newspapers. (Kratochvíl et al. 1962: 259)

The authors were well aware of the difficulty, or even impossibility of compiling a dictionary of two languages with completely different grammatical and lexicosemantic systems which should equally serve to native speakers of both languages. The reasons which led to the ultimate decision of taking Czech as the source language were both purely linguistic and pragmatic ones. In a retrospective paper L. Zgusta evaluates this decision as basically correct. (Cf. Zgusta 1992: 86–89)

When *CCD* reached both Czech and Chinese users, it appeared that the applied lexicographic strategy was appropriate to the manifold purpose. The dictionary intended in the first place as an aid in generating Chinese texts, was readily and effectively, due to the lack of suitable manuals, used by Chinese students of Czech as a diagnostic dictionary. It also became the theoretical model and one of the main lexicographic sources in the preparation of a comprehensive *Czech–Chinese Dictionary* at the Slavonic Department of the University of Foreign Languages in Peking.<sup>1</sup>

#### **4.1 The principal prerequisite of *CCD***

Thanks to a long tradition of linguistic research the lexicosemantic system of Czech has been described in detail; there exist reliable monolingual dictionaries of standard Czech. The authors were guided by the four volume *Slovník spisovného jazyka českého* [Dictionary of Standard Czech Language]. The polysemy in the word-entries of this dictionary is minutely differentiated and richly illustrated by specimens of typical word-combinations and examples at sentence level. This comprehensive dictionary includes also obsolete, rare, dialectal and other less frequent entries, which caused a certain lack of balance in the selection of entries for *CCD*. A reduced form of this dictionary would have been a more suitable model for the word-list of *CCD*. Unfortunately its publication came too late (1978).

The practice of compiling *CCD* proved that the existence of a monolingual standard dictionary of the source language is an indispensable condition in preparing a generative dictionary which is also expected to serve as an operative aid for the diagnosis of texts of the source language by foreign users.

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<sup>1</sup> The manuscript of this medium dictionary of 50,000 entries was completely checked by three lexicographers from the institutes of the Czechoslovak Academy of Sciences in 1983–84, including the present author. It was scheduled for publication by Commercial Press for 1990. Unfortunately, probably due to economic considerations, it has not yet come out.

Most of the present Chinese-X dictionaries compiled both by foreign and Chinese lexicographers do not transcend the diagnostic purpose and can hardly be effectively used in creating texts in the target language. The generally known reasons for this are the structure of the Chinese language itself and the lack of monolingual standard dictionaries. A certain role is also played by the adherence to the graphomorphemic principle in the arrangement of the word-lists and by the construction of entries.<sup>2</sup>

#### 4.2 Lexicographic strategies of CCD

Two lexicographic strategies appear to have played the decisive role in the possibility of using CCD both in the generative and diagnostic function:

a. Equivalence (Cf. Zgusta 1979: 384–385) was taken as adequacy in meaning and function, not as identity, which is scarcely achieved even in terminology. The Chinese equivalents in CCD were chosen mostly in the process of observation of particular contexts; they were also verified as regards their reversibility by diagnosing Czech minitexts created specially for this purpose. Correct use is not guaranteed outside the particular context, its slight modifications, and the indicated collocability of the given equivalent (Cf. Coseriu 1955–56: 48–49).

E. g. the verb *páčiti* has in Czech three meanings: 1. to open something by force, with a lever; 2. to tear out something by force; 3. to exact, to extort something from somebody. The users are on safe ground only with the given Chinese equivalents and the indicated category of objects: 1. *qiàokai* 撬开 (a door, a safe); 2. *wāchu* 挖出 (a nail out of the wall, tree stumps; the semantic feature ‘by force’ is not so prominent as in Czech); 3. *bīzhe* 逼着, *jīdui* 挤对 (a confession, a reply).

b. Efforts were made to assure that polysemy were well-organised and balanced and the inclusion of single senses considerate. Their definitions were to rule out ambiguity. The possible equivalents were subjected to semantic feature analysis. Only those with dominant semantic components corresponding to the core of the Czech meaning were accepted; the choice of others with secondary semantic components was purposefully restricted.

E. g. the polysemy of the Czech *otevřít* ‘to open’ is structured into six senses. The Chinese verb *kāi* 开, its reduplicated form *kāi kai* 开开 and the verb *dākai* 打开 figure as equivalents in four senses. Other possible equivalents were verified as regards their secondary semantic components and provided with explications and illustrative examples: *chǎngkai* 敞开 (wide, to open the door wide), *zhāngkai* 张开 (by parting or spreading, to open one’s mouth, one’s arms), *chāikāi* 拆开 (by tearing, a letter).

<sup>2</sup> E. g. The recently published *A Modern Chinese-English Dictionary* (1988) copies the arrangement of the monolingual standard *Xiandai Hanyu Cidian* 现代汉语词典 [Modern Chinese Dictionary] of 1978. The 100,000 entries of this dictionary covering, before all, modern expressions of the last ten years, seem to favour English speaking users in the orientation in Chinese texts about politics, economics and current affairs more than the Chinese learners of English and readers of English texts whom the compilers indicate as the main users in the preface.

The working method of combining concise explications with typical word-combinations is of advantage to speakers of both languages. It guarantees quite a high chance of correctly generating a Chinese text and a fairly good understanding of a Czech text on the basic and intermediate level of proficiency.

## **5. Limitations of combining the generative and diagnostic function in one X-Chinese dictionary as seen from the experience of CCD**

a. The generative function of a X-Chinese dictionary compiled by native lexicographers of the source language is to be considered primary. The dictionary is expected to serve equally for both oral and written communication.

Practice has shown that *CCD* was used mostly in generating oral texts in Chinese. There are two reasons for this. Oral communication (conversation, interpreting) was and still is the more frequent form of Czech–Chinese intercourse. Compared with the relatively high possibility of reaching proficiency in written communication in other foreign languages, the Czech (and any other) user is handicapped by the complicated Chinese script and the intricacies of the written style.

b. The diagnosis of texts in the source language by Chinese users is to be taken as a secondary target of the respective lexicographic project.

*CCD* was, though, often used by Chinese students of Czech with the basic level of proficiency and was instrumental to the understanding of written texts on topics from daily life, newspaper articles and fiction of medium stylistic quality. In combination with other teaching aids *CCD* also served quite efficiently to those possessing intermediate reading proficiency in Czech. The needs of Chinese users with high knowledge of Czech (university teachers, translators of literature) in appreciating stylistic properties of Czech written texts were not fully satisfied by the information contained in *CCD*.

c. The experience of *CCD* is applicable to X-Chinese medium dictionaries compiled by native speakers of other source languages.

The same may not be true about X-Chinese dictionaries compiled by Chinese lexicographers. The possibility of their being used by foreigners in correctly generating Chinese texts is limited by the current Chinese lexicographic practice, which does not pay sufficient attention to the manifold functional aspects of equivalents.

## **6. Concluding remark**

The lexicographic project of *CCD* had to withstand many criticism both from the linguistic and pragmatic side (the Czech–Chinese ‘direction’ of the dictionary, the long duration of the project, the political aversion to China, especially in the decade 1966–76, the period of the ‘cultural revolution’, when *CCD* was due to publication).

The experience of both Czech and Chinese users, though, has proved that the lexicographic model elaborated by L. Zgusta and modified and applied by lexicographic team of the Oriental Institute in Prague was in principle correct and more broadly user-oriented than the authors could have foreseen when considering the overall arrangement of the dictionary and its editorial instructions.

The question in the title of this paper is to be answered in the positive. As verified by the actual use of *CCD*, an ‘active’, i.e. generative dictionary, especially the one compiled by native speakers of the source language, may perform a double function. Its secondary, i.e. diagnostic function is directed towards written texts of the source language. It can be applied with utmost efficiency in analyzing and understanding of not very sophisticated written materials.

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