A Study of Adjective-Noun Collocations in Chinese English

Lixin Xia*, Caiyan Niao

*Corresponding Author: Lixin Xia
Guangdong University of Foreign Studies, Guangzhou 510420, China

1Guangdong University of Foreign Studies, Guangzhou 510420, China

Abstract: This study explores the collocational patterns of ten high-frequency adjectives in the Written Corpus of China English (abbreviated to WCCE) with a focus on its collocations with nouns. A corpus-based comparative methodology was adopted to investigate the differences between China English and British English in the use of adjective and noun collocational patterns. The major findings of the study can be stated as follows: 1) Some collocational structures only occur in the Chinese context, such as economic rebalancing, economic belt, and international airspace. 2) Some collocational structures, like economic corridor, economic construction, new energy, are used more frequently in China English than in British English. 3) The frequencies of some collocational structures in BNC are much greater than those in WCCE, in particular, Old Testament, local election. The reasons for these different usages of collocational structures with distinct Chinese features might include (but not limited to), i. the development of China’s economy (e.g. economic belt, economic corridor); ii. the differences between China and Britain in politics and society (e.g. Old Testament, local election); iii. the influence of the development of science (e.g. new energy); iv. linguistic transfer (e.g. old Yao, economic take-off). The findings show that China English has its distinctive collocational patterns which may suggest that English used in China has undergone a process of nativization.

Keywords: Chinese English; collocation; corpus linguistics.

1. INTRODUCTION

Empirical research in the nativization of English is increasing, among which the difference on lexical meaning is an important study field. (Alm 2003; Adegbija, 1989; Bamiro, 1994; Dubey, 1991; Lee & Collins, 2004; Lee et al., 2009) Most scholars, currently however, are investigating nouns or noun phrases, and less attention was paid to other parts of speech, such as adjectives. In fact, the use of adjectives might exhibit the most typical feature of the nativization of English in Chinese context. When adjectives co-occur with other word classes (such as nouns), the feature of nativization will be more distinctive (Yu & Wen, 2010). Therefore, this paper will examine the adjective and noun collocational patterns in WCCE.

2. METHODOLOGY

2.1 Source of the Data

The target corpus, WCCE is a collection of samples of written language with a total of 13,962,102 tokens, from four types of genres, i.e. fictions, magazines, newspapers, and academics, designed to represent a wide cross-section of China English in modern times. BNC (British English Corpus) is used as a reference for contrast. The 10 most frequently-used adjectives and their hits in the corpus are as follows: other (20440), new (18391), many (14666), the 10 most frequent nouns only occur in the Chinese context, such as economic belt, economic construction, new energy, are used more frequently in China English than in British English. 3) The frequencies of some collocational structures in BNC are much greater than those in WCCE, in particular, Old Testament, local election. The reasons for these different usages of collocational structures with distinct Chinese features might include (but not limited to), i. the development of China’s economy (e.g. economic belt, economic corridor); ii. the differences between China and Britain in politics and society (e.g. Old Testament, local election); iii. the influence of the development of science (e.g. new energy); iv. linguistic transfer (e.g. old Yao, economic take-off). The findings show that China English has its distinctive collocational patterns which may suggest that English used in China has undergone a process of nativization.

Keywords: Chinese English; collocation; corpus linguistics.

2.2 Data Analysis

The list of statistically significant adjective-noun collocations in the WCCE is based on collocation frequency (≥5 hits) and association scores calculated via the loglikelihood test.
2.2.1 Collocational structures that only occur in the Chinese context

Owing to space limit, we will focus on the top 20 collocations in the WCCE (in descending order of Log-likelihood index) (see Table 2.1).

| Collocations            | Log-likelihood | Rank | Collocations            | Log-likelihood | Rank |
|-------------------------|----------------|------|-------------------------|----------------|------|
| old Tibet               | 197.01         | 1    | economic takeoff        | 50.97          | 11   |
| economic work           | 152.09         | 2    | many hostess            | 44.69          | 12   |
| other hostess           | 148.32         | 3    | new CPC                 | 44.50          | 13   |
| economic mobilization   | 105.47         | 4    | old Wang                | 44.18          | 14   |
| economic belt           | 85.96          | 5    | many NGOs               | 38.32          | 15   |
| economic rebalancing    | 83.24          | 6    | many netizen            | 37.39          | 16   |
| local govt (debt)       | 69.97          | 7    | international airspace  | 34.79          | 17   |
| first China             | 69.81          | 8    | new iPhone              | 32.09          | 18   |
| new iPad                | 59.74          | 9    | other concubine         | 30.72          | 19   |
| old Yao                 | 58.24          | 10   | international metropolis| 27.62          | 20   |

Table 2.1: The collocational structures only in the Chinese context

One very important argument needs to be mentioned here is that, the absence of any collocation in BNC does not imply the phrase in question is problematic or unacceptable, let alone erroneous. On the contrary, it serves as clear evidence that the English used in the Chinese context is, to some extent, undergoing a process of nativization, reflecting the unique Chinese ideology different from the West in economy, politics, culture and other aspects. It will be further discussed in Section 3.

2.2.2 HF Collocations in WCCE

The following table shows the collocational structures that are used more frequently in China English. Due to space limit, we will focus on the top 20 collocations (in descending order of WCCE/BNC ratio) (see Table 2.2).

| HF collocations         | Hits per million in WCCE | Hits per million in BNC | WCCE/BNC ratio | Rank |
|-------------------------|--------------------------|-------------------------|----------------|------|
| local media             | 14.11                    | 0.03                    | 470.32         | 1    |
| old China               | 8.52                     | 0.02                    | 426.15         | 2    |
| economic corridor       | 3.58                     | 0.01                    | 358.11         | 3    |
| economic globalization  | 9.96                     | 0.03                    | 331.85         | 4    |
| economic governance     | 3.15                     | 0.01                    | 315.14         | 5    |
| economic data           | 3.08                     | 0.01                    | 307.98         | 6    |
| first moon              | 2.86                     | 0.01                    | 286.49         | 7    |
| international non-proliferation | 2.36       | 0.01                    | 236.35         | 8    |
| economic construction   | 7.81                     | 0.04                    | 195.17         | 9    |
| new energy              | 43.19                    | 0.28                    | 154.24         | 10   |
| international student   | 5.87                     | 0.04                    | 146.83         | 11   |
| local GDP               | 1.36                     | 0.01                    | 136.08         | 12   |
| local regulation        | 5.16                     | 0.04                    | 128.92         | 13   |
| international seabed    | 1.29                     | 0.01                    | 128.92         | 14   |
| economic transition     | 4.37                     | 0.04                    | 109.22         | 15   |
| economic take-off       | 0.86                     | 0.01                    | 85.95          | 16   |
| new nexus               | 0.86                     | 0.01                    | 85.95          | 17   |
| international board     | 3.44                     | 0.04                    | 85.95          | 18   |
| local tourism           | 3.37                     | 0.04                    | 84.16          | 19   |
| international exchange  | 14.68                    | 0.18                    | 81.57          | 20   |

In all of the cases, there is no question about the acceptability and comprehensibility of the collocations, as evidenced in their occurrence in the BNC. The more frequent a collocation is, the more likely it is that people from other cultures would encounter it (Liang, 2015).

2.2.3 HF collocations in BNC

The following table shows that the frequency of some collocational structures in BNC is much greater than that in WCCE. Due to space limit, we will focus on the top 20 collocations (in descending order of BNC/WCCE ration) (see Table 2.3).
Table 2.3: HF collocations in BNC

| HF collocations          | Hits per million in WCCE | Hits per million in BNC | BNC/WCCE ratio | Rank |
|--------------------------|--------------------------|-------------------------|-----------------|------|
| local council            | 5.87                     | 0.07                    | 81.96           | 1    |
| local plan               | 3.9                      | 0.21                    | 18.15           | 2    |
| new settlement           | 6.39                     | 0.57                    | 11.15           | 3    |
| local paper              | 2.24                     | 0.21                    | 10.43           | 4    |
| local service            | 2.03                     | 0.21                    | 9.45            | 5    |
| international rugby      | 0.61                     | 0.07                    | 8.52            | 6    |
| old testament            | 2.15                     | 0.29                    | 7.50            | 7    |
| such matter              | 4.76                     | 1                      | 4.75            | 8    |
| old person               | 2.52                     | 0.57                    | 4.40            | 9    |
| old generation           | 1.44                     | 0.36                    | 4.02            | 10   |
| many thousand            | 3.25                     | 0.86                    | 3.78            | 11   |
| international scene      | 0.79                     | 0.21                    | 3.68            | 12   |
| new series               | 2.61                     | 0.72                    | 3.64            | 13   |
| new scheme               | 2.02                     | 0.57                    | 3.53            | 14   |
| many teacher             | 1.71                     | 0.5                     | 3.41            | 15   |
| such question            | 2.44                     | 0.72                    | 3.41            | 16   |
| local election           | 3.74                     | 1.15                    | 3.26            | 17   |
| first sign               | 2.29                     | 0.86                    | 2.66            | 18   |
| such change              | 2.69                     | 1.15                    | 2.35            | 19   |
| first edition            | 2.55                     | 1.15                    | 2.23            | 20   |

The overused collocations in BNC will be further discussed in Section 3.

3. FINDINGS AND DISCUSSION

3.1. Unique collocations and HF collocations in WCCE

Both the unique collocations and HF collocations in WCCE fall into five categories, namely, collocations related to: a) The development of economy (Table 3.1); b) Political field (Table 3.2); c) Social factors (Table 3.3); d) Culture and technological development (Table 3.4); e) Linguistic transfer (Table 3.5).

Table 3.1: CE collocations related to the development of economy

| Collocations                  | Log-likelihood | Collocations                  | Log-likelihood |
|-------------------------------|----------------|-------------------------------|----------------|
| economic belt                 | 85.96          | economic rebalancing          | 83.24          |
| economic corridor             | 118.59         | economic transition          | 125.63         |
| economic work                 | 152.09         | economic data                | 115.44         |
| economic construction         | 289.49         | international board          | 72.8           |
| local GDP                     | 34.58          | economic globalization       | 413.65         |
| economic governance           | 75.9           | local tourism                | 111.85         |
| economic mobilization         | 105.47         |                               |                |

The first group concerns collocations related to China’s economic development. For example, the pattern, economic belt, refers to the Silk Road Economic Belt (SREB), which is the overland interconnecting infrastructure corridors to create a good surrounding political, national defense and environment for China. China has been vigorously reviving the Silk Road Economic Belt in recent years. Hence, the phrase economic corridor is also emphasized.

Some collocations reflect the actual economic development status since the Chinese reform and opening-up in 1978. For instance, the basic line of the Communist Party of China focuses on the central task of economic construction. The collocations, such as economic work, economic construction, local GDP, and economic takeoff, are stressed accordingly. Then, some emerging economic problems in recent years require new economic policies, concerning economic governance, economic mobilization, economic rebalancing, and economic transition.

Patterns like economic data and international board are related to the derivative areas of the economy. From the view of global economic development, the increasing economic integration and interdependence among nations and regions promote the globalization of the economy, thus the expression economic globalization highly occurs.

These collocations are strongly associated with the development of the economy in China especially by contrast with its British counterpart. Therefore, it seems obvious why these English terms are needed.
The second category pertains to the political field like the term international airspace. This reflects China's foreign policy in territorial integrity. Another term international seabed also belongs to the same category. In a real context, international seabed often occurs in the proper name International Seabed Authority, referring to an intergovernmental body established to organize, regulate and administrate all mineral-related activities in the international seabed area beyond the limits of national jurisdiction, an area underlying most of the world’s oceans. Similarly, international non-proliferation is not often used independently but with other nouns, forming into patterns like international non-proliferation regime, international non-proliferation mechanism, or international non-proliferation efforts.

A few collocations, such as many NGOs, new CPC, do not appear regularly, but they can still reveal the preference of word choice of China English (CE). For example, new CPC in real context does not mean a new Party in China, but a new leading organization of the Party, thus, new CPC leadership, new CPC Central Committee, are often used.

This group is related to social factors. The past thirty years have witnessed the tremendous changes in China’s society in various aspects such as the construction of urbanization (e.g. international metropolis), opening to the outside world (e.g. international student), the rise of social media (e.g. local media, many netizen), the discard of the past backwardness (e.g. old China, old Tibet, many/other hostesses, other concubine). The development of Chinese society has a great effect on the collocational preference of CE.

This group of collocations is mainly connected with culture and technological development. Advance in science has contributed to the flourishing of the culture. Since the 1940s and 50s, the third revolution of science and technology required more attention to be paid to information technology and the expansion of new energy. Android smartphones and iPhone accordingly came into people's life about a decade ago. Apple Inc subsequently introduced other products such as iPad. Since then, all sorts of intellectual products (e.g. new iPad, new iPhone, new Nexus smartphone) are becoming more popular. In addition, artificial intelligence is boosting the rapid development of satellite astronomy technique. After the first moon probe, first moonrover, and first moon orbiter in the world, China is striving to break new records in the lunar exploration.

Language is a component of culture. The development of science will, to a certain extent, affect the use of language, in this case, the preference of collocations.

The last group concerns CE user’s collocational preferences which have been transferred from the patterns of expressing ideas in Chinese. The linguistic transfer has several branches while transference concerning collocation falls into the semantic field (Yu, et al., 2010). The first two examples (old Wang and old Yao) are terms of address, usually

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**Table 3.2: CE collocations related to political field**

| Collocations                  | Log-likelihood | Collocations   | Log-likelihood |
|------------------------------|----------------|----------------|----------------|
| international airspace       | 34.8           | many NGOs      | 38.32          |
| international seabed         | 18.4           | new CPC        | 44.5           |
| international non-proliferation | 86.16        |                |                |

**Table 3.3: Collocations related to social factors**

| Collocations        | Log-likelihood | Collocations        | Log-likelihood |
|---------------------|----------------|---------------------|----------------|
| international metropolis | 26.62       | old China           | 147.2          |
| international students    | 122.67      | old Tibet           | 197            |
| local media           | 234.34       | other concubines    | 30.72          |
| many hostesses        | 44.69        | other hostesses     | 148.32         |
| many netizen          | 37.39        |                     |                |

**Table 3.4: Collocations related to culture and technological development**

| Collocations        | Log-likelihood | Collocations   | Log-likelihood |
|---------------------|----------------|----------------|----------------|
| new energy          | 720.78         | new Nexus      | 23.63          |
| new iPad            | 59.73          | first moon     | 72             |
| new iPhone           | 32.09          |                |                |

**Table 3.5: Collocations related to linguistic transfer**

| Collocations     | Log-likelihood | Collocations   | Log-likelihood |
|------------------|----------------|----------------|----------------|
| old Wang         | 44.18          | economic take-off | 33.49         |
| old Yao          | 58.23          | economic takeoff | 50.96         |
used to call a senior colleague or friend who shares the same level of position in a company or clan. Chinese people have the habit of calling an acquaintance a nickname sometimes in the form of “old/small + family name”. In the case of “old Yao”, “Yao” is the last name of a person and “old” indicates a relatively elder age. Similar terms such as “small Wang” found in WCCE are used to call a younger person or a junior staff whose family name is “Wang”. However, the English address names are in another case due to different conventions. English appellations are relatively simple, apt to call a person commonly by his name. Therefore, such collocations in WCCE cannot be found in British English.

The collocation economic takeoff/take-off (jīngjìtánkfēi) in Chinese is a subject-predicate structure. “jīngjì” (economy) is the subject and “tánkfēi” (take off) can be actually taken as a verb. When translated into English, tānfēi (take off) is nominalized, in the noun form of the word, i.e. takeoff/take-off. Thus, the phrase economic takeoff/take-off is transferred from the Chinese word-formation.

3.2. Analysis of HF Collocations in BNC

A few examples chosen from Table 2.3 serve to illustrate the HF collocations in BNC such as local council, local election, international rugby, and Old Testament.

Various reasons can be enumerated to explain such phenomena, including political factor, eco-social factor, religious factor, and so forth. For example, local council is the organ in charge of the local politics and administration in Britain, while such a system is rarely known in China. As for local election, it is a way to elect councilors to form the local administrations of the United Kingdom, which is quite different from Chinese electoral system. The phrase international rugby demonstrates the cultural difference between Britain and China in that rugby is a popular ball game in Britain while China has ping-pong (table tennis) as its national sport. Moreover, these two countries have different religious faiths. The major religion in the United Kingdom is Christianity. But in China Buddhism and Taoism prevail. Thus, Old Testament is less common in Chinese context compared to British English. Britain and China are two distinctive nations in various ways, so there is no doubt that their choice of collocations can be very different.

4. CONCLUSION

This paper illustrates and presents how China English differs from British English in terms of collocational features. Below is a brief summary of the study’s major contributions: (1) It elucidated Chinese English speakers' preferences for collocation patterns which contributes substantially to the study of China English. (2) It used authentic and natural data from corpora to investigate the collocational structures in China English, which is a methodological contribution to the study of China English. (3) The findings of the study can be directly applied to the dictionaries which describe different English varieties. (4) The paper explored the structural meanings of the collocational structures in China English which is meaningful to Natural Language Processing with regard to the understanding of natural language.

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