

A Study of the Phonological Differences between American English and British English

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Abstract—Language is a communicative tool, and phonetics is an important part of language. English is mainly divided into American English and British English. For many English learners, especially Chinese English learners, it is difficult to distinguish between American English and British English, which greatly aggravates the difficulty of learning English learners. In the process of learning English, we can easily find that American English and British English sometimes have different pronunciation of the same word; in the same word, the stress syllables in American English and British English are different; in the same sentence, the stress words in American English and British English are also different. There are many reasons including historical reasons, social life or regional culture for these differences, which deserve our careful study. These differences are also a challenge for English learners, so it is very important to learn the phonetic differences between American English and British English.

Keywords—phonological differences; importance; American English; British English; the reasons of differences

I. INTRODUCTION

English language includes three important aspects: phonetics, vocabulary and grammar. Phonetics is the coat of language: correct and graceful pronunciation and intonation are conducive to vocabulary and grammar learning, listening, speaking, reading, writing, translation and singing, especially the cultivation and improvement of listening and speaking ability, and it is more conducive to make an accurate and appropriate communication.

English includes American English and British English. From the point of view of pronunciation, American English can be divided into three dialects: general English General (American), New England American, and South American English (Southern American). Therefore, the general pronunciation of American English is close to the pronunciation of English in the north and North, and in Scotland and Ireland. However, there are some differences in pronunciation, morphology and syntax between American English and British English. The differences between the two often cause great confusion to Chinese students whose English is second.

As a branch of English, American English has changed a lot in its development because of the relationship between regions and nations. Nowadays, there are many differences in

American English in pronunciation, spelling and usage. Even in some cases, people who use British English and American English can not understand each other. It can be seen that even the same language sometimes produces a foreign language effect. In the domestic English education, due to the variety of reading and listening materials, there is also a mixture of British English and American English.

This paper aims to study the differences in pronunciation between American English and British English, to explore the similarities and differences of the two languages, and to analyze the reasons behind them, so as to lay a solid foundation for Chinese students to acquire authentic English or American English pronunciation.

II. THE IMPORTANCES OF ENGLISH PHONETICS

English and Chinese are "non-relative pronunciation, the former belongs to Indo-European language family, the latter belongs to Sino-Tibetan language family, the difference between them is large".(He,2002) There are 48 international phonetic symbols in the English language. These phonetic symbols are very important for learning English words and sentences, especially in spoken English.

Whether it is Chinese or English, "in the process of language evolution, phonetics first appear, then words". (Li,2018) Language is human's emotion and thought. Cultural communication is the most important means of communication, and oral communication must rely on phonetics. Speech, the material shell of language, is the external form of language and the most direct symbol system to record people's thinking activities. It is a voice of certain social significance emitted by human voice organs. The physical basis of speech includes pitch, intensity, length and color, which are also the four elements of speech. Without speech, there would be no written language. Phonetics is like the root of words, which is firmly rooted, and the branches and leaves are naturally flourishing.

III. PHONOLOGICAL DIFFERENCES BETWEEN THE AMERICAN ENGLISH AND BRITISH ENGLISH

There are two kinds of English in the world today: British English and American English. There are some differences between the two types of English in phonetics, morphology and syntactic structure.(Li,2009:15) What are the British English and American English? Generally speaking, British English mainly refers to RP (Received Pronunciation), which is based

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on the dialects of London and the surrounding areas. It is widely accepted as the teaching language of public schools. It is generally regarded as standard British English. The BBC uses RP. American English mainly refers to GA (General American Speech), also known as Mid-Western American Speech, which is widely used in textbooks, radio and television in the United States. However, in phonetics, the differences between the two may sometimes cause misunderstanding and embarrassment to the communicating party. The phonetic differences between American English and British English mainly include the differences in consonants, vowels, stress positions and alphabet combination pronunciation. There is a joke: an Englishman and an American meet by chance at the railway station. Americans are open-minded and good at making friends. After a few polite words, he ask, "What's your job?". The British answered, "I'm a clerk." The American was surprised to hear, "Clock? Your job is to tick tick all day long?" The same word was read by Americans /klɜrk/, while the British read /clɑ:k/. The above joke reflects the differences in pronunciation between Britain and the United States. These differences seem insignificant, but they are of great significance in specific occasions.

In China, most students begin to learn English from primary schools or even kindergartens. Most Chinese English teachers usually teach students British English pronunciation. However, most of the foreign teachers in China come from the United States and Canada. Even if the different pronunciation of a letter is in the same word, it is difficult for Chinese English learners to identify. A slight discrepancy, such as different pronunciation of a letter in a word, can sometimes lead to the loss of the English listening test of Chinese English learners or the misunderstanding of oral communication. Therefore, it is necessary to explore the differences between British English and American English for Chinese English learners.

The pronunciation of American English and British English are different, and the phonetic symbols used are slightly different. American English used to use the Webster Noah phonetic alphabet. The main difference between the Wechsler phonetic alphabet and the international phonetic alphabet is the vowel phonetic alphabet; the consonant phonetic symbols are the same except for a few different ones.(Wang,2008)

A. Differences in Consonants

There are 24 consonants in British English and 25 consonants in American English. They can be divided into two categories: clear consonants and voiced consonants. When consonants are pronounced, airflow exhales from the lungs, passes through the trachea and vocal cords, and is obstructed by a certain vocal organ and comes out from the mouth or nasal cavity. The vocal cords do not vibrate with clear consonants, and the vocal cords vibrate with voiced consonants. American English is the same as British English. There are eight pairs of clear and voiced consonants, such as /p b t d k g f v s z ʃ ʒ θ ð/ dz/. There are nine other mismatched consonants, two of which are clear consonants, /h h w/ and seven voiced consonants, /r m n ŋ l w j/.

Take consonant /r/ for example: the letter r is often combined with vowel letters to form a combination of letters.

In British English, /r/ sound acts as a fricative sound at the beginning and end of a word, while in American, /r/ sound can appear at the end of a word.

Note the pronunciation of bold letters in the following words:

/ɑr/	/ɜ:/	/ɜ:/	/ɔr/	/ɜ:/
ar	er	ir	or	ur
far	her	birth	nor	fur
argue	berm	merth	borfer	burst
harm	term	circulate	lord	turtle
smart	fern	vitgin	north	curb
sharp	terminal	dirty	more	murder

In British English, the letters r and vowel letters in the above-mentioned letter combinations constitute a combination of letters, which is pronounced as vowels and the letter r is not pronounced; in American English, the letters r and vowel letters together constitute a combination of letters, the letter r reads /r/ sound, which is one of the significant differences between American and British sounds.

Besides, American English has one and a half vowels /hw/ more than British English. The /hw/ phoneme is a clear consonant. When pronounced, the vocal cords do not vibrate, the lips are slightly rounded, and the back of the tongue wants to raise the soft palate. When air flows through the mouth, from the gap between the lips, the upper teeth can not touch the lower lip. /HW/ phoneme is the common pronunciation of most wh-letter combinations in American English. Such as:

what /hwat/	whenever /hwɛn'evə/
whether /'hwɛðə/	wherever /hwɛr'evə/

B. Differences in Vowels

Many Americans speak with a smaller or even smaller mouth when they pronounce, but this only represents part of the American pronunciation. Many Americans open their hair a little more than half.(Zhu,2003)

American English diphthones are basically the same as British English diphthones. The common feature is that the first one slides to the second one. The first one is long, strong and clear, and the second one is short, weak and vague. Generally speaking, the second one is not the end of the pronunciation, and the two sounds are combined to form a single sound which is called a diphthong. British English has five closing diphthongs/eɪ əʊ aɪ aʊ ɔɪ/ and three concentrated divowels/ɪə eə ʊə/. British English also has five consonant diphthones/e o aɪ aʊ ɔɪ/. However, there are four concentrated diphthones in American English /ɪr ɛr ʊr or/. In American English, there is a concentrated diphthong /or/ that is commonly used, which is equivalent to /ɔə/ in English, but the British seldom use /ɔə/ this concentrated diphthong, preferring to use /or:/ this post-vowel instead of /or/. The different pronunciations of the letter combinations - oor, - ore and - our in American English and British English are compared as follows:

	American English	British English
door	/dɔr/	/dɔ:/
floor	/flɔr/	/flɔ:/
bore	/bɔr/	/bɔ:/
pour	/pɔr/	/pɔ:/

There are five closing diphthongs in American English:

American English	British English	words
/eɪ/	/eɪ/	a
/oʊ/	/əʊ/	no
/aɪ/	/aɪ/	I
/aʊ/	/aʊ/	now
/ɔɪ/	/ɔɪ/	boy

There are four centering diphthongs in American English:

American English	British English	words
/ɪr/	/ɪə/	ear
/ɛr/	/eə/	share
/ʊr/	/ʊə/	poor
/or/	/ɔ:/ (/ɔə/)	more

American English has three vowel letters which are pronounced differently from standard British English. They are a vowel in dance, fast, grass, half, and path, o vowel in dock, fog, hot and rod, and u vowel in dew, news, and tutor. (Li,2009:365)

The letter vowel a in dance is read in English /ɑ:/, but read in American English /æ/.

The vowel o in rod is read in English /ɒ/, but in American English /ɑ/.

In dew, the vowel letter u is read in British English /u:/, but in American English /u/.

C. The Changes of Stress Position

1) The change of stress position of word

The stressed syllables in English words are word stress, and the stressed symbols are marked on the upper left of the stressed syllables. Monosyllabic words have strong pronunciation and can be stressed, but their stress symbols need not be marked. Two or more syllables can have one or more stressed syllables. The stressed syllables vary from word to word and are irregular. Therefore, when learning English new words, we should master the correct stressed syllable and pronunciation. If the accent is mispronounced, it is likely to be misleading or puzzling. For example, the word menu /'menju:/ (recipes) is on the first syllable; while manure /mə'njuə/ (feces) word stress falls on the syllable. Of course, here are two different words, but in restaurants, if "Here is the menu." /'hiə ɪz ðə 'menju:/ read "Here is the manure." /'hiə ɪz ðə mə'njuə/. What an embarrassing embarrassment it is!

There are three degrees of stress can be found in English: primary, secondary, and zero. The term primary stress refers to the strong emphasis a speaker puts on the most important syllable of a particular word. Secondary stress refers to a less strong emphasis on the next most important syllable. Zero stress refers to any syllable that receives no stress, such

syllables are called unstressed syllables. In other words, an unstressed syllable receives no intensity or loudness at all. In words like timetable /'taɪm,teɪbl/ and operation /,ɒpə'reɪʃn/, we find three degrees of stress. The frequent occurrence of the unstressed syllable is one of the fundamental characteristics of spoken English, and the one that most distinguishes English from Chinese. (Wang,2005:82-83)

The stress of English words is very irregular, but it follows the following rules:

a) As a noun, the stress of a disyllabic word often falls on the first syllable; as a verb, the stress often falls on the second syllable.

For example:

noun	verb
'insult	in'sult
'record	re'cord
'increase	in'crease
'import	im'port
'object	ob'ject

b) The stress of compound nouns is generally on the first syllable. For example:

'blackboard	'handbag
'bookstore	'bedroom

The stress of compound verbs is generally on the second syllable. For example:

over'load	ill-'treat
short'change	cross-'section

c) Some compound words have double pronunciation. For example:

'second-'handed	'kind'hearted
'arm'chair	'four-'footed

d) A few compound words stress on the second syllable. For example:

what'ever	who'ever
your'self	through'out

e) Stress of monosyllabic words with suffixes:

The first syllable of a monosyllabic word is often stressed, for example, by adding suffixes such as - er, - ly, - ing, - ed, - ful, - est, - less, - ness, - ish, - res, etc.

teacher /'ti:tʃə/(teacher-er)	biggest /'bɪɡɪst/(big-gest)
quickly /'kwɪkli/(quick-ly)	smallest /'smɔ:lɪst/(small-est)

Stress of words with A-like prefix:

The words which by adding suffixs such as a-, be-, re-, res-, in-, im-, en-, em-, es-, ex-, con-, com-, dis-, mis-, pre-, pro-, trans-, usually are stressed the second syllable. For example:

about /ə'baʊt/(a-bout)	believe /bɪ'li:v/(be-lieve)
report /rɪ'pɔ:t/(re-port)	condemn /kən'dem/(con-demn)
inform /ɪn'fɔ:m/(in-form)	discuss /dɪs'kʌs/(dis-cuss)

De-, in-, re-, con-, pre- and other prefix words can also be reread on the first syllable. Sometimes, the same syllable words and stressed syllables may also have different meanings and parts of speech. For example:

'— (noun)	—' (verb)
desert /'dezət/(n.)	desert /dɪ'zə:t/(v.)
insult /'ɪnsʌlt/(n.)	insult /ɪn'sʌlt/(v.)

Transliteration of compound words and loanwords, stress of prefixed words:

Some compound words, English translations and disyllabic words consisting of meaningful prefixes, such as re (re), ex - (predecessor), un - (no), pre - (before), post - (after), can have two stresses. Example:

'—'	
outside /'aʊt'saɪd/	Berlin /bə:'lɪn/

f) Stress of polysyllabic words:

The general rules of polysyllabic word stress are as follows:

Polysyllabic words are usually stressed on the penultimate third syllable; three syllable words are of course stressed on the first syllable. The stress of polysyllabic words is as follows:

'— — —;	
—'— — —;	
— —'— — —.	
difficult /'dɪfɪkəlt/(dif-fi-cult)	

2) The change of stress position in sentences

There are stressed syllables and unstressed syllables in words and, of course, stressed and unstressed syllables in sentences. To learn English pronunciation well, we must learn to use weak forms. Not to use the weak form, in addition to affecting the fluency of speech, but also because all the irrelevant words are strong, the words that should be prominent are not prominent, and may even cause some unnecessary misunderstandings. In a sentence, English speakers joint stressed and unstressed syllables together smoothly. Stress syllables are long, have a pitch change and have full vowel sounds while unstressed syllables are short and often have a reduced vowel sound. In English sentences, notional words, such as nouns, adjectives, adverbs, substantive verbs, several times, interrogatives and interjections, are generally stressed. Their stressed syllables must be long and loud, which is called sentence stress.

- Functional words, such as articles, prepositions, conjunctions, auxiliary verbs and modal verbs, are generally not stressed in sentences. For example:
'Two 'newly-'married 'couples 'walked 'quietly along the 'river.
- When a noun, adjective or adverb modifies another word, both words are stressed. For example:
a 'later 'paper
- However, street is not re-read in street names, while road and Avenue are re-read. For example:
'Main Street

- The indefinite pronoun one is usually not stressed. For example:
a 'beautiful one
- Generally speaking, nouns, adjectives, adverbs and meaningful verbs have sentence stress, but in practical use, some words can be stressed according to the emphasis that the speaker wants to highlight. For example:
'John was 'reading an 'English 'novel at 'home 'yesterday 'afternoon.
- In spoken English, only new concepts accept sentence stress, which is called logical stress. Logically stressed words generally accept intonation. Words mentioned above generally do not accept sentence stress.
-- 'Where are you 'going?
-- 'New 'York.
- Generally speaking, personal pronouns, articles, auxiliary verbs and so on are not stressed in sentences, but in order to emphasize a certain meaning, they also need to be stressed under certain circumstances. For example:
'What did 'Tom 'say to 'Sally?
- Modal verbs, auxiliary verbs and verbs be and have are generally not stressed. It can be stressed or not at the beginning of an interrogative sentence. When combined with "not", it should be stressed. In affirmative short answers, they appear at the end of the sentence and should be stressed.
() May I 'ask a 'question?
'Yes, he is.
'Yes, I 'have. 'No, I 'haven't.

D. Alphabetic Combination Pronunciation in American English

What is very different from British English is that American English is often pronounced by combining letters. So English learners sometimes hear sounds like British English but different from British English. For example:

- The English pronunciation of honest is /'ɒnɪst/, where h is not pronounced; however, in American English, h is still pronounced as /'hɒnɪst/.
- The letter A is pronounced in British English /ɑ:/, while in American English it is pronounced /n/ /f/ /s/ /θ/ before the /æ/. Such as: after /'æftə/, pass /pæs/, path /pæθ/.
- In stressed syllables, the combination of letters ar, ear and Er is sometimes pronounced as /ɑ:/ in British English, while the American sound needs to be added as /r/ pronunciation, pronounced as /ɑr/.

- The letter wh-in British English is read as /w/, while in American it is read as a mix of /hw/. For example:
when /(h)wen/, white /(h)wait/.
- In American English, blasting vowels /t/ appear in unstressed syllables, between two vowels, or with l, n, which is usually muddled into /d/. There is no such change in British English. For example: city /'sɪdi/, letter /'ledəɹ/. (Li,2005)
- The alphabetic combinations er, ear, ir, ur, or, our are pronounced as /ɜ:/, with a curly tongue /r/ at the end of the syllable, and /ɜ:/ in the English syllable.

IV. TRACING TO THE SOURCE OF THE DIFFERENCES BETWEEN AMERICAN AND BRITISH ENGLISH PHONETICS

George Bernard Shaw once said: there is a common language gap between Britain and America. The development of any language must go through a complicated process. The emergence of every language has its causes and background. English belongs to the Germanic language branch of the Indo-European language family. (Li,2009:1) American English originates from British English but differs from British English in some aspects.

Firstly, there are differences in national history. Language, as a carrier, symbolizes the course of a country and is one of the most powerful ways of reflecting the history of a country. Britain has a longer history than the United States. Britain has gone through the ancient Rome Empire, Anglo Saxon era, Britain and France hundred years war, maritime hegemony, the outbreak of Civil War, the Abolition of Monarchy, the establishment of the Republic, glorious revolution, heyday, the "sun not to fall Empire", World War I and World War II, until now. These long histories make the British more fond of history. With the change of history, from Old English to Middle English and then to Modern English, the vocabulary has been expanding, grammar has also changed, and pronunciation is different from the past. The United States is a relatively short-lived country. American English is based on Victorian British English. The history of American English is closely related to American immigrants. The earliest settlers came from the Puritan in the eastern part of England and in Suffolk County. They settled in the market town of southeastern Massachusetts in 1620. (Li,2009:364) The outbreak of the American Revolution broke out in 1775. In July 4, 1776, the declaration of independence was officially announced. The United States has experienced the colonial period, the War of Independence, the Westward Movement, the Progressive Movement, the Gilded Age, World War I and World War II, and the Cold War until now. Although the United States has a short history. It has a vast territory, so Americans prefer geography. In the process of immigration, many British English has been adopted by the United States, but some English that is no longer used is still used in American English. In the latter half of the eighteenth century, Britain carried out the first industrial revolution. Since then, there have been flying shuttle and spinning jenny in English. Similarly, the British colonists established Jamestown, the first

colony in the United States, which was then called plantation. It used to mean colony.

Secondly, the difference of social life. The British island countries separated from the European continent, the mild and humid climate and the gentle terrain have created the comfortable living conditions of Britain, which has also promoted the formation of the British "island state mentality" centered on the characteristics of steadfastness, prudence, rationality, independence, flexibility, conservatism, humility, compromise, tolerance and restraint. (Wang,2016) It is said that the English people are very gentleman and stubborn. It is because of this personality that their English sounds more melodious and high-pitched, which is quite similar to French. English pronunciation sounds clear and sharp, and the intonation changes greatly, fluctuates and the speed of the language is faster. Compared with the British, Americans are cheerful, enthusiastic and informal. Americans are relatively stable and low-pitched, and their sentences tend to be lower-pitched and slower. American English sounds mellow and exaggerated, but its intonation is relatively flat.

Besides, the difference of regional culture. Language not only witnesses a country's history, but also reflects its regional culture in a certain space. Britain is surrounded by the sea. Many English words are related to the sea, fish, water and navigation activities. For example, plain sailing (plain sailing). The United States has a vast territory, with rolling mountains, vast plains, flat heights, and all kinds of terrain can be found. For example, caribou (North American reindeer), sagebrush (North American Bush), Sequoia (Hong Shan), the Everglades Everglades (the southern part of the United States swamp land) and other words are unique in American English. Some words in British English can not be found in American English, such as prince, duke, knight and so on, which are peculiar to British English.

Finally, the influence of other languages is different. British English is greatly influenced by French and Latin. In 1066, Duke conquered the England. At that time, French became the official language of Britain and the language of the ruling class, while English was regarded as a low-level civilian language, and the ability to speak French became a symbol of social status. In order to marry the upper class, the original English began to learn French, which led to the introduction of a large number of French vocabulary into English. So English was impacted by French unprecedented. Up to now, English has been mixed up with many French, while American English has been greatly influenced by German. (It is also well understood that German Americans are the second largest ethnic group in the United States after British Americans).

V. OPINIONS ON THE PHONETIC DIFFERENCES BETWEEN AMERICAN ENGLISH AND BRITISH ENGLISH

With the continuous improvement of the status of the United States in the world, American English has become more and more important. Compared with British English, it not only retains some characteristics of British English, but also gradually forms its own characteristics.

Different cultures breed different languages. Whether American English or British English, they are the precipitation of a country's history and culture. English learners should respect them.

For Chinese English learners, it is necessary to learn the differences between British English and American English. Many English learners often feel inadequate in listening training and testing and in oral communication with native speakers because they often hear words that are familiar and unfamiliar, many of which are often related to the phonetic differences between American English and British English. Lack of identification of subtle differences between American English and British English will lead to loss of marks and communication failure.

VI. CONCLUSION

American English is different from British English in pronunciation, but there is no variety is superior to another. Some people like the orthodoxy of British English. Some like the freedom of American English. (Wu,2014) Either way, it's worth learning.

The existence of any language is meaningful."Seeking common ground while reserving differences" may be the correct attitude of Chinese English learners to deal with the differences between British and American English pronunciation. There are similarities and differences between British English and American English. The phonetics, morphology and grammar of the two are generally the same, but the differences are relatively small. In any case, Chinese

English learners should bear in mind and perceive the phonological differences between British English and American English while learning English.

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