Tonal vs. Non-Tonal Languages: Chinese vs. English

Chinese and English are perhaps the two extreme cases of tone vs. non-tone languages: Chinese is a typical tone language, whereas English is a typical non-tone language. This means that in Mandarin Chinese the same sounds, pronounced with different tones, can refer to different things. Mandarin’s tones give it a very distinctive quality, but tones can also be a source of miscommunication if not given due attention. Mandarin has four tones and one neutral tone. On the other hand, in a non-tonal language such as English, tone might convey emotional information about the speaker, but indicates nothing about the meaning of the word that is pronounced.

Hence the results of studies according to which native Mandarin speakers and native English speakers use their brain’s left hemisphere differently in their activity of speaking, as shown by the Peking University and other universities. With Mandarin speakers, the region for processing music via pitch and tone, from the right hemisphere, plays an important role. Moreover, Chinese and English speakers use three regions in the left hemisphere: the inferior frontal gyrus, the anterior superior temporal gyrus, and the posterior middle gyrus. However, Chinese speakers exhibit activity in an extra area in addition to these three: the superior temporal gyrus.

The reason for having these tones may be that the Chinese language has very few possible syllables – approximately 400 – while English has about 12,000. For this reason there may be more homophonic words, words with the same sound expressing different meanings, in Chinese than in most other languages. It appears that tones help the relatively small number of syllables to multiply and thereby alleviate, but not completely solve the problem; therefore, learning Chinese in context is very important. For example, the Chinese use only one syllable da and they can tell the difference between ‘to hang over something’ ( 搭 da1), ‘to answer’ ( 答 da2), ‘to hit’ ( 打 da3), and ‘big’ ( 大 da4), where the number after each syllables indicates the tone. Therefore, for Chinese speakers, the secret is tones.

Traditionally, tone is defined as the pitch contour on a word that can distinguish lexical meaning. For example, in Mandarin Chinese, with a falling tone the syllable ma means ‘to scold’ and with a rising tone it means ‘hemp’ - the difference must be attributed to tone. In this regard, Chinese is a tone language. In English, a word can be pronounced with different pitch contours, but it still has the same lexical meaning. For example, the word cat has a falling tone in neutral intonation and a rising tone in question intonation, but its lexical meaning remains the same.

Of course, there is no single Chinese language, but many different versions or dialects including Wu, Cantonese and Taiwanese. Northern Chinese, also known as Mandarin, is the mother tongue of about 70% of Chinese speakers and is the accepted written language for all Chinese. Belonging to two different language families, English and Chinese have many significant differences, which make learning English a serious challenge for Chinese native speakers. First of all, Chinese does not have an alphabet, but uses a logographic system for its written language. In logographic systems, symbols represent the words themselves - words are not made up of various letters as in alphabetic systems. Because of this fundamental difference, Chinese learners may have great difficulty reading English texts and spelling words correctly.

What is more, most aspects of the English phonological system cause difficulties for Chinese learners because some English phonemes do not exist in Chinese, and stress and intonation patterns are different. For instance, Chinese learners find it difficult to hear the difference between l and r, and thus may mispronounce rake and rice as lake and lice. Southern Chinese speakers have a similar difficulty in distinguishing l and n. Also, a major problem is with the common final consonant in English. This feature is much less frequent in Chinese and results in learners either failing to produce the consonant or adding an extra vowel at the end of the word. For example, hill may be pronounced as if without the double ll, but with a drawn out i, or as rhyming with killer. Such difficulties in pronouncing individual
English words, compounded by problems with intonation, result in the heavily accented English of many Chinese learners. In some cases, even learners with perfect grammar may be very hard to understand.

Other differences between the two languages include the fact that English emphasizes structure, while Chinese focuses on meaning. In English, several meanings can be expressed clearly with complicated structure in just one sentence. In Chinese, a sentence is usually short with few modifiers, otherwise it will cause confusion in meaning. Furthermore, when expressing meaning, a long sentence is regularly used in English and a short sentence is used in Chinese. There are many clauses in English sentences which are often separated into small sentences in the Chinese way of expression. In an English sentence, except some modifiers, there are many clauses which make a sentence much more complicated. In Chinese, one meaning is usually expressed in separate sentences connected by a comma. Another difference is that in English people use pronouns extensively, but in Chinese speakers often use nouns. English speakers not only use *we, you or she*, but also *that and which* to keep a sentence well-structured and clear, and avoid repeated meaning. Due to the short sentence structure, a pronoun is commonly replaced by a noun in Chinese expression. Finally, the passive voice is often used in English expression, whereas in Chinese one generally uses the active voice. For example, "It is (always) stressed that..." in English is usually expressed as "People (always) stress that..." in Chinese.

But Chinese is not the only tonal language. There are others such as Thai, Vietnamese, etc. In a tonal language, the way the voice goes up and down during the pronunciation of a vowel is enclosed in the word. In such languages, an "upward a" and a "downward a" (different because of the tones) are just as distinct as p and b (different because of voicing). If one changes the tone, the meaning also changes, even if all the other sounds are exactly the same. For example, in Thai, *mai* can mean 'middle', 'low', 'high', 'falling' or 'rising' – the only distinction is given by tone. In contrast, the English word *change* can be pronounced with a downward or upward pitch and this would not affect the meaning of the word, or point to a different word, as English belongs to a different category of languages. Instead, it assigns stress to one syllable of every word. Changing the stress can point to a different word (*pérfect, perfèct*), although usually this also leads to changes in the vowels.

**Resources:**

http://esl.fis.edu/grammar/langdiff/chinese.htm
https://chinesepod.com/tools/pronunciation/section/17
http://people.wku.edu/shizhen.gao/Chinese101/pinyin/tones.htm
http://www.pnas.org/content/112/10/2972.abstract
https://theconversation.com/if-you-speak-mandarin-your-brain-is-different-37993