

Negative transfers in phonological systems of native Chinese speakers when learning Japanese

Ruolan SU

Institute of Education, University College London, London WC1E 6BT, UK

Abstract: The paper explores the difficulties Chinese speakers face when learning Japanese, guided by the theory of negative transfer. It examines specific challenges in pitch, vowel length, and exceptional cases, highlighting how Chinese linguistic structures influence and complicate the acquisition of Japanese phonetics.

Key words: negative transfers; phonological systems; Japanese learners; native Chinese speakers

1 Introduction

These days, many native Chinese speakers start to learn Japanese. But during the learning, the learners have common mistakes. This essay is written based on the theory of phonology and transfer in second language acquisition.

1.1 Negative transfer in second language acquisition

When learning a second language, learners will subconsciously use their first language knowledge. This is known as language transfer. In any two languages, it is acknowledged that there are similarities and differences in their phonological, lexical, and grammatical systems. Negative transfer occurs when an L1 pattern is different from the target language pattern, which may lead to inappropriate formal errors in the target language.

This essay will focus on some negative transfer phenomena in phonological systems when Chinese people are learning Japanese as their L2. Below are the introductions to the phonology of standard Chinese and Japanese in terms of both pitch and duration.

1.2 Pitch

In linguistics, standard Chinese is a tonal language, which has four tones in full syllables. A vowel can carry one of four tones to distinguish different words. All languages use pitch for various linguistic purposes such as intonation. When pitch is used to distinguish words, it is called tone [2]. Differently, Japanese is recognized as pitch accent: All syllables are pronounced basically either in high or low pitch. One of the most differences between tonal language and pitch accent lies in their functions. The tone has a meaning-distinctive function, while Youwei Shi argues that the pitches in Japanese has few functions in defining the words meaning [4].

Furthermore, the functions of the Japanese pitches are concluded as: distinguishing homophones; giving a word phonetic integrity; indicating the beginning and end syllables of each word in the flow of speech; and enriching phonetic expressiveness of words.

However, many scholars argues that there is no pitch accent prototype. Hyman put forward that languages which have been identified as pitch accent freely "pick and choose" between the prototypical properties of stress-accent systems vs.

tone systems [3]. In other words, pitch accent is intermediate between tone and stress. Duanmu suggests that it is manifestly apparent that tone and accent are not disjoint classes. There is no rigid dichotomy, it is more a matter of gradual transition or parametric specification [2].

Some same properties shared between tone and pitch accent make it easy for Chinese people to learn the pitch within each Japanese word. But the differences cause some obstacles, especially when it comes to the sentences that full of high pitches.

1.3 Duration

Briefly speaking, in Japanese each syllable is pronounced approximately in equal length and stress. To some extents, Chinese shares the same phonetic features. Standard Chinese has full syllables and weak syllables. Phonetically, full syllables have similar duration [2].

As it is mentioned before, the four tones in Chinese have the function of distinguishing the meaning of words. Chinese people must pronounce the four tones clearly enough to express their ideas. In order to do this, it takes more time to pronounce a Chinese syllable than a Japanese syllable. In Japanese, there are glottal stops, long vowels and nasal sound, which prevent learners from allocating the proper amount of time to each syllable.

Besides, Youwei Shi argues that Chinese is a tone language and pays attention to medial sound. Without sufficient time or duration, such phonological features cannot be clearly expressed [4]. However, Japanese lacks tones and is spoken at a fast speed, so there is no need for a duration like Chinese which needs 2 mora in one syllable. Usually, the basic syllable of Japanese only has 1 mora. The fast speed also causes some troubles to the learners who are not familiar with it.

2 Negative transfer in pitch

Using T1 to indicate the first tone of the four tones in Chinese, T1 is a high level tone, T2 is a rising tone, T3 is a dip-rise, and T4 is a descending tone. Compared with Japanese, Chinese pitches are more various.

Japanese has pitch accent: All syllables are pronounced basically either in high or low pitch [1]. For example, the pitch of なまえ (namae, whose English meaning is name) is on ま (ma) and え (e), see Fig.1.

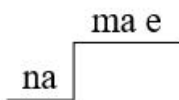


Fig. 1. the pronunciation of namae

There are other examples in Table 1.

Table 1. Examples of pitches in Japanese

Pitch	ku ^{ro} i	to ^{u kyo u}	ka ^{zo ku}
Japanese	黒い (くろい)	東京(とうきょう)	家族(かぞく)
Pronunciation	kuroi	toukyou	kazoku
Meaning	black	Tokyo	family

Both standard Chinese and Japanese have pitches in their words. However, Chinese has four tones of different pitches. That's why the tone is full of changes when a Chinese people is speaking a long sentence. People usually use "cadenced" to describe oral Chinese. On the contrary, the pitches of Japanese words are not as changeable as Chinese, and in most cases,

several syllables are of the same high pitches in one sentence. So Chinese people would feel uneasy to read a long Japanese sentence, because there would be a lot of same pitches appearing at the same time. For example, here are two sentences.

- a. 我完全不懂你在说什么。(Your words don't make sense to me.)
- b. 君の言葉は全然わからない。(Your words don't make sense to me.)

The tones of the Chinese can be described as: wǒ wán quán bù dǒng nǐ zài shuō shén me. There are 5 kinds of pitches in the sentence. And the positions and shapes of tongue and vocal cord vary a lot when producing these sounds.

In contrast, the sentence in Japanese encompass less pitches, see Fig. 2.



Fig. 2. The pitches of the example sentence in Japanese

In this sentence, though the positions of the tongue change a lot, the vocal cord stays in one shape in several successive syllables which are of high pitches. Duyu Bao argues that this is different from the various tones in Chinese. Learners are not used to it, so they may lower the pitches on several syllables subconsciously that should have been in high pitches [5]. See the wrong way to read the sentence in Fig. 3.

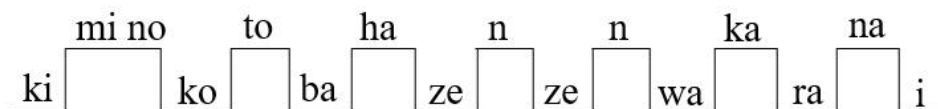


Fig. 3. The wrong way to read the example sentence in Japanese

This would make the sentence sounds more like "cadence" in Chinese, since the pitches change quickly.

3 Negative transfer in duration

3.1 Contracted sounds

When hiragana や(ya), ゆ(yu), and よ(yo) are written in small shape and follow the consonants with i-vowel hiragana, they are used to transcribe contracted sounds. The contracted sound represents a single syllable.

For example, き(ki) followed by small や(ya) becomes きゃ(kya), and きゃ(kya) only has one syllable. On the contrary, the pair きゃ(kiya) has two syllable き(ki) and や(ya). For Japanese native speakers, きゃ(kya) and きゃ(kiya) is different, not only in sounds but also in their meanings of words. However, native Chinese speakers are not sensitive to duration. When they are learning other languages, they focus much less on the lengths of the sound than pitch and syllable [4]. In Chinese, syllable structure can also be affected by casualness of speech and lengthening at pre-pause boundaries [2]. The meaning of one word seldom changes if the pronunciation of one character is prolonged. For example, the meaning of Chinese words 美容院 (beauty salon) don't change if we deliberately say one single character with longer duration, such as: 美—容院 or 美容院— (Here "—" means longer duration). As a result, Chinese people who are leaning Japanese often ignore the differences between や, ゆ, よ and their small shapes.

One of the typical mistakes is that Chinese people often confound びょういん (beauty salon) with びょういん (hospital). The main difference is that the former よ is normal, while the latter "よ" is small. In short, the length of びょういん (beauty salon) is one syllable longer than びょういん (hospital). But it is hard for Chinese to distinguish them. Because to their common senses, the duration would make no difference to the meaning.

3.2 Long vowels

When the same vowel is placed one right after the other, the pronunciation of the vowel becomes about twice as long as the single vowel. Learners should make sure that they hold the sound long enough, because the length of the vowel can change one word to another. However, Chinese characters seldom distinguish themselves in the way of the length of sound. The following table lists many common mistakes made by Japanese language learners, see Table 2.

Table 2. The examples of common mistakes

Words	Meaning	The similar words	Meaning
おじいさん(ojiisan)	Grandfather	おじさん(ojisan)	Uncle
おばあさん(obaasan)	Grandmother	おばさん(obasan)	Aunt
いいえ(iie)	no	いえ(ie)	house
くうろ(kuuro)	Air line	くろ(kuro)	Black

Learners need to pay extra attention to the long vowels when pronouncing and listening to these words. Otherwise, it is very possible that learners mistake おばあさん (grandmother) with おばさん (aunt), so they finally transfer the wrong information.

3.3 The Pronunciation of "ん(n)"

Hiragana ん (n) is treated like a full syllable, in terms of length. This point is often ignored by learners.

In pinyin, the sound [n] is similar to ん. In Chinese, every syllable has a nucleus, usually filled by a vowel. The part before the nucleus is called the onset, the part after it, the coda. The nucleus and the coda together are called the rhyme. For example, in "满" [man] the onset is [m], the nucleus is [a], the coda is [n], and the rhyme is [an] [2]. So [man] is treated as one syllable. [n] isn't pronounced separately.

In Japanese, 満足 (satisfy) is pronounced as まんぞく (manzoku). Learners could find that the pronunciation of the kanji 満 in the word 満足 is similar to the Chinese character 满 (full). However, kanji 満 has two syllables: ま (ma) and ん (n), making itself different from Chinese character 满. However, learners often treat ん as [ŋ] or [n] in pinyin. As a result, under the influences of the character 满 and pinyin, learners often pronounce 満(まん) as [maŋ] or [man].

4 Conclusion

As it is mentioned in the introduction part that the transfer in second language acquisition is a subconscious process. When learning Japanese, learners are not able to find all of differences between Chinese and Japanese, especially some confusing areas such as pitch and duration. As native Chinese speakers, it is hard to pronounce every syllable at the correct pitches, because learners are likely to lower them under the influence of the Chinese four tones. Besides, Chinese people are insensitive to the different durations. They often make mistakes like they don't hold enough time when there are long vowels and ん, or they can not identify whether there are contracted sounds or not.

Based on these mistakes, learners need extra help and reminding when learning. Besides, in order to get used to the phonological system of Japanese, learners should be exposed to various language situations, then imitate, analyze, and learn from it. Only in this way, native Chinese speakers can learn Japanese well.

Conflicts of interest

The author declares no conflicts of interest regarding the publication of this paper.

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