De-stressed words in Mandarin: Drawing parallel with English

Hana Třísková
The Oriental Institute of the Czech Academy of Sciences, Prague

In colloquial Standard Mandarin, monosyllabic tonal function words (such as classifiers, prepositions, personal pronouns, etc.), are regularly pronounced as unstressed and phonetically reduced (e.g. *tā* 他 [tʰə]), unless they are emphasized ([tʰaː]). Their unstressed forms play an important role in speech rhythm. This study investigates this group of words. I open the discussion by addressing the general issue of stress in Mandarin, arguing that de-stress might be an essential notion here. English *words with weak forms* (articles, prepositions, etc.) are then introduced. I establish a similar group of words in Chinese, coining a new term for them: *the cliticoids*. The strong resemblance between both groups is pointed out. Finally, pedagogical implications of the findings are proposed: the proper handling of the cliticoids may help L2 learners to improve their oral performance.

Keywords: Mandarin; phonetics and phonology; stress; tone; the clitics; second language teaching; English words with weak forms

1. Introduction

It is commonplace to find that the teaching of Mandarin pronunciation is largely focused on isolated words, while the prosodic modifications the words undergo in connected speech are overlooked. This approach is criticized by Lin Tao. He observes that while in isolated words the four tones can be handled quite successfully by students, "to use the words in sentences without having a foreign accent (洋腔洋调) is not so easy" (Lin Tao 2001b: 217).

One of the phenomena deprived of due attention in language pedagogy is stress/non-stress. Most teachers tend to encourage their students to enunciate each morpheme and pronounce it with full tone (except for the neutral tone syllables). Yet, in everyday colloquial speech, delivered in rapid tempo, many words/syllables become phonetically reduced as a result of being unstressed. The task that lies ahead, in my view, is to reveal the principles governing the occurrence of non-stress and to explain these principles in language teaching. Occasional

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observations and attempts at listing the most important groups of unstressed items can be found in the literature (e.g. Lin Tao 1962, Dow 1972: 123, Wang et al. 2002:128, Zeng 2008: 102, Lin and Wang 2013: 168). Yet, such attempts are rather rare and not sufficiently systematical.

The aim of this study is to throw more light on one particular group of unstressed items. It is not difficult to notice that unstressed realization is notably typical for monosyllabic tonal function words, such as classifiers, prepositions, postpositions, personal pronouns, etc.[1] Although they carry a lexical tone, and thus have the potential to be stressed, they are pronounced as unstressed in most contexts, displaying various degrees of phonetic erosion. Full realization is mostly reserved for citation forms, emphasis or contrastive stress. For instance, the classifier *gè* 个 is regularly pronounced as [ɡ̊ə] or [gə] (not as [ɡ̊ɣˆ][4]), the postposition *shàng* 上 is regularly pronounced as [ʂɑ̃] (not as [ʂɑŋ][4]), the personal pronoun *wǒ* 我 is regularly pronounced as [wɔ] or [wə] (not as [wɔˆ][3]). My interest in this group of Chinese words was originally triggered by the practical needs of teaching the prosody of connected Mandarin. It soon became obvious that the issue extends beyond the area of teaching practice and requires deeper theoretical attention. Yet, so far, these words have not been recognized as a distinct class or closely examined by linguists.

The present paper argues that the studied words establish a rather well-defined group with conspicuous prosodic behavior. My observations were actually inspired by the existence of a similar (and well described) group of words found in English: WORDS WITH WEAK FORMS, such as personal pronouns, articles, prepositions, conjunctions, etc. They have two distinct forms in pronunciation: "strong" and "weak" (e.g. the regular form of *and* is weak, unstressed [ən], the strong, emphasized form is [ænd]). I draw a close analogy between words with weak forms and the examined group of Chinese words. I have coined a new term for them – THE CLITICOIDS. An attempt at a tentative classification of the cliticoids is made. Finally, the importance of the cliticoids in second language teaching is pointed out. Students of Mandarin (especially beginners) tend to unduly use the "all-strong-form" pronunciation of these words. This leads to the development of a foreign accent and to the blurring of the pragmatic meaning of the utterance, thus running the risk of causing ambiguity or even misunderstanding. Moreover, unfamiliarity with de-stressed, reduced forms of cliticoids leads to problems in speech perception.

1. This study is not concerned with *disyllabic* function words, such as the personal pronoun *wǒmen* 我们 (cf. Duanmu 2002:166), nor with *toneless* function words, such as *de* 的 or *ma* 吗.

2. Stress and non-stress in Mandarin

There is a great deal of controversy concerning the nature of stress in Chinese. At the same time, "stress is the least discussed area in Chinese phonology" (Duanmu 2001: 120). Discussions are mostly concerned with stress at the level of words (e.g. Yin 1982, Lin Hua 2001), while only a smaller number deal with higher levels. A number of linguists study Chinese stress using formal approaches such as metrical phonology (e.g. Duanmu 2001), while this issue is still insufficiently treated in the area of applied linguistics and in language textbooks.

One of the factors that make research on stress complicated is that Chinese is a tone language (what is the relationship between tone and stress?). Another problem is that Chinese is rather heterogeneous, encompassing many different language varieties. Thus, it is generally difficult to come up with global statements about Chinese stress as such. In spite of the controversies, linguists agree that Mandarin (unlike, for example, Cantonese) *has* stress/non-stress. Some morphemes are inherently unspecified for tone, carrying *qīngshēng* 轻声 'neutral tone' (e.g. *de* 的, *ma* 吗), and are always unstressed (for neutral tone, see, for example, Lee and Zee 2014: 375). Furthermore, most linguists agree that in Mandarin stress operates at all major structural levels: word, phrase and sentence level. There is also a general agreement regarding the phonetic cues for stress and non-stress. I begin with this issue.

2.1 Phonetic cues for stress/non-stress in Mandarin

It is commonly accepted that stress and non-stress in Mandarin syllables are phonetically cued by:

- manipulation of PITCH RANGE (expanded/compressed)
- manipulation of DURATION (long/short)
- changes in LOUDNESS (increased/decreased); secondary feature[2]
- SEGMENTAL (V or C) REDUCTIONS in the unstressed syllables

These conclusions can be found, for example, in Chao (1948: 26), Chao (1968: 35), Lin Tao (1962: 302), Lin Tao (2001a: 140), Kratochvil (1968: 41), Coster and Kratochvil (1984: 120), Shih (1988: 93), Shen (1989: 59), Lin Yen-Hwei (2007: 99, 222). In addition to linguistic literature, the accepted description is also reflected in

2. Instrumental analyses revealed that loudness tends to be the least important cue for stress in various languages, while F0 contour may be the most important one (e.g. Fry 1958).

introductory Chinese phonetics/phonology texts, e.g. Zhu ed. (1997:228), Lin and Wang (2013:165, 167, 171), and in some textbooks, e.g. Wang et al. (2002:127).

In the syllables carrying lexical tone, manipulations of pitch range and syllable duration for stress/non-stress purposes inevitably have consequences on tone contours. In stressed syllables, due to their sufficient duration and wide pitch range, tone contours are well distinguishable. Conversely, in unstressed syllables, due to the shortened duration and compression of the pitch range, tone contours become less distinct or even unperceivable. The degree of fullness of tone realization may thus be viewed as one of the indicators cuing stress/non-stress. On the relationship between stress and tone, see e.g. Kratochvil (1968: 41), Coster and Kratochvil (1984:120), Liang (2003).

This paper examines the function words which are frequently unstressed in speech, thus it is particularly concerned with the features of *unstressed* syllables. Here is one of the standard descriptions: "An unstressed syllable is typically short in length, weak in prominence… and has a shorter lax vowel or reduced rime, e.g. rime with more centralized vowel and/or a weakly articulated or deleted coda consonant." (Lin Yen-Hwei 2007: 99). See also Lin Tao (2001a:120), Cao Wen (2002:112), Wang et al. (2002:127), Lin and Wang (2003:180). The types of reduction which occur in unstressed syllables (particularly in neutral tone syllables, in high-frequency words and/or in casual, rapid speech) may be summed up in the following way:

- the syllable is short in duration
- its pitch range is compressed
- its segments have their articulation weakened, even down to complete deletion[3]
- the syllable may be less loud

Note that in L2 learning it is especially the *unstressed* syllables which are notoriously difficult to handle for students of Mandarin. We can put it this way: the first step is to learn fully articulated, canonical syllables/words with distinct tones and properly articulated segments. The second step is to "unlearn" some of their features (reduced tone, reduced segments, shortened duration). Reductions of the original phonetic shape clearly represent a rather sophisticated skill, involving two difficult questions: *when*, and *how*.

3. Segmental reductions affect both vowels and consonants. They may involve: lax articulation, the undershooting of articulatory targets (e.g. vowel centralization), vowel devoicing, turning falling diphthongs into monophthongs, voicing of voiceless consonants, and deleting terminal nasal consonants (e.g. *lǎba* 喇叭 [laːb̥a] → [laːbə], *nǎinai* 奶奶 [naɪnaɪ] → [naɪnə], *gàishang* 盖上 [kaɪʂaŋ] → [kaɪʂã]. The monophthong [ə] is generally permitted only in atonic syllables.

2.2 The importance of non-stress

The very nature of Chinese stress is still a controversial issue. I attempt to address this issue from yet another perspective, arguing that more attention should be devoted to the notion of non-stress.

The notion of stress is inseparable from non-stress – they are two sides of the same coin. Some authors point out that non-stress is equally as important as stress. Dow (1972:123) writes: "Good speech requires both stressing and unstressing of syllables and words…" Zhu (1997:228) points out: "Stress (重读) and non-stress (轻读) are two sides of a single issue. Stress means that certain parts of a sentence are more prominent, thus attracting the attention of a listener. Conversely, non-stress means that particular words in particular positions within a sentence have their meaning changed, emptied or weakened. Both situations have some kind of semantic background." Among the Chinese linguists who deal with the issue of non-stress distribution in Mandarin is Lin Tao. Lin (1962) discusses the nature of non-stress in *putonghua*, establishing STRUCTURAL NON-STRESS, and INTONATIONAL NON-STRESS. I shall return to his analysis in Section 2.4. Much later, the significance of non-stress was pointed out by Cao Jianfen (Cao 2007: 25): "Research on Chinese non-stress and stress (轻重音) is far from sufficient, especially at the level of the sentence." She observes that this under-researched aspect of *putonghua* pronunciation affects several areas. One of them relates to the results of SPEECH SYNTHESIS. Cao claims that the level of naturalness of synthesized speech is still not satisfying. The sentences sound rather monotonous, lacking a relative difference between fully articulated syllables and reduced syllables. "The major attention is on resolving local word stresses and main stress in a sentence, while the massive existence of the words pronounced without stress or of unstressed syllables is neglected." She concludes that "at the current time, we still lack a comprehensive knowledge of the rules of stress and non-stress distribution in Chinese, especially of the occurrence of non-stress." According to Cao, yet another area affected by insufficient research on non-stress is LANGUAGE TEACHING. "Be it the foreign accent (洋腔洋调) of the learners of Chinese as a second language, or the local accent (土腔土调) of the Chinese coming from various dialect areas and learning *putonghua*, one of the major reasons for their accent is a poor command of stress and non-stress; it is especially non-stress which is hard for them to handle." It seems that the notion of non-stress in Chinese deserves more attention.

2.3 The reverse view

Wang et al. (2002:126) suggest that, at least at the level of words, non-stress (instead of stress) is a crucial issue. They write: "In Chinese [i.e. in *putonghua*], the notion of stress and non-stress (轻重音) is considerably different from

Western languages. In Western languages, the focus is on the notion of stress. Except for the stressed syllable(s), all remaining syllables contained in a word are weakly stressed (弱重音) or unstressed (非重音). Chinese is the other way round: so called [sic!] stress (重音) in a word can only be established with regard and in opposition to non-stress (轻音); the stressed syllable does not have to be especially prominent (重读) at all." We can interpret this idea in the following way. The words such as *dòufu* 豆腐 are perceived as trochee: the first syllable is felt to be stressed, and the second syllable as unstressed. However, this impression is *not* due to the fact the first syllable, *dòu*, is pronounced as stressed, with an extra salience (enhancing the original features). Rather, this can be attributed to the fact that the second syllable, *fu*, is unstressed (it has a neutral tone, a short duration and a possibly devoiced vowel; that means some of its original features are reduced or even deleted). In fact, even if Tone 4 on the first syllable of *dòufu* were to be realized as quite subdued, with a rather compressed pitch range and a moderate duration, the word would still be perceived as trochee.

The observations made by Wang et al. (2002) regarding the importance of non-stress (instead of stress) at the word level could be expanded to yet higher linguistic levels. If it is the case, the question arises as to why Chinese is different from Western languages in this respect. Is this possibly because it is a tone language? If the answer is *yes* (cf. Duanmu 2002: 143), the reasoning may proceed in the following way:

In NON-TONAL LANGUAGES syllables in words and sentences may be viewed as unstressed by default, while stress is an extra quality added to particular syllables (enhancing their original features in the way specific to the language) for a particular reason, such as word stress or emphasis. Stressed syllables are marked, while unstressed syllables are unmarked. The essential issue in research on stress in non-tonal languages is word stress, which acts as a major (though not the only) factor determining the overall distribution of stressed syllables in an utterance.

In CHINESE, however, the situation appears to be reversed – possibly due to the existence of tones. Except for toneless morphemes, such as *de* 的, or *zi* 子 in *háizi* 孩子, every Chinese syllabomorpheme (*yǔsù* 语素) is "born with a phonemic tone" (Tseng 1990: 47). Underlying, lexical tone provides a syllable with the ability to be stressed. This potential may be realized to various degrees in a word and/or in connected speech. A syllable may be "normally stressed", or have its inherent tone features enhanced (e.g. if emphasized), or become reduced (when it is unstressed). The syllabomorphemes which carry lexical tone generally have an ambition to be fully realized. The reason is that their lexical tone needs sufficient syllable duration and sufficiently wide pitch range in order to be duly produced and perceived, thus allowing a tone to fulfill its

vital distinctive function.[4] However, in certain contexts (which are more or less predictable) or in certain words, tonal syllables may be de-stressed, and thus have their full realization reduced. They abandon some of their essential features for the sake of the important functions de-stress fulfills. These functions are utilized to various degrees in various dialects and varieties of Chinese.[5]

The idea that tonal syllables are full, "normally stressed" by default, and that some of them subsequently become either weakened or enhanced, may be supported by Y.-R. Chao's suggestions about stress (Chao 1968: 35–37). He establishes three phonemic degrees of stress, pointing out: "All syllables that have neither weak stress [i.e. neutral tone], nor contrastive stress [emphasis] are said to have normal stress." Note that Chao avoids setting up an intermediate level of "normal stress", unlike, for example, Yin (1982).[6] After all, it is well known that native speakers have a difficult time in distinguishing various degrees of stress besides neutral tone syllables and emphasis: "…most native speakers of Mandarin deny any differences in stress level beyond the palpable contrast between (all) full-toned syllables and the neutral-tone syllables." (Peng et al. 2005:245). Similarly, Duanmu (2001:120) writes: "If we exclude contrastive stress and weak syllables, then it is quite true to say that native speakers can hardly feel stress in Chinese."

One of the proofs of the prior importance of non-stress is the existence of the lexical neutral tone, which is an ultimate, lexicalized case of stress loss (while tonally neutralized syllables are the cases of contextual, recoverable stress loss). Further evidence of the importance of non-stress comes from the Chinese umbrella term for stress and non-stress: it is *qīngzhòngyīn* 轻重音, not **zhòngqīngyīn* 重轻音.[7] Finally, the logic of de-stressing is reflected in the very process of language

4. This particularly concerns contour tones (cf. *glissando threshold*). The general ambition of full realization also includes the segmental level, as segmental lenition might further decrease the ease of perception and further increase the omnipresent homophony of Chinese morphemes.

5. The abundance of neutral tone syllables is notably typical for the Beijing dialect. Neutral tone carries a much heavier phonological load here than in other dialects, as Chao (1968:38) points out. In *putonghua* the occurrence of the neutral tone and severely reduced unstressed syllables is not as common as in the Beijing dialect, but is still quite frequent. Švarný (1991:210) claims that 30 per cent of syllables in his corpus (see Švarný 1998–2000) are atonic. About half of them are toneless syllables, the other half are tonally neutralized syllables. Cf. Liang 2003.

6. According to Chao (1968), particular phonetic degrees of stress in "normally stressed" syllables may be viewed as "allophones of one phonemic normal stress". Yet Yin (1982) and other phonologists need to decide whether the words such as *rénmín* 人民 'the people' or *huǒchē* 火车 'train' are 重中, or 中重.

7. The term *qīngzhòngyīn* was already in use in the 1950s, such as in Xu (1958:96).

learning: students first have to learn the isolated words with full tones, then learn how to reduce particular words or some of their syllables when using them in connected speech.

To sum up, it may be due to the tonal character of Chinese that the situation in Mandarin seems to be reversed when we compare it to non-tonal languages. It appears that the notion of DE-STRESS and prosodic weakening is essential here. De-stressing leads to depriving particular syllables of some of their original inherent features, as present in the lexicon (the motivated, though not common term 'de-stress' conveniently reflects this process, unlike the neutral term 'non-stress'). Besides emphasis, linguistic functions lie mainly in the presence of non-stress (lexical neutral tone being an obvious case), not in the presence of stress. Thus, if we leave aside emphasis,[8] examining the process of STRESS ASSIGNMENT would better be replaced by examining the process of NON-STRESS ASSIGNMENT (the starting point of the analysis is thus different). In other words, an important task for linguists appears to be to reveal the mechanism of and rules for de-stressing (reduction), rather than to find out which syllables become stressed (enhanced), to what particular degree and why. In my opinion, the reverse view of the problem may help us in future research to find the key to the issue of stress in Mandarin. The present paper attempts to provide a partial contribution to our understanding of the principles governing the distribution of unstressed syllables in connected speech.

2.4 The taxonomy of unstressed items

A number of Chinese authors attempt to list the major categories of items which are commonly/always unstressed in speech, e.g. Wang et al. (2002: 128) (pointing out that "some non-stresses are decided by grammar, their occurrence being very regular"), Zeng (2008:102) (she outlines as many as 14 categories), Lin and Wang (2013: 168) (6 categories); also cf. Dow (1972: 123). However, the lists share two problems. First, it is not made clear what exactly is the unit under description (word? morpheme? syllable?). Wang et al. (2002) speak of "various elements (各类成分) which should be pronounced as unstressed", Lin and Wang (2013) speak of "grammatical elements (语法成分) which should be pronounced as unstressed", Zeng (2008) speaks of "rules for neutral tone (轻声)". The unhierarchized lists of

8. Emphasis, i.e. logical/contrastive stress, does not considerably change the picture. It can be generally placed on any word or morpheme (except for neutral tone syllables), if the speaker wishes to do so. It functions in a similar way across languages to a greater or lesser extent, resulting in the enhancement of particular phonetic features of the word in question (these features are language specific).

categories comprise independent monosyllabic function words (e.g. classifiers, such as *gè* 个) as well as bound morphemes (e.g. the lexical suffix *zi* 子). This makes the picture incoherent. Second, the authors generally do not make a clear distinction between the toneless items carrying a lexical neutral tone (e.g. sentence particles, such as *ma* 吗), and tonal items which become tonally neutralized (e.g. classifiers, such as *gè* 个), e.g. Chao (1968: 38). This also appears to be inconsistent. Because of this mingling of various criteria, such attempts cannot actually be viewed as classifications or taxonomies.

An interesting treatment of non-stress was offered by Lin Tao several decades ago (Lin 1962). He established two types of non-stress: "structural" and "intonational".

By STRUCTURAL NON-STRESS (*jiégòu qīngyīn* 结构轻音, pp. 305–311) Lin is referring to those cases related to the linguistic structure of Chinese. The items he includes in this category have an absolute or very high degree of prosodic predictability, rooted in the inherent properties of the item and/or in the grammar (precisely the cases that were described by the authors mentioned above). The examples given are: the second syllable in disyllabic morphemes, such as *pútao* 葡萄; lexical suffixes, such as *zi* 子, *men* 们; particles such as *de* 的, *de* 得, *le* 了, *zhe* 着, *ma* 吗, *a* 啊; the postpositions *shàng* 上, *xià* 下, *lǐ* 里 (but not *qián* 前, *wài* 外, *zhōng* 中); the classifier *gè* 个; the second syllable in reduplicated verbs (*kànkan* 看看), directional complements (*nálai* 拿来), morphemes *de* 得/*bù* 不 in potential complements (*xiědehǎo* 写得好, *xiěbuhǎo* 写不好) (note that Lin 1957: 71 additionally mentions some of the *resultative* complements, such as *jiàn* 见, *zhù* 住, *diào* 掉, *kāi* 开, *dào* 到, *sǐ* 死, *zháo* 着, and postverbally occurring prepositions *zài* 在, *gěi* 给, *dào* 到). In line with previously mentioned authors, some of Lin's examples are bound morphemes (*zi* 子, *men* 们), while others are single (though function) words (*de* 的, *lǐ* 里). Furthermore, some examples are toneless items (*men* 们), while other cases carry lexical tone and occasionally may become stressed (*lǐ* 里).

Lin's INTONATIONAL NON-STRESS (*yǔdiào qīngyīn* 语调轻音, pp. 304–305) is unrelated to language structure and stands in opposition to contrastive stress/emphasis. It refers to the words which become de-stressed in particular contexts, while they may be normally stressed or emphasized in other contexts. His examples are: the copula verb *shì* 是, personal pronouns *wǒ* 我, *nǐ* 你, *tā* 他 (in all functions),[9] and adverbs *jiù* 就, *dōu* 都, *kě* 可, *hái* 还, *yě* 也. Lin points out the

9. The weak realization of personal pronouns functioning as *object* is commonly noticed in the literature. However, Lin Tao (1962:304) emphasises that personal pronouns are regularly unstressed in all functions: also when occurring as an *attribute* (*nǐ gēge* 你哥哥) or *subject* (*Wǒ méi tīngjiàn.* 我没听见。).

"different modality" of both usages, while the grammatical structure of a sentence remains the same:

(1) 他是学生。 *Tā shì xuésheng.*

(2) 他是学生。 *Tā **shì** xuésheng!*

Let us take a closer look at Lin's analysis. Distinguishing between "structural non-stress" (which is regular and generally predictable), and "intonational non-stress" (which is context-dependent and unpredictable) is a well-grounded underlying concept which can be developed further. However, several questions emerge. First, there are the problems that characterized the work of previously mentioned authors: the unit of description is not clearly defined; Lin vaguely refers to 轻音. Furthermore, tonally neutralized/reduced morphemes and toneless morphemes are not distinguished.

Secondly, there is a problem with the membership of the group INTONATIONAL NON-STRESS. Let us repeat Lin's examples: the verb *shì* 是 (see the example above), pronouns *wǒ* 我, *nǐ* 你, *tā* 他, and adverbs *jiù* 就, *dōu* 都, *kě* 可, *hái* 还, *yě* 也. All of them are *shící* 实词. The traditional Chinese category of *shící* (roughly corresponding to content words) comprises – among other word classes – verbs (including modal verbs, *shì* 是, *zài* 在, and existential *yǒu* 有), pronouns (including personal pronouns) and (usually, though not always) adverbs. However, the words listed above, in spite of belonging to *shící*, clearly display the properties of function words, or at least have a transitional status. They are semantically rather empty. They have an inherent systematic tendency to stressless realization, which can only occasionally be overridden by the use of emphasis. The verb *shì* 是 is a mere copula. Personal pronouns (namely the monosyllabic ones), unlike interrogative or demonstrative pronouns, are regularly unstressed in speech (note that personal pronouns are listed among function words in Western grammars). The adverbs *jiù* 就, *dōu* 都, *kě* 可, *hái* 还, *yě* 也 are frequently used as rather formal elements. These aspects were obviously not noticed by Lin. In fact, his examples of "intonational non-stress" are quite similar to the words belonging to "structural non-stress". There is no principal difference between, for example, *zài* 在 or *shàng* 上 from the first group, and *shì* 是 or *jiù* 就 from the second group. All of them are rather deficient in lexical meaning, the difference being just a matter of degree. Thus, all Lin's examples of "intonational non-stress" can actually go to "structural non-stress". What about "intonational non-stress"? It appears that this label can conveniently be used to refer to content words such as *ròu* 肉, which become de-stressed in particular situations, e.g. if mentioned in the previous context: *Nǐ ài chī **ròu** ma?* 你爱吃肉吗？ *Wǒ **gēnběn** bù ài chī ròu!* 我根本不爱吃肉！ Lin does not indicate whether he considered including cases of de-stressed content words. We can only infer that this was probably not his intention as he does not provide such examples.

A systematic and clear taxonomy of regularly unstressed items has not so far been made available. The question arises as to how a plausible taxonomy might be conceived. The following criteria will undoubtedly be included:

- monosyllabic word OR bound morpheme in a polysyllabic word or structure
- content word OR function word
- presence OR absence of lexical tone
- linguistic level (such as the level of word, phrase, sentence)

The criteria will have to be ranked in some way (e.g. the application of the second criterion must inevitably be preceded by the application of the first criterion). The question of how to apply them exactly in order to arrive at a sound taxonomy of unstressed items, as well as the question as to what the expression "items" should refer to (words? morphemes? syllables?) is left for future research. The present paper is only concerned with one particular group: monosyllabic function words with lexical tone (such as prepositions, classifiers, personal pronouns, etc.). These will be the focus of our attention in Section 4. As the title of the paper indicates, I intend to draw a parallel between Chinese and English. English will be examined first because in the English language the discussed phenomenon is firmly stabilized and well-described, and may thus serve as a point of departure for further discussion.

3. English

3.1 Words with weak forms

English has a distinct group of high-frequency monosyllabic function words (roughly 40–50 items) which are regularly unstressed in connected speech, assuming "weak forms": articles, prepositions, personal pronouns, auxiliary verbs, etc. They are known as WORDS WITH WEAK FORMS, or weak form words (below abbreviated as WFW), *ruòdúshì cí* 弱读式词 in Chinese. See, for example, Cruttenden (2001:252), Roach (1996:102). Four examples are listed below: *for, and, to, him*. Two example sentences are provided for each of them. The first occurrence of the word in question is stressed, involving emphasis or contrastive stress (a.), while the second occurrence is unstressed (b.):

(1) *for* (preposition)
a. *What is it **for**?*
b. *This one is for Peter.*

(2) *to* (preposition)
a. *The letter is **to** him, not from him.*
b. *Give it to me.*

(3) *and* (conjunction)
a. ***"And"** is a conjunction.*
b. *I like fish and chips.*

(4) *him* (pers. pronoun) a. *Give it to **him**, not to me.*
b. *Tell him to wait.*

The four words are pronounced quite differently by native speakers of English in the respective example sentences (a., b.). Both forms of pronunciation are provided in Table 1 below. The third column contains the full reading, full form, commonly called THE STRONG FORM. The fourth column contains the unstressed, reduced form, commonly called THE WEAK FORM.[10]

Table 1. Examples of English function words with strong and weak forms

	Part of speech	**Strong form (full)**	**Weak form (reduced)**
for	preposition	[fɔːɹ]	[fə]
to	preposition	[tʰuː]	[tə]
and	conjunction	[ænd]	[ən], [n̩]
him	personal pronoun	[hɪm]	[ɪm]

Obviously, segmental reductions in weak forms may be quite drastic, influencing the whole phonological structure of a syllable (syllable duration is affected too – see below). This may sometimes lead to the merging of two different forms into one (e.g. *of, have* may merge into [əv], *is, has, does* may merge into [s], see Cruttenden 2001: 279).

3.2 Phonetic changes in weak forms

As explained above, English WFW have two rather different phonetic forms: weak and strong. The phonetic shape of the weak form is always derived from the full form in some way. The following reductions (both segmental and suprasegmental) may happen:

- the syllable is shortened
- its pitch is lowered/pitch range flattened
- high vowels [i], [u] are turned into centralized, lax [ɪ], [ʊ]
- non-high vowels, such as [a], [e], are turned into a neutral vowel [ə]
- diphthongs are turned into simple vowels
- consonants have their articulation weakened
- some consonants or vowels are completely deleted
- the syllable is less loud

10. Note that there may be more than one weak form, as the degree of reduction is a continuum: for instance *and* may be alternatively pronounced as [ənd], [ən], [n̩d], or [n̩].

Weak forms occur only in connected speech. Being unstressed, they can never stand alone. They have a clitic status, clinging tightly to a neighboring word – clitic host (cf. e.g. Spencer and Luís 2012).[11]

Severe reductions in the unstressed syllables are typically found in so called STRESS-TIMED LANGUAGES (languages with "Morse code rhythm") which shorten unstressed syllables. English is viewed as a typical example of such a language. On the other hand, reductions are not (so commonly) found in SYLLABLE-TIMED LANGUAGES (languages with "machine gun rhythm"). A typical example is Czech (the native language of the author of the present paper).[12]

3.3 The choice between strong and weak forms

The selection between the strong (full) and weak (reduced) phonetic form in speech is not free, it is constrained. It is decided mainly (though not only) by the pragmatic context:

STRONG FORMS are used if the word is stressed (= if emphasised, quoted, or uttered in isolation, e.g. *And* [ænd] *is a conjunction.*). Strong forms are exceptional, marked (function words rarely become stressed across languages).

WEAK FORMS are used in most other situations (e.g. *fish and* [ən] *chips*). Weak forms are regular in speech, they are unmarked.

3.4 Items belonging to words with weak forms

The members of the examined group of English WFW are namely:

–	articles	*a, an, the*
–	personal pronouns	*you, he, she, we, us, him, her, his, them…*
–	conjunctions	*and, as, but, than, that…*
–	prepositions	*at, for, from, of, to…*
–	modal verbs	*can, could, may, might, must…*
–	auxiliary verbs	*am, is, are, have, has, had, do, does…*

11. The term clitic is derived from the Greek verb *klinein*, 'to lean on'.

12. While English is considered to be a stress-timed language (重音节拍语言), Mandarin is sometimes said to have features of a syllable-timed language (音节节拍语言), cf. Lin and Wang (2007), Mok (2009). However, judging from the widely accepted views about its stress cues (see 2.1), Mandarin Chinese exhibits properties similar to English: stressed syllables tend to be long and fully pronounced, the unstressed ones are short and reduced. Obviously there is some contradiction involved. In any case, the type of Chinese rhythm is still an under-explored issue.

All words contained in the group share the following features:

1. they are monosyllabic
2. they are function words
3. they are extremely frequent in the language
4. they have two distinct pronunciations (sound forms):
   a. strong (full) form, b. weak (reduced, clitic) form
5. the choice between the forms is constrained
6. the weak form is regular, the strong form is exceptional

Weak forms are more or less lexicalized phonetic variants of the words in question. Their appropriate usage is an essential feature of standard English pronunciation.[13] Non-native speakers of English who ignore weak forms and use "all-strong-form" pronunciation of WFW exhibit a clear foreign accent. Furthermore, unfamiliarity with weak forms causes non-native speakers to have problems with their perception of the speech of native speakers (cf. Roach 1996: 102, Cruttenden 2001: 255). It follows that WFW represent an important topic in the teaching of English as L2. In the following section I shall try to identify a similar group of words in Mandarin.

4. Standard Mandarin

4.1 Monosyllabic function words with lexical tone (the cliticoids)

I shall focus my attention on one particular group of items which regularly become destressed in colloquial everyday Mandarin (*putonghua*): monosyllabic function words, namely those which carry a lexical tone. They will be termed CLITICOIDS.

I shall provide a few examples first: *shì* 是, *hěn* 很, *tā* 他, *zài* 在. Two example sentence are given for each word. The first occurrence of the word in question is stressed, involving emphasis or contrastive stress (a.). The second occurrence of the word is unstressed (b.):

(1) *shì* 是 (copula verb 'to be')
   a. *Tā **shì** lǎoshī!* 他是老师。
      'He **is** a teacher!'
   b. *Tā shì lǎoshī.* 他是老师。
      'He is a teacher.'

13. Although the usage of weak forms is pervasive and rule-governed, note that it is not directly obligatory.

(2) *hěn* 很 (adverb 'very')

a. *Zhè běn shū **hěn** hǎo!* 这本书很好!
'This book is **very** good indeed!'

b. *Zhè běn shū hěn hǎo.* 这本书很好。
'This book is (very) good.'

(3) *tā* 他 (personal pronoun 'I')

a. *Wǒ ài **tā**, wǒ bù ài nǐ*! 我爱他，我不爱你!
'I love **him**, not you!'

b. *Wǒ ài tā.* 我爱他。
'I love him.'

(4) *zài* 在 (preposition 'at, in')

a. "***Zài***" *zhè gè cí shì jiècí.* «在»这个词是介词。
'"*Zài*" is a preposition.'

b. *Tā zhù zài Běijīng.* 他住在北京。
'He lives in Beijing.'

In rapid colloquial Mandarin the words are pronounced quite differently in the respective two example sentences (a., b.). Both forms of pronunciation are provided in Table 2 below. The third column contains the full reading, full form (*wánzhěngshì* 完整式), or "strong" form (*qiángdúshì* 强读式). The fourth column contains the unstressed, reduced form (*jiǎnruòshì* 减弱式), or "weak" form (*ruòdúshì* 弱读式).

Table 2. Examples of Chinese function words with full and reduced pronunciation

	Part of speech 词类	**Full form ("strong")** 完整式, 强读式	**Reduced form ("weak")** 减弱式, 弱读式
shì 是	copula verb	[ʂʅ˥]^{4}	[ʂʅ]
hěn 很	adverb	[xən]^{3}	[xə̃]
tā 他	pers. pronoun	[tʰaː]^{1}	[tə]
zài 在	preposition	[d̥zaɪ]^{4}	[d̥zə]

4.2 Phonetic changes in reduced forms

Phonetic changes taking place when a full form of a cliticoid is turned into a reduced form are in principle the same as those mentioned in Section 2.1 (reductions in unstressed Mandarin syllables). Note that the changes are very similar to reductions occurring in English WFW. Let us provide a few examples of the *segmental* reductions which may take place in reduced forms (I omit the tones in full forms):

- high vowels [i], [y], [u] are pronounced as [ɪ], [ʏ], [ʊ] (e.g. *lǐ* 里 [liː] → [lɪ])
- non-high vowels, such as [a], [e], are changed into [ə] (e.g. 个 [ɡɤ˥] → [ɡə])
- a vowel may become desonorized after a voiceless initial (e.g. *shì* 是 [ʂʅː] → [ʃʅ̥])
- falling diphthong may be changed into a monophthong (e.g. *zài* 在 [d̥zaɪ] → [d̥zə])
- aspirated initials may lose aspiration (e.g. *tā* 他 [tʰaː] → [tə])
- voiceless unaspirated initials occurring between two sonorants may become sonorized (e.g. *zhè shì* 这是 [ʂʅː] → [ɻʅ], *zhè gè* 这个 [ɡɤ˥] → [ɡə])
- terminal nasals may be dropped completely, being reduced to a nasalization of the main vowel (e.g. *hěn* 很 [xən]→ [xə̃])

The degree of reduction is a continuum. Thus, in the same way as in English WFW, there may be more than one reduced form. For instance, *tā* 他, if weak, may be pronounced as [tʰa], [tʰə], or [tə] (either retaining remnants of Tone 1 or not). The degree of reduction may vary across different speakers, their dialectal background, education level, speech habits or particular mood, as well as across different speech styles, depending on speech rate, etc., cf. Lin Yen-Hwei (2007: 160). Severely reduced forms are common in rapid colloquial Mandarin (many of them are substandard, yet worth knowing).[14] However, note that they are not common in *all* varieties of Mandarin. Counter examples include formal styles of speech, such as in CCTV broadcasting, slow speech, Taiwan Mandarin (*guoyu*), etc. To sum up, the discussed phenomenon is not as pervasive and stabilized in Chinese as it is in English.

Reduced forms occur only in connected speech. Being unstressed, they can never stand alone. They behave as CLITICS (*fùzhuó cí* 附着词), clinging tightly to a neighboring word (e.g. *tā* in *Wǒ ài tā*. 我爱他。'I love him.').[15]

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14. If the reductions are drastic, including the complete loss of tone, they may lead to a merging of particular sound forms (mainly due to the merging of particular finals, e.g. *-e, -a, -ai, -ei* → [ə]), and thus to the homophony of some morphemes. This phenomenon is comparable to English.

15. An indisputable clitic status is commonly ascribed to toneless function words (such as *de* 的); they invariably behave as ENCLITICS. However, there are no toneless or tonally neutralized proclitics. The question arises as to how to treat the unstressed, reduced, yet not completely neutralized forms of tonal function words, such as when *wǒ* 我 precedes a stressed word (e.g. *Wǒ méi tīngjiàn.* 我没听见。). I view them as PROCLITICS, agreeing with the standpoint adopted by Chao (1968: 35): "Most cases of weak stress occur enclitically, that is closely following a stressed syllable… In the relatively few cases when the weak stress precedes a closely following stressed syllable, usually a pronoun or one of a few conjunctions… it is then a proclitic."

4.3 The choice between full and reduced forms

In a similar way to English, the choice between the full form and the reduced form is constrained. Undue usage sounds awkward or completely wrong. Zhu (1997:228) remarks: "[Sometimes the speaker] pronounces the words which should be stressed as unstressed, and the words which should be unstressed as stressed. If he pronounces [all syllables] as unstressed, the intonation sounds monotonous and stiff. If he pronounces [all syllables] as stressed, it may distort the meaning of the sentence." The choice between the forms is mainly determined by the pragmatic context:

FULL ("STRONG", STRESSED) FORMS are used if the word is emphasised, quoted, or uttered in isolation. For instance, *Tā* ***shì*** [ʂʅ:][4] *lǎoshī!* 他是老师！ 'He **is** a teacher!' In general, stressed forms are exceptional and marked, as the function words rarely become stressed.

REDUCED ("WEAK", UNSTRESSED) FORMS are used in most other contexts. For instance, in the neutral statement *Tā shì* [ʂʅ] *lǎoshī.* 他是老师。'He is a teacher.' Weak forms are regular and unmarked.

4.4 The membership of the group of cliticoids

There are many Chinese monosyllabic function words which behave in a similar way to the four words discussed above. There are around 50 most frequently used ones. The parts of speech they belong to are fairly similar to those of English WFW. The major categories are:

- personal pronouns[16] *wǒ* 我, *nǐ* 你, *tā* 他
- conjunctions *hé* 和, *dàn* 但, *kě* 可…
- prepositions *zài* 在, *bǎ* 把, *gěi* 给…
- postpositions[17] *shàng* 上, *xià* 下, *lǐ* 里
- classifiers *gè* 个, *zhǒng* 种, *běn* 本…
- modal verbs *yào* 要, *huì* 会, *xiǎng* 想…

Two groups of semantically "bleached" content words (*yǔyì xūhua* 语义虚化) may be added. They undergo the process of grammaticalization to a certain extent:

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16. Personal pronouns are usually listed among *shící* 实词 "full words", not *xūcí* 虚词 "empty words" (e.g. Li Xiaoqi 2005). I place them among function words (cf. Xiao et al. 2009:300).

17. I use the term POSTPOSITION, instead of the more commonly used term LOCALITY WORD (*fāngwèicí* 方位词) belonging to the class of nouns. The reason is that I am focusing on weak, auxiliary properties of such items in the postnominal usage, not needing to consider their nominal character.

– three stative verbs[18] *shì* 是, *zài* 在, exist. *yǒu* 有
– some adverbs[19] *jiù* 就, *dōu* 都, *hěn* 很…

The words in this group share the following features:

1. they are monosyllabic
2. they carry lexical tone
3. they belong to function words or to semantically weak content words
4. they are high-frequency words
5. they have two forms of pronunciation:
   a. full (stressed) form, b. reduced (unstressed, clitic) form
6. the choice between the forms is constrained
7. the reduced forms are more common in speech

The examined group of words seems to be quite coherent and reasonably well-defined (although to a lesser extent than in the case of the English WFW). However, there is no collective label for it so far. I have coined a new term, CLITICOID, *lèi fùzhuó cí* 类附着词 for these words.[20] The cliticoids may be characterized as monosyllabic function words carrying lexical tone which regularly behave as clitics: they are weak, unstressed, rhythmically attached to the neighboring word (e.g. *Wǒ ài tā* [tʰə]. 我爱他。 'I love him.'). However, in some situations (such as standing in isolation or being emphasized) they behave differently, becoming stressed (e.g. *Wǒ ài* ***tā*** [tʰaː][1], *wǒ bù ài nǐ!* 我爱他，我不爱你！ 'I love **him**, not you!').

Table 3 provides a few other examples of the words belonging to the examined group, presenting their full and reduced pronunciations (tone marks in these words are left out in the examples of usage):

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18. Verbs are generally listed among content words. However, the verbs 是, 在, existential 有 are close to function words. First, their meaning is very general (是 expresses identification, 在, 有 express some kind of existence). Second, they can never stand alone: NP is required obligatorilly after them. Third, they must be unstressed if not emphasised, with stress going to the NP.

19. Adverbs are commonly listed among content words. However, some monosyllabic adverbs, such as *jiù* 就, *dōu* 都, *hěn* 很 are prone to losing their lexical meaning, becoming a mainly formal element or expressing some kind of modality (as Lin Tao 1962: 305 notes, mentioning 就,都,可,还,也). Their unstressed occurrences may be viewed as function words.

20. The term is derived from the common term clitic (*fùzhuó cí* 附着词 or *fùzhuó chéngfen* 附着成分), with the Greek morpheme *oid* being added to it (the Greek word *eidos* means 'appearance, look'). The term cliticoid is analogous with expressions such as *android* (something resembling a man, a mechanical man), *asteroid* (something resembling a star), etc.

Table 3. Examples of the cliticoids

Word	Part of speech 词类	Full form 完整式	Reduced form 减弱式	Example of usage of the reduced form
wǒ 我	pers. pronoun	[wɔ^]^{3}	[wɔ], [wə]	*Gěi wo!*
nǐ 你	pers. pronoun	[nɪː]^{3}	[nɪ]	*Máfan ni.*
gè 个	classifier	[g̊ɣ^]^{4}	[g̊ə], [gə]	*sān ge xuésheng*
jiàn 件	classifier	[d̥zjɛn]^{4}	[d̥zjɛ], [d̥zjə̃]	*zhè jian shìr*
hé 和	conjunction	[xɣ^]^{2}	[xə]	*wǒ he tā*
dào 到	preposition	[d̥aʊ]^{4}	[d̥ɔ], [d̥ʌ]	*kāi dao wàimian*
gěi 给	preposition	[g̊eɪ]^{3}	[g̊e]	*Bǎ shū gei tā ba!*
shàng 上	postposition	[ʂaŋ]^{4}	[ʂɑ̃]	*zhuōzi shang*
xià 下	postposition	[ɕja]^{4}	[ɕjʌ]	*Chē xia yǒu dōngxi.*
yào 要	modal verb	[jaʊ]^{4}	[jɔ], [jʌ]	*Nǐ yao zǒu ma?*
huì 会	modal verb	[xweɪ]^{4}	[xwe], [xwɛ]	*Tā hui lái.*
zài 在	locative verb	[d̥zaɪ]^{4}	[d̥zɛ]	*Tā zai wūzi lǐ.*
yǒu 有	exist. verb	[joʊ]^{3}	[jʌ], [jə]	*Wàimian you rén.*
dōu 都	adverb	[d̥oʊ]^{1}	[d̥ɔ], [d̥ʌ]	*Lián tā dou lái le!*
jiù 就	adverb	[d̥zjoʊ]^{4}	[d̥zjɔ]	*Nǐ jiu qù ba!*[21]

The cliticoids are high-frequency items. They undoubtedly belong to "a limited number of words [which] are doing most of the work in spoken communication", as mentioned by Tao (2015:340). He stresses the essential importance of monosyllabic words in speech, noticing that many of them are function words: "Many of the core vocabulary items are not real lexical or high-content words". Among the top 50 high-frequency words (Table 25.2) Tao lists, for example, the personal pronouns *wǒ* 我, *nǐ* 你, *tā* 他, the copula verb *shì* 是, the adverbs *jiù* 就, *dōu* 都, *hěn* 很, *hái* 还, *yě* 也, the modal verb *yào* 要, the classifier *gè* 个. All of them belong to the cliticoid group.

It is obvious that the unstressed occurrences of the cliticoids must substantially contribute to the ratio of unstressed syllables in speech. Deeper level statistics based on a large corpora may shed more light on their importance. They belong to monosyllabic words whose "role is far more robust than previously recognized" (Tao 2015: 345), and thus deserve further examination.

21. Note that in connected speech two cliticoids often occur next to each other (*nǐ jiù, jiù shì, tā zài* etc. In this case both words usually tightly join together, forming a trochaic unit; the first word receives certain degree of stress.

Plentiful examples of the unstressed occurrences of cliticoids may be found in Švarný's corpus (Švarný 1998–2000): a dictionary of c. 2,000 Chinese morphemes that are accompanied by 16,000 exemplar sentences; these were recorded (at natural tempo and in a spontaneous manner, produced by a native Beijing speaker), and were then prosodically transcribed.

4.5 A comparison of the Chinese cliticoids and English words with weak forms

We may observe strong parallels between the Chinese cliticoids and English words with weak forms, namely in the following respects: their monosyllabic character, similar word classes (synsemantic function words), a similar number of items in the group (around 50), high frequency occurrence in speech, two distinct forms (stressed, full, "strong" vs. unstressed, reduced, "weak"), similar principles regarding phonetic reductions in weak forms (undershooting of articulatory targets, short syllable duration, low pitch and/or compressed pitch range), similar constraints imposed on the choice between the forms (full forms occurring mainly in emphasis). The difference clearly rests in the degree of stabilization of the groups in both languages. In English, the use of weak, reduced forms is stabilized, being generally part of the pronunciation norm (RP, GA). On the other hand, in Mandarin, the occurrence of reduced forms is less pervasive and less stabilized (it is, for example, style-dependent, speaker-dependent, it is not found in all varieties of Mandarin, etc.). The usage of very moderately reduced forms is acceptable in unstressed occurrences, while some severely reduced forms may be substandard. Thus, in Mandarin Chinese, the phenomenon may be more pertinently described as a tendency rather than a rule. However, this paper claims that in everyday colloquial Mandarin this tendency is palpable.

4.6 The cliticoids in Chinese language teaching

Learners of Mandarin often practice "all-strong-form" pronunciation of the cliticoids in speech, and avoid using their unstressed, reduced forms. This mostly results in unnatural, foreign accent. It may even lead to misunderstandings (e.g. the speaker may give the impression that s/he is emphasizing a word which actually does not carry any important information). Furthermore, L2 speakers of Mandarin who are not familiar with the unstressed forms may have difficulty in understanding speakers who do use them. Unfortunately, the degree of attention accorded to such phenomena still remains marginal in the teaching of Chinese pronunciation (Třísková 2016b – forthcoming).

Language textbooks generally do not provide sufficient space to pronunciation issues as such, dealing mostly with the very basics. The prosodic phenomena

of connected speech are usually dealt with in a very limited way or not at all. Metalinguistic instruction in relation to both segmental and suprasegmental phenomena, if offered, is mostly sketchy, sometimes even downright wrong. The findings of phonetic research are not integrated. For instance, phonetic correlates of *putonghua* stress/non-stress are hardly ever presented, although they have been commonplace in the literature for many years. Students are thus unprepared to face the frustrating tone variations in connected speech that are caused by stress, intonation, emotions, speech rate, speech style, the functional character of some words, etc.

Following the spirit of the textbooks, CLASSROOM PEDAGOGY regarding the pronunciation instructions mostly focuses on practicing the pronunciation of isolated words. The phonetic variation of words in connected speech (which concerns the examined group of cliticoids) is not given much attention. Pragmatic aspects are usually neglected. Furthermore, pronunciation errors are not consistently corrected (partly due to the large number of students in the class), the primary focus being on fluency, self-confidence and the development of communicative skills. Due to an insufficient level of corrective feedback on the part of the teacher, many students end up with fossilized pronunciation errors, which are hard to rectify.

One of the future challenges in teaching Chinese pronunciation, in my opinion, lies in paying more attention to the features of connected speech. Teaching the cliticoids may contribute to this objective. If learners master the reduced forms and their proper usage in speech, it may significantly enhance the naturalness and native-speaker likeness of their oral performance. Familiarity with the reduced forms may also help them in relation to their perception of native speakers. Mastering the cliticoids and the stress patterns they frequently enter is something that can be conveniently practiced using short disyllabic or trisyllabic PHONETIC CHUNKS, such as ***hěn hǎo*** 很好, *zài* ***nàr*** 在那儿, ***máfan nǐ*** 麻烦你, *tā* ***zǒu*** *le* 他走了, ***zhè běn shū*** 这本书, *yào* ***chūqu*** 要出去, ***zhè shì gǒu*** 这是狗, ***zhèr yǒu shū*** 这儿有书, etc. (Třísková 2016a – forthcoming).

5. Conclusion

In examining the nature of stress in Mandarin, this study has sought to present the idea of the primary importance of non-stress (de-stress) instead of stress. This may be due to the tonal character of the Chinese language.

Similarities between colloquial Mandarin and English regarding stress/non-stress phonetic cues have been noticed. If the parallel is pertinent, it appears that a colloquial variety of Mandarin displays a tendency to the so called "stress-timed rhythm" observed in English. This may possibly indicate the future direction in language change.

A specific group of Chinese words has been established: monosyllabic function words carrying lexical tone, such as monosyllabic personal pronouns, prepositions, modal verbs etc. Their pronunciation in colloquial Mandarin has been examined, observing that they occur in two phonetic forms in speech: full (stressed) and reduced (unstressed). The fairly predictable distribution of these two forms has been noted. A new term has been coined for this group of words: THE CLITICOIDS. Their strong resemblance to English WORDS WITH WEAK FORMS has been pointed out.

Insights relating to the cliticoids are applicable when teaching Mandarin pronunciation, namely when teaching colloquial variety of Mandarin (*putonghua*). Familiarity with the reduced forms of the cliticoids (both in speech perception and speech production) is particularly essential for students who aim to achieve a natural, native-like performance.

As the cliticoids are high-frequency items, they play an important role in speech rhythm. Their unstressed occurrences substantially contribute to the ratio of unstressed syllables in speech. A deeper investigation into the role of the cliticoids in speech rhythm is a task for future research.

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