## A New View of Accentuation and the Annotation of Accentuation

著者(英)	Koichi MIYATA
翻訳者(英)	Wayne Lawrence
校正者(英)	Timothy J. Vance
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## A New View of Accentuation and the Annotation of Accentuation MIYATA Kōichi

When analysing Japanese accentuation, the pitch of each mora making up words is classified as high or low, or high, mid, or low. The accentuation of languages such as English and German, although not pitch-accent languages, is analysed in a similar manner, so it was easy to follow this for Japanese accentuation. However Japanese accentuation can be viewed differently, and I will present my thoughts on this below.

My view involves focusing on the change in pitch between two adjacent moras. In other words, one looks at whether two moras are pronounced with a rise in pitch, a fall in pitch, or on a level pitch. With words longer than two moras, one analyses the words two moras at a time. For example, in Tokyo Japanese, the word *jama* 'mountain' is pronounced with a rise in pitch, and *umi* 'sea' a fall in pitch. *jamanobori* 'mountain climbing' is analysed as follows: *jama* is pronounced with a pitch rise, *mano* is level, *nobo* has a fall in pitch, and *bori* is level.

I have used the following method to represent this. The symbols ' and ` are used to represent rises and falls respectively, and these are placed between moras. A level contour, whether high level or low level, is represented by the use of no symbols. This notation is exemplified as follows:

ja'ma 'mountain'	mi'dzu 'water'
u`mi 'sea'	ja'ma'ni 'mountain-DAT'
mi'æuo 'water-ACC	ja'mano`bori 'mountain-climbing'
jo'rokobaʃi`i 'felicitous'	

In the absence of other symbols, no matter how many moras follow ', what follows ' is pronounced on a higher pitch than what precedes it, and what precedes ` is pronounced on a higher pitch than what follows it.

When the degree of rise or fall is very slight, this is represented by shorter and finer versions of these two symbols (i.e. ' and ` ). This will be explained later in this paper.

What is this view of accentuation based on? Let us first compare Japanese accentuation with English accentuation. As is universally known, English accentuation differs from that of Japanese in that the English accent is an intensity accent. Being an intensity accent, it requires more effort to produce sounds with intensity than sounds lacking intensity. For this reason it is normal for a strong syllable to be followed by a weak syllable which does not require effort. It is also because of this that there is normally only one so-called accented syllable in one word, and it is this syllable which forms the core of the accentuation on the word and attracts the so-called sentence-stress. However, Japanese accentuation differs from this in being the relationship between the pitch of sounds. The pitch of sounds differs according to the tenseness of the vocal cords. The effort which accompanies the various degrees of tenseness of the vocal cords does not differ greatly. What requires effort is changing from a low-pitch sound to a high-pitch sound, or from a high-pitch sound to a low-pitch sound. Once the pronunciation has changed from a low-pitch sound to a high-pitch sound to a high-pitch sound, the pronunciation will continue high by momentum so long as no further effort is exerted. The places where the effort is required are the core of the accentuation, and for Japanese I will represented them using ' and ` . What corresponds to sentence-stress also appears between these two moras. In other words, it is expressed by increasing the magnitude of the rise or fall in pitch. It is a characteristic of Japanese accentuation that the same pitch is continued by momentum, and this phenomenon is not observed in English accentuation. My view of accentuation is underpinned by this interpretation of the role of momentum.

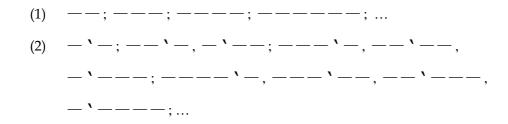
In the three-level view of Japanese accentuation, words such as *hana* 'nose' and *hana* 'flower' are distinguished, the former as Low-Mid, and the other as Low-High. When these words form part of a sentence, they are clearly distinguished in their pronunciations. However, when pronounced in isolation, or when in clause-final position (as in the sentence *Kore-wa hana, are-wa hana* 'This is a nose, (and) that is a flower'), in normal circumstances a difference between the accentuation of these two-syllable words is not perceived. They both have the same rising tonal contour. A difference in the degree of rise can be measured instrumentally, and it can also be perceived auditorily, but this difference is a secondary effect and is not a basic component of Japanese accentuation. This is also a basis of my view of accentuation. (After completing this paper, I read a paper on this topic by Mr Tatsurō Yatabe and Dr Kanae Sakuma in *Shinrigaku Kenkyū* [The Japanese Journal of Psychology] 2.3: 486-493, but my claims were not influenced by this paper.)

Let us now consider the practicalities of an accentual annotation under this view of accentuation. We will first look at individual words in isolation. In the table below, the line — represents one mora, and for convenience' sake nouns are followed by the object-marking particle *o*. This serves as a representative of all particles except the genitive/copula/subject-marking *no*. When nouns immediately precede verbs or adjectives, the particle *o* also represents the first mora of that verb or adjective.

- ' ha'o 'leaf-ACC', ka'ku 'to lack'.
- `— ha`o 'tooth-ACC', ka`ku 'to write', jo`i 'good'.
- -'-- ha'nao 'nose-ACC', hi'roo 'to pick up', ka'ite 'lacking', a'tsui 'thick'.
- ' ` ha'na`o 'flower-ACC', o'to`su 'to drop', ka'ke`ba 'if (it) lacks',
  a'tsu`i 'hot'.
- ` ha `nao 'beginning-ACC', ka `ite 'writing', a `tsuku, 'hot, and'.

/	se'nakao 'back-ACC', ta'takau 'to battle', i'jaʃii 'vulgar, shabby'.
_/`_	a'tama`o 'head-ACC', hi'roe`ba 'if (I) pick up', su'zuʃi`i 'cool'.
`	a'sa`hio 'morning sun-ACC', o'to`ʃi̯te 'dropping', su'zu`ʃi̯kuၞ 'cool, and'
_`	Jo`motsuo 'book-ACC', jo`kereba 'if good'.
	he'etaio 'soldier-ACC', ʃi̯'karareru 'to be scolded', i'kameʃii 'stern'.
_/`_	ka'minari`o 'thunder-ACC', ta'takae`ba 'if (I) battle'.
_/`	ka'raka`sao 'oil-paper umbrella-ACC', jo'roko`nde 'delighting',
	a'tata`kaku 'warm, and'.
_/_`	a'sa`ŋaoo 'morning glory-ACC', su'zu`ʃi̯ku̯te 'cool, and'.
_`	ta`mpopoo 'dandelion-ACC', ta`kakereba 'if high'.

As can be seen from the above table, except where there is a fall in pitch immediately following the initial mora, there is always a rise in pitch between the first and second moras. This is a characteristic of the Tokyo language and is probably due to physical and physiological properties of the vocal cords. Because this is common to all words, this may not be so important accentually speaking. For this reason, as long as there is prior agreement, the annotation of this pitch rise may be omitted without any adverse effects. In contrast, the fall in pitch is the core of accentual phenomena and so demands attention. (In certain cases the rise in pitch is important – for example when there is sentence-stress.) Using this abbreviated notation, the accentual patterns on words in isolation can be given as follows.



(1) is cases where there is no accent (i.e. fall in pitch) on the word, and in (2) there is always one place where there is an accent. (1) is the so-called level register, and (2) is the contour register.

Above we considered the accentuation of words pronounced in isolation, but if all words in sentences were to be pronounced as in isolation, it would sound as if a young child were reading a book and would not be the accentuation used in actual conversation. In actual conversation there is the phenomenon of sentence-stress where, when an important word is followed by a word of lesser importance, the latter word completely subordinates itself to the more important word and both words are pronounced together as if they were one word. In this case, the accentuation of the latter word either becomes extremely weak or it is lost entirely. (In contrast with ' and `, slight changes in pitch will be annotated using ' and `.) In such cases it is necessary to pay attention to the fact that, due to the momentum of the first word, the initial mora of the second word is pronounced at the same pitch level as the final mora of the first word. In other words, if the preceding mora is low, the initial mora of the second word will also be low, and if the preceding mora is high, the initial mora of the second word will also be high. (This fact is also evidence for the view of accentuation proposed in this paper.) Please refer to the following examples. (In cases of important words followed by subordinate words, the two words must either be written as one unit or some kind of linking symbol must be employed. Here I will use a hyphen.)

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na'o-uru 'build up a reputation' na'o-uru 'sell greens' na'o-u'ru 'gain a reputation' na'o-u'ru 'obtain greens' su'zuo-huru 'shake a bell' ha'ta`o-huru 'wave a flag' sa`io-huru 'shake a dice' ja'riŋa-hu`ru 'spears rain down' ju'ki'ŋa-hu'ru 'snow falls' a`meŋa-hu`ru 'rain falls' hi'ni-jakeru 'be burned in the sun' hi'ni-jakeru 'be burned in fire' ki'o-tsuke`ru 'be careful' me 'o-tsuke'ru 'fix (one's) eyes on' ki'o-tsu`kete 'being careful' me'o-tsu'kete 'fixing (one's) eyes on'

(The End)

This humble research is incomplete. In spite of this, I decided to publish it because I believe it touches on the essence of Japanese accentuation, and I wish to solicit feedback from readers. I am, however, unfamiliar with the accentuation of dialects other than the Tokyo dialect, so I do not know whether the viewpoint adopted here will also be applicable to other dialects. With regard to this point also I would appreciate instruction from readers.

## ORIGINAL PAPER

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