‘Weak’ Units and Accent Shift

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Abstract

The prosodic unit of the Standard Tokyo Japanese accent had traditionally been regarded as the mora. Nowadays, however, many researchers describe the accent system in terms of the syllable, placing the system as ‘mora-counting syllable language’, or ‘mora-counting syllable-accent language’, precisely. In this presentation, I prescribe the prosodic unit once again as the mora, from a new point of view: a ‘weak’ unit followed by the accent shift. I propose that Standard Japanese is a “mora-counting mora-accent language”, with the moraic phonemes as ‘weak’. I argue this idea based on the data from a number of Japanese dialects and Latin.

1. The Standard Japanese

The syllable-oriented researchers claim that they can neatly describe the accent system of the Standard Japanese language in terms of the syllable (McCawley 1968, Hayata 1999, for example). In Tokyo Japanese, the moraic phonemes M, such as the latter part of the diphthong /J/ and the long vowel /R/, moraic nasal /Ñ/ (usually /N/, but /Ñ/ in this paper) and moraic checked sound /Q/, cannot bear the accent kernel in principle. Thus, we have no contrast between /O]M/ and */OM]/, where ‘O’ means any mora other than the moraic phoneme, that is, a mora which is also a syllable by itself, and ‘]’ is a lowering accent kernel. The accent system analyzed in terms of the mora has many gaps (‘―’), shown as in (1), where ‘=’ represents kernelless.

(1)Analysis by mora

\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{e} & \text{boo} & \text{kaze} & \text{koori} & \text{goboo} & \text{sakana} \\
\hline
\text{e} & \text{yama} & \text{toori} & \text{oto} & \text{satoo} & \text{sobay} \\
\hline
\text{to} & \text{so} & \text{ra} & \text{so Joi} & \text{kopi} & \text{karasu} \\
\hline
\end{array}
\]


If we recapture /O]M/ as /σ]/, that is, as a syllable unit, we find no gaps and get a neater accent system, as in (2).

(2)Analysis by syllable

\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{e} & \text{boo} & \text{kaze} & \text{koori} & \text{goboo} & \text{sakana} \\
\hline
\text{e]} & \text{tooi} & \text{yama} & \text{toori} & \text{satoo} & \text{oto} \\
\hline
\text{so} & \text{ra} & \text{so]ri} & \text{ko]p} & \text{ka]rasu} \\
\hline
\end{array}
\]

They also claim that there are several accent rules that can be treated better from a viewpoint of the syllable, such as compound accent rule (3), ultimate-kernel deletion by the genitive particle no (4), and ultimate-kernel deletion in the adverbial usage of quantitative nouns and time nouns (5), and so on.

(3) otoko] yama]toko ‘mountaineer’

\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{satoo} & \text{kaku]too} & \text{cube sugar} \\
\hline
\text{sobay} & \text{ko]kyuu]sobay} & \text{‘high-class noodle shop’} \\
\hline
\end{array}
\]

(4) otoko] otokono= kino= ‘of yesterday’

\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{satoo} & \text{kino} & \text{no} & \text{‘of sugar’} \\
\hline
\text{sobay} & \text{no} & \text{‘of five persons’} \\
\hline
\end{array}
\]

(5) asita= iku=. ‘I go tomorrow.’

\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{kinoo} & \text{mi} & \text{ta} & \text{‘I saw yesterday’} \\
\hline
\text{hito} & \text{iru} & \text{‘There is one person.’} \\
\hline
\end{array}
\]

Indeed, I agree with the gaps in the accent system based on the mora. However, as for the syllable-based accent rules above, I can point out a few counterexamples to each rule, as in (6)-(8). These facts cast doubt on the syllable-based approach.


\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{te]Nno} & \text{syoo]wat} & \text{Nno} & \text{syoo]wate} & \text{Nno} & \text{‘Showa emperor’} \\
\hline
\end{array}
\]

(7)satoono= ‘of sugar’

\[
\begin{array}{c|c|c|c|c|c|c|c}
\hline
\text{goni} & \text{Nno} & \text{goni} & \text{Nno} & \text{‘of five persons’} \\
\hline
\text{nikai} & \text{no} & \text{nikaino= ‘of two times’} \\
\hline
\end{array}
\]
Moreover, considering a number of accentual varieties of Japanese dialects, I presume that the prosodic unit of Tokyo Japanese is the mora, and propose a new concept: a weak unit followed by the accent shift.

2. The Izu dialect in Shizuoka Prefecture

In Japan, we find many dialects where the prosodic unit is undoubtedly the mora. See the examples of the Izu dialect in Shizuoka Prefecture, as in (9).

(9) Accent opposition in the two-mora nouns

kai ‘shell’ ka’i ‘oar’ hai= ‘ash’
ko’i ‘love’ ko’ji ‘carp’ oi= ‘nephew’
too ‘ten’ to’o ‘party’ boo= ‘stick’
ryoo’ ‘volume’ ryo’o ‘dormitory’
kyoo= ‘utra’
ki[N ‘gold’ ki[N ‘bacteria’ hi[N ‘quality’

We have many contrasts between /OM/ and /O/M/. Only the moraic check, indicated by Q, cannot bear the accent kernel. We find no contrast between */OQ/* and /O]Q/*.

3. The Wan dialect of Kikai-jima

Kikai-jima is located in Kagoshima Prefecture, Kyusyu districts, but its language is Ryukyuan. The Wan dialect has a two-pattern accent system, kernelless (or Hayata’s word-tone) pattern and penultimate-kernelled pattern. In this dialect, not only the moraic phonemes M but also a narrow syllable ‘N’ before a wide syllable ‘W’, that is, a syllable with a narrow (or close) vowel followed by a syllable with a wide (or open) vowel, is not in the position to bear the accent kernel. See the examples in (11). All the simplex words in (11) have the same kernelless pattern. Their phonemic descriptions are those of Standard Japanese, because they are irrelevant to the accent.

(11) Two-way partition of the Shizukuishi dialect

penultimate

OWN#: sakana= hosiza[ka]na
‘fish’ ‘dried fish’
odori= bo[N]ori
‘dance’ ‘bon festival dance’
ONN#: kasumi= haru[ga]sumi
‘mist’ ‘spring mist’
sirusi= kagi[zi]rusi
‘mark’ ‘hooked symbol’
ONM#: syasi[N= syuugoosya[siN
‘picture’ ‘group picture’

antepenultimate

OWN#: kuruma= kata[guruma
‘car’ ‘piggyback’
musuko= baka[musuko
‘son’ ‘foolish son’
OMO#: ba[N]do= hea[ba[N]do
‘band’ ‘hair band’
boosi= wata[boosi
‘hat’ ‘cotton veil’

(O: any syllable, N: Ci/u, W: Ce/o/a, C: any consonant, #: word boundary, ‘[: ascending accent kernel.)

4. The Shizukuishi dialect of Iwate Prefecture

We have another kind of the ‘weak’ unit. In the Shizukuishi dialect of Iwate prefecture, not only the moraic phonemes M but also a narrow syllable ‘N’ before a wide syllable ‘W’, that is, a syllable with a narrow (or close) vowel followed by a syllable with a wide (or open) vowel, is not in the position to bear the accent kernel. See the examples in (11). All the simplex words in (11) have the same kernelless pattern. Their phonemic descriptions are those of Standard Japanese, because they are irrelevant to the accent.

5. The Kanazawa dialect of Ishikawa Prefecture

This dialect has a more complicated ‘weak’ structure, including the voice/voiceless contrast
of the consonants before the vowel. The ‘weaker’ unit is \(N^\prime\) before \(W\), that is, a voiceless narrow syllable — a syllable consisting of a voiceless consonant and a narrow vowel — followed by a wide syllable, and \(M\).

Additionally, there is another type of ‘weak’ unit: \(N^\prime\) before \(W\), that is, a voiceless narrow syllable — a syllable consisting of a voiceless consonant and a narrow vowel — followed by a wide syllable. Thus, we have three-way partition as in (12). All the latter simplex words in (12) have the same ultimate-kernelled pattern \([O][O][O]\), such as kuzira, sakura, hatake, and so on.

(12) Three-way partition of the Kanazawa dialect

\[
\begin{array}{ccc}
\text{antepenultimate} & \text{penultimate} & \text{ultimate} \\
\text{ON}'W#\#: & \text{zatook} & \text{zira ‘kind of a whale’} \\
\text{OMO}\#: & \text{komeko} & \text{jozi ‘rice-malt’} \\
\end{array}
\]

Elsewhere: penultimate

\[
\begin{array}{ccc}
\text{yasaibata} & \text{ke(-WO#) ‘vegetable field’} \\
\text{haruyasu} & \text{mi(-N'N#) ‘spring vacation’} \\
\text{mizukemu} & \text{ri(-N''N#) ‘spray’} \\
\end{array}
\]

The basic pattern is the penultimate accent. When the accent falls on \(N^\prime\) before \(W\) or \(M\), the kernel shifts leftwards and has the antepenultimate-kernelled pattern. However, in the case of \(N^\prime\) before \(W\), the kernel shifts rightwards and has the ultimate-kernelled pattern. Here, too, we find no cover categories such as the “syllable” in Standard Japanese.

6. Latin

Latin has a one-pattern accent system. The system is sometimes described as a “mora-counting syllable-accent language”, and the analysis is often referred to as supporting evidence for the syllable-based analysis of Standard Japanese. It is claimed that both languages have this “mora-counting syllable-accent” character in common.

(13) Latin accentuation

‘Put stress on the syllable which is two moras before the last syllable.’ (J. McCawley 1968: 60-61)

However, the Latin accent system can be described without the concept of the mora, if we have the concept of ‘weak’ unit and accent shift.

(14) Latin accentuation (my version)

‘Put accent on the penultimate syllable. When it is the light syllable, that is, the CV structure, shift the accent onto the antepenultimate syllable, so far as it exists.’

Schematically, the Latin accentuation can be represented as in (15). The accent is entirely predictable from the syllable structure. Latin is a syllable-counting syllable-accent language, not a mixture of “mora-counting syllable-accent” language.

(15) \(\square\); 
\(\square\)\(\square\); 
\(\square\)\(O\)\(\square\), \(\square\)\(O\)\(\square\); 
\(\square\)\(O\)\(\square\), \(\square\)\(O\)\(\square\); 
\(\square\)\(O\)\(\square\), \(\square\)\(O\)\(\square\); 
…

(\(\square\): any syllable, \(O\): heavy syllable, \(o\): light syllable, ““”: accent on the following syllable)

7. Discussion

I define the ‘weak’ unit as the unit of the phonetically weak property that cannot carry the accent kernel in the language.

There are two subcategories of the weak units. One is the case where the unit is intrinsically weak in itself, without reference to the following unit. The moraic phoneme(s) in Japanese dialects and the light syllable in Latin fit the case.

The other is the case where not only the unit but also the following one is relevant, and the status is determined relatively. Thus, in the Shizukuishi dialect, \(N^\prime\) before \(W\) is ‘weak’, but \(N^\prime\) before \(N\) or \(N^\prime\) before \(M\) is not treated as ‘weak’. See the examples /baka[musuko]/ vs. /haruga[sumi]/ and /syuugoosya[siN]/ in (11). Compare also ON''W vs. ON''N, and ON'W vs. ON'N in (12) in the Kanazawa dialect.

We can explain the phenomena phonetically. Weaker unit behaves as it is before strong unit. However, when the following unit is equal or weaker, the preceding “weak” unit withstands and behaves as if it is not weak.
8. Conclusions

Now, some varieties of the ‘weak’ units are listed as in (16).

(16) Types of the ‘weak’ unit
Izu dialect: ‘Q’ (moraic check)
Kikai-jima dialect: ‘Q’ and ‘Ñ’ (moraic nasal)
Tokyo dialect: ‘M’ (all moraic phonemes: Q, Ñ, R, J)
Shizukuishi dialect: ‘M’ and ‘N before W’
(a narrow syllable before a wide syllable)
Kanazawa dialect: ‘M’ and ‘N” before W’
(a voiced narrow syllable before a wide syllable) on one hand, ‘N’
before W’ (a voiceless narrow syllable before a wide syllable) on
the other.
Latin: □□□□# (a light penultimate syllable in words of more than three syllables)

Judging from this list, Standard Japanese is ‘weak’ just on the moraic phonemes, and thus appears to be a “syllable-accent” language. Syllable-based analysis does not apply to the other dialects. Instead of dealing with Standard Japanese as a “mora-counting syllable-accent language”, I propose that it is a “mora-counting mora-accent language”, with the moraic phonemes defined as ‘weak’. The counting unit and the bearing unit are the same in (16), mora in all the Japanese dialects, and syllable in Latin. This framework with ‘weak’ units and accent shift has a wider scope than the so-called “universal” syllable-based approach.

Acknowledgements

This study was supported by a Grant-in-Aid for Scientific Research (B) # 22320085 (headed by Nobuko Kibe) from the Japan Society for the Promotion of Science.

Notes

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References