There are about a dozen classes of suffixes in Japanese that form an intransitive/transitive (or unaccusative/accusative) pair. In this squib I will show the accentuation pattern associated with such suffixes and discuss an implication for Lexical Phonology (see Kiparsky (1982), Mohanan (1982)). In particular, I will show that the Japanese data exhibit the same type of problem seen in English (Aronoff (1976), Halle and Vergnaud (1987a,b)) and Chamorro (Halle (1987), Halle and Vergnaud (1987a,b)), in that they constitute counterexamples to the Stratal Ordering Hypothesis, a major tenet in Lexical Phonology originally proposed by Siegel (1974). I assume some basic notions and mechanisms regarding stress/accent assignment within the model of Lexical Phonology discussed in Halle and Vergnaud (1987a,b) and Tenny (1986).

Relevant sets of data are given in (1)–(4). The gerundive form of a verb (-te form) is used throughout. The suffix -te is recessive (unaccented) and does not affect the accentuation pattern of the root plus the intransitive/transitive suffix. Thus, the suffixation of -te allows us to tell where the accent of the root plus (the intransitive/transitive) suffix is located. The accentuation in (1)–(4) is based on the Tokyo dialect.1

I would like to thank Stuart Davis, Nick Clements, and two anonymous LI reviewers for their valuable comments and suggestions on earlier versions of this squib. All errors are my responsibility.

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1 The transitive versions in (1), (2), and (4) include the epenthetic -i- just before the gerundive -te. (This is to avoid a surface consonant cluster, -s-te-.) The intransitive forms in (2) and (3) undergo a phonological rule that changes r to t (in order to prevent the surface occurrence of another consonant cluster, -r-te-).
(1) **Intransitive** | **Transitive**
--- | ---
-\(rel\)/-s  

<table>
<thead>
<tr>
<th>Intransitive</th>
<th>Transitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. taô-re-te</td>
<td>taô-s-i-te</td>
</tr>
<tr>
<td>b. nagâ-re-te</td>
<td>nagâ-s-i-te</td>
</tr>
<tr>
<td>c. mù-re-te</td>
<td>mù-s-i-te</td>
</tr>
<tr>
<td>d. tubu-re-te</td>
<td>tubu-s-i-te</td>
</tr>
</tbody>
</table>

(2) -\(/r\)/-s  

<table>
<thead>
<tr>
<th>Intransitive</th>
<th>Transitive</th>
</tr>
</thead>
</table>
| a. naô-t-te | naô-s-i-te | ‘mend’  
\(<\) naо-r + te |
| b. nokô-t-te | nokô-s-i-te | ‘leave behind’  
\(<\) noko-r + te |
| c. kutugâe-t-te | kutugâe-s-i-te | ‘turn down’  
\(<\) kutugae-r + te |
| d. tôo-t-te | tôo-s-i-te | ‘go through’  
\(<\) too-r + te |
| e. wata-t-te | wata-s-i-te | ‘pass/cross’  
\(<\) wata-r + te |

(3) -\(arl\)/-e  

<table>
<thead>
<tr>
<th>Intransitive</th>
<th>Transitive</th>
</tr>
</thead>
</table>
| a. tasuk-â-t-te | tasûk-e-te | ‘help’  
\(<\) tasuk-ar + te |
| b. sag-â-t-te | sâg-e-te | ‘go down’  
\(<\) sag-ar + te |
| c. mag-a-t-te | mag-e-te | ‘bend’  
\(<\) mag-ar + te |
| d. kim-a-t-te | kim-e-te | ‘decide’  
\(<\) kim-ar + te |

(4) -\(il\)/-os  

<table>
<thead>
<tr>
<th>Intransitive</th>
<th>Transitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. ôk-i-te</td>
<td>ok-ôs-i-te</td>
</tr>
<tr>
<td>b. ôr-i-te</td>
<td>or-ôs-i-te</td>
</tr>
<tr>
<td>c. ôt-i-te</td>
<td>ot-ôs-i-te</td>
</tr>
<tr>
<td>d. horôb-i-te</td>
<td>horob-ôs-i-te</td>
</tr>
</tbody>
</table>

The morphemes -\(rel\)/-s, -\(/r\)/-s, -\(arl\)/-e, and -\(il\)/-os, among others, form the intransitive/transitive pairs by their suffixation to a verb root. It is not clear what determines which suffix is chosen except for some cases that appear to be derived from adjectives.\(^2\) I will call ‘root’ the portion to which the intransitive/transitive suffixes are attached, and ‘stem’ the output of this suffixation. The asterisk in (1)–(4) indicates the location of the accent. I adopt the three-way classification of Japanese suffixes on the basis of their accentuation system discussed in Tenny (1986): recessive (unaccented), dominant-accented, and dominant-shifting. Recessive (unaccented) suffixes do not affect the accent on the stem/root regardless of whether the stem/root is accented or unaccented. The accent of a dominant-accented suffix overrides the stem/root accent, if there is one, always determining the surface accent. With a dominant-shifting suffix,

\(^2\) In such cases the root takes the -\(arl\)/-e suffixes.
when the stem/root is accented, that accent shifts; when the stem/root is unaccented, it remains unaccented.

The accentuation pattern is consistent in (1) and (2) in that the location of the accent is the same in both the intransitive and the transitive versions. That is, both versions have their accent on the final mora of the root in (1a–c) and (2a–b), on the penultimate mora of the root in (2c–d), and nowhere in (1d) and (2e). Given the classification described above, we can assume that the suffixes -rel-s and -rel-s are recessive suffixes and thus that the accent patterns indicated in (1)–(2), including unaccented ones, are inherent to the root.

In (3) the parallel accentuation pattern between the intransitive and transitive stems observed in (1)–(2) is lost. This suggests that either the intransitive suffix -ar or the transitive suffix -e may have the effect of shifting the inherent accent of the root. Assuming with Tenny (1986) that the Japanese predicate morphology limits recessive suffixes only to recessive-unaccented, the intransitive suffix -ar cannot be a recessive suffix because, if it were, no accent should be expected on that suffix, unlike the intransitive stems in (3a–b). If -ar is a dominant-accented suffix, all the intransitive stems in (3a–d) should receive their accents in the same position. However, this is not the case since the intransitive stems in (3c–d) are accentless. Therefore, -ar is not a dominant-accented suffix but a dominant-shifting suffix. Recall that, with a dominant-shifting suffix, the accent of an accented root shifts, whereas the accent of an unaccented root does not change. This means that in (3a) and (3b) the accent is underlingly on the root and the suffixation of -ar causes the accent to shift. The roots in (3c) and (3d), on the other hand, must be unaccented; when -ar is suffixed to these roots, there is no root accent that can be shifted.

What is the status of the transitive suffix -e in (3)? Since the root plus the suffix -e in (3c) and (3d) is unaccented (where the roots mag- and kim- were considered unaccented above), -e cannot be a dominant-accented suffix. This means that the choice is between dominant-shifting or recessive. As I argued above, -ar in (3) is a dominant-shifting suffix. Then, the underlying accent on the root tasuk-, (3a), for example, is either on the first mora or on the second mora. Now, if we assume that -e is also dominant-shifting, then the underlying accent on the root tasuk- would be on the first mora. However, there are no surface allomorphs of tasuk- with accent on the first mora. Thus, it can be concluded that -e is not dominant-shifting but simply a recessive suffix.

Turning to (4), the small set of verb roots that take -i as an intransitive suffix invariably have their accent within the root. With the transitive suffix -os, on the other hand, the accent always surfaces on that suffix. Thus, we assume that -i is a recessive suffix and that -os is a dominant-accented suffix.

Thus far, I have classified a few of the above-mentioned
intransitive/transitive suffixes according to their accentuation pattern. Such a classification, especially the status of some of the intransitive/transitive suffixes as recessive, has an interesting implication for the organization of Japanese predicate morphology. Halle and Mohanan (1985) claim that dominant suffixes are cyclic, whereas recessive suffixes are noncyclic, and furthermore that the concatenation of a recessive suffix before a dominant suffix is not allowed. According to Halle and Mohanan, Vedic Sanskrit and English are relevant examples that maintain such a constraint. In English, for example, grammaticalness is well-formed because -ic and -al are cyclic, affecting the stress pattern (that is, they are dominant suffixes), whereas -ness is noncyclic, lacking such an effect on stress (that is, it is a recessive suffix). On the other hand, *guardedity is not possible since -ed, which is recessive (noncyclic) is followed by -ity, which is dominant (cyclic).

A question immediately arises concerning the universality of this constraint. If we assume that this constraint on the configuration of two types of suffixes applies universally, it is apparently contradicted by the predicate morphology of Japanese. The stem formed by adding the recessive suffixes -re/-s, -rl-s, and -e to the root can further be suffixed by another morpheme. For example, all the stems in (1)–(4) can be suffixed by the non–past tense suffix -(r)u and the informal tentative suffix -(y)oo, among others. Thus, (5) and (6) show the application of such morphological processes to the (a) examples of (1)–(4):

(5)  -(r)u
    tao-re-ru  tao-s-u
    nao-r-u  nao-s-u
    tasuk-år-u  tasuk-ê-ru
    ok-l-ru  ok-ōs-u

(6)  -(y)oo
    tao-re-yōo  tao-s-ōo
    nao-r-ōo  nao-s-ōo
    tasuk-ar-ōo  tasuk-e-yōo
    ok-i-yōo  ok-os-ōo

As partially observed from (5) and (6), the non–past tense suffix -(r)u is dominant-shifting and the informal tentative suffix -(y)oo is dominant-accented. It is not uncommon for the intransitive/transitive suffixes, regardless of whether they are dominant or recessive, to be followed by another dominant suffix. Such suffixes are not limited to -(r)u and -(y)oo, however. The dominant suffixes listed in (7) can be suffixed to verbal stems just like the two suffixes in (5)–(6):

(7)  -masu  (formal verbal suffix)
    -sase-  (causative suffix)
    -azu  (negative suffix)
    -ana-  (negative suffix)
    -rare-  (passive suffix)
The possibility of adding a dominant suffix to a form ending in a recessive intransitive/transitive suffix in Japanese contradicts the view that a recessive suffix must follow a dominant suffix. Such an accentuation property associated with the predicate morphology in Japanese is quite distinct from the stress/accident property as observed by Halle and Mohanan (1985) for Vedic Sanskrit and English. Thus, the Japanese data presented above argue against the universality of the claim that dominant suffixes must precede recessive suffixes. This means that, in Japanese, dominant and recessive suffixes can occur on any given stratum. This point is entirely consistent with the recent proposal by Halle and Vergnaud (1987a,b), who claim, based partly on some affixation data from English and Chamorro, that a dominant prefix or suffix is affixed on a plane different from that of the root/stem, whereas a recessive prefix or suffix is affixed on the same plane as the root/stem, and that whether or not a given affix is cyclic is an idiosyncratic property of that affix. The Japanese data thus constitute additional support for the modifications of Lexical Phonology along the lines proposed in Halle and Vergnaud (1987a,b).

References


