MARKED VERSUS MARKEDNESS: A CASE AGAINST THE BRACKET ERASURE CONVENTION

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0. The English adjective-forming suffix -ed has three phonological forms depending on its preceding segment: /id/ after a dental, /t/ after a voiceless consonant other than a dental, and /d/ elsewhere. This patterning is almost identical to the inflectional suffix -ed. However, the derivational -ed diverts from its inflectional counterpart in some respect:1 when followed by -ly or -ness, the suffix is realized as /id/ no matter what segment precedes it (e.g. markedness [maːkidnis], designedly [dizainidli] vs. marked [maːkt], designed [dizaind]). In this short essay we will consider this property of the derivational suffix and explore its theoretical consequences.

1. Consider the following (We omit the -edness examples since their behavior is identical with the -edly case. Cf. Kenyon and Knott 1953.):

   a. marked [maːkt]    markedly [maːkidli]
   confessed [konfesit] confessedly [kɔnfishidli]
   supposed [spouzd]    supposedly [spouzidli]
   designed [dizaind]   designedly [dizainidli]
   avowed [ǝvaud]       avowedly [ǝvauidli]

   As can be seen from the paradigm above, the adjective-forming suffix -ed followed by -ly or -ness is pronounced as [id] after a voiceless obstruent (markedly), after a voiced obstruent (supposedly), after a sonorant consonant (designedly), or even after a vowel (avowedly). It is evident, therefore, that the case in question is not conditioned by the segmental fea-

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1 Another discrepancy between inflectional -ed and the adjective-forming -ed is that, when attached to certain words that end in a velar, it is pronounced as [id] (e.g. naked [neikid], four-legged [fɔːlegid]).

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tutes of the preceding segment.

2. In this essay we shall propose that it is the structure of the preceding syllable that is crucially involved in this case. Suppose that the \textit{-ed} were /\textit{t}/ or /\textit{d}/ instead of /\textit{id}/. In order to be a well-formed phonological form of English, the /\textit{t}/ or /\textit{d}/ should be resyllabified either to the onset of the following syllable or to the rhyme of the preceding syllable. The former option is not available, since in English there is no onset of the following form:

\begin{equation}
(2) \begin{array}{cccc}
\text{a. } & *O & \text{b. } & *O \\
\text{t} & \text{n} & \text{d} & \text{n} \\
\text{c. } & *O & \text{d. } & *O \\
\text{t} & \text{l} & \text{d} & \text{l}
\end{array}
\end{equation}

If the latter option were adopted, the skeletal form of the preceding rhyme would be VCCC, VVCC, VCC, or VVC. In English, the rhyme that consists of four segments can appear only in the word-final position. Although the rhyme that consists of three segments does occur word-internally in English (e.g. assumption (VCC), mountain (VVC)), the final segment of the rhyme can never be /\textit{t}/ or /\textit{d}/. Therefore, the /\textit{t}/ or /\textit{d}/ cannot be resyllabified to the preceding syllable.

In order to resolve this undesirable situation, a rhyme (or a syllable) is created by inserting a vowel before the dental consonant. This rhyme creation process can be formulated as the following rule:

\begin{equation}
(3) \quad \text{Rh} \xrightarrow{\text{V}} \text{d} \quad / \quad \text{Rh} \xrightarrow{\text{O}} \text{d} \quad \{/\text{l}/ \text{n}/\}
\end{equation}

This rule inserts a vowel before /\textit{d}/ and makes them a rhyme if /\textit{d}/ is preceded by a branching rhyme and followed by /\textit{l}/ or /\textit{n}/. This rule predicts that when the preceding rhyme does not branch, i.e. when the rhyme consists of a single short vowel, no new rhyme is created and -\textit{ed} cannot be realized as /\textit{id}/. However, it is hard to find relevant examples, since, as Liberman and Prince 1977 point out, word-final short vowels tend to be lengthened before the -\textit{ed} is attached. As for the inserted vowel, we assume, following Anderson 1982, that it is phonetically realized as a mid-central vowel, [i] or [e].

However, this rule is too powerful since it also applies to \textit{blindly} and \textit{loudly}. These words have a superheavy syllable that ends with a dental consonant before -\textit{ly} or -\textit{ness} and, therefore, satisfy the conditions of the rule. However, they do not permit a vowel to be inserted before /\textit{d}/: we would not, for example, get either *[\textit{blainidli}] nor *[\textit{lauidli}].
The only way to prevent the rule from applying to blindly or loudly is to include the bracket before the dental. Since the dental in designedly or avowedly is an affix, -ed, it is immediately preceded by a bracket. On the other hand, the /d/ in blindly or loudly is not an affix and is not preceded by a bracket. If we adopt the idea the vowel insertion rule would be revised as the following:

\[
(4) \quad \begin{array}{c}
\text{Rh} \\
\text{d} \\
\text{V} \\
\text{d} \\
\end{array} \quad \begin{array}{c}
\text{Rh} \\
\text{O} \\
\text{l/n} \\
\end{array}
\]

Thus we can correctly distinguish the designedly case and the blindly case.2, 3

3. The account of the phenomenon presented above has some theoretical implications. In the framework of Lexical Phonology, Pesetsky 1979 proposes the following Bracket Erasure Convention (BEC):

(5) Bracket Erasure Convention

Given the nested constituents

\[[n \ldots [n-1 \ldots n-1] \ldots n]\]

the last rule of cycle j is: Erase brackets j – 1.

The analysis of the -ed presented above runs counter to BEC. The configuration that the rhyme creation rule applies to is \([n-1 \ldots d_n][l/n][n+1]\).4

2 Thus, blindly and loudly have to retain the problematic syllable configurations as they are. In the case of blindness, however, the difficulty can be avoided by dropping the /d/ with the resulting pronunciation [blainnis].

3 Two anonymous reviewers have suggested that the words which have an /r/ sound before -ed, such as coveredness ([k\text{\texttt{v}}\text{\texttt{d}}n\text{\texttt{n}}is]), may pose a problem: in these words, it appears that no vowel is inserted in the position before /d/. This problem may be explained in the following way. The rhyme-final /r/ sound turns the preceding vowel into [ə], a mid-central vowel, and then the /r/ usually is dropped. Thus, the phonological representation of coveredness will be [[[k\text{\texttt{v}}\text{\texttt{d}}]d]n]is]. This representation needs no application of the rhyme-creation, since no undesirable rhyme configuration is created. Even if the rhyme-creation applies and a mid-central vowel is inserted, as defined above, it would create two adjacent mid-central vowels, which is prohibited in English. In this case, therefore, the application of the rule will be blocked.

The two anonymous reviewers have also presented stainedness ([steindnis]) as a problematic example. At present we cannot check all the possible pronunciations of this word because of the limited data available. But if it is confirmed that this word can never be pronounced as [steinidnis], we should stipulate that it is an exception.

4 An anonymous reviewer has pointed out that, in such cases as ill-advisedly, there may be more than one bracket between /d/ and /nis/ or /l/i in the formulation of the rhyme-creation. It does not pose any problem, however, since the rule applies when the /d/ and /nis/ or /l/i/ are segmentally adjacent regardless of the number of the brackets between them.
The rule in question applies at the cycle n+1, since the conditions of the rule are not satisfied until the /d/ is followed by /l/ or /n/. According to BEC, this rule can include the n bracket, but it cannot mention the n−1 bracket. Nevertheless, the rule does refer to the bracket of n−1. This is the situation that BEC prohibits.

Thus, the analysis of -ed in this article rejects BEC. Recently, BEC suffers serious deficiencies. Based on Malayalam data, Mohanan 1982 suggests a weak version of BEC. He proposes that the convention be relaxed to ‘Erase the internal brackets at the end of each stratum.’ A more radical proposal is made by Cole 1987. She claims that BEC is not applicable until all the rules of the lexical level have been applied.

In this article, we have shown, on the basis of English data, that Pesetsky’s BEC is too strong and needs some modifications along the line of Mohanan’s or Cole’s. However, we have not yet determined which of the weaker versions, Mohanan’s or Cole’s, is most suitable: since both of the adjective-forming suffix -ed and the suffixes -ly and -ness are attached at the same lexical stratum (Cf. Selkirk 1982), our analysis does not conflict with either proposal. This question requires further study.

REFERENCES

Pesetsky, David. 1979. Russian morphology and lexical theory. Ms. MIT.