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1 Introduction

A growing body of research (e.g. Adger and Smith 2005, Adger to appear) attempts to bridge the gap between Minimalist theories of syntax (Chomsky 1995, 2000) and the empirical study of Labovian variation and change in progress (e.g. Labov 1994; for overviews see Chambers, Trudgill, and Schilling-Estes 2002). In this paper, I discuss how variation might be addressed within the theoretical framework of Distributed Morphology (DM) (Halle and Marantz 1993, Embick and Noyer to appear, and related work). The paper examines the case of \textit{weren't} leveling, a pattern of morphosyntactic variation and change currently in progress on Smith Island, Maryland. This case provides an empirical argument that significant mechanisms of variation should be located in the inventory and feature structure of DM’s Vocabulary and the interaction between Vocabulary Items and operations in the morphological component.

2 Labovian Variation and Change in Progress

Labovian variation (a.k.a. inherent variation, variability, sociolinguistic variation) is when “speakers use different forms to express the same meaning” (Labov 1995:115). In other words, this kind of variation is “the nondeterministic choice of form” (Adger to appear), as opposed to allomorphy. A working definition follows.

(1) Labovian variation
   a. Individuals use variant morphosyntactic forms;
   b. The variant forms appear in the same morphosyntactic environment (variants are not allomorphs in complementary distribution);
   c. The variant forms do not express different lexical or truth-conditional semantics, nor different morphosyntactic functions.

*My sincerest thanks go to Donna Lardiere, David Adger, Kleanthes Grohmann, and Natalie Schilling-Estes; to my collaborator Jennifer Mittelstaedt; to Matt Bauer and Andrew Nevins; to the organizers of PLC 30 and its participants; to David Embick and Rolf Noyer for the DM session; and to the people of Smith Island.

Differences in linguistic forms observed between individuals or speech communities (i.e., cross-linguistic/dialectal variation) are to be explained by a theory of principles and parameters (e.g. Chomsky and Lasnik 1995, Kayne 1996). It has been claimed that Labovian variation in morphosyntax is the result of multiple parameter settings (e.g. Henry 1995, 2002), and that competition between grammars, perhaps as defined by multiple parameter settings, yields morphosyntactic change over time (e.g. Kroch 1989, 1994).

Labovian variation must be distinguished from the familiar phenomenon of allomorphy, where variant forms appear in complementary distribution as determined by aspects of their morphosyntactic or morphophonological environment. The appearance of Labovian variants can be probabilistically influenced, but crucially is not determined, by aspects of their morphosyntactic or morphophonological environment.

Labovian variation usually, perhaps always, involves the sociolinguistic choice of form. Variants "convey exactly the same grammatical meaning," but "very different social meanings" (Chambers 2002:3-4). The empirical, sociolinguistic study of Labovian variation yielded the apparent-time method for observing language change in progress (Bailey et al. 1992, Labov 1994), "one of the cornerstones of research in language variation and change" (Bailey 2002:312). For reasons of space, this paper concentrates on the mechanisms of Labovian variation, and does not consider the role played by these mechanisms in morphosyntactic change as observed in apparent time.

3 Smith Island Weren't Leveling: A Change in Progress

Smith Island, Maryland has a small, homogeneous population of 364 according to the U.S. Census (2000). The community has been geographically and socially isolated throughout its history, and the declining seafood-based economy and ongoing land erosion are causing population attrition. Dialect death by "concentration" is a pattern of variation and change in progress first documented on Smith Island (Schilling-Estes 1997, Schilling-Estes and Wolfram 1999, Schilling-Estes 2000, Parrott 2002, Wolfram and Schilling-Estes 2003, Schilling-Estes and Wolfram 2003, Trester 2003, Mittelstaedt to appear), whereby usage of certain phonological and morphosyntactic variants (assumed to be socially characteristic) increases in apparent time. As a result, "linguistic distinctiveness is heightened among a reduced number of speakers" (Schilling-Estes and Wolfram 1999:488) for social reasons, here to express solidarity in a moribund community.
3.1 *Was* and *Were* Leveling

The descriptive term "leveling" (a.k.a. analogical leveling or regularization) refers to a pattern of variation whereby one morphological form—the leveled form—appears variably in the morphosyntactic environments of other forms. If usage of the leveled form reaches 100%, the result is categorical (i.e. non-variable) syncretism. However, actual usage of leveled variant forms need not increase: leveling variation may remain stable over apparent time, decline over time, or even reverse trajectory over time (e.g. Hay and Schreier 2004).

Leveling variation in the forms of past-tense *be* (*was/were*) is common in diverse varieties of English. *Was* leveling (variable usage of the form *was* with 2nd Sg. and plural subjects) is particularly common, and has been documented in African-American English among many other varieties. As the following examples show, the leveled form *was* also appears with contracted negation.

(2) *Was* leveling, attested (Tagliamonte and Smith 2000)
   a. And then you was away onto a fishing station.
   b. And we was the only colour family.
   c. They was picking up wood and thing.
   d. My feet was sticking up and she pulled me feet up.

3.2 *Weren’t* Leveling on Smith Island, MD

Leveling to *was* is attested on Smith Island (examples from Mittelstaedt in progress and personal communication, with speaker sex and year of birth).

(5) Smith Island *was* leveling, attested
   a. The roots was going just like this.  (F, 1926)
   b. The boats was a lot slower.        (M, 1951)
(6) Smith Island was leveling with negation, attested
There just wasn’t enough oysters. (M, 1930)

Leveled were is completely unattested on Smith Island. However, leveling to the form weren’t is increasing rapidly in apparent time on Smith Island, reaching nearly 100% usage for generation groups III and IV (see figures below).

(7) a. * I were scared. (unattested)
b. * She were not scared. (unattested)

(8) Smith Island weren’t leveling, attested
a. I weren’t able to answer. (M, 1930)
b. She weren’t that close to you. (F, 1926)
b. The man weren’t there every day. (M, 1930)

<table>
<thead>
<tr>
<th>Generation Group</th>
<th>#was/ #leveling environs</th>
<th>#wasn’t/ #leveling environs</th>
<th>#were/ #leveling environs</th>
<th>#weren’t/ #leveling environs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%was</td>
<td>%wasn’t</td>
<td>%were</td>
<td>%weren’t</td>
</tr>
<tr>
<td>Generation I</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 1899-1932</td>
<td>34/99</td>
<td>5/6</td>
<td>0/418</td>
<td>6/27</td>
</tr>
<tr>
<td>(7 persons)</td>
<td>34.3%</td>
<td>83.3%</td>
<td>0.0%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Generation II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 1942-1961</td>
<td>17/116</td>
<td>2/9</td>
<td>0/462</td>
<td>17/36</td>
</tr>
<tr>
<td>(7 persons)</td>
<td>14.7%</td>
<td>22.2%</td>
<td>0.0%</td>
<td>47.2%</td>
</tr>
<tr>
<td>Generation III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 1965-1971</td>
<td>11/49</td>
<td>0/2</td>
<td>0/214</td>
<td>12/12</td>
</tr>
<tr>
<td>(9 persons)</td>
<td>22.4%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Generation IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. 1975-1987</td>
<td>6/51</td>
<td>0/2</td>
<td>0/254</td>
<td>27/28</td>
</tr>
<tr>
<td>(6 persons)</td>
<td>11.8%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>96.4%</td>
</tr>
<tr>
<td>Totals</td>
<td>68/315</td>
<td>7/19</td>
<td>0/1348</td>
<td>62/103</td>
</tr>
<tr>
<td>(29 persons)</td>
<td>21.5%</td>
<td>36.8%</td>
<td>0%</td>
<td>60.1%</td>
</tr>
</tbody>
</table>

Table 1: Past-tense be leveling on Smith Island in apparent time (Schilling-Estes 2000, adapted from Wolfram and Schilling-Estes 2003)

This pattern of variation (weren’t leveling without were leveling, with or without was leveling) has been documented in various dialects of the Mid-

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1This expletive sentence is the only token (1/4) of leveled wasn’t in Mittelstaedt’s sample.

4 Adger and Smith’s Minimalist Lexical Analysis

Adger and Smith (2005, see also Adger to appear) argue for a Minimalist approach to Labovian variation. On their analysis, variants are syntactic terminals with the same semantically interpretable syntactic features, but different uninterpretable features, and thus having correspondingly different spell-out morphemes at PF. This captures the “multiple form/single meaning notion of a linguistic variable” (Adger and Smith 2005:173). Although their analysis must also invoke a post-syntactic morphological component, it does not make use of any specific mechanisms of DM theory.

4.1 A Minimalist Lexical Analysis of (Buckie) Was Leveling

Adger and Smith analyze was leveling in the village of Buckie, Scotland, where there is a “relatively rare . . . variable/categorical split” (2005:167) in the variable’s morphosyntactic environment, such that leveled was is untested with 3rd Pl. pronouns. For reasons of space, I cannot review Adger and Smith’s analysis of the Buckie pattern, but only their analysis of the more common was leveling pattern as outlined above.

I follow Adger and Smith in assuming that copular be is a verbal head, and that auxiliary be is the head of an AuxP above VP. Both kinds of be raise by head movement to adjoin with T. I also follow them in setting aside questions about the expanded internal structures of IP/TP and VP/vP. Because they (and others) report that the “copula vs. auxiliary status of the verb” was not statistically “significant for the use of [leveled] was” (2005:174, fn. 6), I also disregard the distinction. Following Harley and Ritter (2002), a Person feature can have a positive (+) value of 1 or 2; third person corresponds to a negative (-) value for Person.

(9) Lexical item T, unchecked and unvalued

\[ T[\text{tense:past}, \text{ucase:nom}, \text{unum:}, \text{upers:}] \]

(10) \{be T\}, checked and valued, with morpheme spell outs

\[ I \ldots [\text{be} T[\text{tense:past}, \text{ucase:nom}, \text{unum:sing}, \text{upers:1}]] \]

→ spells out as was

\[ You \ldots [\text{be} T[\text{tense:past}, \text{ucase:nom}, \text{unum:sing}, \text{upers:2}]] \]

→ spells out as were

\[ She \ldots [\text{be} T[\text{tense:past}, \text{ucase:nom}, \text{unum:sing}, \text{upers:-}]] \]

→ spells out as was
We ... [be T[tense:past, ucase:nom, unum:pl, upers:1]]
→ spells out as were
You ... [be T[tense:past, ucase:nom, unum:pl, upers:2]]
→ spells out as were
They ... [be T[tense:past, ucase:nom, unum:pl, upers:-]]
→ spells out as were

On Adger and Smith’s approach, “... variation will arise if there is another lexical item [for T, JKP] which can combine with the same pronominals to give the same output of interpretable features, but which has a different featural content in terms of uninterpretable features” (2005:166). This lexical item T2 has no uninterpretable number feature. Additionally, Adger and Smith need to invoke morphology: “... the featural content of [be T] differs from that of [be T], and the morphology can be sensitive to this, spelling out the former as was” (2005:166).

(11) Lexical item T2, unchecked and unvalued
    T2[tense:past, ucase:nom, upers:]
(12) [be T2[tense:past, ucase:nom, upers:±]]
    → spells out as was

4.2 The Problem of Weren’t Leveling

We could capture were leveling in this system by assuming a lexical item T3 that has no uninterpretable Person features. T3 will check features with any subject, and will spell out as were with any specification of number. However, this kind of analysis predicts concurrent were leveling, contrary to fact.

(13) T3[tense:past, ucase:nom, unum:]
(14) [be T3[tense:past, ucase:nom, unum:±]]
    → spells out as were

We could try adding an uninterpretable negation feature to form the lexical item T3-NEG, and let it spell out as were. But if uninterpretable features must be checked all at once (as in Chomsky 2000), then T3-NEG would seem uncheckable; if not (as in Castillo, Drury and Grohmann 1999), T3-NEG might predict were leveling with not, contrary to fact. Moreover, this analysis would require some kind of generative lexicon, explicitly rejected in DM theory (e.g. Marantz 1997, Embick and Noyer 2001).

(15) T3-NEG[tense:past, ucase:nom, unum:, uneg:+]
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Finally, we could posit that T3 is spelled out as *were* only when adjoined to negation, as specified in the spell-out rule.

But this move seems to undermine Adger and Smith’s lexical approach: why do we need a distinct lexical item T3 if will only spell out in the morphology after being adjoined with negation in the syntax? That is, why not instead have a distinct morphological spell out for T when it is adjoined to negation? This suggests a DM treatment, where mechanisms of Labovian variation are situated in the post-syntactic morphological component.

5 Distributed Morphological Mechanisms

In this section, I present a DM mechanistic analysis of Smith Island *weren’t* leveling (following Mittelstaedt and Parrott 2002, see also Parrott 2003). I adopt the same Minimalist syntax as Adger and Smith, augmented by DM (Halle and Marantz 1993, mostly following Embick and Noyer to appear).

5.1 Past-tense *be* suppletion and allomorphy in DM

In order to account for the suppletive forms of past-tense *be*, we can assume straightforwardly that *be* and T undergo Fusion in the morphological component. In this case, Fusion is fed by head movement in the syntax (the operation can also be fed by morphological Merger/Lowering.

We can capture the allomorphy of past-tense *be* by postulating that the Vocabulary Items below compete for Insertion into the target node created by Fusion of *be* and T. The most specified Vocabulary Item inserts *were* when the Person and Number features of the target node are valued 2<sup>nd</sup> Sg.;
an underspecified Vocabulary Item inserts *were* when the Number feature of the target node is valued Plural; and an elsewhere Vocabulary Item inserts *was* by default.²

(20) Postulated Vocabulary for past-tense *be*

\[
\begin{align*}
[be, 	ext{tense:past, unum:sing, upers:2}] & \quad \leftrightarrow \quad /\text{wəz}/ \\
[be, 	ext{tense:past, unum:pl}] & \quad \leftrightarrow \quad /\text{wəz}/ \\
[be, 	ext{tense:past}] \text{ (elsewhere)} & \quad \leftrightarrow \quad /\text{wəz}/
\end{align*}
\]

5.2 Past-tense *be* and negation in DM

I assume that one difference (not necessarily the only difference) between contracted negation *-n’t* and full negation *not* is that the latter is possibly a specifier or adjunct to some other functional head X (as illustrated below); the former is head-joined to [be T] at some stage in the derivation, either by syntactic head movement or by post-syntactic morphological Merger (as illustrated below).

(21) Neg, *be*, and *T*

\[
\begin{array}{c}
\begin{array}{c}
T \rightarrow XP \\
T \rightarrow Neg \rightarrow X(P) \\
\text{be} \\
\text{X} \\
\text{AuxP} \\
\text{...}
\end{array} \\
\begin{array}{c}
T \rightarrow NegP \\
Neg \rightarrow AuxP \\
\text{be} \rightarrow T
\end{array}
\end{array}
\]

5.3 *Weren’t* as negative suppletion

Schilling-Estes and Wolfram (1994:294) suggest that *weren’t* leveling results from a “remorphologization” of negation that yields “suppletive-like nega-

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²Andrew Nevins (personal communication) points out that *was/were* suppletion could also be captured by positing an Impoverishment rule that deletes plural in the context of second person. Then we would need only two Vocabulary Items:

(i) *be, tense:past, unum:sing* \( \leftrightarrow /\text{wəz}/ \\
(\text{elsewhere}) \leftrightarrow /\text{wəz}/
tors that function as unanalyzable units,” analogous to the form ain’t. Mittelstaedt and Parrott (2002, see also Parrott 2003) implement this suggestion in DM, proposing that weren’t leveling arises from a Vocabulary Item for past-tense be that is unspecified for Person and Number features, but includes a Negation feature.

(22) Postulated Vocabulary Item for weren’t

\[\text{[be, tense:past, neg:+]} \leftrightarrow /\text{wənt/}\]

Insertion of this Vocabulary Item requires morphological Fusion of the Neg terminal with the [be T] terminal. Be and T must be Fused for Insertion of suppletive was/were; head-adjunction/Merger of Neg for contracted -n’t feeds Fusion. This explains why weren’t leveling only occurs with contracted negation and never with full negation not.

(23) Morphological Fusion of be, T, and Neg

\[
\text{NegP} \quad \text{Neg} \quad \text{AuxP} \quad \text{Neg} \quad \text{AuxP}
\]

This Vocabulary Item should not compete for Insertion, since its morphosyntactic features are a subset of any target terminal only when Fusion has applied to [be T] and Neg—and then weren’t will be the only Insertable Vocabulary Item. Non-competition of Vocabulary is indicated below with a dashed and dotted line.

(24) Non-competition of weren’t and was

\[
\text{[be, tense:past, neg:+]} \leftrightarrow /\text{wənt/}
\]
\[
\text{[be, tense:past, unum:sing, upers:2]} \leftrightarrow /\text{wəz/}
\]
\[
\text{[be, tense:past, unum:pl]} \leftrightarrow /\text{wəz/}
\]
\[
\text{[be, tense:past] (elsewhere)} \leftrightarrow /\text{wəz/}
\]

On this analysis, Fusion must apply late in the morphological component, after the first search and Insertion of Vocabulary. Kandybowicz (2006)
References

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