

A Distributed Morphology account of *weren't* leveling

1. Introduction and goals

In this paper, we present a formal analysis of *weren't* leveling using the theory of Distributed Morphology (DM) (Halle and Marantz 1993). We have the following goals:

- to give an explicit theoretical account of *weren't* leveling's unusual properties.
- to suggest a linguistic (specifically, morphological) motivation for paradigm leveling in general.
- to illustrate the usefulness of sociolinguistic variation data and methodologies in addressing issues of importance to theoretical linguistics (e.g., the nature of the interface between syntax and phonology, a.k.a. morphology).

2. *Weren't* leveling

In this section, we present some facts about *weren't* leveling, a phenomenon found independently in varieties of English spoken in Ocracoke, NC and Smith Island, MD (Schilling-Estes and Wolfram 1994; Schilling-Estes 2000; Schilling-Estes and Wolfram 2002).

2.1 Leveling

- **Leveling** is a descriptive term referring to process of morphological change whereby a particular morphological form replaces other the forms in a paradigm, resulting in partial or total syncretism.¹

¹ We also mean paradigm as a descriptive term, referring to a matrix of possible values for morphosyntactic features, which may or may not be realized by distinct phonological forms. We remain agnostic about whether paradigms are theoretically significant objects (see Bobaljik 2002 for more on this issue).

(1) Paradigm for 'standard' English² $be_{[+PAST]}$

	<u>Singular</u>	<u>Plural</u>
1st	<i>I was</i>	<i>we were</i>
2nd	<i>you were</i>	<i>(y'all) were</i>
3rd	<i>(s)he was</i>	<i>they were</i>

➔ Note that the same forms occur regardless of the presence or type of negation (*not* or *-n't*).

(2) Paradigm for 'standard' English $be_{[+PAST]}$ with negation

	<u>Singular</u>		<u>Plural</u>	
1st	<i>I was not</i>	<i>I wasn't</i>	<i>we were not</i>	<i>we weren't</i>
2nd	<i>you were not</i>	<i>you weren't</i>	<i>(y'all) were not</i>	<i>(y'all) weren't</i>
3rd	<i>(s)he was</i>	<i>(s)he wasn't</i>	<i>they were</i>	<i>they weren't</i>

2.2 Was leveling

Was leveling is common and well documented in many varieties of English, including African American Vernacular English, Appalachian and Ozark English, Southern English, and New York City English (see Schilling-Estes and Wolfram (1994) for an overview):

(3) Paradigm for English $be_{[+PAST]}$, after *was* leveling

	<u>Singular</u>	<u>Plural</u>
1st	<i>I was</i>	<i>we was</i>
2nd	<i>you was</i>	<i>(y'all) was</i>
3rd	<i>(s)he was</i>	<i>they was</i>

➔ Note that *was* leveling is not sensitive to the presence or type of negation:

(4) Paradigm for negated English $be_{[+PAST]}$, after *was* leveling

	<u>Singular</u>		<u>Plural</u>	
1st	<i>I was not</i>	<i>I wasn't</i>	<i>we was not</i>	<i>we wasn't</i>
2nd	<i>you was not</i>	<i>you wasn't</i>	<i>(y'all) was not</i>	<i>(y'all) wasn't</i>
3rd	<i>(s)he was</i>	<i>(s)he wasn't</i>	<i>they was not</i>	<i>they wasn't</i>

²Although we use the term 'standard' English, we believe there to be little evidence for the existence of such an entity, whether linguistic or sociolinguistic. We intend 'standard' English as a contrastive term with regard to the dialects we are investigating. That is, we mean 'standard' English to refer merely to some other variety of English (in all likelihood a variety spoken by the reader), where the phenomena in question do not occur. See Lippi-Green (1997) for more on what she dubs "the standard language myth."

- (5) Attested examples of *was* leveling
- a. We *was* sleeping.
 - b. They *was* picking up wood and thing.
 - c. You *wasn't* gonna do it or anything.
 - d. They *wasn't* prejudiced up there then.
- (from Tagliamonte and Smith 2000)

2.3 *Weren't* leveling

Weren't leveling has unusual properties that distinguish it from other known cases such as *was* leveling.

- *Weren't* leveling occurs ONLY with negation (there is no *were* leveling):³

- (6) * It *were* me.
(unattested, judged unacceptable by Smith Island informants)

- *Weren't* leveling occurs ONLY with *-n't* (there is no leveling with *not*):

- (7) * It *were* not me.
(unattested, judged unacceptable by Smith Island informants)

- (8) Paradigm for negated (*-n't*) English *be*_[+PAST], after *weren't* leveling

	<u>Singular</u>	<u>Plural</u>
1st	<i>I weren't</i>	<i>we weren't</i>
2nd	<i>you weren't</i>	<i>(y'all) weren't</i>
3rd	<i>(s)he weren't</i>	<i>they weren't</i>

- (9) Attested examples of *weren't* leveling (Ocracoke, NC)
- a. I called them and told them I *weren't* going to go to work that summer.
 - b. It *weren't* me and it *weren't* Linda.
- (from Schilling-Estes and Wolfram 1994)

On most current syntactic and morphological theories, it is not clear why negation should influence leveling (or any change) in the morphological expression of agreement. (e.g. Chomsky (1995; 1998)). It is also difficult to explain why negation's effect on agreement leveling should be limited to *-n't*.

³ Forms of past *be* that are non-negative or occur with *not* remain (more or less) like those in the paradigm of 'standard' English, even when *weren't* leveling is completed. See Schilling-Estes & Wolfram (1994; 2002) and Schilling-Estes 2000 for quantitative data on the changes in progress, which we will not provide here.

3. Distributed Morphology

We adopt the theory of Distributed Morphology (DM) (Halle & Marantz 1993) for our analysis of *weren't* leveling. In this section we provide a crash course in DM, focusing on the aspects of the theory that are most important for our analysis. The examples provided below form the background for our analysis, presented in Section 4.

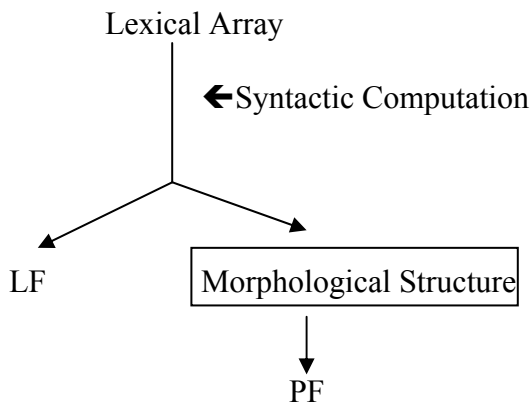
3.1 Late insertion of phonological features

Distributed Morphology departs from standard, lexicalist theories in claiming that that phonological features are NOT bundled together with morphosyntactic features in the lexicon, and are NOT present during the syntactic computation.⁴ Phonological features are 'late inserted', arriving after syntax (discussed below).

3.2 Morphological Structure

DM postulates an additional, distinct level of representation, **Morphological Structure** (MS), located between the levels of syntax and phonology. The syntactic computation delivers bundles of morphosyntactic features, called terminal nodes, to MS where they are subjected to further, distinctly morphological operations and requirements (discussed below):

(10) The grammar, with Morphological Structure



3.3 Vocabulary Insertion and Vocabulary Entries

The final MS operation, **Vocabulary Insertion**, inserts phonological features at terminal nodes according to **Vocabulary Entries** (VE), represented schematically below. The

⁴ Thus DM is a Separationist morphological theory; for some other Separationist theories see Anderson (1994) and Beard (1995).

phonological features on the right of the arrow will be inserted at the terminal identified by the (so-called substantive) features to the left of the arrow:

(11) [morphosyntactic features] ⇔ /phonological features/

➔ Crucially, the substantive features of VEs can be underspecified, as long as they contain no features that contradict features of the relevant terminal node. Underspecified VEs compete for insertion at a terminal node, according to the Elsewhere Principle: the most highly specified VE is inserted first, blocking the insertion of less specified VEs, and default, Elsewhere VEs.

(12) **VE block for English *be*[+PAST]**

[Pers=2; Num=S]	⇔	/were/
[Num=Pl]	⇔	/were/
<i>elsewhere</i>	⇔	/was/

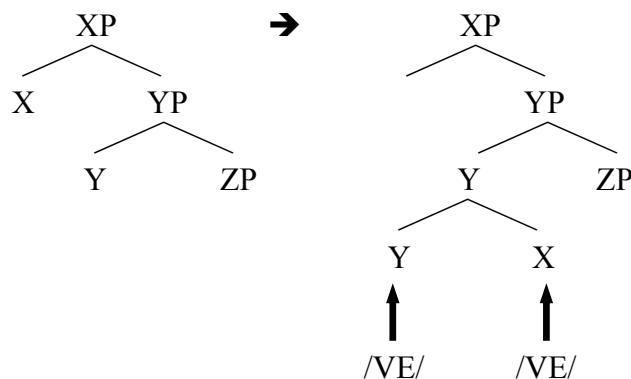
This block contains VEs in competition for insertion at a node containing the features of *be*, plus past tense features. On this analysis, *was* is an elsewhere form, inserted by default whenever the agreement features contained in the terminal node for past *be* do NOT include 2nd singular or plural.

3.4 Morphological operations

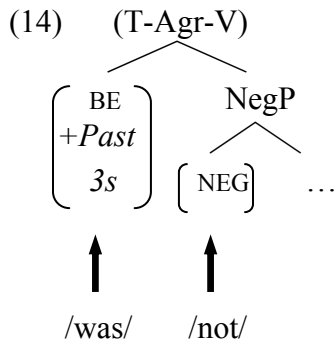
MS operations are distinct from syntactic ones, and can modify terminal nodes in various ways, with various effects on Vocabulary Insertion and PF.

- The MS operation **Merger** combines two terminal nodes under a single node. Two separate VEs insert phonological features at Mergered terminal nodes; however, Mergered nodes are interpreted as a single phonological unit. Thus Merger creates clitics or affixes. Merger is represented schematically below:

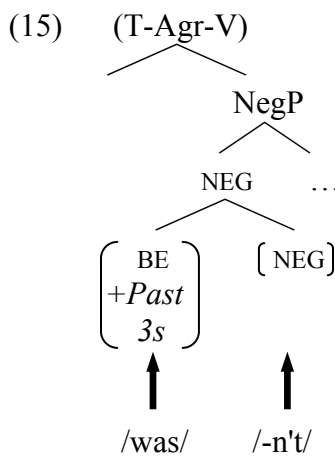
(13) Merger of (X, Y)



For example, consider negation and *be* in English. When the negation terminal node is distinct from the terminal node containing agreement features at MS, the VEs for *was* and *not* are inserted separately and interpreted as distinct phonological units:

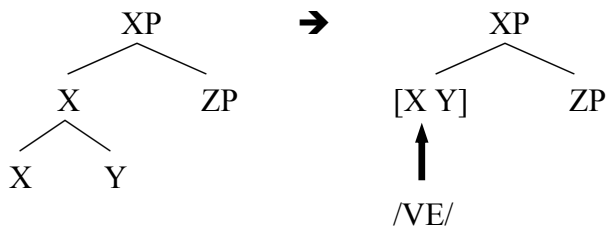


When the negation terminal node is Merged with the terminal node containing agreement features at MS, the VEs for *was* and *-n't* are inserted separately but interpreted as a single phonological unit:



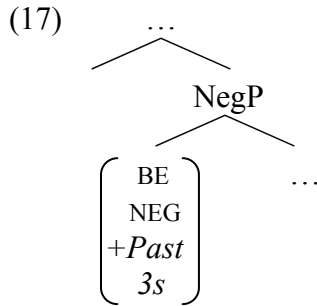
- Another MS operation, **Fusion**, combines the features of two Merged terminal nodes into a single node. A single VE inserts phonological features into the resulting node. Thus Fusion creates suppletion and inflectional/fusional morphology. Fusion is illustrated schematically below:

(16) Fusion of (X, Y)



4. Analysis

Our analysis of *weren't* leveling is straightforward in the DM framework. We propose that Fusion applies to the negation and T-Agr-V terminal nodes, producing the following structure at MS:



We further propose that the following VE inserts phonological features at the Fused terminal node:

(18) [BE; NEG; +Past] ⇔ /weren't/

- The VE in () can only be inserted at a terminal containing both negation and past tense *be* features, which results from Fusion of the past *be* and negation terminal nodes. This explains the lack of *were* leveling with *not*: *not* is inserted only when the negative head has not undergone Merger or Fusion with another head.
- Our proposal also explains why *weren't* leveling can proceed without *were* leveling. *Weren't* leveling is not a process affecting agreement features, but rather a process affecting the morphological realization of negation. Thus *weren't* leveling does not cause (or require) any concurrent agreement paradigm leveling.
- Our analysis can be extended to other known instances of *-n't* negated auxiliary agreement leveling in English dialects:

(19) *Don't* leveling (found in Smith Island English (Parrott 2001))

	<u>Singular</u>	<u>Plural</u>
1st	<i>I don't</i>	<i>we don't</i>
2nd	<i>you don't</i>	<i>(y'all) don't</i>
3rd	<i>(s)he don't</i>	<i>they don't</i>

(20) *Ain't* leveling, *have* (found in African American English (e.g., Poplack 2000))

	<u>Singular</u>	<u>Plural</u>
1st	<i>I ain't seen it</i>	<i>we ain't seen it</i>
2nd	<i>you ain't seen it</i> ⁵	<i>(y'all) ain't seen it</i>
3rd	<i>(s)he ain't seen it</i>	<i>they ain't seen it</i>

(21) *Ain't* leveling, *do* (found in African American English (e.g., Poplack 2000))

	<u>Singular</u>	<u>Plural</u>
1st	<i>I ain't show up</i>	<i>we ain't show up</i>
2nd	<i>you ain't show up</i>	<i>(y'all) ain't show up</i>
3rd	<i>(s)he ain't show up</i> ⁶	<i>they ain't show up</i>

5. Why level?

A more general question is why morphological paradigm leveling should occur at all.

- Underspecified VEs compete for insertion at a terminal node, as discussed above.
 - On our analysis, only one VE is compatible with the terminal node created by Fusion of the negation and past *be* nodes. In this sense, *weren't* is a suppletive form: it does NOT compete with any other VEs for insertion.
- We claim that leveling is (at least in part) motivated by a preference in the morphology to **reduce competition** for insertion among VEs.

6. Conclusions

We have claimed that *weren't* leveling is the result of two changes in the morphological system:

- the terminal nodes for negation and past tense *be* undergo the Fusion operation at MS
- a single VE inserts *weren't* into the new terminal node

We have also claimed that *weren't* leveling, and leveling generally, is motivated by a morphological preference to reduce VE competition for insertion.

⁵ This example is attested; it was spoken to one of the authors.

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Some questions and directions for further research:

- ➔ Our analysis raises a 'chicken and the egg' problem: is the new *weren't* VE made necessary by the Fusion operation, or does Fusion take place in order to provide an insertion terminal for the new VE? We suspect the latter: in other words, morphological operations are somehow triggered by the VEs available in a language. This suspicion needs to be investigated.
- ➔ We would like to be able to predict which form will level across a paradigm, and it might be possible to do so by looking at VE blocks. Is it the 'elsewhere' VE that levels? Or the most highly specified VE? Or something else? To answer this question, we need more empirical evidence about leveling patterns in a variety of dialects and languages.
- ➔ A deeper question is why reduction of VE competition is preferred in the morphology. Does this reflect principles of simplicity or economy in the morphological system? Is the underlying design of morphology similar to syntax in this way?

In conclusion, we hope that work like ours will persuade theoreticians to pay more attention to patterns of variation and change found in non-standard varieties of American English. We think that American English dialects are a useful, but mostly neglected, source of data for syntactic and morphological theory.

References

- Aronoff, M. (1994). *Morphology by itself : stems and inflectional classes*. Cambridge: MIT Press.
- Beard, R. (1995). *Lexeme-morpheme base morphology : a general theory of inflection and word formation*. Oxford: Oxford University Press.
- Bobaljik, J. (2002). Syncretism without paradigms: Remarks on Williams 1981, 1994. Ms., McGill University.
- Chomsky, N. (1995). *The minimalist program*. Cambridge: MIT Press.
- Chomsky, N. (1998). Minimalist inquiries: the framework : MIT Working Papers in Linguistics.
- Embick, D., & Noyer, R. (2001). Movement operations after syntax. *Linguistic Inquiry*, 32(4), 555-595.
- Halle, M., & Marantz, A. (1993). Distributed morphology and the pieces of inflection. In K. Hale & S. J. Keyser (Eds.), *The view from Building 20* . Cambridge: MIT Press.
- Lippi-Green, R. (1997). *English with an accent*. Blackwell.
- Parrott, J. K. (2001). A Preliminary sketch of variation in the verbal agreement system of Smith Island English. Ms., Georgetown University.
- Poplack, S. (Ed.). (2000). *The English History of African American English*. Malden, MA: Blackwell.
- Schilling-Estes, N. (2000). *Exploring morphological change: The was/weren't pattern in Smith Island English*. Paper presented at NWAV 29, Michigan State University.
- Schilling-Estes, N., & Wolfram, W. (1994). Convergent explanation and alternative regularization patterns: *Were/weren't* leveling in a vernacular English variety. *Language Variation and Change*, 6, 273-302.
- Schilling-Estes, N., & Wolfram, W. (1999). Alternative models of dialect death: Dissipation vs. concentration. *Language*, 75(3), 486-521.
- Schilling-Estes, N. & Wolfram, W. (2002) Explaining parallel development in alternative restructuring: The case of *weren't* intensification. Paper presented at NWAV 31, Stanford University.

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