

Variation, change, and the morphological component¹ (More specifically: Smith Island, *weren't* leveling, and Distributed Morphology)

1. Introduction and preliminaries

1.1 Terms, and questions

(1) Variation (between dialects)

- Dialect variation is just language variation writ small
- The theoretical study of dialect variation has the same goals as comparative syntax (i.e., 'micro-parameters' (Kayne 2000))

➔ The nature of 'parameters,' and especially 'micro-parameters,' is not well understood in minimalist theory.

➔ U.S. English dialects have not been well studied in theoretical linguistics.

(2) Variation (in an individual grammar)

- For a single speaker, alternative morphological forms or syntactic constructions are optional in the same grammatical environment, with no consequences for (truth conditional or grammatical) meaning (= a variable).
- Individual variation is very involved in (and perhaps the driving force of) language change.

➔ Individual variation is difficult to account for in minimalist theory (especially on the 'lexicalist' assumptions that are fairly standard in syntactic theory): every step of a given derivation is forced, and alternative steps are prohibited.

¹ Much of the handout consists of material modified from Parrott (2001; 2002). The DM analysis of *weren't* leveling results from collaborative work with my colleague Jennifer Mittelstaedt at Georgetown University; Sections 4 - 6 are modified from Mittelstaedt & Parrott (2002). The Smith Island quantitative research was conducted in collaboration with Natalie Schilling-Estes (PI) and Jennifer Mittelstaedt, Georgetown University. Data were also collected during the early 1980s by Rebecca Setliff, Georgetown University. We are extremely grateful for the cooperation and assistance of the people of Smith Island. The quantitative research was financed in part with State Funds from the Maryland Historical Trust, an agency of the Department of Housing and Community Development of the State of Maryland. However, the contents and opinions of this report do not necessarily reflect the views or policies of the Maryland Historical Trust or the Department of Housing and Community Development.

(3) Change (diachronic)

- Morphological forms or syntactic constructions in the grammars of individuals change over time.
- Language change is very involved with (and perhaps driven by) individual variation.

➔ Diachronic change is not well understood in minimalist theory.

(4) Morphology (the component)

- Morphology = the PF branch mapping between syntax and phonology.
- Morphology is part of the **interface level** between 'narrow' syntax and the Articulatory-Perceptual system. On minimalist assumptions, interfaces are the only place for 'imperfections' such as variability.
- Distributed Morphology (Halle & Marantz 1993):
There is a level of morphological representation on the PF branch after Spellout, before phonology. This level has its own distinct objects, operations, and requirements.

➔ Morphology is a good place to look for answers to the theoretical problems posed by variation and change.

➔ Variation and change are good place to look for data relevant to linguistic theory, and especially morphological theory.

1.2 Goals

- To introduce an interesting and unique dialect of U.S. English spoken on Smith Island, Maryland.
- To present some of the methodologies and results of variationist sociolinguistics.
- To give a theoretically explicit analysis of a particular, troublesome case of morphological change on Smith Island.
- To illustrate the usefulness of investigating variation (both kinds) and language change, in relation to theoretical linguistics generally but especially in relation to morphological theory.
- To illustrate that U.S. English dialects are a source of interesting data for theoretical linguistics, and especially for morphological theory.
- To emphasize the importance of morphology in overall theory of grammar, and to argue specifically for Distributed Morphology.

1.3 Structure of the talk

Section 2: Where is Smith Island, Maryland, and what's the deal there?

Section 3: What are the patterns of variation and change on Smith Island? A discussion of dialect death and language change by concentration, an

overview of the methodologies of variationist sociolinguistics, and a brief look at some language changes in progress on Smith Island.

Section 4: *Weren't* leveling on Smith Island, the main event. What is it, how does it work, why is it special, how is the change proceeding on Smith Island, and why is mysterious on standard theoretical assumptions ?

Section 5: A crash course in Distributed Morphology.

Section 6: Mittelstaedt & Parrott's (2002) Distributed Morphology analysis of *weren't* leveling, some extensions to related phenomena, and some implications for the analysis of variation and change.

Section 7: Summary and directions for future research.

2. Smith Island, Maryland U.S.A.²

One in name and identity, Smith Island is actually a small cluster of islands and wetland marshes located in the Chesapeake Bay, just on the Maryland side of the Virginia - Maryland border. Although many of the Chesapeake bay islands were once inhabited, only Smith Island and nearby Tangier Island, Virginia are currently populated.

(5) Smith Island, MD³



² For more on the history and social life of Smith Island, see Dize (1990), Horton (1987), Horton (1996), Sheenan (1994), and Wennersten (1992).

³ Map from Schilling-Estes (2000).

- English, Cornish, and Welsh settlers first established a community on Smith Island in 1657, and the island has been continuously populated since then.
- The island's only industry is small scale crab and oyster harvesting, and this trade is increasingly threatened due to environmental and political factors beyond the control of the islanders. For this reason, most young people leave Smith Island after high school in order to find employment. Moreover, the island is being eaten away by the constant erosion of the Chesapeake Bay, and may not even be habitable after 100 years.
- The original population consisted of a few groups of farmers, grew to 19 families by 1808, and then to 300 by the end of civil war. In recent decades, Smith Island's population remained steady at about 650 residents, but began to fall in 1980, reaching 459 in 1990, and approximately 350 in 2001. The population of Smith Island will undoubtedly continue to decline until the community ceases to exist.
- Smith Island is separated from Crisfield, MD, the closest town on the mainland, by a forty minute boat ride. The ride is sometimes impossible during the winter, when the Bay can freeze up. There is no automobile access, and no airport. There are three small towns on Smith Island: Ewell, Rhodes Point, and Tylerton. Ewell and Rhodes Point are connected by a short road; Tylerton, the most isolated of the three communities, can be reached only by boat.
- Because of Smith Island's geographical isolation, contact with the mainland has been sporadic and limited in nature. Mainlanders are regarded as “foreigners,” although tourism draws increasing numbers of them to the island, a modern innovation. Unlike Tangier Island, Virginia or North Carolina's Outer Banks Islands, however, Smith Island has never catered to tourism. Ferry service is infrequent and scheduled for islanders rather than for visitors, making days trips next to impossible. There are only two small bed and breakfast style hotels on the island, both in Ewell, and no tourist facilities other than a small visitors center. Very few mainlanders live on the island year round, or settle for long periods of time.

3. Variation and change on Smith Island

The dialect of English spoken on Smith Island is dying. Typically, moribund dialects undergo a process of **dissipation**, whereby characteristic features dissipate or decay over time, being gradually replaced by features of the encroaching dominant or majority language (e.g., Dressler 1988; Wolfram & Schilling-Estes 1995). On Smith Island, however, dialect death is proceeding via a process of rapid **concentration** (Schilling-Estes 2000; Schilling-Estes & Wolfram 1999).

- (6) Concentration:
The use of distinctive or innovative features increases over time,
- throughout the dialect (as opposed to **focusing**);
 - as the population decreases, so that "linguistic distinctiveness is heightened among a reduced number of speakers." (Schilling-Estes & Wolfram 1999);
 - so that as the dialect approaches death it becomes less, and not more, similar to the dominant or majority dialect that is replacing it.

→ Concentration allows us to see highly accelerated language change, sometimes with changes completed in a few generations!

- (7) Linguistic changes on Smith Island:
- | | |
|------------------|------------------------------------|
| Phonological: | raised /ay/ and glide-fronted /aw/ |
| Morphosyntactic: | weak expletive <i>it</i> |
| Morphological: | <i>weren't</i> leveling |

3.1 Variationist sociolinguistics: a methodological overview

- Data are collected using **sociolinguistic interviews**.

These consist of recorded informal conversations between a researcher and one or more members of a dialect community. The researcher does not typically attempt to elicit any particular forms or grammaticality judgements (although they may); however, researchers often introduce topics that are intended to produce excited, non-self-conscious language (such as near death experiences, the supernatural, community controversies, etc.).

- Data are analyzed **quantitatively**.

The number of occurrences of a certain **variable**, and its values, are counted in order to yield usage percentages. Statistical analyses are also carried out (usually with the program VARBRUL), to determine the (favoring, disfavoring, or zero) effect of various **factor groups** (e.g., linguistic environment, age, sex, social class, etc.). For example, suppose we were investigating the morphophonological variable of [-ing] → [-in] reduction in English. We would first count every instance where [-ing] can occur--gerunds, progressives, and words ending in [-ing] such as *bring*. We then count the number of these instances where the variable is realized as [-in], and divide for a usage percentage. We may then put the numbers into VARBRUL, which tells us whether any factor groups, such as sex or social class, make the occurrence of [-in] more or less likely.

- Language change can be observed in **apparent time**.

Observing language change in real time is difficult--it requires the longitudinal study of a large number of individuals. However, Bailey, Wikle, Tillerly, & Sand (1992) showed that language change can also be observed in **apparent time**. This involves collecting data from several different **generation groups** in the community under investigation. When the usage of some variable(s) shows a significant increase (or decrease) across

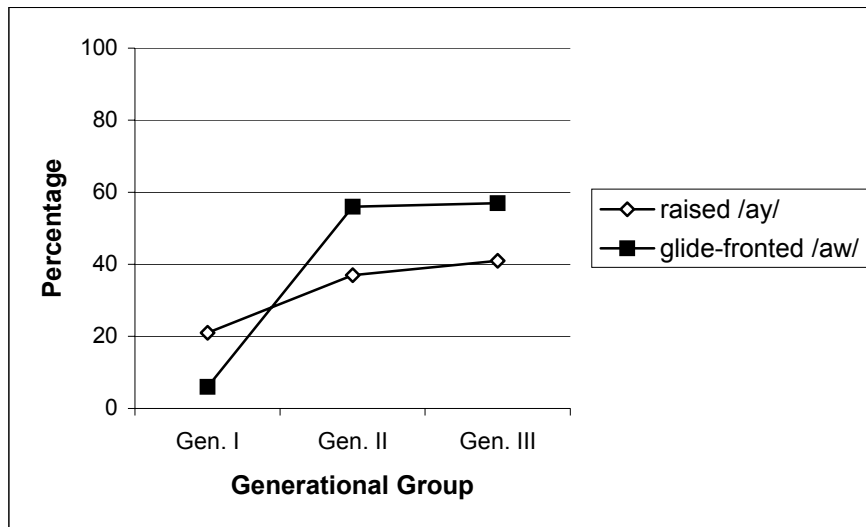
successive generation groups, then a linguistic change is taking place. The speed of the change can also be determined by looking at the slope of the increase/decrease between the generation groups. The apparent time methodology has been replicated and confirmed (by comparison with real time studies) and is a standard tool in variationist sociolinguistics.

3.2 Phonological change

Two phonological changes (Schilling-Estes & Wolfram 1999; examples from Schilling-Estes 2000):

- (8) /ay/ is raised, e.g. [roId] ‘ride’
- (9) /aw/ is glide-fronted, and/or raised, e.g. [saInd] or [sEInd] ‘sound’

(10) The Cross-Generational Patterning of Raised /ay/ and Glide-fronted /aw/, 1983 interviews (Schilling-Estes & Wolfram 1999, graph from Schilling-Estes 2000)



- Generation I: b. 1899 - 1916 (age 84 - 67 at time of interviews, 1983)
- Generation II: b. 1944 - 1961 (age 39 - 22 at time of interviews, 1983)
- Generation III: b. 1966 - 1971 (age 17- 12 at time of interviews, 1983)

3.3 Morphosyntactic change

A morphosyntactic change (Parrott 2001a; 2001b; 2002):

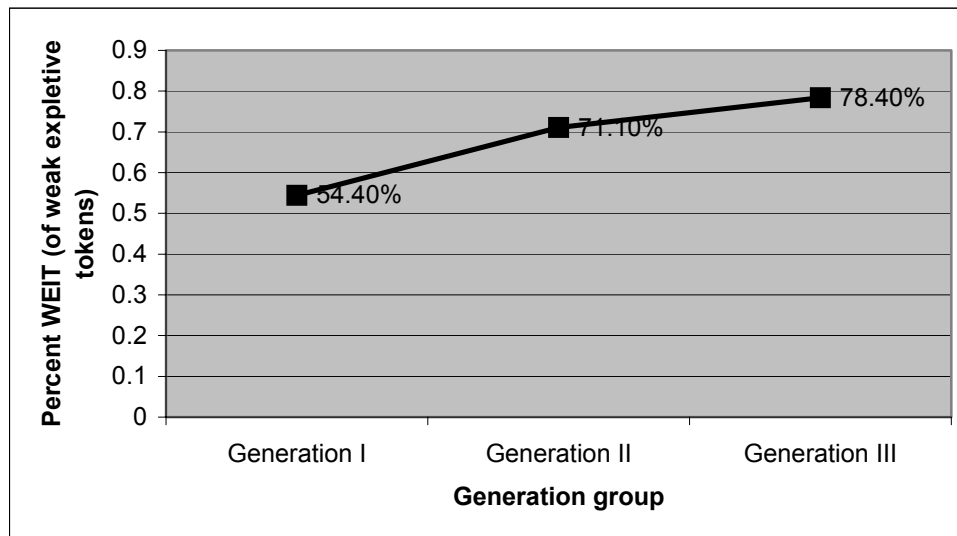
- (11) Weak expletive *it* (WEIT):
it occurs variably in place of expletive *there*, with the expected distribution.

- (12) **Copular existentials**
In winter, it's nothing to do. (2000)⁴
- (13) **Raising predicates w/non finite complements**
It just happened to be a EMT on this part of the island.... (1983)
- (14) **Unaccusatives**
Then you go straight on down, and it comes this white house here... (1983)
- (15) **Passives**
And it was sharks seen down there that day. (1983)

However, WIET triggers categorical (i.e., non-variable) 3s verbal agreement regardless of the associate NP:

- (16) a. I don't know how many it is there now. (1983)
b. * I don't know how many it are there now. (non-attested)⁵

(17) WEIT usage by generation, 1983 interviews



4. Morphological change: *weren't* leveling

Weren't leveling is the most dramatic linguistic change on Smith Island (Mittelstaedt & Parrott 2002; Parrott 2001b; Schilling-Estes 2000; Schilling-Estes & Wolfram 1994; Wolfram & Schilling-Estes 2002). *Weren't* leveling is found independently in other varieties of English, but its geographical distribution is limited to isolated dialects spoken on the mid-Atlantic coast of the United States (such as those in Ocracoke Island, Harkers Island, and Hyde County, North Carolina (Wolfram & Schilling-Estes 2002)), and certain dialects spoken in England (Britain (2002), cited in Wolfram & Schilling-Estes (2002)).

⁴ Examples followed by a date are attested; the date refers to the date of the interview.

⁵ Sentences like this were strongly rejected by the two Smith Island informants I consulted.

Smith Island *weren't* leveling is unique because the change has been **completed** in this generation due to the effects of concentration.

4.1 Leveling, *was* 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 total (but possibly variable) syncretism.⁶

(18) Paradigm for 'standard' English⁷ $be_{[+PAST]}$

	<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 of $be_{[+PAST]}$ occur regardless of the presence or type of negation (*not* or *-n't*).

(19) 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 not</i>	<i>(s)he wasn't</i>	<i>they were not</i>	<i>they weren't</i>

- **Was** leveling "...is widespread among the vernacular English dialects of the world..." (Wolfram & Schilling-Estes 2002) It is documented, just for example, in dialects as diverse as African American English, Appalachian and Ozark English, Southern White English, New York City English, and dialects of English spoken in England (see Schilling-Estes & Wolfram (1994) for an overview; see also Wolfram & Schilling-Estes (2002) for comparison of *was*, *were*, and *weren't* leveling in various dialects).⁸

⁶ Paradigm is intended here as a descriptive term, referring to a matrix of possible values for morphosyntactic features, which may or may not be realized by (any, or distinct) phonological forms. Under the DM framework paradigms are not 'real' or significant objects in the grammar (see Bobaljik 2001; 2002 for more on this issue).

⁷Although I use the term 'standard' English, there is little evidence for the existence of such an entity, whether linguistic or sociolinguistic. 'Standard' English is intended here as a contrastive term with regard to the dialects under investigation. That is, 'standard' English refers 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."

⁸ *Were* leveling is less common, but documented in a few varieties of English (Wolfram & Estes (2002), and citations). *Were* leveling, like *was* leveling, is not sensitive to the presence or type of negation (see (3) and (4) above, replacing *was* with *were*).

(20) 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:

(21) 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>

(22) Attested examples of *was* leveling (in African American English, from Poplack (2000)):

- We *was* sleeping.
- They *was* picking up wood and thing.
- You *wasn't* gonna do it or anything.
- They *wasn't* prejudiced up there then.

4.2 *Weren't* leveling

(23) 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>

(24) Attested examples of Smith Island *weren't* leveling:

- ...he weren't very good with it. (2000)
- ...coming home weren't too good.... (2000)
- ... I weren't there.... (2000)

Smith Island *weren't* leveling has unusual properties that distinguish it from *was* leveling.⁹

⁹ *Was* leveling is declining and very nearly extinct on Smith Island, so that forms of past *be* that are non-negative or occur with *not* are now (more or less) like those in the paradigm of 'standard' English, even when *weren't* leveling is completed. See Schilling-Estes (2000), Schilling-Estes & Wolfram (1994), and Wolfram & Schilling-Estes (2002).

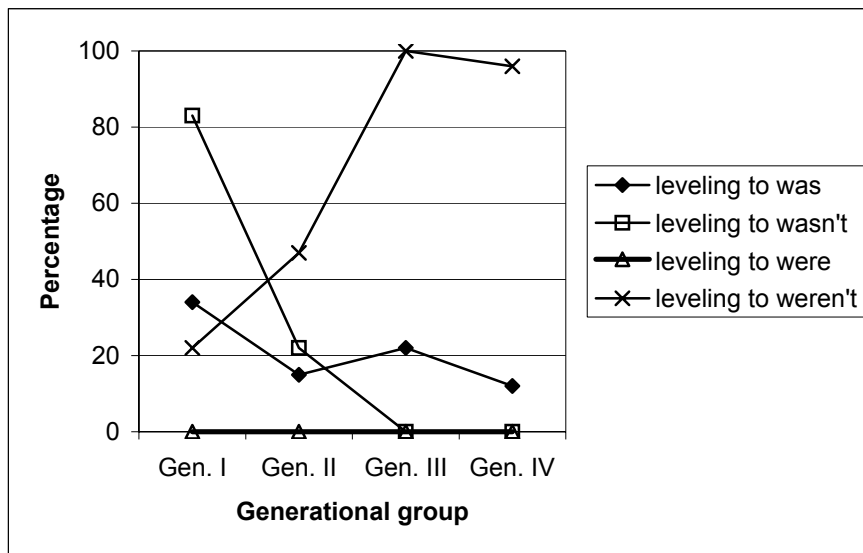
- *Weren't* leveling occurs ONLY with negation (there is no *were* leveling on Smith Island):

(25) * It *were* me. (unattested; cf. *It was me*)

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

(26) * It *were* not me. (unattested; cf. *It was not me*)

(27) The Progress of *was/weren't* Leveling in Smith Island English (Schilling-Estes 2000), graph from Schilling-Estes (2000)



- Generation IV: b. 1975 - 1987 (age 24 - 12 at time of interviews, 1999-2000)

4.3 Mysteries

It is not clear how *weren't* leveling can be accommodated in minimalist theory, on 'lexicalist' assumptions.¹⁰

- (28) Lexicalism (ala minimalism) (Chomsky (1995); possibly (1998))
- There is a pre-syntactic **Lexicon** where the terminal elements of syntax (= lexical items) are assembled.
 - Phonological features are associated with syntactic/semantic features in the Lexicon.
 - Lexical items enter the syntax **fully inflected** (i.e., with a complete set of syntactic/semantic/phonological features) and are checked against the features of functional projections.

¹⁰ The term lexicalism has been applied to various theories and permutations of theories. I mean the term only as defined here.

- The mapping between phonological and morphosyntactic features is determined prior to syntax, and is not altered by subsequent operations.

➔ **Why can *weren't* leveling proceed without *were* leveling?**

Weren't leveling is, on its face, a change in the expression of agreement. For a lexicalist this has to mean that the phonological features /were/ are re-associated in the Lexicon (however this happens) with all values of agreement features. But this means that *weren't* leveling should be impossible without concurrent *were* leveling, contrary to fact on Smith Island.

(29) Lexical Items, $be_{[+PAST]}$, before change

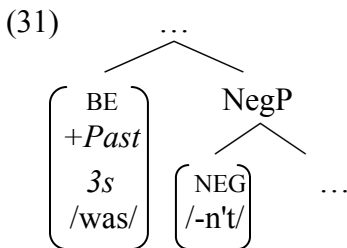
[Pers=1; Num=S; +Past; /was/]	[Pers=1; Num=Pl; +Past; /were/]
[Pers=2; Num=S; +Past; /were/]	[Pers=2; Num=Pl; +Past; /were/]
[Pers=3; Num=S; +Past; /was/]	[Pers=3; Num=Pl; +Past; /were/]

(30) Lexical Items, $be_{[+PAST]}$, after change

[Pers=1; Num=S; +Past; /were/]	[Pers=1; Num=Pl; +Past; /were/]
[Pers=2; Num=S; +Past; /were/]	[Pers=2; Num=Pl; +Past; /were/]
[Pers=3; Num=S; +Past; /were/]	[Pers=3; Num=Pl; +Past; /were/]

➔ **How can negation affect agreement?**

If lexical items are constructed in pre-syntactic Lexicon, a negation head in the syntax should not affect the phonological features associated with agreement. The two heads are distinct and share no features:



Thus it is not clear how negation could influence leveling (or any change) in the agreement morphology, as it does in Smith Island *weren't* leveling.

➔ **Why is *weren't* leveling only possible with *-n't*?**

Even assuming that some account could be given for the effect of negation on agreement morphology, why should the effect be limited to clitic form *-n't*? Why is there no *were not* leveling on Smith Island?

Of course, any proposed analysis of *weren't* leveling should also address the following more fundamental questions:

- ➔ **What is the nature of the variability of *weren't* leveling?**
- ➔ **What is the nature of the *weren't* leveling change?**

5. Distributed Morphology

For the analysis of Smith Island *weren't* leveling I adopt the theory of Distributed Morphology (DM) (Halle & Marantz (1993); see also much subsequent work in/on this framework, e.g. Embick & Noyer (2001)). This section provides a crash course in DM, focusing on the aspects of the theory that are most important for the analysis. The examples provided form the background for the analysis, presented in Section 6.

5.1 No more lexicalism

DM is a **non-lexicalist** theory.

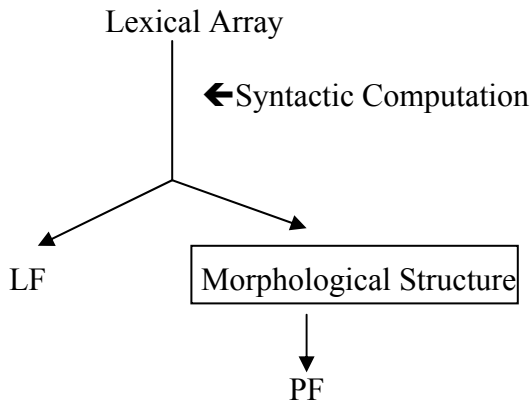
- There is no single Lexicon--word formation is distributed through the grammar, including in the syntax and in Morphological Structure (see below).
- Phonological features are **not** associated with morphosyntactic features in a pre-syntactic lexicon; and phonological features are **not** present during the syntactic computation. Phonological features are '**late inserted**,' after syntax (by Vocabulary Insertion, see below).¹¹

5.2 Morphological Structure

DM postulates an additional, distinct level of linguistic representation, **Morphological Structure** (MS), located on the PF branch between syntax and phonology. The input to MS is exactly the output of the syntactic computation: a hierarchically arranged structure of morphosyntactic feature bundles (= **terminal nodes**). At MS, terminal nodes are subjected to further, distinctly morphological requirements and operations (see below):

¹¹ Thus DM is a Separationist morphological theory; for some alternative Separationist theories see Anderson (1994) and Beard (1995).

(32) The grammar, with MS



5.3 Vocabulary Insertion, Vocabulary Entries

Vocabulary Insertion, an MS operation, inserts phonological features at terminal nodes. Insertion is governed by **Vocabulary Entries** (VEs), which are represented schematically below. The phonological features on the right of the arrow will be inserted at the terminal identified by the **substantive features** to the left of the arrow:

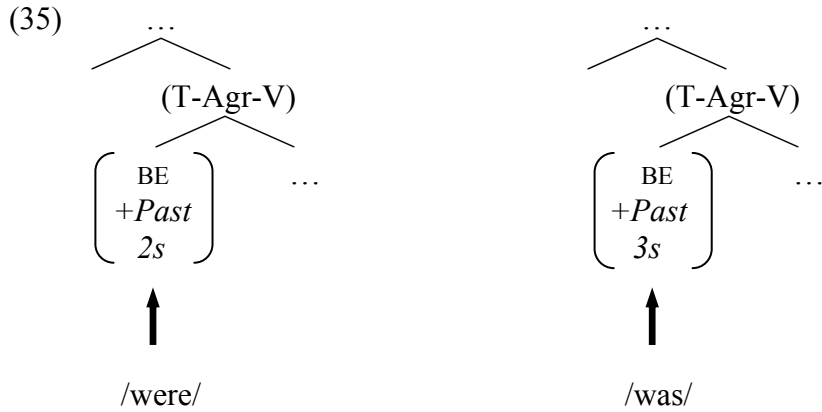
(33) [morphosyntactic features] \Leftrightarrow /phonological features/

- Crucially, the substantive features of VEs are **underspecified**. A VE can be inserted at some terminal node so long as the VE contains no substantive features that contradict features of that terminal node.
- Underspecified VEs **compete** for insertion at a terminal node, according to the **Elsewhere Principle**. The most highly specified VE (with the most substantive features that match the features of a terminal node) is inserted first, blocking the insertion of less specified VEs. 'Elsewhere' VEs are inserted by default whenever a more specified VE cannot be inserted.

(34) **VE block for *be*[_{+PAST}], 'standard' English and Smith Island**

[BE; + <i>Past</i> ; Pers=2; Num=S]	\Leftrightarrow	/were/
[BE; + <i>Past</i> ; Num=Pl]	\Leftrightarrow	/were/
[BE; + <i>Past</i>] <i>elsewhere</i>	\Leftrightarrow	/was/

The VEs above are in competition for insertion at a node containing the features of *be*, plus past tense features. On this analysis, *was* is a default form (inserted whenever the agreement features contained in the past *be* terminal node do NOT include 2nd singular or plural).

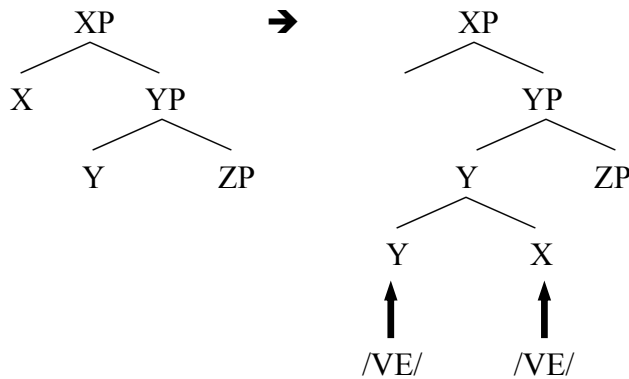


5.4 Morphological operations

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

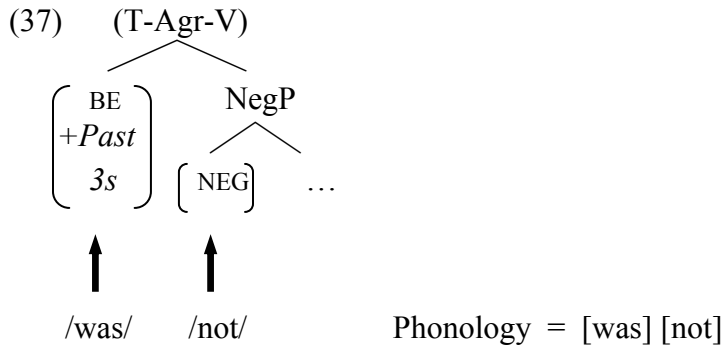
- The MS operation **Merger** combines two terminal nodes under a single node. Two separate VEs insert phonological features at Mergered terminal nodes; however, Mergered nodes are interpreted as a single phonological unit. Thus Merger creates clitics or affixes.¹² Merger is represented schematically below:

(36) Merger of (X, Y)

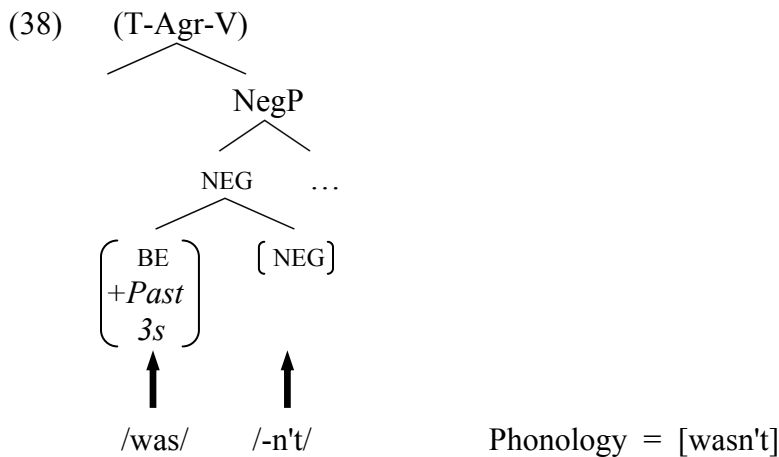


For example, consider negation and *be* in English. When the negation terminal node is distinct from the terminal node containing agreement features at MS, the VEs for *was* and *not* are inserted separately and interpreted as distinct phonological units:

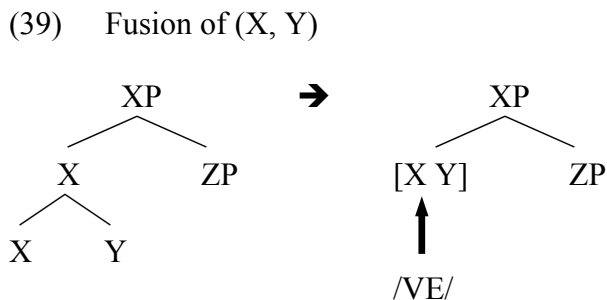
¹² There is no (single) distinction between 'clitics' and 'affixes' in DM; see Embick & Noyer (2001).



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.¹³



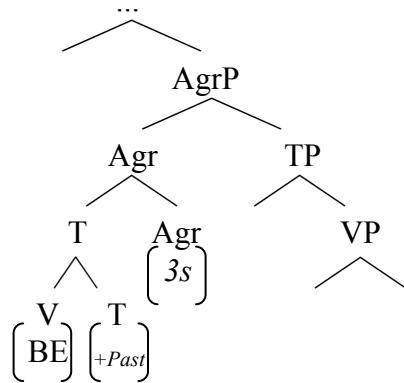
- Another MS operation, **Fusion**, combines the features of two Merged terminal nodes into a single, new terminal node. A single VE inserts phonological features into the resulting node. Thus Fusion creates suppletion and inflectional/fusional morphology. Fusion is illustrated schematically below:



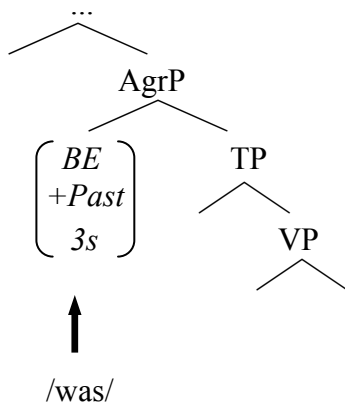
¹³ It might be that the features /-n't/ are inserted by a VE distinct from the VE inserting /not/; or, that the features /not/ are always inserted, and changed to [-n't] by a rule in MS (Readjustment) or in the phonology. The difference is irrelevant for present purposes.

For example, consider suppletive *be* in English. By hypothesis, the terminal nodes for Agr, T, and V¹⁴ are Merged (via Merger and/or head movement) and then Fused to allow insertion of VEs:

(40) Agr-T-V



(41) Fusion of (V, T); Fusion of ([V T], Agr)



6. Analysis

Schilling-Estes & Wolfram claim that *weren't* leveling involves the "remorphologization" of negation, producing "suppletive-like negators that function as unanalyzable units." (1994: 294) Thus leveling makes *weren't* analogous to *ain't*, a common feature of many English dialects including Smith Island:

(42) *Ain't* analogy (Schilling-Estes & Wolfram 1994: 290)

$$\left\{ \begin{array}{l} am \\ is \\ are \end{array} \right\} : ain't \quad :: \quad \left\{ \begin{array}{l} was \\ were \end{array} \right\} : x \text{ (x = weren't)}$$

¹⁴ Or whatever head is realized as *be* in English, perhaps Aux.

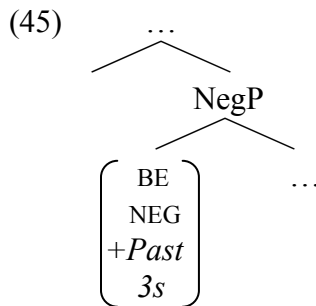
(43) *Ain't* leveling, $be_{[-PAST]}$ (found in Smith Island English, Parrott (2001b))

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

Mittelstaedt & Parrott's (2002) analysis of *weren't* leveling straightforwardly captures the intuitions of Schilling-Estes & Wolfram (1994) in a DM framework. The *weren't* leveling change involves the addition of the following VE to the Vocabulary of Smith Islanders:

(44) [BE; NEG; +Past] ⇔ /weren't/

Because its substantive features contain both negation and $be_{[+PAST]}$, this VE requires that Fusion apply to the Neg and [Agr-T-V] terminal nodes (which must already be Merged, see above). This produces the following structure at MS:



6.1 Explanations, *weren't* leveling

- The analysis explains why *weren't* leveling can proceed without *were* leveling. Contrary to appearances, *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 leveling.
- 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*: the VE for *not* is inserted only when the negative head remains distinct (un-Merged) at MS.

6.2 Extensions

The analysis can be extended to other known instances of *-n't* negated auxiliary agreement leveling in English dialects:

(46) *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>

(47) *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 it¹⁵</i>	<i>(y'all) ain't seen it</i>
3rd	<i>(s)he ain't seen it</i>	<i>they ain't seen it</i>

(48) *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 up¹⁶</i>	<i>they ain't show up</i>

6.3 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 this 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.
- ➔ Leveling is (at least in part) motivated by a preference in the morphology to **reduce competition** for insertion among VEs.

6.4 Variation and change

- ➔ On this analysis, variation is simply as the choice between two Vocabulary Entries (the new *weren't* VE, which triggers Fusion with negation, and the old *was/were* VE block, which does not). Choice of vocabulary must be optional on any theory of grammar, so this is a natural place to locate variation. DM makes Vocabulary based explanations possible for morphological variation.

¹⁵ This example is attested; it was spoken to one of the authors.

¹⁶ This example is attested; it was spoken to one of the authors.

- On this analysis, language change results from a (gradual) choice to use the new VE exclusively. This choice, and its rate, can be expressed quantitatively. Moreover, variation and change is known to be sensitive to social factors. This is natural if variation and change is vocabulary based, since choice of vocabulary is sensitive to social factors. Again, DM makes such an analysis possible for morphological variation.

7. Conclusions, and future questions

- *Weren't* leveling is the result of the introduction of new VE, which requires that the terminal nodes for negation and past tense *be* undergo the Fusion operation at MS.
- *Weren't* leveling, and leveling generally, is motivated by a morphological preference to reduce VE competition for insertion.
- DM allows a Vocabulary based explanation of at least a significant part of variation and change. This explanation is consistent with minimalist theory, and also with facts from variationist sociolinguistics.

Some questions and directions for further research:

- The 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? This analysis has assumed the latter: 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.
- *Weren't* appears to be composed of phonological features from two VEs, $be_{[+PAST]}$ and negation. How is this combination of features possible? More generally, is the DM Vocabulary generative in any sense?
- 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?

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Email: Jeffrey Parrott: jkparrott@punksinscience.org
Jennifer Mittelstaedt: jhm3@georgetown.edu