

Distributed Morphological mechanisms of Smith Island *weren't* leveling

1. Introduction

A growing body of research attempts to bridge the gap between "biolinguistic" theories of syntax and the empirical study of "Labovian" variation and change in progress (see especially the papers and references collected in Cornips and Corrigan 2005b). In this talk, I will 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), consistent with the Minimalist research program (Chomsky 1995, 2000, et seq., and related work). The talk has the following specific goals:

- To examine the case of *weren't* leveling, a pattern of morphosyntactic variation and change currently in progress on Smith Island, MD.;
- To provide 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;
- To illustrate the usefulness of variationist data and methodologies in addressing questions relevant to DM and theoretical morphosyntax.

2. Labovian Variation and Change in Progress

➔ Variation is "alternate ways of saying 'the same' thing" (Labov 1972: 118)¹, or when "speakers use different forms to express the same meaning" (Labov 1995: 115).

¹ Cited by Cornips and Corrigan (2005a: 20).

2.1 Labovian variation in morphosyntax

→ Variation is "the non-deterministic choice of form" (Adger to appear), as opposed to allomorphy (see below).

(1) Labovian variation²

- 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.

→ Variation usually (always?) involves the sociolinguistic choice of form: although variants "convey exactly the same grammatical meaning", they "convey very different social meanings" (Chambers 2002b: 3-4).

2.2 Vs. Parametric variation

→ Cross-linguistic/dialectal variation is to be explained by a theory of parameters (and principles) (e.g. Borer 1984, Chomsky and Lasnik 1993, Kayne 1996, Baker 1996, 2001, Chomsky 1995, et seq., and much other work).

(2) Parametric Variation

Differences in linguistic forms are observed between individuals (speech communities, dialects, languages).

→ Labovian variation in morphosyntax has been claimed to arise from 'multiple parameter settings' (e.g. Henry 1995, 1996, 2002, Wilson and Henry 1998). Consistent with such an account, 'competition' between the grammars defined by these multiple parameter settings yields morphosyntactic change over time (e.g. Kroch 1989, 1994, Kroch 2001).

2.3 Vs. Allomorphy

→ Allomorphy is the deterministic choice of form: "...particular allomorphs are chosen depending on their

² A.k.a. "inherent variation," "variability," "sociolinguistic variation."

morpho-syntactic (or morphophonological) context" (Adger to appear).

(3) **Allomorphic variation** =

Variant forms (allomorphs) appear in complementary distribution as determined by aspects of their morphosyntactic environment.

2.4 Vs. Other variation(s) in form?

➔ What about variation in first (e.g. Lightfoot 1999, Schütze 1997, Wexler 1998) and second language acquisition (e.g. Lardiere 2005, Sorace 2005), multilingualism, pidgins and creoles (e.g. papers in DeGraff 1999), or sign language (e.g. Kegl, Senghas and Coppola 1999, Sandler et al. 2005)?

2.5 Change in progress: Variation in apparent time

➔ The empirical, sociolinguistic study of variation yielded the apparent-time method for observing language change in progress (Bailey et al. 1992, Labov 1994, 2001, Bailey 2002).

➔ "The 'synchronic approach' to the study of language change, the study of change in progress, forms one of the cornerstones of research in language variation and change" (Bailey 2002: 312).

➔ "None of the studies" in Labov (1994, 2001) "show examples of syntactic change currently in progress. The main research results on syntactic variation have emerged from the diachronic studies of texts..." (Labov 1994: 3).

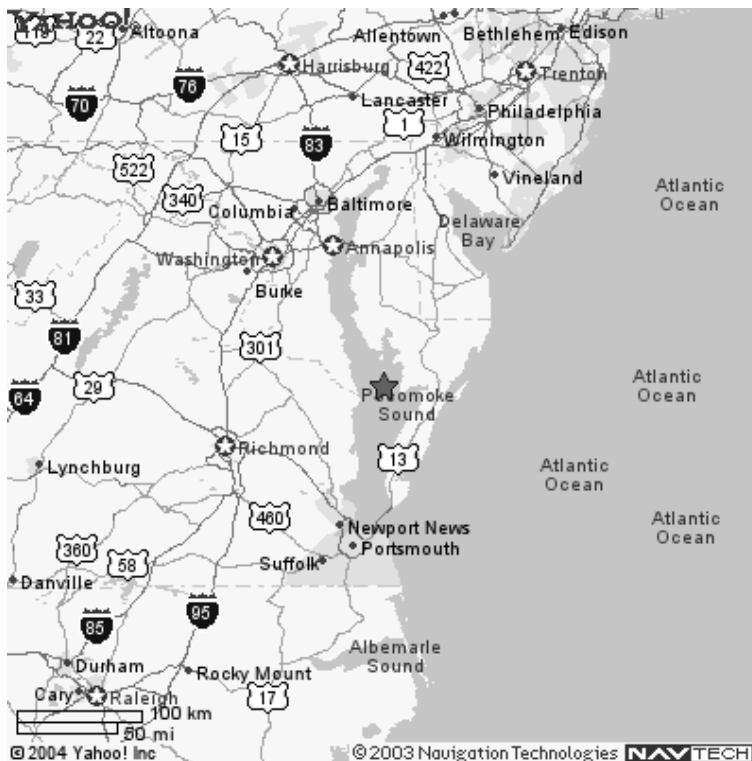
2.6 Two general research questions

We can pose two general research questions:

- (4) What are the morphosyntactic mechanisms of Labovian variation in a (Minimalist) theoretical model of the syntax and PF interface?
 - a. What kind of morphosyntactic objects are the variant forms?

- b. What are the morphosyntactic structural environments where variant forms occur?
 - c. How can we explain the difference between the non-deterministic, sociolinguistic distribution of Labovian variants and the deterministic, complementary distribution of allomorphic variants?
 - d. How can we explain apparent morphosyntactic mismatches in the variant forms?
- (5) What role do mechanisms of Labovian variation play in morphosyntactic change as observed in apparent time?
- a. How can we explain the possibility of sociolinguistic "choice" of variants?
 - b. How can we explain the origin of new variants?
 - c. How can we explain the speed and trajectory of changes in progress?

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



Map 1. Smith Island, Chesapeake Bay, and surroundings



Map 2. Smith Island: Ewell, Rhodes Point, Tylerton

➔ Smith Island 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; the declining seafood-based economy and ongoing land erosion are causing population attrition. (For non-linguistic sources on Smith Island's history and culture, see Horton 1987, Dize 1990, Wennersten 1992, Horton 1996, or Sheenan 1994.)

➔ Dialect death by “concentration” was first documented on Smith Island, where the process involves both phonological and morphosyntactic variables (Schilling-Estes and Wolfram 1994, Schilling-Estes 1997, Schilling-Estes and Wolfram 1999, Schilling-Estes 2000, Mittelstaedt and Parrott 2002, Parrott 2002a, 2003, Wolfram and Schilling-Estes 2003, Schilling-Estes and Wolfram 2003, Mittelstaedt in progress, Parrott in progress).

➔ Death by concentration is a pattern of variation and change in progress, whereby “linguistic distinctiveness [i.e. usage of characteristic variants, JKP] is heightened among a reduced number of speakers” (Schilling-Estes and Wolfram 1999) for social reasons, e.g. solidarity in a

moribund community (see also Schilling-Estes and Wolfram 2003).

3.1 Past-tense *be* and leveling

→ 'Paradigm' is intended here solely as a descriptive term, referring to a matrix of possible values for morphosyntactic features; cells in a paradigm may or may not be realized by any distinct morphophonological forms.³

(6) Paradigm for past-tense *be*, with negation

	<u>Singular</u>	<u>Plural</u>
<u>1st</u>	<i>I was not</i> <i>I wasn't</i>	<i>we were not</i> <i>we weren't</i>
<u>2nd</u>	<i>you were not</i> <i>you weren't</i>	<i>you were not</i> <i>you weren't</i>
<u>3rd</u>	<i>she was not</i> <i>she wasn't</i>	<i>they were not</i> <i>they weren't</i>

→ 'Leveling' (a.k.a. 'analogical leveling' or 'regularization' in the variation literature) is also used here as a descriptive term, referring to a pattern of variation where one morphological form in a paradigm (called the 'leveled' or 'pivot' form) appears variably in the morphosyntactic environments (= paradigm cells) of the other forms.

→ If usage of the leveled form reaches 100%, the result is categorical (i.e. non-variable) syncretism in all cells of the paradigm (e.g. Smith Island *weren't* leveling). However, actual usage of leveled variant forms need not increase: leveling variation may remain stable over apparent time (e.g. Ocracoke *weren't* leveling, Schilling-Estes and Wolfram 1994), decline over time (e.g. Smith Island *was* and *wasn't* leveling, Wolfram and Schilling-Estes 2003, Mittelstaedt in progress), or even reverse trajectory over time (e.g. Hay and Schreier 2004).

³ Under the DM framework, paradigms are not theoretically 'real' (see e.g. Bobaljik 2001, 2002 for arguments against any theoretical status for paradigms). Although I will not pursue the point, patterns of leveling documented in the variation and change literature might constitute a source of empirical evidence regarding whether paradigms are theoretical objects or not. See also Mittelstaedt (in progress).

3.2 Was leveling

→ *Was* leveling (with 2s and plural subjects) has been documented in many English dialects, including African-American English, Appalachian and Ozark English, Southern White English, New York City English, and dialects of British English (for some reviews and references see e.g. Tagliamonte and Smith 2000, Chambers 2002a, Britain 2002, Wolfram and Schilling-Estes 2003).

(7) *Was* leveling, attested
(from Tagliamonte and Smith 2000: 143)

- a. And then you was away onto a fishing station.
- b. And we was the only colour family.
- d. They was picking up wood and thing.
- e. My feet was sticking up and she pulled me feet up.

(8) *Was* leveling with negation, attested (*ibid*: 143)

- a. You wasn't gonna do it or anything.
- b. They wasn't prejudiced up there then.

(9) Paradigm for *was* leveling with negation

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

3.3 Were leveling

→ *Were* leveling (with 1s and 3s subjects) has also been documented, but is apparently much less common in English dialects than *was* leveling (*ibid*).

(10) Ocracoke *were* leveling, attested
(from Schilling-Estes and Wolfram 1994: 280)

- a. I were afraid I was going to miss something.
- b. The neighborhood she was in were just like the old Germans.

(11) Paradigm for were leveling with negation

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

Generation Group	#was/ #leveling environs %was	#wasn't/ #leveling environs %wasn't	#were/ #leveling environs %were	#weren't/ #leveling environs %weren't
Generation I b. 1911-1933 (5 persons)	13/91 14.3%	0/10 0.0%	6/464 1.3%	18/37 48.6%
Generation II b. 1934-1958 (6 persons)	23/142 16.2%	2/11 18.2%	6/733 0.8%	27/58 46.6%
Generation III b. 1967-1983 (8 persons)	8/85 9.4%	0/4 0.0%	0/262 0.0%	14/25 56.0%
Totals (19 persons)	44/318 13.8%	2/25 8%	12/1459 0.08%	59/120 49.1%

Table 1. Past-tense *be* leveling on Ocracoke, NC, in apparent time (table adapted from Wolfram and Schilling-Estes 2003, data from Schilling-Estes and Wolfram 1994)

3.4 Weren't leveling on Smith Island, MD

➔ On Smith Island, quantitative analyses (Schilling-Estes 2000, Mittelstaedt in progress) show that usage of leveled *was* is declining very slightly in apparent time; usage of leveled *wasn't* has declined much more rapidly, to 0% percent usage in generation groups III and IV (see figures below, attested examples from Mittelstaedt in progress and personal communication, with speaker sex and year of birth).⁴

⁴ For more on general patterns of agreement leveling on Smith Island, see Parrott (2001) or Trester (2003).

(12) Smith Island *was* leveling, attested

- a. The roots *was* going just like this. (F, 1926)
- b. The boats *was* a lot slower. (M, 1951)

(13) Smith Island *was* leveling with negation, attested⁵

There just *wasn't* enough oysters. (M, 1930)

➔ *Leveled were* is completely unattested on Smith Island.

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

➔ Leveling to *weren't* is increasing rapidly in apparent time on Smith Island, to 100% usage for generation groups III and IV.

(15) Smith Island *weren't* leveling, attested

- a. She *weren't* that close to you. (F, 1926)
- b. The man *weren't* there every day. (M, 1930)
- c. I *weren't* able to answer. (M, 1930)
- d. He *weren't* expecting a boat. (M, 1930)

(16) Paradigm for Smith Island *was* and *weren't* leveling

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

⁵ This expletive sentence is the only token (1/4) of *leveled wasn't* in Mittelstaedt's sample. Expletive sentences are typically included in variationists' quantitative analyses of agreement leveling, as in all the studies discussed here. However, there are reasons to suspect that expletive sentences are involved with independent patterns of variation (Parrott 2000, 2002a, in progress); if so, expletive sentences might be inflating the *was/wasn't* leveling counts. This does not affect the theoretical points made here.

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

Table 2. Past-tense *be* leveling on Smith Island, MD, in apparent time (data from Schilling-Estes 2000, table adapted from Wolfram and Schilling-Estes 2003)⁶

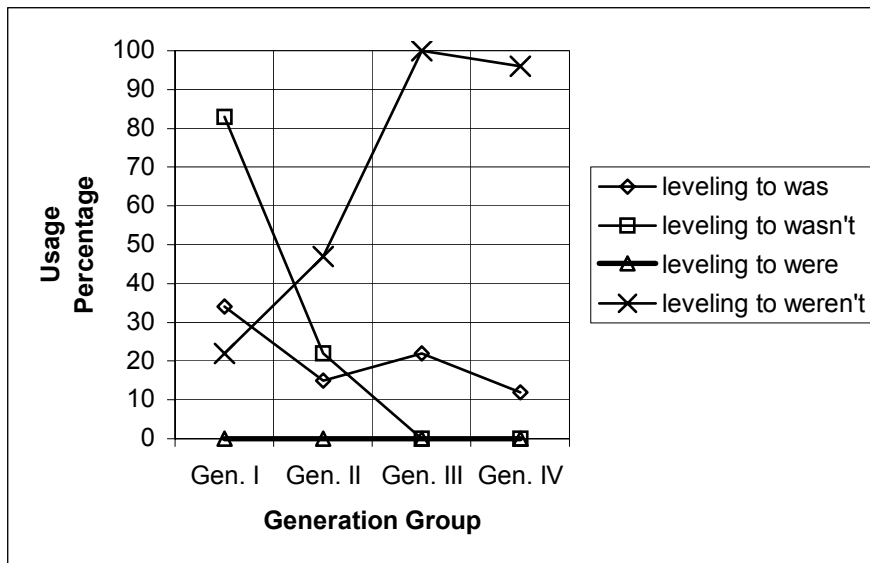


Figure 1. Past-tense *be* leveling on Smith Island, MD, in apparent time (data from Schilling-Estes 2000, graph adapted from Wolfram and Schilling-Estes 2003)

⁶ The number of speakers per generation group was not indicated in the cited publications; that information comes from Schilling-Estes (personal communication).

Generation Group	#was/ #leveling environs %was	#wasn't/ #leveling environs %wasn't	#were/ #leveling environs %were	#weren't/ #leveling environs %weren't
Generation I b. 1923-1933 (4 persons)	9/62 14.5%	1/4 25%	0/119 0%	27/41 65.9%
Generation II b. 1938-1958 (8 persons)	7/41 17.1%	0/12 0%	0/107 0%	16/31 51.6%
Generation III b. 1960-1970 (5 persons)	10/56 17.9%	0/8 0%	0/107 0%	7/24 29.2%
Generation IV b. 1973-1987 (13 persons)	6/41 14.6%	0/10 0%	0/134 0%	30/33 90.9%
Totals (30 persons)	32/200 16%	1/34 2.9%	0/467 0%	80/129 62%

Table 3. Past-tense *be* leveling on Smith Island, MD, in apparent time (table adapted from Mittelstaedt in progress)

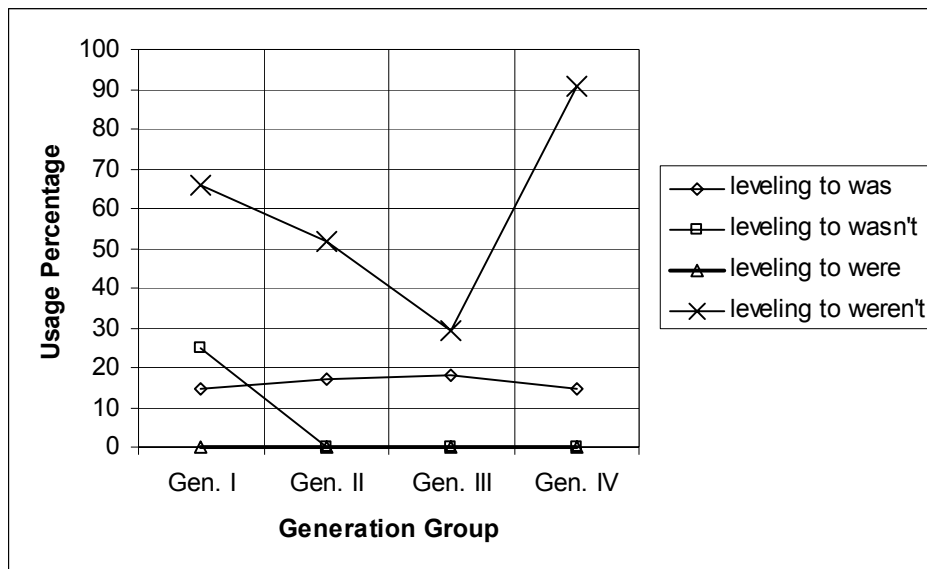


Figure 2. Past-tense *be* leveling on Smith Island, MD, in apparent time (data from Mittelstaedt in progress)

➔ This pattern of variation (*weren't* leveling without *were* leveling, with or without *was* leveling) has been documented in various dialects of the Mid-Atlantic region (Schilling-Estes and Wolfram 1994, 2003, Wolfram and Schilling-Estes 2003) and also in the English Fens (Britain 2002).

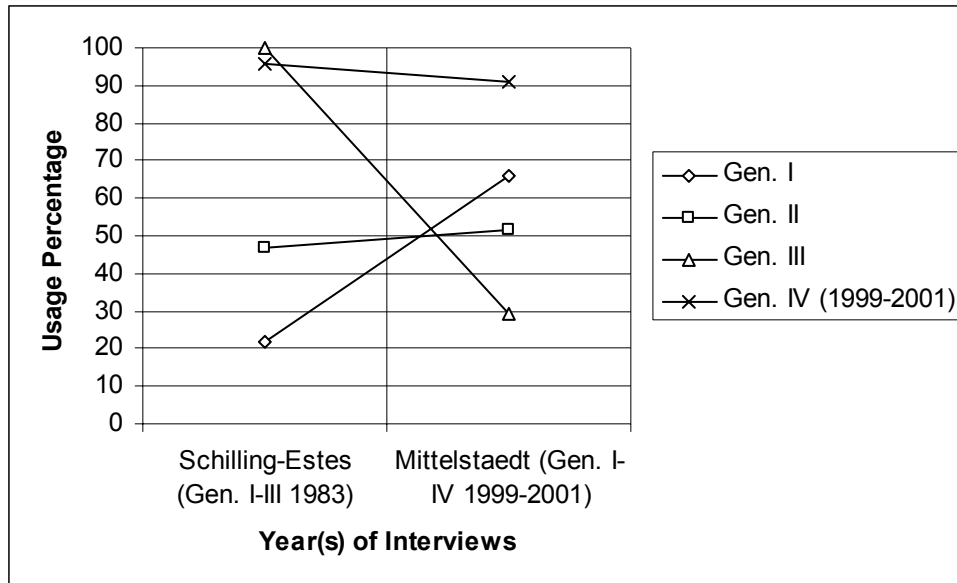


Figure 3. *Weren't* leveling on Smith Island, MD, in real and apparent time, two samples (Mittelstaedt in progress, Schilling-Estes 2000)

3.5 Two research questions, Smith Island *weren't* leveling

We can re-pose the general research questions above for the case of Smith Island *weren't* leveling:

- (17) What are the morphosyntactic mechanisms of *weren't* leveling on Smith Island?
 - a. What kind of morphosyntactic object is leveled *weren't*?
 - b. How can there be *weren't* leveling without concurrent *were* leveling?
 - c. Why does *weren't* leveling occur only with cliticized negation *-n't*?

- (18) What role do the mechanisms of *weren't* leveling play in Smith Island's change in progress (death by concentration)?
 - a. How can *weren't* be "chosen" by Smith Islanders?
 - b. What is the origin of the *weren't* variant?

4. Adger and Smith's Minimalist Lexical Analysis

→ Adger and Smith (2005) argue "that a Minimalist approach to syntax melds extremely well with the kinds of data that variationists study because...it builds the notion of (tacit) choice of lexical item into the syntactic system, and it allows derivations with different lexical items to converge on the same basic semantic representation, thus capturing the multiple form/single meaning notion of a linguistic variable."

4.1 A Minimalist syntax

→ Adger and Smith utilize a basic model of syntax (Adger 2003, Pesetsky and Torrego 2001) following the Minimalist research program for linguistic theory (Chomsky 1995, 2000, et. seq., and much related work).

→ Adger and Smith "follow Distributed Morphology (Halle and Marantz 1993) in assuming that [lexical items] lack any phonological information: they are just bundles of syntactic and semantic features which are spelled out as morphemes at some point in the derivation" (2005: 174, fn. 3).

(19) Feature checking

[*u(n)interpretable*] feature: value]

...[F:a, ~~u~~G:b]...[G:b]...

(20) Person features⁷

<u>[pers:+]</u>	<u>[pers:-]</u>
[pers:1] = 1st	[pers:-] = 3rd
[pers:2] = 2nd	

4.2 Was leveling in Buckie, Scotland

→ Adger and Smith analyze was leveling in the village of Buckie, Scotland (Smith 2000, Tagliamonte and Smith 2000).

⁷ Following Harley and Ritter (2002); see Adger (to appear) or Nevins (2006) for different featural analyses of person.

➔ Buckie was leveling shows a “relatively rare...variable/categorical split” (Adger and Smith 2005: 167) in the morphosyntactic environment for leveling: leveled was is completely unattested with 3p pronominal subjects, but occurs variably with full NP plural subjects.

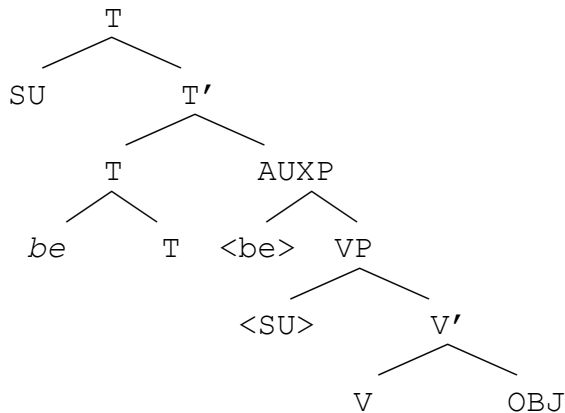
(21) Paradigm for Buckie was leveling with negation

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

4.3 A Minimalist lexical analysis of (Buckie) was leveling

➔ I follow Adger and Smith in assuming (standardly) that copular *be* starts in somewhere within the VP, and auxiliary *be* starts as the head of an AUXP above VP; both kinds of *be* raise to adjoin with T. I also follow them in setting aside questions about expanded structure internal to TP/IP (e.g. Pollock 1989, Bobaljik and Jonas 1996, and much other work) and VP/vP (e.g. Hale and Keyser 1993, Larson 1987, Marantz 1997, and much other work).

(22) Syntax of auxiliary *be* (Adger and Smith 2005: 165)



→ Adger and Smith report that the “copula vs. auxiliary status of the verb” was not statistically “significant for the use of [leveled] *was*” (2005: 174, fn. 6). None of the other studies discussed here found that the copula/auxiliary status of past-tense *be* made any difference in the patterns of variation.

(23) Lexical item T, unchecked and unvalued

T[tense:past, ucase:nom, unum:, upers:]

(24) [*be* T], checked and valued, with morpheme spell outs

I ... [*be* T[tense:past, ~~u~~case:nom, ~~unum~~:sing, ~~upers~~:1]]
→ spells out as *was*
You ... [*be* T[tense:past, ~~u~~case:nom, ~~unum~~:sing, ~~upers~~:2]]
→ spells out as *were*
She ... [*be* T[tense:past, ~~u~~case:nom, ~~unum~~:sing, ~~upers~~:−]]
→ spells out as *was*
We ... [*be* T[tense:past, ~~u~~case:nom, ~~unum~~:pl, ~~upers~~:1]]
→ spells out as *were*
You ... [*be* T[tense:past, ~~u~~case:nom, ~~unum~~:pl, ~~upers~~:2]]
→ spells out as *were*
They ... [*be* T[tense:past, ~~u~~case:nom, ~~unum~~:pl, ~~upers~~:−]]
→ spells out as *were*

→ On Adger and Smith’s analysis, “...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).

(25) Lexical item T2, unchecked and unvalued

T2[tense:past, ucase:nom, upers:]

→ This lexical item T2 has no uninterpretable number feature.

→ However, Adger and Smith need to invoke additional mechanisms in the morpheme spell out: “...the featural content of [*be* T2] differs from that of [*be* T], and the morphology can be sensitive to this, spelling out the former as *was*” (Adger and Smith 2005: 166).

(26) [*be* T2[tense:past, ~~u~~case:nom, ~~upers~~:+]]

→ spells out as *was*

→ The morpheme spell out of T2 is specified with a positive value for uninterpretable person (~~upers~~:+). Thus, T2 will check syntactic features with any pronoun; but [be T2] will only spell out as *was* with singular and plural *you* (~~upers~~:2) and plural *we* (~~upers~~:1), and not with 3s or 3p pronouns (~~upers~~:−). This explains the Buckie pattern.

(27) [be T2], checked and valued, with morpheme spell outs

<i>I</i> ... [be T2[tense:past, u case:nom, u pers:1]]	
	→ spells out as <i>was</i>
<i>You</i> ... [be T[tense:past, u case:nom, u pers:2]]	
	→ spells out as <i>was</i>
<i>She</i> ... [be T[tense:past, u case:nom, u pers:−]]	
	no spell out!
<i>We</i> ... [be T[tense:past, u case:nom, u pers:1]]	
	→ spells out as <i>was</i>
<i>You</i> ... [be T[tense:past, u case:nom, u pers:2]]	
	→ spells out as <i>was</i>
<i>They</i> ... [be T[tense:past, u case:nom, u pers:−]]	
	no spell out!

→ To explain the more common pattern, where leveled *was* occurs with both 3p *they* and full-NP subjects, we need another spell out for [be T2].

(28) [be T2[tense:past, ~~u~~case:nom, ~~u~~pers:±]]
 → spells out as *was*

4.4 The Problem of *weren't* leveling

→ We can get *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 predicts concurrent *were* leveling, contrary to fact.

(29) T3[tense:past, ~~u~~case:nom, unum:]

(30) [be T3[tense:past, ~~u~~case:nom, unum:±]]
 → spells out as *were*

→ We could try adding an uninterpretable negation feature to the lexical item T3-NEG, and let it spell out as *were*. But if uninterpretable features must be checked in "one

fell swoop" (as in Chomsky 2000), then T3-NEG would seem uncheckable; if not (Castillo, Drury and Grohmann 1999, Parrott 2000), T3-NEG might predict *were* leveling with *not*, contrary to fact.

(31) T3-NEG[tense:past, ucase:nom, unum:, uneg:+]]

(32) [~~be~~ T3-NEG[tense:past, ~~u~~case:nom, ~~unum~~:±, ~~uneg~~:+]]
→ spells out as *were*

→ We could posit that T3 is spelled out as *were* only when adjoined to negation, as specified in the spell out.

(33) T3[tense:past, ucase:nom, unum:]]

(34) [~~be~~ T3[tense:past, ~~u~~case:nom, ~~unum~~:±]] neg:+]]
→ spells out as *weren't*

→ But why do we need a distinct lexical item if it only spells out with negation? Why not just have a distinct spell out for T? This suggests a DM treatment.

(35) [~~be~~ T[tense:past, ~~u~~case:nom, ~~unum~~:±, ~~u~~pers:±]] neg:+]]
→ spells out as *weren't*

4.5 Summary

→ On Adger and Smith's analysis, mechanisms of variation are primarily located in the uninterpretable features of lexical items (i.e. Syntactic Terminals in DM, Embick and Noyer to appear) and their checking combinations in the syntax.⁸

→ Although their analysis must also involve spell out rules, it does not make use of any specific mechanisms of DM theory.

→ This kind of lexical analysis can account for (Buckie) *was* leveling, but apparently cannot account for the pattern of *weren't* leveling found on Smith Island (and elsewhere).

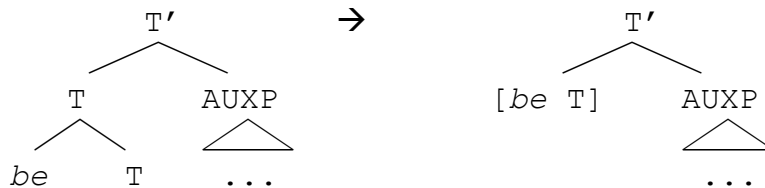
⁸ Hence, Adger's "Combinatorial variability" (to appear).

5. Distributed Morphological Mechanisms

→ I adopt the same Minimalist syntax as Adger and Smith, augmented by Distributed Morphology (DM) (Halle and Marantz 1993, mostly following Embick and Noyer to appear).

5.1 Past-tense *be* suppletion in DM

(36) Morphological Fusion of *be* and T

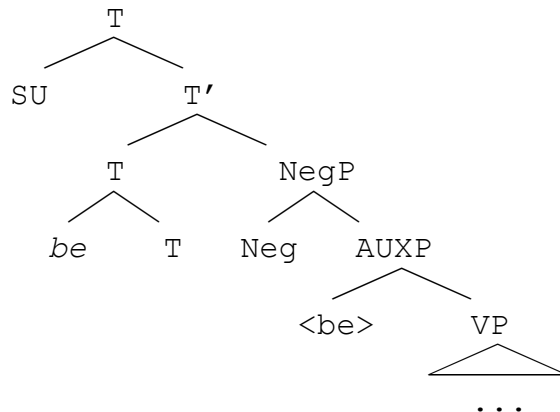


(37) Postulated Vocabulary for past-tense *be*⁹

[<i>be</i> , tense:past, unum:sing, upers:2]	↔	/wəɪ/
[<i>be</i> , tense:past, unum:pl]	↔	/wɛɪ/
[<i>be</i> , tense:past] (<i>elsewhere</i>)	↔	/wʌz/

5.2 Past-tense *be* and negation in DM

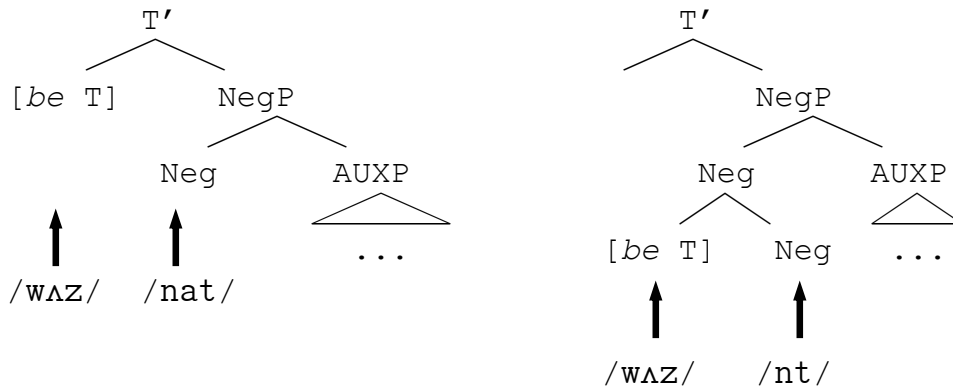
(38) Syntax of auxiliary *be* and negation



⁹ Nevins (personal communication) points out that the *was/were* paradigm could also be captured by positing Impoverishment of "[–pl] in the context of 2nd person." Then we need only two Vocabulary Items:

(i) [<i>be</i> , tense:past, unum:sing]	↔	/wʌz/
(elsewhere)	↔	/wɛɪ/

(39) Morphological Merger of Neg and [be T]



5.3 *Weren't* as suppletion

➔ Schilling-Estes and Wolfram (1994) suggest that *weren't* leveling results from a "remorphologization" of negation that yields "suppletive-like negators that function as unanalyzable units," analogous to the form *ain't*.

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

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

➔ 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 underspecified for person and number features, but includes a negation feature.

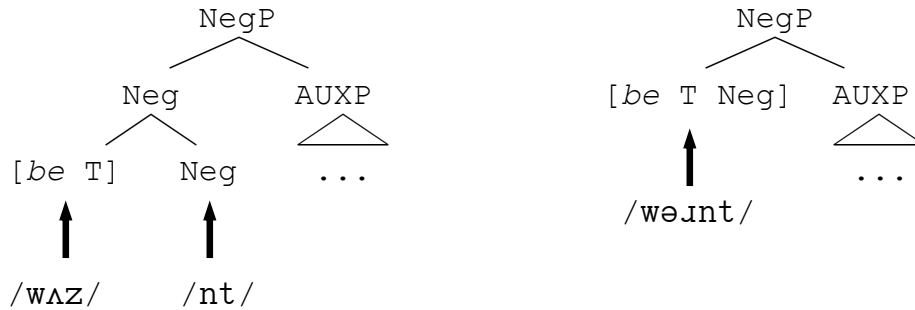
(41) Postulated Vocabulary Item for *weren't*

$$[be, tense:past, neg:+] \quad \Leftrightarrow \quad /w\text{ə}nt/$$

➔ Insertion of this Vocabulary Item requires morphological Fusion of the Neg(ation) terminal with the [be T] terminal. *Be* and *T* have already been Fused (*was/were* suppletion), and Merger of Neg (*-n't* cliticization) feeds Fusion.

➔ This vocabulary item should not compete for Insertion, since its "substantive" features are a subset of any target terminal only when Fusion has applied--and then *weren't* will be the only Insertable Vocabulary Item.

(42) Morphological Fusion of Neg and [be T]



(43) Non-competition of *weren't* and *was*

[be, tense:past, neg:+]	↔	/wəʊnt/

[be, tense:past, unum:sing, upers:2]	↔	/wɔɪ/
[be, tense:past, unum:pl]	↔	/wɔɪ/
[be, tense:past] (<i>elsewhere</i>)	↔	/wʌz/

5.4 Extension to *ain't* and other auxiliaries

➔ This analysis can be extended to leveled *ain't* and other auxiliaries. On Smith Island, variationist quantitative analysis shows that present-tense auxiliaries showing a person/number distinction (*be*, *have do*,) are leveling when negated with a clitic (*-n't*) (Mittelstaedt in progress).

(44) Postulated Vocabulary for (Smith Island) *ain't*

[be, tense:pres, neg:+]	↔	/eɪnt/
[have, tense:pres, neg:+]	↔	/eɪnt/

(45) Postulated Vocabulary Item for (Smith Island) *don't*

[do, tense:pres, neg:+]	↔	/dɒnt/
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Generation Group	#weren't/ #leveling environs %weren't	#ain't/ #leveling environs (be) %ain't	#ain't/ #leveling environs (have) %ain't	#don't/ #leveling environs %don't
Generation I b. 1923-1933 (4 persons)	27/41 65.9%	4/5 80%	1/5 20%	16/20 80%
Generation II b. 1938-1958 (8 persons)	16/31 51.6%	23/23 100%	7/10 70%	12/15 80%
Generation III b. 1960-1970 (5 persons)	7/24 29.2%	25/28 89.3%	3/7 42.9%	20/30 66.7%
Generation IV b. 1973-1987 (13 persons)	30/33 90.9%	107/107 100%	35/37 94.6%	40/41 97.6%
Totals (30 persons)	80/129 62%	159/163 97.5%	46/59 77.9%	88/106 83%

Table 4. Clitic-negated auxiliary leveling on Smith Island, MD (table adapted from Mittelstaedt in progress)

➔ In African-American English (AAE), both present and past tense *do* variably level to *ain't* (Green 2002, Martin and Wolfram 1998).

(46) "This is my first summer [with] no trouble. I ain't go to jail for speeding. Didn't go to jail for DUI. I didn't break my foot. I didn't break my other foot. I'm one step ahead of the game already."¹⁰

(47) Postulated Vocabulary for (AAE) *ain't*

[be, tense:pres, neg:+] ⇔ /eint/
[have, tense:pres, neg:+] ⇔ /eint/
[do, neg:+] ⇔ /eint/

6. Summary of Conclusions

(48) What are the morphosyntactic mechanisms of *weren't* leveling on Smith Island?

- a. Labovian variants are different Vocabulary Items; leveled *weren't* is a suppletive Vocabulary Item that can only be inserted after Fusion of [be T] and Neg.

¹⁰ Attested, Kwame Brown speaking to the Washington Post, collected by the author 10/1/2005.

- b. *Weren't* leveling takes place without concurrent *were* leveling because the *weren't* Vocabulary Item is underspecified for person/number features; *weren't* leveling is a "remorphologization" of negation exponence, not an agreement leveling process.
 - c. *Weren't* leveling occurs only with cliticized negation (*-n't*) because the *weren't* Vocabulary Item contains negation in its "substantive" morphosyntactic features; Merger (for *-n't* cliticization) feeds Fusion of [be T] and Neg.
- (49) What role do the mechanisms of *weren't* leveling play in Smith Island's change in progress (death by concentration)?
- a. Mechanisms of Labovian variation are located "within properties of lexical items" (Adger and Smith 2005: 173), here understood as DM's Vocabulary; thus, social "patterns of variation seen across (groups of) individuals reduce to" (*ibid*) choice of Vocabulary Items;
 - b. Leveled *weren't* can be "chosen" by Smith Islanders because the *weren't* Vocabulary Item does not compete for Vocabulary Insertion.
 - c. Leveled *weren't* is chosen more frequently than leveled *wasn't*, and is evidently part of the socially motivated concentration process on Smith Island, along with other phonological and morphosyntactic variables.
 - d. It seems reasonable to conjecture that the *weren't* variant arose by analogy to *ain't*; this is also supported by the fact that *ain't* is historically derived from *aren't*--i.e. the pivot is the plural form, as with *weren't* (and unlike *was* leveling).¹¹

7. Speculations, Implications, Questions for Research

➔ Token numbers for morphosyntactic variables are notoriously slim. However, Schilling-Estes and associates (personal communication) have collected over 100 hours of sociolinguistic interviews recorded in the Smith Island community during 1983 and from 1999 to 2001, including re-

¹¹ As pointed out by Mittelstaedt (in progress, personal communication).

interviews of several individuals. Thus, Smith Island represents a unique opportunity to observe morphosyntactic change--via dialect death by concentration--in great detail, using both real- and apparent-time methods, and with an unusually large population sample.

➔ What exactly is the interaction between Vocabulary and morphological operations? Does the morphological component "see" which Vocabulary are available for Insertion? Or is *weren't* leveling evidence for "late" Fusion (Kandybowicz 2006)?

➔ What is the historical origin of the *weren't* Vocabulary Item? How can individuals "re-arrange" or "re-build" their Vocabulary? How is Vocabulary acquired from UG and environmental input? Can hypothesized constraints on Vocabulary acquisition help explain the addition or loss of Vocabulary Items (Parrott 2002b, in progress, to appear, Lardiere 2005)?

➔ How do we handle *was* leveling on this approach? We might posit an underspecified Vocabulary Item that Inserts *was* at any past-tense *be* terminal.

(50) **Hypothetical Vocabulary for *was* leveling**

[<i>be</i> , tense:past]	↔	/wʌz/

[<i>be</i> , tense:past, unum:sing, upers:2]	↔	/wəɪ/
[<i>be</i> , tense:past, unum:pl]	↔	/wəɪ/
[<i>be</i> , tense:past] (<i>elsewhere</i>)	↔	/wʌz/

➔ However, if this Vocabulary Item had to compete for Insertion, it would be the default. This means we have to stipulate non-competition--here, as additional structure in the Vocabulary. Instead, it might be possible to derive non-competition by making the morphosyntactic features of variable Vocabulary Items identical to those of competing, non-variable Vocabulary Items.

(51) **Hypothetical Vocabulary for was leveling**

[be, tense:past, unum:sing, upers:2]	↔	/wʌz/
[be, tense:past, unum:pl]	↔	/wʌz/

[be, tense:past, unum:sing, upers:2]	↔	/wəɪ/
[be, tense:past, unum:pl]	↔	/wəɪ/
[be, tense:past] (elsewhere)	↔	/wʌz/

➔ What about Buckie was leveling? Is it possible to capture this pattern of was leveling using only Vocabulary?

➔ I have argued here that we need a DM-mechanistic analysis in order to handle weren't leveling. One important question for research is whether similar empirical arguments can be made for the lexical analysis of variation (i.e. an analysis involving uninterpretable features of Syntactic Terminals and feature checking in the narrow syntax). To the extent that empirical cases can be handled without a lexical analysis, we might hypothesize that all of the mechanisms of Labovian variation in morphosyntax are located in DM's Vocabulary and operations of the morphological component.

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