Phonological Constraints Governing Nicknaming Conventions in African American Vernacular English

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Abstract— This paper shows the close interaction between morphology and phonology through an OT analysis of AAVE. AAVE exhibits a lot of identity between the base and the truncated form that forms the beginning of the analysis because truncation is often the starting point of suffixation and reduplication. This paper looks at different models used to analyze AAVE nicknaming conventions using optimality theory and has arrived at a good starting point. AAVE has not been heavily researched because it was considered an inferior language in the United States and it has only just started gaining international notoriety in the academic community as many state governments have debated the idea of educating the elementary school teachers in the linguistics of AAVE thinking that it will translate into having better prepared teachers to improve the failing reading scores of the African American community. Finally, the United States encourages linguists to analyze AAVE.

Index Terms— Optimality Theory, African American Vernacular English, Phonology, Sympathy Theory, Truncation, Suffixation, Reduplication

1 Introduction

African American Vernacular English (AAVE) is a language primarily spoken by the African American community in the United States of America. While AAVE is commonly discriminated against as an inferior dialect of English spoken by uneducated people, it is a language governed by principles and parameters like any other language in the world. From a linguistic point of view, no language is inherently better than another language. Also, many speakers of AAVE, including Former President Barrack Obama, are fluent in both AAVE and the Standard American English.

I will perform an Optimal Theory (OT) phonological analysis of AAVE looking for the phonological constraints that govern the language. One is able to observe many different phonological constraints when nicknaming conventions in AAVE are investigated. Standard American English and AAVE differ in nicknaming conventions when it comes to modifying the names. By analyzing the data, one should be able to determine the ranking of the phonological constraints that govern AAVE.

2 Theory

At first glance AAVE and Standard American English (SAE) exhibit two noticeable differences that have been investigated in Weeda (1992). The two languages differ when it comes to modifying names to become nicknames. SAE will normally utilize truncation and suffixation to modify the name. On the other hand, AAVE will normally not only utilize truncation and suffixation, but also utilize the phonological process of reduplication. An example of truncation commonly seen in SAE is Bradley >>> Brad. An example of suffixation commonly seen in SAE is Bruce [bʊs] >>> [bɹ ʊs -i], and an example of reduplication commonly seen in AAVE is Lee >>> Lee-Lee.

The other noticeable difference is that truncation in AAVE prefers open syllables. The nicknaming convention for the name David in SAE would usually be truncated to Dave [1]. However, the AAVE nicknaming convention would usually be to change David to De-De [deɪ-deɪ].

3 Data

While compiling the data for analysis, I took into account the following things:
a) the overall syllable count b) the open or closed status of the final syllable
c) stress placement d) the open or closed status of the stressed syllable

Monosyllabic, Open Final Syllable: [li]
Monosyllabic, Closed Final Syllable: [bɹʊs]
Disyllabic, Open Final Syllable, Open Stressed Syllable (Initial): [ˈʤi.nə]
Disyllabic, Open Final Syllable, Closed Stressed Syllable (Initial): [ˈɑn.dɹe ɪ]
Disyllabic, Closed Final Syllable, Open Stressed Syllable (Initial): [ˈloʊ.ɪs]
Disyllabic, Closed Final Syllable, Closed Stressed Syllable (Initial): [ˈwʊlf.gæŋg]
Disyllabic, Open Final Syllable, Open Stressed Syllable (Final): [lə. ˈneɪ]
Disyllabic, Closed Final Syllable, Closed Stressed Syllable (Final): [i.ˈvɛt]
Trisyllabic, Open Final Syllable, Open Stressed Syllable (Initial): [ˈmɑ.ɹi.o ʊ]
Trisyllabic, Closed Final Syllable, Open Stressed Syllable (Initial): [ˈbrɑ.də.ɹ ɪk]
Trisyllabic, Open Final Syllable, Open Stressed Syllable (Medial): [ə. ˈja.meɪ]
Trisyllabic, Closed Final Syllable, Open Stressed Syllable (Medial): [moʊ.ˈhɑ.mɨd]
Trisyllabic, Closed Final Syllable, Closed Stressed Syllable (Medial): [oʊ.ˈwɛn.θu]

4 Native Informant (29 year old male, Milwaukee,

Wisconsin)

Table 1 Monosyllabic, Open Final Syllable

Name	Preferred
[li]	[li-li]

Table 2 Monosyllabic, Closed Final Syllable

Name	Preferred
[bɹʊs]	[bɹʊs -i]

Table 3 Disyllabic, Open Final Syllable, Open Stressed Syllable (Initial):

Name	Preferred
[ˈdʒi.nə]	[dʒi-dʒi]

Table 4 Disyllabic, Open Final Syllable, Closed Stressed Syllable (Initial)

Name	Preferred
[ˈɑn.dɹ eɪ]	[dɹe ɪ]

Table 5 Disyllabic, Closed Final Syllable, Open Stressed Syllable (Initial)

Name	Preferred
[ˈloʊ.ɪs]	[loʊ-loʊ]

Table 6 Disyllabic, Closed Final Syllable, Closed Stressed Syllable (Initial)

Name	Preferred
[ˈwʊlf.gæŋg]	[wʊlf]

Table 7 Disyllabic, Open Final Syllable, Open Stressed Syllable (Final)

Name	Preferred
[lə. ˈneɪ]	[neɪ-neɪ]

Table 8 Disyllabic, Closed Final Syllable, Closed Stressed Syllable (Final)

Name	Preferred
[i.ˈvɛt]	[i]

Table 9 Trisyllabic, Open Final Syllable, Open Stressed Syllable (Initial)

Name	Preferred
[ˈmɑ.ɹi.o ʊ]	[ˈɹi.o ʊ]

Table 10 Trisyllabic, Closed Final Syllable, Open Stressed Syllable (Initial)

Name	Preferred
[ˈbrɑ.də.ɹ ɪk]	[ɹ ɪk]

Table 11 Trisyllabic, Open Final Syllable, Open Stressed Syllable (Medial)

Name	Preferred
[ə. ˈjɑ.meɪ]	[jɑ-jɑ]

Table 12 Trisyllabic, Closed Final Syllable, Open Stressed Syllable (Medial)

Name	Preferred
[moʊ.ˈhɑ.mɨd]	[moʊ-moʊ]

Table 13 Trisyllabic, Closed Final Syllable, Closed Stressed Syllable (Medial)

Name	Preferred
[oʊ.ˈwɛn.θu]	[oʊ]

5 Optimality Theory

Optimality theory has become mainstream in phonology. This is how Optimality Theory (OT) works. Universal Grammar (UG) includes: (1) A linguistic alphabet (2) A set of constraints (3) Two functions, GEN and EVAL. The grammar of a particular language includes: (1) Basic forms for morphemes (from which inputs are constructed). (2) A ranking for constraints in CON. Next, for each input: (1) GEN creates a candidate set of potential outputs (2) EVAL selects the optimal candidate from that set.

Basic premises of OT [2]:

1.Grammar is defined by the interaction of constraints.

2.Constraints come in two kinds:

a. Markedness constraints evaluate output representations.

b. Faithfulness constraints demand that input and output must be identical in a certain way.

3. Constraints may conflict with each other over the relative value of representations.

4. Even so, all constraints are present in every grammar (language).

5. Constraints are violable: conflicts are decided by prioritization (ranking).

6. Even so, constraint violation is minimal.

7. Differences between grammars are precisely differences in their prioritization schemes.

8. Each input gives rise to a set of potential outputs, a candidate set.

a. This candidate set is the same for all grammars.

b. The candidate that best satisfies the ranked constraint set (in a particular language) is output for the given input.

The principles of OT are [3]:

1.Violability: constraints are violable, but violation is minimal.

2. Ranking: Constraints are ranked on a language-particular basis. The notion of minimal violation is defined in terms of ranking.

3. Inclusiveness: the constraint hierarchy evaluates a set of candidate analyses that are admitted by very general considerations of structural well-formedness.

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6 Advantages of OT

1. new directions, new empirical results [4]

2. generality of scope: OT can be applied not only to phonology, but also to syntax, semantics, etc. [5]

3. parsimony: constraints only, not constraints plus rules plus other formal devices, so a more streamlined inventory of theoretical machinery. This is an application of Occam's razor [6].

4. direct incorporation of markedness (via universal constraints) [4]
5. compatibility with connectionism: network-like grammars, typically using weighted or probabilistic constraints [7]
6. factorial typology derives from free ranking calling attention to the problem of typological overkill or the Too Many Solutions/Repairs Problem [5]
7. conspiracies: homogeneity of target / heterogeneity of process [4]
8. Morpheme Structure Constraints (MSCs) and the problem of duplication or redundancy: rules and phonotactic constraints do the same thing, replicating each other's purpose [6].
9. problems with rules and levels: rules are inherently unconstrained, arbitrary, and languagespecific; lexical strata or levels tend to be proliferated without independent justification [8]
10. grammaticality judgments and gradient well-formedness: these involve unsystematic nonce forms and indicate that speakers have knowledge about violated constraints; RBP cannot account for this [9]. In other words, experiments show that many speakers know things about their language which they could not have learned.
11. back-copying and overapplication in reduplication: faithfulness constraints can handle these well, but RBPs cannot deal with cases where the base copies from the reduplicant [5].
12. serial derivations, for one reason or another, do not make sense from a cognitive point of view [10]
13. unifying the description of individual languages with cross-linguistic typology (through ranking permutation), may arguably be "the most important insight of the theory" [5]
14. learnability: universal constraints make it much easier for the child to acquire a language [11]
15. expressing structural descriptions (triggering environments) in addition to structural changes (repairs) with rules is more stipulative [12]

7 Truncation

Truncation is the basis for both suffixes and reduplicate forms of AAVE, so I would like to begin my analysis here. "Truncation is a general term for any morphological category that is derived by a systematic phonological shortening of a basic form" [6]. Cross-linguistically, we observe a common type of truncation, which involves shortening a name to create a nickname. Benua [6] proposed an analysis of OO-correspondence in truncation. This is where there is maximization of phonological identity between the truncated form and the base. This phenomenon can be observed in AAVE:

(1) a. Andrei [ˈɑn.dɹe ɪ] **Base**
b. Drei [dɹe ɪ] **Truncated form**
(2) a. Wolfgang [ˈwʊlf.gæŋg] **Base**
b. Wolf [wʊlf] **Truncated form**
(3) a. Yvette[i.ˈvɛt] **Base**
b. [i] **Truncated form**

In AAVE, there is shape identity between surface forms, either reduplicant-base or truncated form and base.
(4) Underapplication in reduplication and truncation
a. In reduplication: BR-Identity >> Markedness >> IO-Faithfulness
Lee [li]----- Lee-Lee [li-li]
b. In truncation: BT-Identity >> Markedness >> IO-Faithfulness
Andrei [ˈɑn.dɹe ɪ]---- Drei [dɹe ɪ]

8 Basic Model of Morphological truncation

Kager [6] explains the truncated form (T) as a stem, a free-standing form, which is an output. The output is related to a non-truncated form, itself a stem and free-standing form, which refers to the base (B). The base, like any other output form, has its own input (I). Correspondence between elements in the input (I) and base (B) is evaluated by IO-Faithfulness constraints. Correspondence between the truncated form (T) and the base (B) is evaluated by BT-Identity constraints.
(1) Correspondence relations in truncated forms are seen in AAVE: [dɹe ɪ]

BT-Identity
B [ˈɑn.dɹe ɪ]< > T [dɹe ɪ]
IO-Faithfulness
I [ˈɑn.dɹe ɪ]

Applying this analysis, we are able to see a lot of correspondence between the base of the base (B) and the truncated form (T) in the data set.

Table 14

Base	Truncated Form
[ˈɑn.dɹe ɪ]	[dɹe ɪ]
[ˈwʊlf.gæŋg]	[wʊlf]
[i.ˈvɛt]	[i]
[ˈmɑ.ɹi.o ʊ]	[ˈɹi.o ʊ]
[ˈbrɑ.də.ɹ ɪk]	[ɹ ɪk]
[oʊ.ˈwɛn.θu]	[oʊ]

This data allows us to be able to consider the following constraints.

(1) **MAX-BT**
Every element in B has a correspondent in T.

(2) DEP-BT
Every element in T has a correspondent in B.
(3) IDENT-IO
Every element in the Input must be present in the output.

In AAVE truncation, DEP-BT outranks IDENT-IO.
Tableau 1

/ ɑn.dɹe ɪ/ base /dɹe ɪ/ truncate	**DEP-BT**	**IDENT-IO**
ɑn	*!***	****
>>dɹe ɪ		**

Tableau 2

/ˈwʊlf.gæŋg/ base /ˈwʊlf/ truncate	**DEP-BT**	**IDENT-IO**
>>wʊlf		****
gæŋg	*!***	****

Tableau 3

[i.ˈvɛt] base [i] truncate	**DEP-BT**	**IDENT-IO**
>>i		***
vɛt	*!	*

Tableau 4

[ˈmɑ.ɹi.o ʊ] base [ˈɹi.o ʊ] truncate	**DEP-BT**	**IDENT-IO**
mɑ.ɹi	*!*	**
>>ɹi.o ʊ		**

Tableau 5

[ˈbrɑ.də.ɹ ɪk] base [ɹ ɪk] truncate	**DEP-BT**	**IDENT-IO**
>>ɹ ɪk		*****
brɑ	*!**	*****

Tableau 6

[oʊ.ˈwɛn.θu] base [oʊ.ˈwɛn.θu] truncate	**DEP-BT**	**IDENT-IO**
>>oʊ		*****
wɛn	*!*	****

AAVE exhibits a lot of correspondence between the base and the truncate and the output form should be similar to the truncated form even if the candidate lacks in IDENT-IO.

9 Reduplication

In this next section, we will apply the Correspondence Theory to nicknaming conventions in AAVE when it comes to reduplication. The Correspondence Theory states that at some stage of the derivation the morpheme "RED" is affixed. This affix has the entirety of the base of affixation as its underlying representation. This analysis would be that if the morpheme is affixed at the beginning of the stem level, its underlying form is the underlying form of the base. If affixed later at a later cycle, its underlying form is the output of the previous cycle.

We are able to identify examples of reduplication in the data set:

Table 15

Base + RED	Stem + RED
[li] + RED	[li-li]
[ˈʤi.nə] + RED	[ʤi-ʤi]
[ˈloʊ.ɪs] + RED	[loʊ-loʊ]
[lə. ˈneɪ] + RED	[neɪ-neɪ]
[ə. ˈjɑ.meɪ] + RED	[jɑ-jɑ]
[moʊ.ˈhɑ.mɪd] + RED	[moʊ-moʊ]

The morpheme is only affixed at the beginning of the cycle for one syllable words. It is affixed later in the cycle for all other words in the data set. While examining this data set, we quickly notice a problemə.[ˈjɑ.meɪ] + RED involves a deleted schwa at the beginning of a word, so we need to use the constraint ONSET.

Tableau 7

/ə. ˈjɑ.meɪ]/+ /RED/ /jɑ/ stem	ONSET	MAX-BR
jɑ-jɑ		***
ə. ˈjɑ-jɑ	*!	**

AAVE exhibits deletion of unstressed syllables so this seems like a proper way to analyze the data. For the purpose of my analysis, I will take Green's (2002) analysis into consideration. AAVE will often exhibit these patterns:

1) Deletion of unstressed syllables [ə. ˈbaut > baut]
2) Front stressing of initial syllables [di.ˈtɹɔ ɪt > ˈdi.tɹɔ ɪt]

The emergence of the unmarked (TETU) is a theoretical term that is often used to describe the phenomenon that there is a general tendency for there to be a reduction of material in reduplicants. The copy is often less marked than the original.

10 Suffixation

Finally, I will look at suffixation in AAVE, which is the last phonological process that AAVE will normally utilize to modify a name into a nickname. The only nickname that appears in my data set to utilize this phonological process is [bɹus]. Itô and Mester [13] analyzes this phenomenon with a NON-FINALITY constraint.
The first constraint that we need to utilize is NON-FINALITY.
NON-FINALITY: No head syllable of a prosodic word is final in prosodic word
The next constraint that needs to be added to the analysis is MAX-IO. There should be faithfulness between the input and the output.

Tableau 8

/bɹus/ + /i/	NON-FINALITY	MAX-IO
a. bɹus	*!	i
b. bɹu	*!	si
c. bɹ	*!	usi
d. b	*!	ɹusi

>>>e. bɹʊs -i		
f. bɹʊ -i		s!
g. bɹ -i		u!s
h. b-i		ɹ!ʊs

11 NEXT DIRECTION

The next direction for this research would be to investigate syllable weight and syllable stress. In layman's terms, the basis for nicknaming conventions in AAVE is truncation, because truncation needs to take place before reduplication or affixation. The motivation as to whether the EVAL will ultimately go with reduplication or affixation needs to be investigated. Obviously, in order for this to take place, I need to include a much more extensive data set with more examples of affixation.

Vam Dam [14] analyzes disyllabic names in SAE that utilize with an extension of the Sympathy Theory (ST):
Tableau 9

/andrew + i/	SONSEQ	NONFINALITY	MAX-IO	ALL-SYLL-LEFT-flower
a. .andr,	*!	*	ewi	
b. .and. (flower)		*	rewi	
c. .an.		*	d!rewi	
d. .a.		*	n!drewi	
e. .a.n-i			drew	SYLL
f. .an.d-i			rew	SYLL
g. .an.dr-i			ew	SYLL
f. .an.drew.w-i				SYLL/ SYLL

His analysis uses the constraint ALL-SYLL-LEFT to be able to select the sympathetic candidate. Finally, after the sympathetic candidate is discovered, the optimal candidate will show faithfulness in relation to the sympathetic candidate.

Full constraint rank [14]:
Tableau 10

/andrew + i/	SONSEQ	NONFINALITY	DEP-flower-O
a. .andr,	*!	*	r
b. .and. (flower)		*!	
c. .an.		*!	
d. .a.		*!	
e. .a.n-i			i
>>f. .an.d-i			i
g. .an.dr-i			ri!
f. .an.drew.w-i			r!ewi

This OT analysis of SAE could also be applied to AAVE, and it is a more complete analysis of suffixation than the original one proposed by McCarthy and Prince [15]:
a. /input/ i. maximally map base segments onto a monosyllable (no skipping, left-to-right)
ii. suffix /i/, /-o/, etc.
iii. resyllabify [15] [output]

b. /hildred/
i. hild
ii. hild-i
iii. hil.di [hil.di]

This analysis would work for the name /brus/ becoming /brus-i/ in my data set, but it would not work for all nicknames. This is a good approximation to begin with but it would not be able to be utilized to analyze more complex data.

Syllable weight should also be considered in the next analysis. The majority of languages allow only two syllable weights: the light syllable, which has one prosodic unit of weight called a mora; and the heavy syllable, which has two moras. These two types of syllables would be called monomoraic and bimoraic, respectively [1]. Both vowels and consonants may carry one or two moras with consequent phonetic differences [16].

English has a minimal syllable of {V} and a maximal syllable of {CCVCC}, with a special adjunction rule for [s] [16]. Vowels in open stressed syllables tend to be bimoraic, and vowels in closed syllables are monomoraic, while the second mora is assigned to the coda, which can be distributed among multiple consonants [16]. In addition, English is a trochaic language, which means that metrical feet are left-strong [1]. In SAE, stress usually tends to fall on closed syllables, but in AAVE open syllables usually tend to attract stress.

12 CONCLUSION

This paper shows the close interaction between morphology and phonology through an OT analysis of AAVE. AAVE exhibits a lot of identity between the base and the truncated form which forms the beginning of the analysis because truncation is often the starting point of suffixation and reduplication. This paper looked at different models used to analyze AAVE nicknaming conventions using optimality theory and has arrived at a good starting point. However, more research needs to be conducted on the unique stress patterns of AAVE and how it differs from SAE. This would most definitely shed some light on the differences in the phonological systems of the two languages. AAVE has not been heavily researched because it was considered an inferior language in the United States and it has only just started gaining international noto-

riety in the academic community as many state governments have debated the idea of educating the elementary school teachers in the linguistics of AAVE thinking that it will translate into having better prepared teachers to improve the failing reading scores of the African American community. Finally, linguistics in the United States are encouraged to analyze AAVE.

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