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THE MANIFESTATION OF AGRAMMATISM IN A BIDIALECTAL SPEAKER OF AFRICAN-AMERICAN VERNACULAR ENGLISH AND STANDARD AMERICAN ENGLISH

by

JEAN E. JONES

A dissertation submitted to the Graduate Faculty in Speech and Hearing Sciences in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2002

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Abstract

THE MANIFESTATION OF AGRAMMATISM IN A BIDIALECTAL SPEAKER OF AFRICAN-AMERICAN VERNACULAR ENGLISH AND STANDARD AMERICAN ENGLISH

By

JEAN E. JONES

Advisor: Professor Loraine Obler

The purpose of this study was to determine how agrammatism can be manifested in a bidialectal speaker of African-American Vernacular English and Standard American English with aphasia.

African-American Vernacular English (AAVE) is a particularly interesting dialect relative to Standard American English (SAE). Some obligatory features in SAE are produced optionally in AAVE (e.g., plural /Z/), resulting in speech that may appear similar to that of agrammatic SAE speakers. The first goal of this project was to distinguish the agrammatic features of a bidialectal AAVE-SAE speaker with agrammatism from those that may simply reflect AAVE dialect patterns.

The first study employed Seymour's (1998) categorization schema to demonstrate that indeed, numerous utterances can be deemed agrammatic rather than dialectal.

In addition, three features of AAVE in which functors are employed more frequently than, or differently from, SAE were identified for experimental testing: habitual be, plural /Z/, and multiple negatives. Three experiments were set up to have the participant read aloud sentences containing these functors. A fourth experiment was designed after piloting suggested that monosyllabic negative contractions (e.g., can't) were particularly problematic for the participant. Moreover, because the piloting suggested that the participant's use of plural /Z/ fell within the normal range for a bidialectal AAVE/SAE speaker, the sixth study of this dissertation reanalyzed a subset of Meth's 1998 data that included the same participant producing 3rd person /Z/ and, by way of comparison, past-tense /D/.

Initially, unbound functors that are distributed differently in AAVE and SAE were investigated. It was observed that the habitual be is spared as are a number of negative elements, but not negative contractions. Monosyllabic words with negative contraction affixes posed particular problems, but another form of inflection, plural, did not. Concerning bound affixes, Meth's (1998) data that included the same participant producing SAE verb inflections, revealed that the participant employs an affix for third person /Z/ more than for past tense /D/. Additionally, the use of suffixes or zero affix is not randomly distributed; rather, the zero affix is more likely to occur with phonologically "harder" items: multisyllabic stems and ones ending in consonant

clusters. Such a pattern was consistent with what Meth (1998) reported for SAE monodalectal speakers that the aphasic speakers of AAVE-SAE can be identified by the same criteria used for SAE and other languages such as the reduction in the use of functors, omissions and substitutions of inflectional markers and telegraphic speech with the relative sparing of content words. On two points the participant's data differed interestingly from what would be expected from the extensive agrammatism literature: his spared use of habitual be and his specific problems with negative contractions.

The present study was the first to describe a bidialectal speaker of AAVE-SAE with agrammatism and to suggest clinical implications regarding his use of habitual be, negative contractions, 3rd person present /Z/ and past tense /D/ affixes.

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Lastly, to my granddaughter Bria and all the children of the world I offer these words: "Be proud of who you are. Embrace your culture, appreciate its richness and live your legacy with pride and dignity. Reach for the moon. Give it your best and if you fail, you will still be among the stars."

"The Unconquerable AAVE"

List of Tables

List of Appendices

CHAPTER 1

INTRODUCTION

1. 1 Overview

Over the past two decades, there have been many classical and contemporary theories of agrammatism in the research literature on aphasia. Researchers have tried to formulate a definition that would best reflect the complexity of the symptoms and account for the nature of the disorder. Theories of agrammatism drawn from the rapidly evolving fields of neurolinguistics and linguistic aphasiology seem to have taken either a new direction relative to traditional theories or they have re-visited past theoretical approaches to the study of agrammatism. The neurolinguistic theories of agrammatism have added enormously to understanding the neural basis of languages and the relationship of the language structures and processes to neurological parameters. Neurolinguistic analyses have influenced modern approaches to gathering more direct evidence on the nature of language-brain relationship.

The move to linguistic aphasiology, another new and independent area of science, is a recent outgrowth of neurolinguistics and is largely derived from clinical studies and concepts. Linguistic aphasiology draws from psycholinguistic, cognitive, psychological and linguistic theories for detailed characterizations of the damaged language-processing system in individual patients. This approach is fundamental to understanding how language breaks down and what the patterns of breakdown reveal about the processing of language in the brain.

Many of the analyses of aphasic symptoms proposed by linguistic aphasiologists challenge traditional approaches. Despite their differences, however, there is general

consensus that observable symptoms of agrammatism include: short phrase length, slow and labored speech rate, omissions and substitutions of functor words and bound morphemes, and the sparing of content words.

Several modern investigators of agrammatism have focused predominantly on the details of the linguistic structures that aphasic patients lose and retain (Kolk et al., 1985; Lapointe, 1985; and Kean, 1977). Researchers such as Grodzinsky (1984), Obler et al., (1984), Badecker and Caramazza (1985) have described the observable symptoms of omissions and substitutions. Other studies have focused on processing abnormalities (e.g., Grodzinsky et al., 1986, and Zurif, 1972) and impaired language knowledge (e.g., Kean, 1977).

An interesting interpretation of agrammatic speech proposed by Arnold Pick (1913) appears relevant to this study. He suggested that agrammatism was analogous to reduced forms of a standard language like those of pidgins and child languages that omit crucial elements. Pick asserted the analogy based on clinical observations of the grammatical impairments seen in aphasic patients. He maintained that the speech impairment in aphasic patients results from speech "disintegration."

Pick's (1913) model of a "natural" agrammatism characterized by reduced forms and omission of crucial elements, is consistent with the notion that SAE speakers with agrammatic aphasia and normal AAVE speakers have similar characteristics. In particular, several features of AAVE (e.g., the zero markings for copula, plurality, tense and possessive), at a first glance could be construed as omissions of crucial elements, as they can be seen in SAE speaking agrammatic individuals. In an alternative analysis, however, these "omissions" of AAVE differ from SAE speaking agrammatic individuals'

omissions because in AAVE, use of functors is rule-governed. Moreover, the use of /Z/ for plural when no quantifier would indicate plurality and other AAVE phenomena (e.g., multiple negative and habitual be) could be construed as being "overused" in AAVE relative to SAE.

1. 2 Statement of the Problem

The participant in this study was a bidialectal AAVE-SAE speaker with agrammatism. AAVE and SAE are two closely related dialects with distinct and shared features. His linguistic background differed from the linguistic backgrounds of some participants in other bilingual and polyglot studies. Case studies have been reported of bilingual and polyglot speakers with aphasia who spoke two different dialects. Other studies have cited speakers of a standard dialect and an unrelated dialect that differed categorically (Behier 1869, cited in Bernard, 1885). Studies of speakers of AAVE and SAE, two closely related dialects, with agrammatism are not found in the aphasia literature.

The clinical symptoms of agrammatism involve patterns that seem typical of AAVE speakers. AAVE is a dialect with its own rules, especially regarding functors and inflections. Instances of agrammatism should be visible in AAVE. To increase the likelihood of seeing agrammatism in it, I selected a non-fluent aphasic participant with effortful speech and short phrase length, in short, a Brocas's aphasic individual who appeared agrammatic. I elicited spontaneous speech for analysis and selected dialect-specific functors to be investigated.

The variable options within AAVE allowed the participant to switch between

AAVE and SAE. This is acceptable in conversation among AAVE speakers. However, formal testing situations are likely to manifest more SAE structures. Therefore, a native bidialectal speaker was crucial for examining the patient, designing the stimuli and analyzing the results.

In some aspects, the variable differences and overlapping nature of the use AAVE and SAE forms, made it harder to accurately diagnose clinical symptoms and to separate typical AAVE forms from the symptoms of agrammatism. By contrast, the closeness of the related dialects with shared features, the straightforward rules governing their use and the investigator's knowledge of the dialectal rules help tease AAVE from the symptoms of agrammatism.

The aphasia literature is very limited with respect to available studies regarding bidialectal agrammatic aphasic individuals with nonstandard spoken dialects. Data from the limited collection of studies of bidialectal individuals with aphasia have shown that they follow patterns of recovery that are similar to their premorbid languages of those demonstrated by bilinguals and polyglots with aphasia. Studies also have revealed dissociation between the aphasic individuals' performance in their standard dialect and in their related dialects. However, the extent and nature of disturbances in bidialectal aphasic individuals have not been thoroughly investigated in the aphasia literature. Certainly, studies that detail the symptoms or the extent of disturbances manifested in bidialectal agrammatic speakers of AAVE and SAE cannot be found in historical or contemporary aphasia literature.

The primary goal of this research was to identify and describe conditions associated with the manifestation of agrammatism in AAVE. The intent was to provide a

profile of agrammatic symptoms and the extent of disturbances seen in the bidialectal agrammatic speaker that is currently unavailable in the aphasia literature. The second goal of this dissertation was to investigate the systematic differences between AAVE and SAE use of functors and suffixes in a bidialectal agrammatic speaker of AAVE-SAE. Specific findings on syntactic patterns involving functors present in AAVE that have analogous counterparts in SAE and follow different rules are important diagnostic information. This information is useful for evaluating the linguistic competency of agrammatic bibialectal speakers of AAVE-SAE and for providing more accurate descriptions of their impairments.

Additionally, the bidialectal AAVE-SAE speaker's patterns and compensatory strategies (i.e. preference for the simpler forms) involved in code-switching between AAVE and SAE are clinically useful as an alternate diagnostic framework.

With these goals in mind, we asked these questions:

Research Questions

1. How does agrammatism manifest in a bidialectal speaker of AAVE and SAE?

2. Specifically, what patterns of performance do we see in an agrammatic AAVE speaker on dialect-specific functors and rules compared to analogous forms in SAE?

1. 3 Definition of Agrammatism

Agrammmatism is considered by aphasiologists to be a syndrome that is a part of the larger syndrome associated with Broca's aphasia. The most noticeable symptoms in agrammatism are the selective omissions of function words and affixes and a relative

sparing of content words in spontaneous speech. The agrammatic individual experiences major problems producing speech requiring complex syntactic specifications. There is a breakdown of syntactic processing at both phrasal and sentential levels. Various aphasia researchers maintain that agrammatic individuals reduce speech to its most crucial elements in an attempt to communicate using a few short words. Thus speech is "telegraphic." Speech is characterized by slow and effortful productions (Goldstein, 1948; Menn and Obler, 1990).

1. 4 Prevalence

Over one million Americans have aphasia (Payne 1997). Yet, the aphasia literature is very limited with respect to information regarding the prevalence of agrammatism in aphasic individuals. Studies concerning the prevalence of agrammatism in African-Americans with aphasia are even more limited and/or non- existent in the aphasia literature. Certainly information regarding agrammatism in bidialectal agrammatic speakers of AAVE-SAE cannot be found.

National data on the incidence and prevalence of aphasia in the non-white population are extremely limited. According to Payne (1997), African-Americans and other minority groups have been systematically excluded from statistical and epidemiological activities. One reason is that national surveys typically sample minorities in proportion to their presence in the sampling population. The limited sampling population of African-Americans is related to many variables (i.e., age, income, family history, and access to health care services) that influence their participation in

epidemiological activities. Paucity of epidemiological data complicates diagnosis both within and between cultural groups (Payne, 1977).

Agrammatism is seen in approximately 2 % of all aphasic individuals (Obler, 2001, personal communication). The limited population of agrammatic individuals and particularly bidialectal agrammatic speakers of AAVE-SAE led to the use of a single participant in this study. This participant was the only bidialectal agrammatic speaker of AAVE-SAE found in an extensive search by the author for several years throughout the United States of America.

CHAPTER 2

LITERATURE REVIEW

2. 1 Introduction

This section begins with brief summaries of two earlier works that were influential in the development of agrammatism as a clinical diagnosis. Two types of information are illustrated with an attempt to interpret several generalizations relevant to the present study. Then, several modern linguistic theories of the characterization of linguistic elements and language processes that are affected in agrammatism are discussed. In the final section on agrammatism, cross-language generalizations closely linked to the linguistic theories are summarized. In the remainder of the chapter, the phenomena of bidialectalism and the sparse literature on aphasic individuals who are premorbidly bidialectal as compared to bilingual aphasic individuals is presented. The final section of the chapter is devoted to a discussion of AAVE, treating briefly its history, the relevant syntax and its patterns that are distinct from SAE and considers as well the notions of optionality and variability. Together, the concepts discussed in this chapter provide the theoretical framework for the studies that follow of the manifestation of agrammatism in a bidialectal aphasic speaker of AAVE and SAE.

2. 2 Historical Theories

The "notion" of agrammatism has its roots in early aphasiologists' explanations of language dissociations in polyglot aphasia. Arnold Pick (1913), an early aphasiologist in modern times cited studies specifically concerned with the grammatical impairment in

aphasia (Pick 1903, 1913, 1915, 1921). He devoted several works to the functional factors associated with components of anatomy and neurology derived from a Jacksonian approach. Pick (1913) hypothesized that the cause of speech disorders in speech dissolution reflected regression to an earlier ontogenetic level. His explanation of aphasic individuals' speech disorders is derived from linguistic analyses of various languages and dialects. Pick (1903) interpreted the interference and the intermingling of grammatical forms of different languages in polyglots with an analogy to such dialects as "Sabir" spoken by Arabs of North Africa that contains Italian, French, Greek, Spanish and Arabic words, or the "pidgin-English" of the Far East (Vendryes) in which English and Chinese words are mixed with predominantly Chinese grammatical forms. He reported a pattern of "natural agrammatism" and language interference. According to Pick, speech regression is a reversion to an "uncultivated" language.

Pick's (1915) patients were German and Czech speakers of more richly inflected, case-marked languages compared to English. According to Brown's (1973, pp. 76-86) translations, Pick identified two forms of expressive agrammatism: frontal and temporal. He described frontal agrammatism as being characterized by reduced complexity and omission of function words and inflections. This description closely corresponds to modern descriptions of the grammatical impairment associated with Broca's aphasia. Temporal agrammatism is the form that closely corresponds to "paragrammatism" and is characterized by disturbances in auxiliary word use, incorrect word inflection, and erroneous prefixes and suffixes. Pick's observations are considered historic contributions describing symptoms of agrammatism, although his observations only describe aspects of this type of aphasia, not the mechanisms underlying it.

Goldstein (1948) provided interesting notions about agrammatism. He identified a "motor agrammatism" which was described as selective impairment in using one class of vocabulary elements, the "little words" or grammatical words (p. 115). Goldstein's theory, however, was limited in explaining the specific nature of language breakdown, the co-occurrence of certain symptoms or other aspects of aphasia.

These observations on aphasic symptoms by Pick (1903, 1913) and Goldstein (1948) were significant to the study of aphasia. However, it was recognized by researchers during this era that agrammatism was a deficit that could be defined in linguistic terms.

Roman Jakobson (1966) made the first contribution of linguistic analysis to the study of aphasia. He applied a linguistic theory that related the phonological breakdown of aphasia to the complexity of sounds. Jakobson's hypotheses were made from observations derived from case studies and reports in the literature, not on his collection of data. From observations of the descriptive phonology of child language, he proposed a parallel between syntagmatic processes in languages and many of the symptoms of agrammatism. He asserted that children show an obligatory hierarchy of sequences for mastering the phonemes of language. Jakobson's "phonemic regression hypothesis" maintained that agrammatic individuals show the same hierarchy of phonemic contrast in the reverse of children's acquisition of phonemes.

2. 2. 1 Summary of Historical Theories

This existing literature helps trace the history of the "notion" of agrammatism and broadens our understanding of many aspects of the complex linguistic manifestations of

the disorder. Although tied to the past, these observations are of more than historic interest, and many of the views put forth early on are still widely accepted today. Language "dissociation" and "psychological" factors and their consequences for language disturbances influenced modern theories.

The contributions of earlier works were indispensable for the contemporary works that followed. The manifestation of agrammatism remains at the forefront of clinical interest of many modern researchers.

2. 3 Contemporary Approaches

Modern works differing in principle from the early studies have attempted explanations that these historic works did not address. Although past theories have been re-visited by some contemporary contributors to agrammatism research, a new orientation to the linguistic approaches has emerged with respect to aphasic individuals' language knowledge as well as the impaired language processes. Many current researchers appear more interested in theoretical explanations of the disorder rather than in delineating traits and symptoms. Several approaches added to the efforts of early aphasiologists. These include documentations of agrammatic individuals' errors choosing inflectional affixes (Goodglass 1973, Kean, 1977 and Goodglass and Berko, 1960), Grodzinsky's (1984) study illustrating different types of impairments of vocabulary elements such as omission of free and bound grammatical morphemes, models of the stages of sentence planning and processes (Garrett, 1984 and Bradley et al., 1980) and cross-language study (Menn and Obler, 1990).

2. 3. 1 Inflectional Suffixes

The variable behaviors of different classes of elements seen in agrammatism and the different involvement of linguistic components are significant for the present study because of the variability of features such as the zero copula, possessive, third person singular, past tense and plural markers in AAVE, one dialect of the participant in the present study.

Variable patterns of loss with respect to inflectional and derivational morphology have been reported in agrammatic English speakers. Goodglass (1973) explored agrammatic individuals' performance on 3rd person singular present, plural and possessive /Z/ and past tense /D/ inflectional endings. These inflections follow the same English phonological constraints. A hierarchy of difficulty of inflectional endings was found. The possessive and the 3rd person /Z/ were the most difficult endings. The plural /Z/ was the easiest and the past tense fell between these extremes.

Goodglass and Berko (1960) demonstrated a "universal hierarchical difficulty" with the use of the grammatical inflections that mark the plural, the third person singular tense and the possessive in English. The suffix /Z/ that marks these forms is within the realms of both morphology and phonology. The phonological forms of the suffix /Z/ vary systematically regardless of its morphological use. This results in the unvoiced form following an unvoiced consonant (e.g. cats); voiced form following a voiced consonant or vowel (e.g. rugs) and becomes a syllabic form with a reduced vowel following a sibilant (e.g., glasses). The authors' data suggest a "universal hierarchy" of difficulty with grammatical inflections that influences the order in which agrammatic individuals

experience difficulty with these forms. The possessive and third person singular forms are omitted more often than plurals. In addition, more difficulty is observed with the non-syllabic forms than with the syllabic form.

Kean (1977) asserted a phonological account. She explains that word boundary affixes are "omission-prone" and the decreased number of errors displayed with the non-syllabic form is explained in terms of a "sonorance hierarchy constraint." The non-syllabic forms of [z] and [s] are less sonorant, (i.e., there is less unimpeded flow of air through the vocal tract for them than there is for the syllabic form [Iz]).

Basic phonetics can be applied to this interpretation. Fricatives by definition cause turbulence in the air stream and the [I] in [Iz] is produced with an unobstructed vocal tract that phonetically causes [Iz] to stand out from [s] and [z] allomorphs because it requires an extra syllable to produce.

The degree of complexity of inflectional affixes described above represents one aspect of variable disturbances seen in agrammatism relevant to the present study. Another unique variation is demonstrated by the co-occurrence of omissions and substitutions of free-standing function words and morphological endings. This variation is illustrated in section 2.3. 2 by contrasting agrammatism with "paragrammatism" a disorder that also affects function words and affixes.

2. 3. 2 Omissions and Substitutions of Grammatical Morphemes

Pick (1913) reported the co-occurrence of omissions and substitutions of function words in agrammatic patients. He suggested that there is a qualitative difference between the two disorders with respect to the paragrammatic patients' distribution of omissions

and substitutions. In Pick's view, paragrammatic patients tend to select incorrect function words and affixes, not omit them.

Grodzinsky (1984) was one of the first contemporary investigators to document cross-linguistic differences in the distribution of substitution vs. omission errors in agrammatism. He reported several Hebrew-speaking agrammatic subjects who appeared to be agrammatic in certain respects and paragrammatic in other respects. This author asserted that both agrammatism and paragrammatism affect the same set of items and maintained that the basis for distinguishing the two is a preference for "phonologically null" items of a morphologically determined paradigm that is present in agrammatism and absent in paragrammatism. In Grodzinsky's (1984) opinion, the mis-selection of items in a morphologically determined paradigm is the same for both agrammatic and paragrammatic individuals. However, the difference is determined by the constraint of the requirement that what is produced be actual lexical items in the language.

Findings of the co-occurrence of omissions and substitutions of grammatical morphemes in mild-moderate agrammatic patients reported in the large cross-linguistic study of Menn and Obler (1990) provide evidence that agrammatism occurs in at least the 14 languages their contributors studied.

The studies discussed so far have focused mainly on individual morphological elements, and function words, but did not address the relationship of the omitted elements to other abnormalities in sentence structures. The main theme of several approaches discussed in the next sub-section is the reduced complexity of syntactic structures.

2. 3. 3 Syntactic Simplifications and Sentence Planning

A theory of language production that relates the problem affected in agrammatism to impairments in construction to what Garrett (1984) termed the "positional level" argues that a single impairment may be responsible for the agrammatic symptoms of omission of function words and inflections and the simplifications of syntactic structures. Garrett (1984) contends that both inflectional affixes and function words are accessed at the same level of sentence planning. The major distinction in Garrett's model is between the sentence-planning processes that specify the content words in a sentence and the sentence-planning processes that determine the choice and position of function words and inflectional morphemes in a sentence. Lexical items are found for concepts at the "functional level," the first linguistic stage of representation that contains input for both syntactic and lexical processes. The syntactic process is concerned with the selection of phrasal frames that creates the "positional frame" for the specifications of grammatical morphemes and assignment of stress. The retrieval of phonological forms of content words is the operation of the lexical process. The "positional level" is the end result of the assembled string of content words with their specified grammatical markers in their appropriate slots in the positional frame.

Linguistic theories of agrammatism have also addressed abnormalities of language functions other than disturbances in speech production. A number of hypotheses of syntactic processing in agrammatism have been made. Miceli et al., (1983) demonstrate agrammatic disturbances in production with comprehension relatively spared. In contrast, documentation of agrammatic symptoms in comprehension has been cited in the literature (Caramazza et al., 1981: Caplan 1985 and Bates et al., 1987). Additionally,

Badecker and Caramazza (1985) reported patients who are agrammatic in both comprehension and production. The variations in disturbances in production and comprehension of patients with agrammatism cited by these researchers lead to the suggestion that agrammatism is more than a single disorder.

The studies of agrammatism discussed to this point concentrate on the agrammatic patients' disturbances in the production of function words, certain affixes and morphological elements and in the reduced complexity of sentence structures, but failed to mention aspects of language-processing abilities.

2. 3. 4 Language-Processing

Concentrating primarily on agrammatic patients' language-processing abilities, Bradley et al., (1980) attempted to answer the question of why agrammatic patients experience difficulties producing function words, certain affixes, constructing and comprehending certain syntactic structures. These investigators argue extensively for deficits in accessing lexical classes. Their argument is based on findings of studies of how agrammatic individuals access these vocabulary items. Bradley and her co-authors accumulated evidence by giving agrammatic patients and normal controls a number of lexical decision tasks that were designed to test recognition of function words and content words. Reaction times for normal controls were inversely correlated with a word's frequency. Faster reaction times were demonstrated for more frequent words. Bradley and her colleagues discovered that the inverse linear relationship between frequency and RT that held for the open-class words was also observed for closed-class words. Bradley and colleagues performed a second set of experiments and obtained results that indicate

agrammatic aphasic patients show interference effects for both open-class and closed-class words when they occurred at the beginning of a non-word letter string. They concluded that the basic process of recognizing closed-class words is abnormal in agrammatic patients. An explanation advanced was for a specialized "recognition routine" which is not frequency sensitive and does not operate in a "left to right" manner in closed-class recognition. Bradley and colleagues conclude that this disturbance in lexical access underlies the inability of the agrammatic patients to use these elements in spontaneous speech, and results in the disturbance seen in syntactic comprehension as well as in syntactic expression.

2. 3. 5 Summary of Contemporary Studies

In this section on agrammatism, the works of two earlier aphasiologists were reviewed to demonstrate the conceptual development of the "notion" of agrammatism. Contemporary aphasiologists' theories of agrammatism that lead to the characterization of disturbances in agrammatic individuals were part of this literature review. Findings from all the studies suggest that there are many different degrees of impairment of grammatical elements, many specific impairments of these elements and many factors and conditions superimposed upon the impairments such as the degrees of severity of the aphasia that lead to adaptations and compensation strategies in the functional domains. Despite these considerations, little or nothing has been said about cross-language data an important topic for understanding how agrammatism manifests in grammars of different languages. The agrammatic impairments seen in different languages that are models for analyzing the disturbance seen in the bidialectal participant of this study as

discussed in the next sub-section. The data collected and analyzed by the colleagues of Menn and Obler (1990) from the 14 languages studied provide a good account of data regarding agrammatism in different languages.

2. 3. 6 Cross-Language Data

All contributors of data for the languages studied in Menn and Obler's (1990) collection review the comparable speech of selected agrammatic patients. Their criteria described agrammatism in terms similar to traditional descriptions that include: a short phrase length, slow speech rate, a decreased variety of sentences and phrase structures and simplification of syntax both within and across clauses. The next sub-section considers first the simplifications reported in these studies, then omissions and what grammatical morphemes are relatively spared and finally word order and clausal structure.

2. 3. 6. 1 Simplifications

The manifestation of agrammatic symptoms reported in the grammar of the different languages includes the following in types of syntactic simplification: absence of relative clause and subordinate clauses: simplification of noun phrases resulting in a preference for function-word modifiers over content-word modifiers; absent optional elements of verb phrases such as mood and modality indicators that occur as free morphemes in English and bound morphemes in languages such as Finnish; a significant level of auxiliary verb omissions in Dutch, Finnish and German and a less significant amount in English, Hindi and Italian patients; omission of main verbs "have" and "be,"

noticeable in Dutch, English, French, German, Hebrew, Hindi, Italian and Swedish languages.

2. 3. 6. 2 Omissions

Findings related to bound and free grammatical morphemes indicated the prevalence of omission for most types of free grammatical morphemes (functors) varying with the severity of the aphasia and the grammar of different languages. The use of a greater number of bound grammatical morphemes, fewer free grammatical morphemes and substitutions are evident in Finnish, an agglutinative language. Indeed, compared to Dutch, Finnish speaking patients have fewer actual omissions. By contrast, free grammatical morphemes are spared in Dutch.

In languages such as Finnish and Hebrew with few or no permissible "zero morphs," substitutions are consistently observed. That is, errors of omitting the person or number endings are not observed even with bare stems that are possible forms of the verb. German, a highly inflected language, shows more substitutions than languages with minimal or no affix paradigm. Semantically less marked forms used in place of marked forms are noted in French, another richly inflected language. Interestingly, zero-marked forms are also found in African-American Vernacular English that appear as omissions on the surface but are rule-governed, a fact that may serve to determine whether they are omissions or substitutions of Standard English counterparts in the participant of this study.

In English, the infinitive of the verb and the plural of nouns are "zero-marked" bound morphemes. In agrammatism as discussed above, it is hard to determine whether

omissions of the past or 3rd singular, plurals and possessive affixes are really errors of omission of endings or errors of substitutions.

Addressing the issue of omissions of content words, contributors reported free grammatical morphemes, auxiliaries and empty main verbs are omitted consistently more than pre/post positions, personal pronouns and articles. Lexical verbs, nouns and coordinate conjunctions are the least frequently omitted forms.

2. 3. 6. 3 Relatively Spared Grammatical Morphemes

In contrast, an abundance of various free grammatical morphemes are reported. In French, conjunctions and definite articles are relatively spared. However, all optional free grammatical morphemes are consistently omitted. Clause initial additive conjunctions such as "and", "and then" "and so," which are discourse controlled and do not require integration into clauses, are observed with a higher than normal frequency. In Japanese, sentence-final particles are found with more normal frequency than in the other languages investigated. Italian adverbial "clitics", Chinese aspect marker "*le*" and Finnish "attitude clitics" are also more frequently observed.

Negative elements are relatively spared across all languages, an observation that contrasts significantly with the findings of the present study where one focus of the research was on the rich negative possibilities in AAVE.

2. 3. 6. 4 Word Order and Clausal Structure

In general, there seems to be a reliance on canonical word order for languages where the position of the verb is grammatically controlled.

In languages such as Finnish and Polish, the verbs move in response to discourse requirements and the patients may adopt a different word order from the canonical word order of the languages. Contributors reported a preference for sentence-final verbs by the Finnish patients and for sentence-initial verbs by the Polish patients.

A final observation is that some agrammatic individuals use non-clausal or minor-clause constructions that are even simpler than basic full clauses. Finnish contributors report the presence of "list" sentences in place of essential constructions and Dutch contributors reported the use of minor clause constructions.

2. 3. 7 Conclusion

The findings from the works reviewed show clinical diversity. Keeping in mind the literature review presented and proceeding from these data, pertinent findings that show the varied and numerous factors that must be taken into consideration when analyzing their effects and interrelations on agrammatic disturbances have been extracted.

Several observations such as Pick's notion of "natural agrammatism" and modern theories of individual variability and different patterns of loss in agrammatism are of interest with respect to an explanation of agrammatism. These observations clearly illustrate that in addition to types of grammatical elements and the extent of impairment, one must take into account all factors that are important to the language involved as well as related elements such as the relationship of the different dialects to each other, the severity of the aphasic disorder, and psychological effects.

Pick's (1913) findings are representative of a more specialized tendency that attempts to tie the results of aphasia research to those of linguistics and social psychology. Goldstein's (1948) theory emphasized the connection between aphasic disturbances and impairments of higher functions and changes in personality.

This review of agrammatism from a linguistic perspective provides some answers to the questions regarding the nature of the impairments and posits theoretical accounts for clinically observed symptoms. The theories reviewed have been selected because their findings appear crucial for an explanation of the variation in the degree of complexity of vocabulary elements, interactions of elements, and the interactions between higher-order deficits and features of languages themselves. This cumulative information motivates theoretical models for analyzing the speech patterns of an agrammatic bidialectal speaker of SAE and AAVE.

2. 4 Bidialectal Aphasia

The study of aphasia in polyglots has provided valuable information on language deficits in aphasia. However, the aphasia literature regarding bilingual and polyglot aphasic adults with respect to spoken-dialect variations within a standard language is extremely sparse.

Michel Paradis (1983) provided translations of a large collection of case studies illustrating patterns of impairments and recovery in bilinguals and polyglot aphasia. His contributions offered a number of possible explanations for these deficits. Individuals with aphasia speaking two related dialects follow similar patterns of restitution of their premorbid dialects as those of aphasic individuals speaking two or more different,

unrelated dialects.

In among the 98 published cases of polyglot aphasia reported by contributors in Paradis (1983), I culled a subset of 12 cases that considers aphasia in bidialectal speakers ("bidialectal" in this study refers to someone who speaks two dialects of the same language.) For the purpose of this study, a dialect is defined as a form or variety of a spoken language common to a specific region, community or social group that is mutually intelligible among speakers of both dialects (Stockman 1996).

For this dissertation, the cases extracted involving bidialectal aphasic individuals were analyzed in light of the issues raised in the larger literature on bilinguals with aphasia. Several explanations of recovery patterns (namely Ribot's rule, Pitres' rule and psychological/affective theories of Minskowski) are discussed to illustrate pertinent generalizations applicable to the present study.

2. 4. 1 Ribot's Law of regression

As early as the 18th century, Rush (1812) described speech disturbances in a polyglot aphasic patient (cited by Wald, 1958 p. 580), a case known since 1779 that revealed varying degrees of impairment of one or more of the patient's known languages. Since then other cases of dissociation were published. Wald (1958) cited a similar case (related by Trousseau, 1872) of a patient who recovered the ability to express himself in German, his mother tongue, but was unable to speak a single word of French, his second language. Trousseau (1872) described an official of the Russian Empire who spoke fluent French prior to a stroke. However, after insult he lost his

ability to use French but retained the ability to utter the word "yes" in Russian, his mother tongue.

Paradis (1977) also reported cases of dissociation of languages. Similar findings as mentioned above were observed. Cros (1857, cited in Wald 1958, p. 580) described a patient who completely lost his ability to use French, and only used a few words in a local dialect (patois), his native tongue before his death. Lordat (1843) also published a case of dissociation between French and the patient's mother tongue. He reported on a priest in a French village with aphasia who was very fluent in the "Languedoc" patois, his native tongue, but could not speak the Standard French he knew premorbidly. Ore (1878) reported similar findings of a twenty-six year old man who spoke French and patois fluently before a stroke. After the insult, he lost his ability to use French, however was able to understand and use the patois, his native tongue.

Generally speaking, the language unimpaired, or the least impaired in the case studies discussed so far, is the mother tongue. The languages or dialects acquired earlier were the strongest and the ones that were more firmly restored.

The first efforts to classify this characteristic of dissociation where the first learned language before the insult is less impaired and the first to recover following aphasia was made by Ribot (1881), a French philosopher and psychologist. Although Ribot had a much broader interest in aspects of memory, he formulated a "regression rule" in his book *Diseases of Memory* in an attempt to explain how habits acquired later in life undergo disturbances resulting from illness or aging sooner than the patterns acquired at a young age. Ribot later applied his "regression rule" to the classifications of polyglot patients with dissociation between their known languages. The regression rule in

essence states "The new dies sooner than the old." According to Ribot (1881), the first learned language or the mother tongue is the first language to be restored in the restitution following aphasia.

It is frequently observed that many cases of speech disorders in polyglots follow Ribot's rule. Similarly, case studies of dissociation of dialects and languages of polyglots are observed to follow patterns of restitution similar to patterns of recovery of two or more different unrelated languages spoken by bilinguals and polyglots. Shown in these case histories, the recovery of the native dialects generally occurred before the recovery of the standard language and adhered to the "regression rule" posited by Ribot (1881). The dialects of the patients, the mother tongue, proved to be the strongest.

Ribot's regression rule is not completely accepted. However, there are cases reported in the literature that demonstrate Ribot's rule to be insufficient for explaining the dissociation of languages and dialects in bilingual, bidialectal and polyglot aphasics. adults. A number of authors, e.g., Behier and Proust, (cited in Wald, 1958, p. 580) reported on patients whose patterns of language restitution did not follow this rule. Behier (1869, cited in Bernard, 1885), for example, described a French patient with French as her mother tongue, who had lived in Spain for many years. Interestingly, the only words spoken after a stroke were Spanish.

It is apparent from these case reports that a reverse pattern of recovery which diverges from Ribot's usual pattern, is possible. As the mother tongue was not necessarily the first to recover, thus these cases did not correspond to Ribot's regression rule.

2. 4. 2 Pitres' Rule

In order to explain dissociation that did not adhere to Ribot's law of regression, Pitres (1895) accumulated a number of cases from other work done in the field and added findings from his own observations. He suggested other systematic regularities of cases in polyglots in his paper, "*Etude sur l'aphasie chez les polyglottes*" and he made several general conclusions that came to be known as "Pitres' rule." According to this rule, all languages of polyglots are not necessarily lost in the same manner, degree or period of time. Pitres maintained comprehension is least affected and shows signs of improvement first. This is then followed by active speech of the most familiar or fluent language at the onset of the aphasia. Pitres suggested that this may not necessarily be the mother tongue but the language the patient was most exposed to at the time of insult. Pitres' detailed analysis of one case and brief descriptions of 2 other cases illustrate this dissociation between standard languages and various dialects. In 2 of the 6 cases he cited, the languages best preserved are not the dialects that they had spoken in childhood, but literary French.

In the first case, Pitres reported a 50-year-old male whose mother tongue was a Bearnais patois. After the recovery from the aphasia, the patient was extremely fluent in Standard French. Later, the patient recovered his comprehension of the Bearnais patois. However, the patient remained unable to speak the patois. Pitres also reported similar findings in a second case of a twenty-five year-old male who spoke both French and a Gascon patois. After global aphasia, the patient comprehended French without difficulty but spoke the language with articulation errors. The patient retained comprehension of

the patois but never regained the ability to speak the Gascon patois, his native tongue, again.

Minkowski's (1927) two cases neither of which supports Ribot's (1881) regression pattern, but rather followed Pitres' (1895) familiarity rule. The first case was a thirty-two year-old male mechanic who spoke a Swiss-German dialect as his native tongue. The patient also spoke Standard German, French and a small amount of Italian. During the initial few days of recovery, the most noteworthy symptom was that the patient had lost his ability to use his native dialect productively. The patient initially re-acquired only German and later there was a return of the Swiss-German dialect.

Minkowski associated this patient's ability to initially regain Standard German to the patient's ability to visualize the written forms of the standard language and to the support provided by the printed words that appeared to facilitate the patient's ability to access Standard German. The Swiss-German dialect, like most dialects, lacks a written system. Minkowski (1927) maintained that the various components of language that include motor, kinesthetic, acoustic and visual are related to each other and should be taken into account because they offer mutual support to each other during restitution following aphasia.

A second case study by Minkowski (1927) that adheres to Pitres' law of recovery from aphasia was that of a male native speaker of Swiss-German dialect. This patient was a professor of mathematics. Other than his native language, the professor spoke French extensively as a professor in France. The professor read and gave lectures predominantly in French. After his insult, the patient rapidly regained comprehension of both Standard

French and the Swiss-German dialect. First, the patient re-acquired French, then Standard German. He never spoke the Swiss-German dialect again.

These cases studies published by Pitres (1895) and Minkowski (1927) have been elaborated on here in order to explain that dissociation in polyglots with aphasia could be quite different from Ribot's "regression rule." Pitres' generalizations regarding the degree of familiarity of languages premorbidly with respect to recovery following aphasia became a notable contribution to aphasia research.

However, other case studies have shown that aphasic recovery may not follow the pattern reflecting the degree of familiarity of the various languages. There has been documentation of recovery diverging from this path; cases in which Pitres' rule was not followed.

2. 4. 3 Psychological, Affective and Emotional Theories

Several of the cases illustrating exceptions to both Ribot's and Pitres' rule are reported by Minkowski (1926,1927, 1949) include bidialectal aphasic patients. These cases provide some examples of the complex and multiple conditions, their effects and interrelationships in the impairment and recovery of languages and dialects. One unusual observation was of an aphasic patient who used Swiss-German dialect and Standard German prior to insult. This patient demonstrated an interesting pattern of recovery of individual languages after the aphasia. The Swiss dialect was both the most fluent and his native language. Contrary to all expectations, Standard German was recovered first. Once Standard German reached a sufficient level of proficiency, the use of the Swiss dialect returned but lagged far behind the level of proficiency of Standard German.

A second case reported by Minkowski (1949) had an unusual character manifested. He cited a case of a Swiss-German epileptic aphasic patient who premorbidly spoke French, Italian, English, Burmese and Arabic. In addition, the patient claimed he had known Spanish and a little Chinese. For three months following his stroke, he spoke only Standard German and not his Swiss dialect. This was accompanied by amnestic aphasia with alexia and agraphia. Approximately four months post-morbidly, he reacquired his Swiss dialect but was still unable to use the foreign languages. Over time he regained his native dialect. This patient's recovery pattern illustrates a peculiar exception to Pitre's rule in that he did not recover the language that was most current at the time of onset and did not later recover the less familiar languages. Minkowski (1927) maintains other factors may have also influenced the recovery of the standard language. These were related to the patients' psychological interests in French for professional reasons as a math teacher. In this case, the dialect had no longer functioned as the patient's most familiar language premorbidly. Additionally, there was no linguistic support from visual elements of reading and writing in the dialect. It was reported that this patient was so incapable of speaking the dialect that he was mistakenly arrested for being a Russian.

Pitres (1895) also included several unusual observations in his paper. He reported two patients, a domestic servant and a baker, speakers of the patois béarnais and the patois gascon respectively, who after their aphasia were only able to understand their dialects, which were their native tongues, but the ability to understand and speak Standard French was completely restored.

Goldstein (1948) in his book *Language and Language Disturbances*, focused briefly on the dissociation between language and dialects. He posited emotionally determining factors contribute to the disorder. Goldstein asserted a dialect spoken along with a written language represents more than a different language because of the intimacy of the dialect to the person and to specific environments. The dialect is spoken naturally and freely only in appropriate surrounding. In other surroundings, the patient may feel uncomfortable and refrain from using his habitual patterns.

Several other researchers have published interesting findings with respect to a dissociation of languages and dialects during the recovery of aphasia. One case study of particular interest is cited by Reichmann & Reichau (1919). These researchers reported a case of a twenty-one year-old male whose native tongue included East Prussian, low German and Standard German. The patient developed aphasia from a cranial wound resulting from a shot in the head. Initially, the patient re-acquired Standard German through therapy. At this stage, he could not speak the dialect but regained the skills during a later stage. The patient never regained some low German consonants for which he substituted phonemes of the standard language. The patient code-switched inappropriately between the dialect and the standard language.

A notable exception to the general rules of both Ribot (1881) and Pitres (1895) is a case report of Minkowski (1926). He published a case in which it was the foreign language that was recovered rather than the mother tongue, which was the one most used prior to his stroke. He cited a case of a Zurich physics professor who spoke a Swiss dialect and German from childhood until he was 21 years old. He later became a professor at Neufchatel where he taught in French. After the insult, he relearned French

aided by exercises in reading French textbooks. Later, German returned spontaneously but the Swiss dialect was never relearned. According to Minkowski, the recovery of languages according to this patient was related to "instinctive tendencies." French was the most important language as a professor with German being the next most important language. The Swiss dialect was the least important, and was inhibited by the other two languages, as they were re-acquired. In this case, a foreign language is preferred to the mother tongue and current language.

A final noteworthy study within the framework of Pitres' rule is related by Dimitrejevic (1940). The case study simultaneously supports and contradicts Pitres' rule. He described a woman born and living for 24 years in Sofia. From childhood on, Yiddish was her mother tongue and Bulgarian was acquired as a second mother tongue. After marriage at age 25, the patient moved to Belgrade and learned Serbian. She discontinued to use Bulgarian and lost it completely over time. After a stroke secondary to hypertension, Yiddish and Bulgarian returned but she never recovered Serbian. Interestingly, Bulgarian, which had not been used since the age of 24, appeared to be completely forgotten. However, it was reacquired simultaneously with Yiddish, the mother tongue. In this instance, Pitres' rule held true for the mother tongue as being the most frequently used at the time of insult.

Several generalizations have been drawn from Dimitrijevic (1940) and Minkowski (1927, 1926) regarding the different varieties of aphasia in polyglots that deviate from Pitres' rule. These conclusions are related to psychological and affective variables. According to Dimitrijevic (1940), the patient's entire being is involved in the remission of aphasia and the re-appearance of languages. He claimed the restitution of the

various languages is dependent on the language that has greater psychological value for the person. According to Minkowski (1926), the affective value of pleasant memories accounts for which language is favored in the recovery processes. However, both researchers suggested other factors such as the mode of acquisition and the relations and reciprocal interferences of the different languages should be taken into account.

2. 4. 4 Summary

Generalizations drawn from the case studies of bidialectal aphasic individuals extracted from the larger polyglot aphasia literature for this dissertation highlight some of the various conditions influencing the linguistic behavior of aphasic adults with respect to the sequences and order observed in the recovery of their individual languages and dialects. As with the bilingual case studies, bidialectal aphasic individuals also present a diversity of recovery patterns. Their patterns of recovery are also influenced by the first dialect learned, most familiar dialect, affect, and psychological factors.

Additionally, the case studies have shown that the dissociation between the standard dialects and related dialects spoken may surface as a disturbance in the entire language system and/or can be related to various levels of interference between the two dialects. The patterns evidenced by the dissociation may be influenced by factors important to the aphasic individual and significant to the language and/or dialects. These factors include but may not be limited to: the character of the languages and dialects, the various conditions regulating the sequence of acquisition with respect to time and degree of acquisition, the specific relationship between the two dialects, the support of acoustic, kinesthetic, motor and visual elements in the standard dialect or the lack of support of

visual elements in the dialect, and the degree and extent of psychological and affective influences. Evidence of how multiple conditions can interact in the determination of the sequence and the degree of recovery of the dialects in bidialectal aphasic individuals is relevant for the present study.

2. 5 African-American Vernacular English

This section begins with a brief historical sketch of African-American Vernacular English (AAVE). A review of its development from a pidgin-Creole origin through the process of decreolization was extracted from works of Stewart (1968), Labov (1972) and Dillard (1972). Generalizations regarding AAVE's current status as a distinct or closely related dialect of SAE are reported from contemporary works such as Wyatt (1996) and Seymour (1998). The discussion of the structure of AAVE with special emphasis on negation, plurality and verb forms, namely: habitual be highlights differences between AAVE feature use and SAE counterparts. In the final section, I discuss the notion of variability and optionality of AAVE features with special reference to Seymour's (1998) model.

2. 5. 1 Historical Sketch

African-American Vernacular English is the term recently used by contemporary researchers such as Stockman (1991), Wyatt (1996) and Seymour (1998), for the social and ethnic dialect of many, but not all, U. S. native African-Americans who share a slave ancestral history. Historically, a myriad of terms such as "Negro Nonstandard English," "Black English," "Black English Vernacular," "African American Vernacular English,"

and "Ebonics" have been employed by AAVE researchers.

Stewart (1968) and Dillard (1972) presented a historical account of AAVE as having a pidgin and Creole origin. Dillard (1972) posited AAVE originated as a pidgin language; a common language with shared features from both the slave tradesmen's languages and the languages spoken by the African slaves, used for communication purposes between the two groups. Slaves who were brought to the new world were imported from different regions of Africa. Virtually all the slaves spoke different native languages. Some of the slaves brought African Pidgin English with them. However, the majority of the slaves spoke only their native languages.

Slave traders practiced language mixing as a method of limiting communication, thus controlling the slaves. Dillard (1972) claimed that the mixing of the slaves with vastly different languages lead to the development of a "pidgin" language. According to this author, the slaves of the New World found themselves in a situation where an auxiliary language was needed in order to communicate in the heterogeneous groups where no one language predominated. This "pidgin" language served the purpose of a "lingua franca"; a language used for the purpose of wider communication. The native tongue of no member of the group would suffice. The children born to the slaves of the New World had the one common language, the pidgin that could be used for communication. As time past, the pidgin began to acquire developmental forms from the children learning to speak it. This pidgin language now had native speakers and fulfilled all the needs of the community. Thus it became classified as a "Creole."
According to Dillard (1972) a "Creole" is a language that was a pidgin language at an

earlier historical stage but now has native speakers, and has become the principal language of the speech community.

Both Stewart (1968) and Dillard (1972) described various social and geographic variations of the Creole. According to Dillard (1972), the Creole spoken by the slaves began to take on different characteristics, styles and modes associated with different levels of prestige. The pattern spoken by the house servant, the freeman and their descendants, who learned the language from their master was considered to be more prestigious because of its similarities to the master's style. The native-born field workers spoke a "Plantation Creole" and the recent imports from Africa came speaking an African Pidgin English. Those slaves who could speak only their native languages experienced the most difficulty communicating and assimilating into the larger populations.

Stewart (1968) suggested acculturation and assimilation into the larger regional populations began to result in a process of decreolization. When speakers of the Creole came in some phase of contact with speakers of the dominant dialect, prominent stereotypical features of the Creole were eliminated and features of the more conventional dialect were added. Stewart (1968) maintained AAVE began to develop as a southern regional pattern that became aligned with aspects of the grammar and phonology of Southern English Dialects. According to this author, the dialect generally regarded as "Negro" dialect came to be associated with southern states. He posited "Plantation Creole" was more slowly decreolized in the areas where the slaves lived more autonomous lives. He claimed "Gullah" the speech pattern of the Southern Coastal region is a distinct survival of the less decreolized "Plantation Creole."

According to Labov (1972), the regional speech patterns transformed into a class and ethnic pattern in the Northern cities. Many southern features were lost or not commonly used in urban areas. Labov (1972) posited the perfective auxiliary "done" as in "He done told me." as an example less commonly seen in the speech patterns of urban African-Americans.

Through the process of decreolization, observable changes within the structure of the dialect were evident. Documentation of structural changes is found in written accounts of various authors. An attestation to the use of the invariant be in its durative action form, was made by Hugh Henry Brachenridge (1972) in his work entitled "Modern Chivalry" cited by Dillard (1972 p. 92). Dillard reported the sentences "I be cash [catch] crab." and "You be a filasafa." as examples of the use of this feature by a Guinea Negro named "Cuff." According to Brachenridge (quoted by Dillard 1972, p. 92), these sentences were found in a speech Cuff presented before the Philosophical Society. Dillard explained the invariant be looks like the obligatory copula before a noun complement. He maintained that the spread of be to the position before an adjective to indicate the durative in the sentences "He be sick." as opposed to "He sick." developed in the United States in the nineteenth century. The author provided the following sentences (p. 100) taken from Carmichael (1824) to illustrate this point.

1) England be very fine country. (Carmichael, p. 89)

2) And then it be so cold. (Carmichael, p. 90)

Stewart (1968) also described structural changes that took place during the process of decreolization. He claimed the three negators did'n, don' and ain' developed from the simple 'no' negative structure of "Plantation Creole" and antecedent pidgin.

He postulated the change from the simple pidgin/Creole forms to the more complex decreolized form is only a surface change. He argued that the new negatives were simply attached to the Creole's categories of tense, aspect and phase as illustrated by the following sentences taken from Dillard (1972, p. 102):

1) It ain no use me workin so hard.

2) You don get no more from me.

2) He did'n give me no money.

Stewart (1968) and Dillard (1972) contended that the older negative, which was used for all purposes, as in the sentence " me no be fellow servant." Dillard (1972, p. 102), was dropped and elaborated double negative structures (e.g., me ain be no fellow servant) developed.

To recapitulate, this brief historical review reveals changes of AAVE, more than three hundred years from the pidgin structures through the process of decreolization attested to in the literature. However, Stewart (1968) and Dillard (1972) maintained that for the most part, the dialect spoken by African-Americans during this period retained structured similarities to the earlier stages. However, published historical accounts of Pidgin English in the speech of the slaves are sparse. Only a few attestations of the pidgin influences are documented (Turner, 1949). According to Dillard (1972), the history is scanty because records were kept primarily by Whites who were unfamiliar with the pidgin and because the pidgin had no written tradition. However, evidence of surviving documents attesting to the use of reduced verb forms with (-s) and (-ed) of Standard English and the tendency to leave out the copula verb (zero copula) in all reported

varieties of English can be found in literary works and written accounts.

2. 5. 2 The Structure of AAVE

In the 1960s and 1970s, the dialect spoken by some African-Americans, particularly AAVE-speaking children in the United States became the subject of many controversial social discussions and educational debates that significantly influenced the kind and scope of research conducted during this period. Labov (1968), Stewart (1968), Wolfram (1969), and Dillard (1972) focused almost exclusively on the linguistic structures of AAVE to show the differences between AAVE and SAE were rule-governed.

These researchers agreed that the greatest differences between AAVE and SAE are seen in the use of the plurality, forms of the copula, and negative constructions in syntactic structures. The use of the aspect and phase categories by speakers of AAVE demonstrates an unusual contrastive difference between SAE in the use of various verb forms. AAVE speakers' use of the habitual or aspectual be and the zero copula exemplifies this claim.

Dillard (1972) posited the AAVE structure "John sick. " is equivalent to the SAE structure "John is sick." The AAVE form does have the same underlying meaning as the SAE form although the copula is absent from the AAVE sentence. Both structures indicate the action is currently in effect, but of short–term duration. However, on the other hand, there is a significant difference in meaning between the AAVE structure "John be running." and the SAE "John is running." The verbs contrast and differ in semantic and syntactic status. The SAE copula verb *is* marks a presently occurring state

of being. In the AAVE structure, the aspectual or habitual be marks an ongoing or continuous state of being. Thus, it implies John is in the habit of frequently running, not only is he running now, but also he has frequently been running in the past and is likely to run in the future. In contrast, when an AAVE speaker says "John running."(SAE equivalent "John runs."), it generally implies the man in question is currently running with no reference to future or past actions. An interesting aspect of the habitual be is that it functions as both a copula in the sentence "He be late." and as an auxiliary in the sentence 'John be running." The habitual be differs in semantic use from the SAE verbs forms of "to be." Generally, tense is an obligatory category in SAE. However, Stewart (1968) argued that speakers of AAVE have the option of indicating whether the action of the verb occurred in the past or the option of leaving the verb in a noncommittal form.

The use of zero (absent) copula by AAVE speakers provides another example of the different use of an AAVE feature relative to SAE. Dillard (1972) maintained that the zero copula alternates with "filler forms" in different contexts. Labov (1969) asserted the most important factor influencing whether or not the zero copula occurs is related to the nature of its preceding subject. Labov (1969) and Wolfram (1969) proposed a variable-rule grammar-model that systematically delineated the permissible context that favors and discourages the use of absent (zero) copula in AAVE.

Additionally, it is apparent that AAVE speakers use forms of the verb "to be". AAVE speakers may produce a structure such as "You right " but also produce the alternate emphatic filler form "You is right. AAVE speakers would say, "Yes he is." and not say, "Yes he" in response to the question "Is he right? " Thus a high degree of variability in copula use in AAVE's grammar is apparent.

Stewart (1968) argued that the contrast between the use of the verb "to be" and zero copula demonstrates a most obvious difference between the grammars of AAVE and SAE and differing semantic and syntactic use of the two verbs. Whereas, the aspectual or habitual be is characterized as a possible variant of the verb "to be."

According to Fasold (1972) and Wyatt (1996), the habitual be is not considered an equivalent form of the verbs is, am and are. In general, speakers of SAE are mandated to mark tense demonstrated by the use of "is. are, am," but have the option of indicating or ignoring the ongoing or static quality of the action of the verb. However AAVE speakers have the option of ignoring tense but are mandated to make a commitment as to whether the action is continuous or momentary.

The verb been is also reported to be in the aspect category and differs most obviously from SAE. According to Dillard (1972), this structure has the classification of "perfection aspect" or "remote perfective aspect" because it marks an action in the past. He cites the sentences "He been know that." to illustrate the point of time aspect and "He been knowing." to illustrate the progressive aspect (Dillard 1972, p. 46). This author contended the "remote perfective form" strongly resembles West African languages grammatically and the "immediate perfective aspect" preverbal form done is documented in other pidgin and Creole related languages.

Research has extensively investigated the use of multiple negative in AAVE. This refers to the added word relative to SAE in negative constructions. The following examples were taken from Labov's book "Language in the Inner City," published in 1972 to reflect the scope of variability found with AAVE negators used by African-American adolescents.

1. The introduction of an extra quantifier.

    e. g., "Ain't in no seventh grade."

2. Free-floating negatives

    e.g., "But not my body can't walk through the wall."

2. Negative inversion

    e.g., "Ain't nobody in the block go to school."

4. The involvement of concord with a quantifier

    e. g., "Don't so many people do it."

These examples do indeed illustrate the extent of variable rules that constitute a much more complex aspect of grammar in AAVE compared with the use of negatives in SAE.

Another unusual variation of feature use in AAVE can be seen in the degree of flexibility in the use of plurals. Dillard (1972) described AAVE as having a "non-redundant" plural system. The deletion of the quantity (s) marker is regularly noted in contexts where mass and count nouns such as many and twenty, which denote plurality, themselves are used. In AAVE, when there are numerals or other markers of plurality, the noun remains unchanged. However, in words ending in sibilants that do not specify count or mass noun status, an allomorph of /Z/ is added to words to indicate plurality in AAVE (e g., glasses). In SAE, an allomorph of /Z/ is always added to nouns with or without count or mass words to indicate plurality for regular plural nouns (e. g., brown shoes; two shoes). The extent of flexibility in the use of plurals in SAE is constrained by straightforward set rules. Similarly, AAVE is rule- governed. The rules in AAVE are also straightforward.

In summary, the zero copula, the use of negatives, habitual be and AAVE's system of plurality show much individual variability with respect to the frequency and distribution of their use compared to SAE single-option forms. The high degree of variability of these forms in AAVE and the systematic constraints on the use of syntactic structures to mark plurality, forms of verbs (copula) and negative constructions in SAE has traditionally led to the belief that AAVE is less rule-governed than SAE. AAVE researchers such as Stewart (1968), Labov (1969), Wolfram (1969), and Dillard (1972) provided evidence of the variable nature and complex intricacies of AAVE features compared to SAE counterparts and show that the differences that exist are rule-governed.

2. 5. 3 AAVE Variability and Optionality

In the 1980s and 1990s, AAVE research appeared to shift orientation. Researchers of this era appeared no longer interested in refuting the theory that AAVE is deficient and in need of remediation (Bereitier & Engleman, 1966). A heightened interest developed regarding the universally shared aspects of child language development for AAVE and SAE (Wyatt, 1991). AAVE studies conducted during this period provided new perspectives regarding the variability of grammatical forms (Wyatt, 1991) and phonological features (Stockman, 1991), and the options speakers of AAVE have using specific syntactic structures in AAVE compared to SAE (Seymour, 1998).

The optionality of specific syntactic structures in AAVE grammar has often resulted in a controversial disorder-difference debate among some researchers when SAE is used as a reference criterion for AAVE (Wyatt, 1991). The absence of specific syntactic structures in SAE that are classified as "optional contrastive" (e.g., "She is sad.)

in Seymour's (1998) paradigm for AAVE features, has often led to a diagnostic prediction of a language disorder in young speakers of SAE past the age of three or four years (Bloom and Lahey, 1978). According to Stockman (1991), with special reference to aspects of phonology, the use of various structures in AAVE is optional in various linguistic environments and should be treated as "variable differences" in feature use.

The optionality in the use of various AAVE structures frequently results in absent or omitted copula, plural /Z/, possessive and third person tense /Z/ and past tense (D) markers. In young speakers acquiring AAVE as their native language, these omissions do not necessarily constitute a disorder (Wyatt, 1996). Seymour (1998) posited that the variable and optional nature of AAVE features results in the flexibility of communication strategies used by speakers of AAVE. He proposed the following three possible categories of features in AAVE compared to SAE that demonstrates this flexibility.

1. In the "optional contrastive" classification, the AAVE speaker has two choices. The feature is absent or present. However, in SAE the use of the feature is compulsory. The absence of the feature in SAE results in a diagnosis of a language disorder in mature SAE speakers.

In the SAE sentence " Mary is a girl." there are the following possibilities for the speaker of AAVE.

e. g. a) Mary is a girl.

b) Mary _ a girl.

c) She is a girl.

d) She _ a girl.

2. In the "obligatory contrastive" classification, the presence of specific forms defines AAVE. The habitual or invariant be has a special function in AAVE that is not marked in SAE. The use of be can be used as an indicator of an AAVE speaker. However, the use of the habitual be by speakers of SAE may result in a diagnostic indicator of a disorder in SAE.

e. g. He be busy.

In this example, the AAVE speaker may be referring to: frequently busy in the past and likely to be busy in the future. The be marks an ongoing continuous state of being.

2. In the "obligatory non-contrastive" classification, the feature is compulsory in both SAE and AAVE. There is no difference in feature usage. The absence of the feature results in an indication of a disorder in both SAE and AAVE.

e. g., He hit the ball.

2. 5. 4 Summary

In summary, there are two important characteristics of AAVE features that distinguish the dialect from SAE varieties. The first is the apparent "omissions" of SAE features evidenced in the zero copula, marking plurality, tense and possessive. On the basis of these, normal AAVE speakers' production may be viewed as resembling that of agrammatic SAE speakers in certain aspects.

The second noteworthy characteristic of AAVE that distinguishes it from SAE is the flexibility of various syntactic features as seen in the use of habitual be as a copula and as an auxiliary verb (e.g., He be late: He be telling lies.).

With these key points in mind, I consider the phenomena of multiple negatives, the use of habitual be, and inflectional markers for plurality, past tense /D/ and 3rd person /Z/ in this dissertation. The primary reason for the selection of these specific structures was that their variable usage continues to be commonly seen today in the speech of many African-Americans and it is speculated that these forms are easily identified in the bidialectal agrammatic participant's speech in the present study. A second important reason for the selection of these features was that they differ interestingly but systematically from analogous SAE forms and the complex intricacies and interrelations of SAE, a standard dialect and AAVE, a closely related dialect, may be seen within and across the two dialects.

Additionally, such functors are frequently omitted in the speech of SAE agrammatic individuals. However, agrammatic individuals rarely manifest all-or-none impairments, so the inherent variability and optionality of features in the dialect per se

are teased apart from the actual impairments seen and from the variability of agrammatism as well.

Six experiments were designed to explore these issues. Each is presented in its own chapter.

CHAPTER 3

OVERALL METHODS AND PARTICIPANT INFORMATION

3. 1 Overview of Design

A series of six experiments was constructed and implemented with a single participant. **Experiment 1** was based on spontaneous speech samples from picture-description narrative and conversational discourse. The objective was to distinguish the participant's agrammatic output from AAVE. Reading aloud tasks were employed to obtain an adequate sampling of those dialect-specific functors that were infrequently used in his spontaneous speech, the optimal method of obtaining speech samples.

Of course there is overlap between AAVE and SAE. Distinctive linguistic differences among AAVE-speakers are observable in their use of multiple negatives, habitual be, and a more refined use of plural markers perhaps linked to quantifiers denoting plurality. These dialect-specific functors were investigated in **Experiments 2-4.**

Observations from the investigation of the bidialectal agrammatic speaker's use of multiple negatives in **Experiment 3,** revealed that monosyllabic negatives can't, don't and ain't were problematic. These findings were not conclusive. Thus, **Experiment 4** was constructed to explore the variables of syllable length and contraction in the bidialectal speaker.

Additionally, Meth (1998, p. 62) has shown that agrammatic aphasic individuals have difficulty producing inflected forms. Her findings indicated that the unaffixed verb form was easiest to produce, followed by the 3rd person /Z/ with the past tense /D/ being the most difficult to produce. Goodglass and Berko, (1960) found that aphasic individuals

had more difficulty with the /Iz/, followed by past tense /D/. Syllabic past tense /D/ was easier than phonemic 3rd person /Z/. Possessive and third person singular inflections were more difficult for the agrammatic patients than the plural, although all three inflections have the same phonological representation (/s/, /z/, /Iz/).

In SAE, the three /Z/ morphemes that mark tense, plurality and agreement are either syntactical, morphological or lexical possibilities and the inherent information value of the inflections significantly influences whether it is produced or omitted (Bates, Friederici, Wulfeck, (1987).

Similarly, the optional use of past tense /D/ and the three /Z/ inflections (plural, tense and possessive) is a frequently observed phenomenon in speakers of AAVE and has also been related to phonological and morphological factors (Stockman, 1996, p. 122).

These inflectional suffixes carry optional status in AAVE unlike Standard American English where the inflections are obligatory grammatical functions. Thus, it was speculated that these suffixes in the bidialectal agrammatic speaker are less likely preserved and could increase the number of apparent omissions in the speaker's output.

To explore the bidialectal speaker's use of past tense /D/ and 3rd person /Z/ suffixes, a subset of Meth's (1998) data on the participant was analyzed. **Experiment 6** employed controlled reading stimuli in a sentence completion task that explored the participant's ability to use the inflectional /D/ for past tense and by way of comparison, 3rd person /Z/.

3. 2 Participant

It was crucial to select a participant who was a bidialectal speaker of AAVE and SAE with agrammatism. At the time of testing, the participant was a 61 year-old bidialectal speaker of AAVE and SAE. He lived in a predominantly AAVE-speaking community from birth until adulthood. He was a high school graduate and had joined the Armed Forces shortly after graduation. After leaving the Military, he re-located to New York where he was residing at the time of the first testing for the study.

As is the case with any bilingual aphasic individual, the participant's pre-morbid use of AAVE and SAE is not fully known. However, he reported that he used SAE at his job as a bank manager prior to his stroke. Indeed, the participant did not consider himself an AAVE speaker but reported that many of his childhood friends from an AAVE-speaking community, and several distant relatives spoke "Broken Language mostly." (Appendix A, line 20). He also reported that his mother was a school teacher in this AAVE-speaking community and that he and his siblings spoke only "English" as children (i. e., "See I don't broken English." Appendix A, line 21).

During formal testing, the participant self-corrected several responses that he considered "broken English"(i.e., "She a Singleton --- "My mother is a Singleton." (Appendix A, lines 120 and 121 respectively). However, over lunch with the examiner, he appeared comfortable and made no attempts to self-correct several AAVE forms he produced. Habitual <u>be</u> forms and the use of multiple negatives (e.g., "Now I <u>don't</u> follow games <u>no</u> more." Appendix A, line 70) were evident in his informal conversational speech with this investigator and also observed in verbal exchange with his adult daughter. The participant's daughter also displayed several instances of habitual <u>be</u> and

the use of multiple negatives in her conversational speech with the investigator although she reported that she was born and lived in New York from infancy to adulthood.

According to Seymour (1998) habitual be is a unique feature associated with AAVE. Thus its use in the participant's speech was one criterion used to determine that he was a bidialectal AAVE/ SAE speaker. Pertinent background information regarding the languages spoken during childhood and surrounding community was obtained using a background questionnaire. This information helped substantiate the participant's bidialectalism and suitability for inclusion in the study.

In addition to the above criteria, the participant's suitability for inclusion in the study as an agrammatic patient was confirmed by clinical judgments of three certified speech-language pathologists with whom he had participated in other research studies. The participant was accepted into this study on the basis of his performance on the Boston Diagnostic Aphasia Examination (BDAE) administered by the author who is also a certified speech and language pathologist and a bidialectal speaker of AAVE and SAE. He received a standard score of 70 % on the BDAE, which placed him in the moderate range of aphasia.

The participant was 4 years post-onset at the time of the first testing for this project. His history of receiving speech and language therapy following his stroke was explored. The participant reported that he had received speech and language remediation for aphasia in SAE for one-year post onset but he was unable to elaborate further on the specific intervention procedures.

The participant was premorbidly right-handed and his medical files revealed a first-time anterior left-hemisphere cerebrovascular accident 4 years prior to the first

testing for this project. His history was negative for alcohol, substance abuse or psychological disorders. No other neurological disorder (e.g., dementia) was reported that would make him unsuitable for inclusion in the study. The participant's speech pattern was mildly dysarthric. However, this appeared not to significantly influence the intelligibility of his speech or the investigator's ability to discriminate the correctness of his responses. Most phonemic errors were associated with omissions and substitutions of inflectional markers rather than phonological processes that would impede intelligibility.

The participant's hearing acuity was judged adequate for conversational speech at average intensity levels based on a pure tone screening performed by the investigator. Additionally, visual acuity was judged to be adequate. The participant experienced no difficulty reading the stimuli written in large black lettering on a white background of 4 x 6 index cards without corrective lenses.

3. 3 Procedures

Four sessions of one hour each were needed to complete all interviews, screen for hearing acuity and administer the experimental tasks for the first five studies. During the initial meeting, the study was described to the participant. The participant was told that the investigator would make an audio tape-recording to remember what was said and read.

The participant was also told to inform the investigator when he became fatigued and was reassured that breaks could be taken for as long as needed after every thirty-minute period during each session.

The letter of informed consent was explained and signed by the participant and investigator. The participant was told that if there was any difficulty writing with the non-dominant hand, a family member would be allowed to sign for him after a full explanation of the proposed study to both of them.

The experimental tasks were administered in a quiet setting in the participant's home with the investigator and the participant seated at a table in close proximity to permit a clear view of the investigator's face and to ensure adequate audibility. The participant was encouraged to read each sentence. The investigator explained the procedures for each experimental task. Examples of the prompts used are given for each task. In each experiment method, for example, before introducing the picture for the narrative description, the investigator said: "Tell me what you see in this picture."

Before administering the experimental reading tasks for the multiple negatives, habitual be, and plurality, the investigator presented the fist cards with the stimulus sentence written on it and said: "I'm going to give you some sentences to read. Please try to read them as they are written and please speak as clearly as you can."

Each sentence for the reading tasks was written in large black lettering on a white background of 4 x 6 index cards.

In Meth's (1998) Sentence-Completion Task, the participant was asked to respond verbally with verbs adding either past tense /D/ or 3rd person /Z/ suffixes. Specific instructions for the task included examples of the task and several trial items presented to insure that the participant understood what was required.

3. 4 Transcription and Scoring

All of the participant's responses from **Experiments 1-5** were tape-recorded at a digitization rate of 48 Hertz using a Sony model TCD-D8 Digital Audio Tape-Recorder. The participant spoke into an additional head microphone model UTQPAC41 that was attached to a headset.

The participant's responses were transcribed and edited for each task by the investigator. The participant's speech sample from the Narrative and Discourse Tasks was transcribed and edited and classified according to three categories of Seymour's (1998) "optional versus obligatory" contrast of AAVE features relative to SAE counterparts.

All responses from the reading tasks were scored according to an error/correctness paradigm with respect to the participant's performance reading the experimental stimuli as written. Scores were tabulated and response tables for the participant's scores for all tasks were constructed.

For **Experiment 6,** the investigator listened to Meth's (1998) tape recordings of the participant producing verbs with suffixes /Z/ for 3rd person present and /D/ for past tense in a sentence-completion task. For this study, the participant's responses for past tense/D/ and 3rd person present /Z/ were scored according to an error/correctness paradigm. Scores were tabulated and response tables for past tense /D/ and 3rd person present /Z/ were constructed.

Inter-rater reliability for the transcriptions and classifications in **Experiments 1** and **6** was achieved by the consensus of the judgment of the principal investigator and a linguist colleague (M. Gitterman) on the classification of 177 transcribed utterances for

Experiment 1 and 80 words each with appended suffixes /Z/ for 3rd person present and past tense /D/ for **Experiment 6.**

CHAPTER 4

EXPERIMENT 1

AGRAMMATISM IN NARRATIVE AND CONVERSATION

4. 1 Research Question

Experiment 1 was constructed to answer the first research question concerning how agrammatism manifests in a bidialectal speaker of AAVE- SAE. The goal was to distinguish the participant's agrammatic output from AAVE. The objective of this study was to examine spontaneous conversational discourse of the bidialectal agrammatic speaker of AAVE and SAE in order to distinguish the agrammatic features from those that may simply reflect habitual AAVE. The question to be answered was: How does agrammatism manifest in a bidialectal speaker of AAVE and SAE?

4. 2 Method

The participant was taped conversing with the examiner about his personal history. Narrative was elicited by asking the participant to describe the BDAE Cookie Theft picture (Goodglass and Kaplan, 1983). The investigator introduced the picture by saying: "Tell me what you see in this picture."

The participant's speech on the two tasks was transcribed and edited to delete the following from the corpus.

a) False starts of the target word.

b) Filler such as "ah," "yea," "naw," and "right," and

c) immediate repetitions of the same words.

The resulting text was divided into utterances comprised of a single clause or sentence. When two clauses were strung together by the conjunction "and," the clauses were separated into two utterances with the second clause beginning with the word "and." When the clause boundaries were unclear, the intonation patterns and contours were used as guidelines to delineate the clause's ending.

The utterances consisting of clauses and sentences were classified according to Seymour's (1998) categorization schema of "optional versus obligatory" contrast of AAVE features relative to SAE counterparts. The "obligatory contrastive" utterances are acceptable in AAVE but not SAE (e. g. He be busy.). Utterances assigned to the "optional contrastive" category have a feature that is compulsory in SAE but optional in AAVE (e.g. Mary is a girl.). Utterances that are acceptable in both AAVE and SAE (e. g. "He went to town.") were categorized as "obligatory non-contrastive." The remainder of utterances consisted of phrases deemed acceptable in neither. These were candidates for classification as agrammatic speech (See Appendix A).

The participant's responses were tabulated and a percentage table of the classification of distribution of utterance types was constructed (Table 1).

The author initially assigned the utterances to Seymour's (1998) "optional vs. obligatory categorization paradigm. Then, inter-rater reliability was achieved for the assignment of the utterances by the consensus of the first author and a linguist-colleague (M. Gitterman). Agreement was reached on 96 % the classification of the transcribed utterances. The items in the fourth category were evaluated by the author and an aphasiologist (L. Obler), to discover the defining characteristics of agrammatism once

dialect specific structures that might mimic agrammatism in a SAE speaker were excluded.

4. 3 Results

The Descriptive Narrative and Conversational Speech Tasks resulted in a corpus of 177 utterances. **See Appendix A.** In the corpus, 42.9 % of the participant utterances were assigned to Category 1 "obligatory non-contrastive." That is, they could be found in the speech pattern of both AAVE and SAE speakers (e.g., "I went to Texas." Appendix A, line 24). There were 19. 2 % of the utterances assigned to Category 2. These utterances contain features that are "obligatory contrastive" with the feature use in SAE; that is, they were acceptable in AAVE but unacceptable in SAE (e.g., "I finish high school." Appendix A, line 11). Another 7. 9 % of the utterances were assigned to category 3. These utterances contained "optional contrastive" features that are obligatory for SAE speakers but optional for AAVE speakers (e.g., "She plants sweet potato, corn, beets." Appendix A, line 76). The remaining 28. 2 % of utterances produced by the participant were considered candidates for agrammatism (e.g., "I starting to the bank." Appendix A, line 47). These, by definition, were unacceptable in the other three categories. These utterances included incomplete clauses or sentences (e.g., "Something little help." Appendix I, line 57, "Some the Northern State." Appendix A, line 82). Additionally, some utterances were characterized by omissions of articles (e.g., "Two time week." Appendix A, line 55, and "Went to hospital." line 172, functors, (e.g., "I went down Pennsylvania." line 168 and " Man talking", line 165); inflections (e.g., "She make moonshine." line 111 and "She mess up." line 6) the sparing of content words

(e.g., "Car accident upstate." line 166), and substitution of affixes (e.g., "I didn't drinks too much." line 116), typical of SAE-speaking agrammatic individuals.

Others had incomplete clauses (e.g., "Broken language mostly" line 20, or words in the wrong order (e.g., "And the spill all the water all over the floor." line 8). Note that some sentences that should be considered paragrammatic were included in this category. They have substituted functors and/or added words or syntactic markers (e.g., "I didn't drinks too much." Line 116 and " Some time she retirer." Line157). Still another 2 % of the utterances were deemed non-agrammatic aphasic utterances. They contained substituted words that were not bound or unbound syntactic markers (e.g., "The boy stal the cookie." Appendix 1, line 3) See Appendix A for participant's language sample. The distribution of utterances in each category is presented in Table 1.

4. 4 Discussion

In this study, narrative and spontaneous discourse tasks were used to distinguish the participant's output from AAVE. Analysis of the variety of sentences produced by the participant revealed spontaneous speech with the essential agrammatic features typical of SAE-speaking agrammatic individuals such as reduction in the use of functors, omissions of articles and substitutions and omissions of inflections. The participant's speech was slow, labored and telegraphic.

The participant produced 28. 2 % of utterances that could clearly be attributed to agrammatism. Utterances characterized by agrammatic symptoms that would have generally helped to distinguish the utterances in a monolectal speaker of SAE (i.e., omission of plural and 3rd person present tense /Z/ and past tense /D/ suffixes) decreased

the number of utterances categorized as agrammatism in this study because of the optionality and variability of use of these features in normal bidialectal AAVE-SAE speakers. Thus, the inclusion of utterances in the agrammatism category consisted of the above criteria.

The addition of erroneous grammatical structures by agrammatic individuals may be "paragrammatism" symptoms. According to Caplan (1985), paragrammatic individuals tend to select incorrect function words and affixes, not omit them. While paragrammatism has historically been associated with patients with posterior lesions, many of the mildly to moderately impaired agrammatic individuals in Menn and Obler (1990) evidenced similar substitutions of inflectional affixes and functors.

The participant's spontaneous output clearly demonstrated knowledge of both SAE and AAVE. (e. g., "My mother is a Singleton." Appendix A, line 121." and "She a Singleton." Appendix A, line 120). In these examples, the participant's ability to code-switch between AAVE simpler forms to the more elaborate SAE forms becomes apparent. He used the more elaborate SAE forms on 7. 9 % of occurrences in the spontaneous speech sample. Several examples can be found in the bidialectal speaker's spontaneous output (see Appendix A).

The largest percentage of utterances (42. 9 %) was non-aphasic utterances used similarly by both SAE and AAVE speakers (e.g., "I think so." Appendix A, line 22, " I went to the Service." line 12 and "You can play ball." line 44). Shared AAVE and SAE dialect features were observed more in the participant's output than either exclusively AAVE or exclusively SAE forms.

Employing the diagnostic model proposed by Seymour (1998), 19. 2 % of the participant's spontaneous speech production was categorized as AAVE utterances. Of interest is that the participant denied being a speaker of AAVE, yet his comprehension of the examiner's use of it, his daughter use of it and his use of structures such as "seven year" line 14 and " I finish high school." line 11, "I move away." line 12, "And I move to New York." line 16, in a clearly past tense context, are consistent with him being bidialectal in AAVE.

Recall that the participant described AAVE as "Broken English" and denied speaking the dialect. This negative attitude toward AAVE compared to SAE is ongoing in speakers of AAVE and SAE and non-speakers of AAVE despite the efforts of many earlier researchers such as Dillard (1972, Stewart (1968) and Labov (1972) and contemporary researchers such as Stockman (1996), Seymour (1998), Taylor (1968), Wyatt (1996) and many others efforts to alleviate public confusions, myths and misunderstanding regarding AAVE as being substandard compared to SAE. These researchers have shown AAVE's complexity with respect to it being rule-governed and its uniqueness with respect to the optionality and variability of features.

In summary, despite the fact that certain aspects of AAVE are similar to certain aspects of agrammatism, clear instances of agrammatic speech were easy to find. These were characterized, as it often is for SAE agrammatic speakers, by reduction in the use of functors, substitutions and omissions of inflections, labored and telegraphic speech with the sparing of content words.

CHAPTER 5

EXPERIMENT 2

HABITUAL be

5. 1 Research Question

Based on the results of **Experiment 1**, five experiments were designed to explore further the characteristics of agrammatism in our AAVE-SAE speaker by testing functors and inflectional affixes that would be problematic for SAE agrammatic individuals, but that have somewhat different functions or rules for inclusion in AAVE. I asked to what extent these functors and inflections are affected. As be is a functor prone to omission in SAE agrammatic speakers, the question of interest in **Experiment 2** was: Would habitual be be susceptible to error in a bidialectal AAVE-SAE speaker?

5. 2 Method

In his spontaneous discourse tasks, the participant did not use habitual be at all. On the other hand, in informal conversations with the investigator, there were several instances in which this form was used. An oral reading task was designed with systematic employment of this AAVE functor to examine the participant's performance on this dialect-specific form. The oral reading task consisted of thirty sentences, 6 or more words in length, containing the habitual be as the copula or auxiliary (e. g. "He be telling lies all the time." or "He be late."). In order to compile the stimulus lists for the habitual be sentences, the investigator collected and transcribed 30 sentences from bidialectal AAVE-SAE speakers residing in the New York metropolitan area (see Appendix B).

In this reading task, the participant was asked to read each sentence aloud, one sentence at a time as written. Before administering the reading task, the investigator presented the first stimulus sentence written on a card and said: "I'm going to give you some sentences to read. Please try to read them as they are written and please speak as clearly as you can."

Each sentence for the task was written in large black lettering on a white background of 4x 6 index cards.

The participant's responses were taped at a digitization rate of 48 Hertz using a Sony model TCD-D8 Digital Audio Tape-Recorder. The participant spoke into an additional microphone model UTQPAC41 that was attached to a headset.

The habitual be responses were scored according to an error/ correctness paradigm with respect to the participant's performance reading only the experimental habitual be stimuli in the sentence. The text of the sentences was not included as a criterion for determining error or correctness of the participant's responses. The participant's responses on the habitual be stimuli were tabulated and a response table was constructed (See Table 2).

5. 3 Results

On the habitual be sentence reading task, no errors were made reading habitual be as written. That is, the habitual be as a copula or an auxiliary verb was never omitted although words in the surrounding contexts were omitted or substituted for by other words. Indeed, eleven of the thirty sentences were considered agrammatic because of errors in the surrounding context.

5. 4 Discussion

According to Seymour (1998), the use of the habitual be verb form is a feature which is uniquely associated with AAVE. In AAVE, habitual be is employed differently from SAE usage of the verb be. The AAVE habitual be contrasts with SAE be in both semantic and syntactic status. The SAE copula be with its several allomorphs marks a presently occurring state of being. By contrast the AAVE "habitual be" marks an ongoing or continuous state of being as distinct from a momentary state of being. The sentence "He be tired." means not only is the person tired right now, but also he has frequently been tired in the past and he is likely to be tired in the future (Wyatt 1996 p. 97). The sentence "He tired," which is indicated by a zero morph indicates a current state of being and is equivalent to SAE "He is tired."

Although the participant did not readily acknowledge being a speaker of AAVE, the habitual be, while not used in the spontaneous discourse sample, was used on several instances of verbal exchange with the author. Moreover, it posed no difficulty for him. His intonation suggested that habitual be was quite natural to him in this reading aloud task compared to SAE monodialectal speakers who confront it for the first time.

The sparing of the habitual be in the participant was unexpected in light of cross-language studies of Menn and Obler (1990) that have shown the verb "to be" and auxiliary verbs to present difficulty for agrammatic individuals. According to those authors, auxiliary verb omissions were common across fourteen languages studied (pp. 1274-75).

A possible explanation for the sparing of the habitual be may be related to the variability of the habitual be that permits the verb form to be used as the copula and as an

auxiliary verb. Stockman (2002, personal communication) posited that habitual be may also function as a content word. The participant's performance clearly indicated comprehension of the rules governing the use of the habitual be although he used it in a few instances in conversational speech other than the narrative discourse tasks where it was not used at all. It is possible that even AAVE monodialectal speakers do not use it any more frequently than he did.

According to Wyatt (1996, p.100), there is an age-group difference in the use of various AAVE grammatical, phonological and lexical items as a result of social stratification. Dillard (1972 p. 226) maintained that "age grading" occurs to a greater extent in the AAVE-speaking community than other English speaking communities as the result of social practices. The participant's use of habitual be may have been influenced by his socio-economic status and the desire to use SAE. The participant's attitude regarding AAVE perhaps caused him to deliberately avoid the use of this marked AAVE form while retaining other less blatant forms like plural /Z/. However, the continued prevalence of this form, particularly noted with young African-American adolescents, African-American musicians and comedians represents a desire to stay "connected" to their culturally distinct ethnic group.

In summary, the participant experienced no difficulty producing the habitual be even when other aspects of his reading the stimulus sentences were clearly agrammatic.

CHAPTER 6

EXPERIMENT 3

MULTIPLE NEGATIVES

6. 1 Research Question

Experiment 3 examined the participant's performance on a reading task employing multiple negatives in naturally occurring sentences. The question asked was: As functors, are negatives vulnerable to agrammatism in a bidialectal AAVE-SAE agrammatic speaker?

6. 2 Method

Thirty experimental sentences, 6 or more words in length and containing 2 to 4 negative forms (e.g., "There ain't no kids in my class using no drugs.") were selected from the author's transcription of bidialectal AAVE and SAE speakers residing in the New York Metropolitan area. These were used as experimental sentences to explore whether multiple negatives are particularly vulnerable to agrammatism (See Appendix C).

The participant was asked to read each sentence aloud as written. Before administering the task, the investigator presented the first stimulus sentence written on a card and said, "I'm going to give you some sentences to read. Please try to read them as they are written and please speak as clearly as you can."

The participant's responses were taped at a digitization rate of 48 Hertz using a Sony model TCD-D8 Digital Audio Tape- Recorder. The participant spoke into an additional head microphone model UTQPAC41 that was attached to a headset.

Responses were scored according to an error/correctness paradigm. A total of 96 negatives occurred in the 30 sentences. The participant's production or omission for negative items was tabulated and a response table was constructed (See Table 2).

6. 3 Results

The participant made errors on 19 out of 96 negatives on the multiple negative reading tasks (See Appendix C). On negatives didn't, no, not never, nothing, and nobody, there were no errors. Errors were associated exclusively with the contractions don't, can't and ain't. These errors included 10 conversions of negative forms to their analogous positive forms (e.g., can't to can) and 5 substitutions of a different word for the stimulus form (e.g., ain't to can).

There were 5 instances of the conversion from don't to do and 5 instances of can't read as can. Ain't was replaced once each with it, is and can't and with can twice. Interestingly, these errors were primarily substitutions rather than omissions. The remaining 4 errors on the reading task (Appendix C, line 7, 8, 14, and 16) were related to the substitution of a different word with the target stimulus or errors in the text.

In 2 out of 30 sentences, the participant made errors on more than one negative (See Appendix C, line 2 and 16). In three sentences, conversions from can't to can did not change the meaning of the sentences from "negative" to positive (see Appendix C, line 6, 12, and 22). Stimulus sentence 6 contained three negatives (no, nobody, and

not change the meaning of the sentences from "negative" to positive (see Appendix C, line 6, 12, and 22). Stimulus sentence 6 contained three negatives (no, nobody, and can't) and sentence 12 contained 3 negatives (no, nothing and can't) with the word nobody. In sentence 22, the 3 negatives were didn't, can't and no with the word anybody. The participant reduced can't to can in each of the 2 sentences, yet the meaning of the sentences remained the same. Conversions from don't to do resulted in sentences whose meanings were difficult to interpret (See Appendix C, line 17, 23 27, 28 and 30).

6. 4 Discussion

The participant's performance with multiple negatives suggests that negatives, shown to be relatively spared among functors across languages of the world (Menn and Obler, 1990 p. 1277) may reflect a more complex system than previously thought. The following examples taken from Labov (1972) reflect the variable function AAVE multiple negatives can play:

1.The introduction of an extra quantifier.

e. g. "Ain't no seventh grade."

2. Free-floating negatives

e. g., "But not my body can't walk through the wall.

2. Negative inversion

e. g., Ain't nobody in the block go to school.

4. The involvement of concord with a quantifier.

e. g. "Don't so many people do it.

One possible explanation for the reduction of can't to can in speakers of AAVE is a phonological one. All the problematic negatives were single-syllable words ending in clusters. All spared words were not in this task. However, in his spontaneous discourse, the participant's spontaneous discourse contained instances of monosyllabic and bisyllabic negatives used in sentences (e.g., "See I don't broken English." Appendix A, line 21, "I didn't drinks too much." line, 116) and instances of the use of multiple negatives (e.g., "No I can't." line 61, and "Now I don't follow games no more." line 70).

A second explanation is a morphophonological one stemming from Stockman's (1996) description of the conditions in which final consonant absence is likely to occur. The final consonant absence is more likely to occur in normal AAVE speakers with bimorphemic clusters (e.g., can't) as opposed to monophonemic clusters (e.g., sent). This observation could account for the conversion of don't to don but not for the conversion from don't to do. Stockman (2002, personal communication) reported the conversion from don't to do as a simplification with respect to the variable of cluster reduction.

Goodglass 1968 (in Goodglass and Blumstein 1973, p. 206) offered an explanation based on his hypothesis of the "stress-saliency" of agrammatism. According to the author, the factor of word-order accounts for his agrammatic individuals' performance with the negative interrogative can't. Goodglass (1973) asserts the initial stressed negative interrogative can't, in spite of its greater grammatical complexity, is easier for agrammatic individuals to pronounce than the simple interrogative can because of the differing stress patterns on phrases with these in the initial word-slot position. This

easier for agrammatic individuals to pronounce than the simple interrogative can because of the differing stress patterns on phrases with these in the initial word-slot position. This author asserted "the complexity of the negative interrogative is apparently overridden by the facilitating effect of having a stressed word in the initial position." (p. 207).

Of course the bidialectal participant had particular difficulty with can't, as with the other monosyllabic negative contractions. However, none of the can't's in this specific task were in sentence-initial position but there were instances of their occurrence in this word-slot position in his spontaneous speech (e.g., "Can't smoke now." Appendix A, line 89), as they were in Goodglass's (1968) stimuli (e.g., "Can't he dance." Goodglass and Blumstein 1973, p. 206).

The negative ain't represents the most common negative form in AAVE according to Rickford and Rickford (2000 p. 122). It is used for the equivalent of Standard American English am not, aren't, isn't, don't, hasn't, haven't and didn't. In AAVE, these are all ain't equivalents. Yet the participant read the stimulus as it, is, can't, and can and made no substitutions for any of the equivalent SAE forms in this task. Interestingly, he substituted functors for ain't, confirming that these negative words are functors.

An alternate explanation is one related to semantics. According to Rickford and Rickford (2000) "Contrary to what purists often allege, double negatives are virtually never interpreted as positive (as the logical); "two negatives make a positive" rule would predict, even by SAE speakers (p. 122). The authors use the sentence "*I don't want nothing nobody can't enjoy.*" to illustrate their point. They maintain that the meaning is

clear in the following context (I don't want nothing = "I don't want anything"; and Nobody can't enjoy = "Nobody can enjoy.").

Adding or deleting the third negative no, in sentences 6, 12 and 22 (Appendix A), does not alter the meaning of the sentences. The meanings remain virtually the same. For example, the sentence *"It's a shame nobody can't go on the ride no more."* was read by the participant as *" It's a shame nobody can go on the ride no more."* (Appendix A, line 6). The underlying meaning of the participant's sentence remains negative although the conversion from negative can't to positive can occurred. When the negative no is deleted from the sentences and the conversion from negative to positive occurs (e.g., *"It' a shame nobody can't go on the ride." = "It's a shame nobody can go on the ride.")*, the underlying meaning remains negative and the converted sentence becomes more similar to a SAE sentence.

A semantic explanation, perhaps in conjunction with a tendency towards what the patient views as the higher prestige register, SAE, seems applicable.

In essence, the participant's performance with the negative contractions: can't, don't and ain't clearly demonstrates that these negative contractions were indeed impaired in the bidialectal agrammatic speaker in this read-aloud task compared to negative items such as not nobody and even didn't. Interestingly, these were less impaired in the participant spontaneous discourse.

In order to test the phonological explanations further, we designed a task to deliberately contrast the monosyllabic negative contractions with bisyllabic counterparts in Experiment 4.

CHAPTER 7

EXPERIMENT 4

NEGATIVE CONTRACTIONS

7. 1 Research Question

Stimuli for **Experiment 4** were systematically constructed to answer the question: What patterns of performance do we see in the bidialectal AAVE-SAE speaker with bi-syllabic negative contractions and monosyllabic contractions: can't, don't and ain't paired in a double negative context. Unlike Experiment 2 where sentences contained from 2 to 4 negatives, all sentences in this study had only two negatives.

7. 2 Method

A total of 250 legitimate AAVE double-negative sentences with a minimum of five words and containing one of the negative contractions *(can't, don't, ain't, didn't, wouldn't, couldn't* and *shouldn't)* paired with each of 4 negative words (*no, never, nothing and nobody*) were constructed for a read-aloud task (See Appendix D)

The experimental task was administered in a quiet setting with the participant and investigator seated at a table in close proximity to permit a clear view of the investigator's face and to ensure adequate audibility. The participant was asked to read each sentence aloud as written. Before administering the experimental reading task, the investigator presented the first stimulus sentence written on a card and said, "I'm going to give you some sentences to read. Please try to read them as they are written and please speak as clearly as you can."

Each sentence for the task was written in large black lettering on a white background on 4 x 6 index cards.

The participant's responses were taped using a Sony model TCD-D8 Digital Audio Tape-Recorder. The participant spoke into a head microphone model UTQPAC41 that was attached to a head set.

Responses were scored according to an error/correctness paradigm with respect to the participant's performance only reading the experimental stimulus as written. The participant's performance reading the surrounding text of the sentences was not a criterion for analysis of the error and correctness of the stimulus. The participant's responses reading the paired negative stimuli were tabulated and a response table was constructed (See table 3).

7. 3 Results

The negative words no, never and nobody paired with the 7 negative contractions were read as written on all stimulus tokens except for 1 omission each for no and never. By contrast the negative word nothing was problematic.

In addition, the monosyllabic negative contractions can't, don't and ain't were more problematic than the bisyllabic negative contractions. The participant read stimulus can't as written on 1 out of 32 tokens, ain't on 1 out of 24 tokens and don't on 5 out of 24 tokens compared to 24 out of 33 correct occurrences for wouldn't, 29 out of 32 for couldn't, and 30 out of 32 for didn't. The participant made no errors on 31 tokens for shouldn't.

The negative contraction can't paired with negatives: never, nobody, nothing and no was read as written on 1/32 tokens and as the "positive" can on the other 31 tokens.

The negative ain't was read correctly on 1/24 tokens. ain't was substituted by for it's, not, didn't, can, nothing and can't.

The negative don't was read as written on 5/24 occasions. There were seven positive conversions: 6 for positive do and 1 for the past tense did. The participant made 7 substitutions for the negative didn't and read don't as did not once and do not 2 times. Although, in the latter two instances, the substituted items were not the target tokens, they did include the correct verb: do and a negative element.

There were other conversions from negative to positive forms observed in the participant's output. The participant read wouldn't as would on 5 tokens. Substituted words couldn't, wanted and didn't for wouldn't were noted. The substituted words couldn't and didn't are very similar in that both are negative auxiliary and 2-syllable contractions. The participant substituted won't, an AAVE equivalent for wouldn't, on one occurrence.

The participant read couldn't for shouldn't, can, come and doing once each. The substitution errors except for shouldn't, a negative auxiliary and 2-syllable contraction, had no apparent association with the target stimulus.

Overall, the participant read 182/215 negative words and 121/209 negative contractions correctly as written. The participant's reading of the contraction shouldn't as written and the negative word nobody were the least impaired (See Table 3).

7. 4 Discussion

Menn and Obler (1990, p. 1277) reported a relative sparing of negatives across languages of the world. Indeed, according to these authors "basic negative elements are used as frequently by agrammatic patients as by normals" in the discourse materials they and their colleagues collected. However, the authors did not have their contributors perform a more refined analysis of negative words nor did they distinguish "negative words" per se from "contractions." As in **Experiment 2** with multiple negatives, some conversions from negative to analogous positive forms resulted in sentences whose meanings were spared with specific monosyllabic and bisyllabic negative contractions. The conversion from can't to positive can (e.g., "The cat can't never catch the mouse." read as "The cat can never catch the mouse." (Appendix D, line 42) seems not to affect the underlying meaning. However, in the sentences "His beard don't never grow too long." read as "His beard do never grow too long." Appendix D line 129), the underlying meaning is no longer spared. The conversion from "negative" to "positive" in this sentence makes the sentence semantically inappropriate and difficult to interpret. Thus, it seems the meaning is spared with conversions from negative to positive with monosyllabic can't but not with don't.

The meaning is also spared with bisyllabic wouldn't when converted to positive would (Appendix D, line 164). The meaning for shouldn't and couldn't are speculated also to be spared similarly to wouldn't although no conversions to positive forms were made in the task. In contrast with the monosyllabic negative don't, bisyllabic didn't conversions to positive did resulted in spared meaning (e.g. "We didn't write to nobody." versus "We did write to nobody.") Thus, it seems that the sparing of meaning for

conversions of negative contractions to "positive forms" occurs with specific negatives and cannot be generalized to all monosyllabic and bisyllabic negatives. The substitution of didn't and not for ain't as discussed in Rickford and Rickford (2001, p 122) can be explained on the premise that these are forms of SAE equivalents for the AAVE negative ain't. Moreover, it does appear that the patient recognized the negative component in ain't when he substituted not, didn't, nothing and can't for it.

A theoretical account for all conversions was not apparent but these findings but seems related to interactions between semantic and syntactic factors and between those and phonological factors and agrammatism.

In summary, the use of negatives contractions by the bibialectal participants was indeed impaired more for monosyllabic than bi-syllable contractions. Overall contractions were more impaired than negative words. These data revealed no consistent patterns that accounted for the conversions to "positive" forms except for the bimorphemic can't that might be explained by a phonological account. Interestingly, conversions to positive forms resulted in spared meaning for monosyllabic can't and bisyllabic shouldn't, wouldn't and couldn't and didn't but changed the meaning of the sentence for the conversions of don't to positive forms. The question as to why various negative contractions were problematic and others were not remains unanswered. Although, as with any agrammatic individuals, (or aphasic ones for that matter), it is impossible to explain specific substitutions. It is noteworthy that substitutions for negative contractions were closely related to them, shared the same target auxiliary, the same monosyllabic shape, and the inclusion of a different negative contraction. Such closeness is quite similar to the report of Blumstein (1973). Her applications of linguistic

principles to characterize agrammatism were in the area of phonology. She asserts aphasic individuals are able to produce the visibly articulated sounds better than back consonants. The author proposed an explanation based on the systematic direction in the articulation errors of aphasia patients. She maintains that at the phonemic level, errors are more likely to differ from their targets by one distinct feature than by two or more (p. 126).

In summary, it seems the participant's difficulty with negative contractions and particularly the conversions of negatives to "positive" forms was the result of a multiplicity of factors such as the complexity of negative patterns in AAVE and the interaction of the phenomena of agrammatism with phonological, morphological and semantic factors.

Consistent with the result of **Experiments 1** and **2**, a number of errors on the negative words in the sentences in this experiment resulted in sentences that were not permissible in either AAVE or SAE, thus reflecting an agrammatic individual's difficulty with negative-marking functors. More refined analysis of negative patterns in agrammatism than was undertaken in Menn and Obler's (1990) studies is clearly warranted.

CHAPTER 8

EXPERIMENT 5

PLURAL /Z/ AFFIX

8. 1 Research Question

In light of the optionality of /Z/ markers for plurality in AAVE, **Experiment 5** explored several aspects of the participant's performance with plurals. The experimental task for the study was designed to determine whether plurals are spared, impaired or differentially employed in the bidialectal agrammatic speaker of AAVE and SAE. In **Experiment 5,** the question to be answered was: As inflections, are SAE plural /Z/ markers problematic for an agrammatic bidialectal AAVE-SAE speaker? As secondary questions, I asked whether sentence position (towards the beginning or the end of the sentences) and whether adverbs of numbers included in addition to the plural /Z/ made a difference.

8. 2 Methods

The plurality stimuli consisted of sixty sentences meeting the following conditions:

a) 20 AAVE sentences contained quantifiers requiring plural nouns in 10 initial and 10 final word-slot positions (See Appendix E).

E. g., 1. Many squirrel live in the old oak tree in the park.

2. In the old oak tree in the park live many squirrel.

b) 20 equivalent SAE sentences contained quantifiers requiring /Z/ plural markers in 10 initial and 10 final word-slot positions.

E. g., 1. Many squirrels live in the old oak tree in the park.

2. In the old oak tree in the park live many squirrels.

c) 20 similar SAE sentences contained plural nouns requiring /Z/, with non-quantifier modifiers preceding them in 10 initial and 10 final word-slot positions.

E. g., 1. Baby squirrels live in the old oak tree in the park.

2. In the old oak tree in the park live baby squirrels.

The participant was seated at a table in close proximity to the investigator in order to insure audibility and the investigator could see the participant's face. The participant was asked to read each sentence aloud, one sentence at a time as it was written. Before administering the reading task, the investigator presented the first stimulus sentence written on a card and said "I'm going to give you some sentences to read. Please try to read them as they are written and please speak as clearly as you can."

Each sentence for the task was written in a large black lettering on a white background of 4 x 6 index cards.

The participant's responses were taped using digitization rate of 48 Hertz using a Sony model TCD-D8 Digital Audio Tape-recorder. The participant spoke in an additional head microphone model UTQPAC41 that was attached to a headset.

Responses were scored according to an error/correctness paradigm with respect to the participant's performance reading the experimental AAVE and SAE plural stimuli

as written. The participant's performance reading the surrounding text was not part of the analysis of correctness/error for the participant's response with the stimulus tokens.

The participant's responses were tabulated and a response table was constructed (See Table7).

8. 3 Results

On the plurality task, the participant read 37 out of 60 stimulus tokens as written. He employed /Z/ as written on 24/40 stimulus tokens requiring /Z/ markers: 13/20 instances with quantifying words and 11/ 20 instances with non-quantifying words. He read 12/20 AAVE stimulus tokens as written and read the plural /Z/ markers on 50% of the SAE stimulus tokens and read 50 % as written of the AAVE stimulus tokens in the initial position of words with quantifiers. In the final word-slot condition with quantifiers, the participant read 70% of the experimental stimuli without /Z/ marker as written and read 80% of the experimental stimuli with /Z/ markers as written. In the condition with non-quantifiers in the initial word-slot position of sentences, the participant read 70 % of the sentences as written with /Z/ markers and 50% of sentences with /Z/ markers in the final position (See Table 7).

The participant made errors on a total of 23/60 stimulus tokens. Interestingly, there were 15 errors related to the deletion of the /Z/ marker for SAE forms and 8 errors of addition of /Z/ markers on AAVE forms. There were 2 substitution errors for target words

(i.e., chipmunk = chipblun, Appendix E, line 4 in the SAE final word-slot condition, chipmunk = chipbunk line 4 in the SAE initial non-quantifier condition and

several = service, line 4 in the SAE initial word-slot position (See Appendix E).

8. 4 Discussion

Quantifying words and sentence complexity did not influence the participant's choice to supply the /Z/ suffix for plurality on this task. With quantifiers, he read /Z/ 65% in SAE and 60 % without quantifiers. With final and initial non-quantifiers he read /Z/ 60 % of the time. This consistency was also evident in **Experiment 1** in the participant's spontaneous narrative and discourse. There, the participant used plural markers on 7 instances and omitted /Z/ for plurality on 6 occurrences in the presence of quantifying words (e.g., seventeen years Appendix A, line 18 and seven year, line 17).

The optionality of plural markers use in AAVE likely accounted for the participant's performance. The consistent use of contextual cues by AAVE speakers in unmarked plural forms and the use of additional words such as "*an dem*" (e.g., Mark *an dem* came.) after the name of a person to refer to others associated with the person and "*dem*" before the noun (e.g., *dem* book) to refer to more than one, are ways other than adding /Z/ for marking plurality in AAVE (Rickford and Rickford, 2000, p. 110). Additionally, some written SAE verb forms convey information (i.e., are) that denote plurality.

According to Dillard (1972):

> "A numeral or some other expression, which clearly denotes plurality by itself, these varieties leave the noun unchanged (e.g., "a whole lotta song"). Where other modifiers do not clearly point out plurality, the noun forms are

changed for the purpose (e.g., the songs). The absence of plural inflection is regularly distributed with reference to such modifiers as numerals." (p. 61).

It would appear that the participant in this study is not following such a rule. Additionally, Obler has observed (personal communication, 2001, that Dillard's (1972) rule was not followed by a normal bidialectal AAVE-SAE speaker she had occasion to listen to. Rather, as with the participant in this study, that Northern-born educated woman in her fifties used /Z/ markers or not, both in conditions where number or other adjectives of quantity indicated plurality or not.

Rickford and Rickford (2000, p. 110) reported, "AAVE speakers sometimes ditch the plural /Z/, but not often (1 to 10 percent of the time)." These authors would expect the participant to apply /Z/ suffix 90% of the time, while he uses it for SAE sentences an average of 60% of the time and for AAVE sentences 45% of the time. Of course Rickford and Rickford were considering non-brain damaged AAVE speakers and not aphasic individuals with symptoms of agrammatism.

Dillard's theory would predict the participant would apply /Z/ in all AAVE instances with non-quantifiers and omit /Z/ with quantity adjectives. But recall Dillard's analysis of AAVE was published in 1972, during a period when AAVE speakers were perhaps more monodialectal in AAVE than bidialectal in AAVE-SAE as our participant. Also, we deliberately did not include /Z/ in the AAVE utterances, including those with quantifiers, and the instructions to the participant to read the stimuli as written.

The variability of the use of plurals in AAVE may account for the sparing of the

suffix in the participant. Because it is optional in AAVE it may be less salient for him than for an SAE speaker and therefore he attended to it less.

CHAPTER 9

EXPERIMENT 6

THIRD PERSON /Z/ AND PAST TENSE /D/ AFFIXES

9. 1 Research Question

Initially unbound functors that participate differently in AAVE and SAE were investigated. Habitual be was observed to be spared as are a number of negative elements but not negative contractions. Negative contraction affixes posed particular problems, but another inflectional form, the plural markers, did not seem to. To further evaluate the participant's performance on bound affixes, Dr. Margaret Meth's data on the participant in this study was reanalyzed. Meth (1998) looked at agrammatic individuals' use of the verb tense marker /D/ and the tense and number marker /Z/. **Experiment 6** investigated the participant's ability to use inflectional /D/ for past tense and /Z/ for 3rd person present. With respect to 3rd person /Z/, I asked whether its distribution was the same, apparently random, distributed as that of plural /Z/ (Experiment 5) for this participant. In addition, Meth carefully constructed stimuli to test the contribution of phonological characteristics of verbs on agrammatic's success with the affixes /Z/ and /D/. The question raised by the result of the two studies of multiple negation whereby the phonological shape of the resultant contractions appeared to influence the participant use of the negative contraction is: Is the participant's use of optional /Z/ and /D/ randomly distributed as errors of suffix omission or a preference for the less-marked (zero affix) AAVE forms?

9. 2 Method

A subset of data consisting of 80 sentences from Meth (1998) was re-analyzed to explore the participant's ability to use inflectional /D/ and /Z/ markers. Meth designed the sentence completion task to vary several factors of the base form to which affixes were to be appended: word frequency, word length, and final consonant cluster status and rhyme gang.

According to Meth (1998, p. 27) ten words were selected for each list for each of the following categories:

1. Large rhymes-gang (the target verbs had 5 or more verbs with endings that rhyme)
2. Small-gang (the target verb had 5 or fewer verbs with ending that rhyme)
3. High frequency word (stimuli fell between 1016, the highest frequency monosyllabic regular verb in the language based on Francis and Kucera's (1982) frequency list and 89).
4. Low frequency (stimuli fell between 2 and 20 occurrences per million word)
5. Low frequency Bi-syllabic words (stimuli fell between 20 and 44 occurrences per million words)
6. Low frequency tri-syllabic words (stimuli fell between 9 and 19 occurrences per million words)
7. Final consonant contrasts (one of each pair ended in a final single consonant with the other ending in an additional consonant preceding it. (for a total of 10 pairs, 20 words in this category).

There were two conditions (past tense /D/ and 3rd person /Z/) for which the participant was asked to append to verbs in sentences read aloud. The participants were asked to respond using verbs with past tense /D/ and 3rd person /Z/ suffixes for a total of 160 words. As Meth reports,

> Specific instructions for the experimental sentence-completion task included examples of the task with several trial items to insure that the Participant understood what was required. The sentences were pseudo-randomized such that the order of presentation of target tense alternated for each sentence type. For example, if item five targeted past tense first, then item six targeted third person first. The participants were told, the examiner will "say some sentences and then say a variation of the sentences with the end missing. Some of the sentences will be harder than others. I want you to finish the sentences for me using a form of one of the verbs in the original sentence." (Meth 1998, p. 97).

These readings were made of each participant's response. Then:

> Four master's level speech pathology students served as raters for the productions of words for each participant. The raters listened to tape recordings of each of the eight participants. The listeners were asked to rate the final part of the word that represented 3rd person or past tense as to whether the participant used the correct suffixes without making any judgment as to the stem. For example, if the correct answer was **hooked** and the participant said **baked,** the response was judged as a correct response. The participants' responses were scored as correct or incorrect. Percentage of

> correct responses were totaled and the mean percent correct by word lists for each participant was calculated for past tense /D/ and 3rd person /Z/ inflectional markers. A Kappa statistic was computed to measure the degree of consensus among raters. Average Kappa scores are consistent with conventional measures of reliability. (Meth 1998, pp. 26-27).

As Meth, the examiner was a speaker of SAE, the materials in her study were all written in SAE and no mention was made of dialect in the testing session.

For the present study, the principal investigator reanalyzed tape recordings of our participant's responses on the sentence-completion task inflecting verbs with past tense /D/, and 3rd person /Z/ suffixes.

The participant's responses were scored according to an error/ correctness paradigm for the /D/ and /Z/ suffixes. Scores were tabulated and a response table was constructed. (Table 8)

Inter-rater reliability was achieved by the consensus of the author's judgment and a linguist- colleague (M. Gitterman) on 160 verbs, 80 each for /Z/ for 3rd person present tense and past tense /D/. Agreement between the two raters was reached on 97% of the participant's responses.

9. 2 Results

The participant employed the affix /Z/ on 26 occurrences and used zero affix for 3rd person present on 37 occasions for a total of 63/80 occurrences. The past tense /D/ was applied on 12 occasions and zero affix for /D/ was seen in 42 instances for a total of

54/80 occurrences. Interestingly, the participant supplied the past tense/D/ suffix in place of 3rd person present on 8 targets and the 3rd person present suffix /Z/ in place of target past tense /D/ on18 occurrences. There were 10 substitutions of other error types for the target word for the verbs with /Z/ suffix (e.g., summary for target summarizes Appendix H), and 8 substitutions for /D/ (e.g., tolering for tolerate) See Appendix G.

The categories with the most errors for /Z/ were; bisyllabic and trisyllable words. He responded with 3rd person /Z/ suffix on 1 instance for bisyllabic and 2 instances for trisyllabic words. Those same word list plus final consonant cluster were problematic for past tense /D/. He responded with 1/10 correct for the list of stems for bisyllabic words, 0/10 correct for trisyllabic words and 1/ 20 for stems ending in final consonant clusters.

9. 4 Discussion

The participant's performance with inflected verbs revealed that he employs an affix more for third person /Z/ than /D/ on this task. This finding is consistent with Meth's data for monodialectal SAE agrammatic individuals for past tense. The use of the suffixes or zero affix was not randomly distributed. Moreover, the participant was more likely to use zero suffix for phonologically "harder" items: bisyllabic and trisyllabic stems for /Z/ and /D/ and stems ending in final consonant cluster for /D/, but not for /Z/. Note that stems ending in consonant cluster were problematic for the use of /Z/, however, the participant succeeded in employing it correctly in one instance.

One explanation for the participant's performance relates to the complexity of these inflectional forms in AAVE and SAE. In SAE /Z/ suffixes are added to verbs with third person single subject and past tense /D/ is added to indicate past tense. Standard

English has variability in the sense that it requires adding /Z/ to the third person singular subjects, but keeps the bare verb forms for the other pronoun (i.e., they go, we go, you go etc.). In AAVE, the use of zero-morph for /Z/ makes the third person form consistent with the bare SAE verb forms.

Past tense in SAE is more complex than 3rd person present tense in the sense that there are regular and irregular verb forms that denote past tense. In AAVE, there are regular and frequent irregular forms and the additional use of words such as done (i.e., "He done eat.") and been (i.e., "She been here.") to help denote past tense. In AAVE, stressed been refers to a situation that exists now and began long ago in the past (Rickford and Rickford, 2000, p. 121).

According to Dillard (1972, p. 42), speakers of AAVE have an option as to whether to indicate the action of the verb went on in the past or to leave the verb in a noncommittal form. This complexity in the use of past tense in SAE and AAVE may account for the participant's difficulty supplying the suffix /D/. Menn and Obler (1990, p. 1272) reported "bound grammatical morphemes (e.g., inflectional endings) were rarely omitted in those languages where it is possible to tell the differences between omissions and substitutions." Our findings are consistent with this pattern as a result of the participant's bidialectalism. What would appear to be omissions in SAE agrammatic individuals may in our participant be preference for the less marked form in AAVE. In general, the participant preferred the zero affix to the use of suffixes for /Z/ and /D/.

In conclusion, the optionality of use of inflectional markers in AAVE may increased the frequency of omissions of 3rd person /Z/ and past tense /D/. It is of interest to note, however, that in this situation where SAE was presumably the goal, the

participant's relative use of the affixes reflected a phonological-complexity component. Both greater stem length in syllables and final consonant cluster status of the stem resulted in the use of zero morphs for the phonologically heavy items in this task. As you recall, bisyllabic negatives were less problematic than monosyllabic negatives in **Experiments 2** and **4**, which seem the opposite of the findings in this experiment.

CHAPTER 10

SUMMARY AND CONCLUSIONS

In this chapter, I present an overview of the key findings of the present study with respect to the manifestation of agrammatism in a bidialectal AAVE-SAE speaker. Here, I also discuss pertinent issues with respect to the participant's bidialectalism. In the section to follow, I make recommendations for future theoretical and clinical research. Finally, the remainder of the chapter is devoted to discussing the clinical implication of this study's findings.

10. 1 Manifestation of Agrammatism

Agrammatism manifests in the bidialectal speaker of AAVE-SAE for the most part in similar ways to those in other agrammatic SAE individuals. Agrammatic speakers of AAVE can be identified by the same criteria used for SAE and other languages. On two points our participant's data differed interestingly from what would be expected from the extensive agrammatism literature: his spared use of habitual be and his specific problems with monosyllabic negative contractions.

With respect to habitual be, the sparing of this functor in the participant was unexpected in light of cross-language studies which have shown the verb "to be" and auxiliary verbs to be problematic for agrammatic individuals (Menn and Obler 1990). The participant's performance with the habitual be verb form may be explained with respect to Ribot's (1881) rule of regression that states, " what is learned later is lost earlier." I assume that the participant in this study used AAVE from infancy to adulthood although he reported SAE to be the language spoken prior to insult. As you recall, there

were more AAVE than SAE utterances in his spontaneous speech sample. Although the participant did not consider himself a speaker of AAVE, instances of the use of multiple negatives were in his spontaneous speech sample. The habitual be, while not used in the spontaneous discourse sample, posed no difficulty for him in the reading aloud task. The flexibility of the habitual be that permits the verb form to be used as the copula and as an auxiliary verb may also be a factor in the participant's performance with this dialect-specific functor. The habitual be with its semantic weight and invariability as compared to SAE be (i.e., *is, are*), helped it to be spared in the participant. According to Stockman (2002, personal communication) the habitual be may function as a content word.

Negatives are shown to be relatively spared among functor morphs across languages of the world (Menn and Obler, 1990). The current study suggests that they may reflect more complex structure than previously thought. Certain aspects of them such as negative contractions can indeed be impaired in agrammatic AAVE speakers. As mentioned above, Labov' s (1972) examples of AAVE speaking adolescents' use of negation (e. g., negative inversion, negatives with extra quantifiers, free-floating negatives and negatives and concord with quantifiers) illustrate the variable rules and complexity of negatives functors in AAVE.

Findings from experimental tasks employing negatives and negative contractions also suggest that negatives in AAVE constitute much more complex structures compared to the use of negatives in SAE. Overall, for this participant, negative contractions were more impaired than other negative words. Single-syllable negatives (e.g., can't, don't and ain't) ending in clusters were markedly more problematic for the participant than

bisyllabic contractions. Phonological, morphophonological and semantic theories were proposed to explain the conversions of negative forms to their analogous "positive forms." Interestingly, many of the words substituted for negative words were functors. A number of errors on the negative forms resulted in forms that were not permissible in either AAVE or SAE, thus likely reflecting an agrammatic difficulty with negative–marking functors. The question as to why certain negative contractions were problematic for the participant remains to be more completely addressed. One may speculate that there is an interaction between phonology, and morphology and syntax, that may help account for such conversions of can't to "positive" can.

According to Stockman (1996), there is reason to suspect morphological and phonological features interact on other forms in the dialect. In addition to final consonant absence, AAVE speakers commonly do not produce /D/ inflections for tense /D/ or /Z/ inflections for quantity and case (i.e., possessive and third- person singular) /Z/. Moreover, Stockman (1996, p. 122) proposed that inflectional absence reduces the phonetic complexity created when bound markers are added to words. Adding /Z/ plural marker to a word ending in a final consonant creates bisegmental and trisegmental consonant clusters (e.g. "pets," "pests"). Goodglass and Berko (1960) also maintain the suffix /Z/ that marks plural, possessive and 3rd person present reflects both morphology and phonology. The latter because its allomorphic forms are selected according to phonological criteria.

In light of the optionality of /Z/ markers for plurality in AAVE, plural markers were relatively spared in the bidialectal speaker of AAVE and SAE. As inflections, SAE plural /Z/ was less problematic than 3rd person present /Z/ in the bidialectal AAVE-SAE

speaker. Additionally, sentence complexity in terms of word-slot position (towards the beginning or end of the sentence) and adverbs of number in addition to the plural marker /Z/ did not make a difference for AAVE structures in this study. Interestingly, there were marked differences noted between SAE forms in the initial and final conditions with non-quantifiers. The latter condition appeared to pose problems for the participant supplying the /Z/ marker. The optionality of the use of plural /Z/ markers and the range of alternate markers (by using contextual cues, additional words and information coded in the written SAE verb forms) may account for the use of the suffix in the final SAE and AAVE condition with quantifiers. However, in the initial word-slot position, these factors were not applicable and seem to make a difference even with quantifying words.

With respect to the participant's ability to use inflectional /D/ for past tense and 3rd person present /Z/, his performance revealed that he employs the affix more for /Z/ than /D/. This is consistent with Meth's (1998) findings for monodialectal agrammatic individuals. The participant's use of zero affix or suffixes was not randomly distributed for /D/. He used zero affix for phonologically "harder items" (i. e., bisyllablic and trisyllablic stems and stems ending in a final consonant cluster).

If the use of /Z/ is optional in AAVE, it was expected it to be used equally in all verb types in Meth's (1998) study. Instead 3 types were markedly lower. All 23 (bisyllablic stems, trisyllablic stems and stems with final consonant clusters) are phonologically " heavy" word-types. What appeared to be errors of omissions of suffixes may have been our participant's preference for the less marked AAVE forms. Zero affix, by this analysis, was preferred over the use of suffixes for /Z/ and /D/. Thus, the use of optional inflectional marker in AAVE would indeed decrease the number of structures

labeled agrammatic in a bidialectal speaker but increase the number of symptoms labeled agrammatic in a monodialectal SAE speaker.

To recapitulate, key findings from this study with respect to the manifestation of agrammatism in the bidialectal AAVE-SAE speaker are illustrated by the variability of the participant's performance on SAE forms and AAVE dialect-specific forms. Despite the fact that certain aspects of AAVE are similar to certain aspects of agrammatism, clear instances of agrammatic speech were easy to find, characterized as it often is for SAE agrammatic speakers, namely omissions and substitutions of bound affixes, reductions in the use of functors, slow labored and telegraphic speech with the sparing of content words. Classifications were different from the classification of agrammatism in a monodialect SAE speaker because as a result of AAVE structural differences from SAE, many items that would have been considered agrammatism, if spoken by a SAE speaker were not. Many substituted items were not permissible as either AAVE or SAE structures. Once anomic and pharaphasia utterances were excluded, the remaining items reflected symptoms could be clearly distinguished from dialectal forms.

10. 2 Implications for Bidialectalism

Generally assumed with respect to the participant's bidialectalism is the observation that individuals with aphasia speaking a standard language and a dialect follow similar patterns of recovery of their premorbid languages as aphasic individuals speaking two different unrelated languages. Additionally, studies have demonstrated dissociation between two or more unrelated languages and between the standard dialect

and related dialects in the recovery of aphasia following the regression of aphasia (Paradis, 1983).

One might argue that the language less impaired in this participant's spontaneous speech from narrative and discourse was AAVE. By this analysis, the dialect acquired earlier was the strongest and the one more firmly restored. As previously mentioned, there were more appropriate AAVE than SAE structures found in the spontaneous speech sample from discourse and narrative. An alternate interpretation is that the participant attempted more SAE forms than AAVE but agrammatic errors on the SAE forms resulted in appropriate AAVE forms. We cannot know precisely the participant's level of proficiency with AAVE and SAE premorbidly, but clearly some of both were spared. The participant's spontaneous output clearly demonstrated knowledge of both SAE and AAVE.

Studies have shown that the dissociation between two different unrelated languages and between a dialect and standard dialect may surface as a disturbance in the entire system. Additionally, the dissociation can be related to various levels of interferences between the two dialects that determine the output in each (Pick's, 1913).

The optionality and variability of structures in SAE and AAVE, two closely related dialects of English, may have been a factor determining the output in each dialect. The participant's ability to code switch from the AAVE forms to SAE forms influenced classifications in that some forms that would be considered agrammatic in a SAE speaker were not.

The participant's optional use of forms in AAVE increased the frequency of omission and presented a more quantitative profile of agrammatism. If optional

utterances were categorized as agrammatism in a monodialectal speaker, rather than as in this study, categorized as appropriate AAVE forms, the profile of the monodialectal SAE agrammatic would appear more severe compared to the bidialectal AAVE-SAE agrammatic speaker. A percentage of the utterances would be otherwise characterized as dialectal forms. This, perhaps, would result in a misdiagnosis of the severity of the bidialectal impairment since SAE forms with optional AAVE status are frequently correct as long as they are recognized as AAVE forms.

Dialectal rules governing the use of AAVE forms and how they compare with SAE counterparts helped tease apart the phenomenon of agrammatism and AAVE. Shared features between AAVE and SAE, closely related dialects, would have complicated the sorting out of AAVE forms from agrammatism without the investigator's knowledge of the optionailty and variable rules of the dialects.

In conclusion, our findings have brought forth an issue regarding the inherent skewing in the distribution of utterances with optional forms to be considered in future studies with monodialectal SAE and bidialectal AAVE-SAE agrammatic individuals.

10. 3 Need For Future Clinical Research

The manifestation of agrammatism in bidialectal speakers of AAVE and SAE remains a clinical interest of the investigator of this study. The present study was the first to describe a bidialectal speaker of AAVE-SAE with agrammatism. I present a new case regarding a bidialectal agrammatic speaker's use of negative contractions and habitual be verb form, plural and 3rd person /Z/, and past tense /D/ inflectional suffixes.

The findings presented in this study are from a single case and this represents a first-effort in describing and explaining all the conditions and factors governing the manifestation of agrammatism in bidialectal AAVE and SAE speakers. Additional studies are needed. A comprehensive description requires data on more bidialectal AAVE speaker with agrammatism similar to this participant. Control subject are needed in order to understand the range of normal variability among bidialectal AAVE speakers as well as to test our findings and claims. Reliable generalizations from a single case cannot be made regarding other bidialectal speakers. There is a crucial need for normative data regarding the impact of SAE-AAVE in agrammatic speakers. Cross-dialect research with bidialectal speakers from different linguistic and cultural backgrounds would provide some normative guidelines for bidialectal speakers in general.

Further research is needed to expand understanding of many aspects of the complex linguistic manifestations of agrammatism (e.g., negative contractions and the spared habitual be) seen in the bidialectal speakers of AAVE and SAE. Additionally, it is clear that dialect use is not homogenous across individuals and groups of speakers. Factors such as education, socio-economic class, regional and geographical locations result in differing degrees of dialect density according to Stockman (2002, personal communication).

Cross-dialectal research studies are needed to develop precise measures for distinguishing symptoms in different languages that may reflect both the dialect and agrammatism. Findings from such studies would increase our understanding of different variable rules of languages that would result in quantitative differences in symptoms of agrammatism for different aphasic speakers. This type of information would be an

important consideration for future research as well as describing assessment guidelines for bidialectal agrammatic speakers.

10. 4 Clinical Implications

Equally important are some of the findings regarding clinical ramifications that are to be considered by those speech and language pathologists involved with assessing and remediation of bidialectal agrammatic AAVE-SAE speakers.

First,

- Clinicians should recognize that monodialectal SAE and bidialectal AAVE-SAE agrammatic speakers might perform differently with similar structures because of their language backgrounds.
- Assessment should be guided by an understanding of the structural uniqueness of the languages spoken.
- Clinicians should be familiar with the language system of the bidialectal AAVE-SAE speaker in order to provide the speaker with the opportunities to make choices related to communication strategies (i.e. to code switch) and language preferences such as using less marked forms.
- Clinicians should have an appreciation for the richness of the optionality and variability of AAVE and SAE forms that allow both AAVE and SAE speakers to choose to keep structures, omit others and keep utterances short with no or few adjectives or adverbs or other modifiers.
- Finally, therapy can be built on invariant forms that are likely to be spared (habitual be) and on phonologically and morphologically simpler forms such as

in the negative data that resulted in the conversions from negative to positive but usually keep the meaning intact.

Table 1

Classification of Distribution of Utterances Types

(1) Obligatory non-contrastive	(2) Obligatory contrastive	(3) Optional contrastive	(4) Agrammatic	(5) Non-agrammatic
N = 76 42. 9 %	N = 34 19. 2%	N = 14 7. 9 %	N = 50 28. 2 %	N = 3 2. %

Table 2

Correctness of Habitual be and Multiple Negative Stimuli

Habitual be (read as written)	Multiple negatives (read as written)
30/30	77/96

Table 3

Negative Contractions Read on Double Negative

Experimental Sentences

Second negative	Never		Nobody		Nothing		No		
First negative V	1st	2nd	1st	2nd	1st	2nd	1st	2nd	Totals
Wouldn't	7	9	7	9	4	3	6	8	24/33
Couldn't	8	8	8	8	7	3	6	7	29/32
Shouldn't	8	7	8	8	7	6	8	8	31/32
Can't	0	8	0	8	1	6	0	7	1/32
Didn't	7	8	8	8	8	5	7	8	30/32
Don't	1	8	3	8	na	na	1	8	5/24
Ain't	0	1	0	8	na	na	1	8	1/24
Total	31	49	34	57	27	23	39	54	121/209

First negative refers to monosyllabic and bisyllabic contractions
Second negative refers to the negative words

Table 4

Error Analysis Don't

Substitution items and frequency for single-syllable negatives

Substituted items	Second negative condition				
	Never	Nobody	Nothing	No	Totals
Do	4	0	0	2	6
did not	0	1	0	0	1
didn't	1	2	0	4	7
do not	1	1	0	1	3
Did	1	0	0	0	1
Can	0	1	0	0	1
Totals	7	5	0	7	19

8 positive
11 negatives

Table 5

Error Analysis Ain't

Substitution items and frequency for single-syllable negatives

Substituted items	Second negative condition				
	Never	Nobody	Nothing	No	totals
Not	0	0	0	4	4
other word	1	0	0	0	1
didn't	2	1	0	0	3
can't	3	0	0	1	4
Can	2	3	0	1	6
it's	0	2	0	2	4
nothing	0	1	0	0	1
Totals	8	7	0	8	23

11 positives
12 negatives

Table 6

Error Analysis Can't

Substitution for items and frequency for single-syllable negatives

Second negative condition

Substitued items	never	nobody	nothing	no	totals
can	7/7	6/6	7/8	6/6	26/27

Table 7

Percentage of Plural Nouns Read as Written

Stimulus	Initial Count	Final Count	Initial Non-count	Final Non-count
AAVE	50%	70%	Not Testable	Not Testable
SAE	50%	80%	70%	40%
N= 60	N=20	N=20	N=10	N=10

Table 8

Affix /Z/ Sentence Completion Task

Number Correct out of Target Stimuli

Stimuli	Employs /Z/	Zero Affix	Substitutes affix /D/	Other errors
Large gang	5	4	1	0
Small gang	5	4	1	0
High Frequency	4	6	0	0
Low Frequency	4	4	1	1
Bisyllabic	1	6	1	1
Trisyllabic	2	7	0	1
Final Consonant Cluster	1	2	3	4
Final Consonant	4	4	1	1
N=10 Totals	26	37	8	10
Overall total	= 63/80			

Total = The number of correct responses where the participant employs /Z/
Overall total = The number of correct response where the participant employs /Z/ + total number where the participant employs zero affix

Table 9

Affix /D/ Sentence Completion Task

Number Correct out of Target Stimuli

Stimuli	Employs /D/	Zero Affix	Substitutes Affix /Z/	Other errors
Large gang	2	3	5	0
Small gang	2	5	3	0
High Frequency	2	6	2	0
Low Frequency	1	8	1	0
Bisyllabic	1	8	0	1
Trisyllable	0	5	2	3
Final Consonant Cluster	1	4	1	4
Final Consonant	3	3	4	0
N = 10				
Total	12	42	18	8
Overall Total Correct = 54/80				

Total = The number correct where the participant employs /D/
Overall total = The number correct where the participant employs /D/ + the number correct where the participant employs zero affix

Appendix A

Language Sample Transcription

A) Narrative Discourse: Utterances 1-9

Stimulus: Cookie Theft Picture (Boston Diagnostic Aphasia Examination)

B) Spontaneous Speech Sample: Utterances 10-177

Categories: (1-3 Adapted from Seymour, 1998)

1) Obligatory Non-contrastive refers to utterances that contain features used similarly by both AAVE and SAE speakers in that specific linguistic environment. (e.g., Yes it is.).

2) Obligatory Constrastive refers to utterances that contain a feature characteristically used by AAVE speakers (e.g., Six girl). However, the utterances are considered incorrect as SAE utterances in that specific linguistic environment.

3) Optional Contrastive refers to utterances that contain a feature that is required for SAE speakers in order for the utterance to be considered correct. (e. g., Six girls).

4) Agrammatic utterances refer to other utterances that cannot be classified according to the three categories listed above or have agrammatic characteristics: omitted or substituted functors and incomplete clauses. Paragrammatic utterances that have substituted functors and/or added words are included in this category.

5) Non-agrammatic aphasic utterances refer to utterances with added or substituted words that are not unbound or bound syntactic markers.

Narrative Discourse

1. The children was playing. (2)

2. And the girl and the boy was stealin the cookie. (2)

Appendix A

Language Sample Transcription

3. The boy stal the cookie. (5)

4. The girl help him stealin the cookie. (2)

5. And while the mother had washes the dishes. (4)

6. And she mess up. (2)

7. She mess all the floor. (2)

8. And the spill all the water all over the floor. (4)

9. The mother have no col the children. (5)

Conversational Spontaneous Speech

10. I was born in Charleston County Mc Clintonville and Sou Carolina. (1)

11. I finish high school. (2)

12. And I move away. (2)

13. I went to the service. (1)

14. Four years (3)

15. And I go back to Sou Carolina (1)

16. And I move to New Jersey, (self corrects) New York. (2)

17. Seven year (2)

18. Seventeen Years (3)

19. Rural area (1)

20. Broken language mostly (1)

21. See I don't broken English (4)

Appendix A

Language Sample Transcription

22. Something you didn't say correct English. (4)

23. I think so. (1)

24. I went to Texas, Lanely --- Lank, Air Force Base. (1)

25. I was in the refueling. (4)

26. And went to after I take my training. (4)

27. I move to Melville, Illinois, by St Louie. (2)

28. I think. (1)

29. I one year and half I stay (4)

30. And I go back to Texas. (1)

31. Remember the same thing. (1)

32. Nother Air Force Base (1)

33. And I ship me out to Alaska (2)

34. And I two years and no pick up. (4)

35. Well, its cold. (1)

36. And I have ice fogs. (1)

37. In the winter time. (1)

38. All three month, day, three hour (4)

39. It will get light-dark all the time. (1)

40. Say twelve o'clock to one o'clock and go back. (4)

41. And man it's a difference (3)

42. Is summer time is difference (4)

Appendix A

Language Sample Transcription

43. All time is light. (4)

44.You can play ball. (1)

45. That's right. (3)

46. Two week—year (2)

47. I starting to the bank. (4)

48. If I one, two the bank. (4)

49. Twenty two years (3)

50. Manage it---Bank America. (1)

51. And I was the post office too. (4)

52. I work up clerk. (4)

53.And after my stroke work the Burke (4)

54. I go to opus. (1)

55.Two time week (2)

56.Opus is support group. (1)

57. Something little help (4)

58. I told her. (1)

59.You call her. (1)

60. No, call her daughter. (1)

61. No I can't. (1)

62. She have a speech problem. (2)

Appendix A

Language Sample Transcription

63. I will go to Atlantic City with Teddy. (1)

64. I will run some bus outing. (5)

65. And something for exer....to go way. (4)

66. I was boiling. (1)

67.No more, I can't. (1)

68.And baseball pitcher and field. (4)

69. The third base. (1)

70. Now I don't follow games no more. (1)

71. Sometimes after the stroke. (1)

72. I think. (1)

73.But sometimes. (1)

74. And I before the stroke I go to baseball all the time. (1)

75. Three acres (3)

76. She plants sweet potato, corn, beets. (3)

77. My father, grandfather. (1)

78. And all the planting. (4)

79. He and me. (1)

80. And he harvest for the corn. (4)

81. The cotton pick...put cotton. (4)

82. Some the Northern State. (4)

83. I was in the course. (1)

Appendix A

Language Sample Transcription

84. The pocket-say some six year, seventeen (4)

85. And I stop. (1)

86. I think forty nine. (1)

87. I think I get a cold . (1)

88. And sometime...all the time I have a cold. (1)

89. Can't smoke now. (1)

90. All the time throat sore. (2)

91. Tried to stop. (1)

92. One time I make my mind. (1)

93. And to stop. (1)

94. The have a cold. (4)

95. And then stop now. (1)

96. I have my I think cousin. (4)

97. And she all the time. (4)

98. I think my grandfather raise a boy. (2)

99. And she get marry (2)

100. And move away (2)

101. But down street (4)

102. And get marry. (2)

103. And have children (1)

Appendix A

Language Sample Transcription

104. And my niece (1)

105. And she make moonshine (2)

106. He good at time. (2)

107. All the time, she good at that. (2)

108. Three, she who raise. (4)

109. She died. (1)

110. And have a son. (1)

111. She make moonshine. (2)

112. All the time she will go (1)

113. Something jar (4)

114. And a pint. (1)

115. It will get you drunk. (1)

116. I didn't drinks too much. (4)

117. She still (1)

118. But he died just last year. (1)

119. Right in the fifties. (1)

120. Have a ball too. (1)

121. Say Georgetown 30 miles (4)

122. Charleston is forty miles. (1)

Appendix A

Language Sample Transcription

123. Between some and Mc Clinton, Charles County (4)

124. My mother is a Singleton (3)

125. Before I have say something. (4)

126. All the people died. (1)

127. I will show you. (1)

128. This one my a worker in Bank America (4)

129. She died too. (1)

130. She a singleton (2)

131. My mother is a Singleton. (3)

132. Same thing I told You. (1)

133. She have a son. (2)

134. I raise up with the father (2)

135. He died last year. (1)

136. She went to Opus. (1)

137. She have a stroke. (2)

138. And she died (1)

139. He same thing to stroke. (4)

140. Mostly come (1)

141. And it's good now. (1)

Appendix A

Language Sample Transcription

142. So beat the stroke (4)

143. Still hand (4)

144. She have a moving hand. (2)

145. But it good she die. (2)

146. Buddy in the post office.

147. But die (2)

148. And my sister died. (1)

149. The daughter died before Linda. (1)

150. No, she 50....40 (2)

151. Something like that. (1)

152. Head of Opus (1)

153. The mother died (1)

154. Two thing, right (2)

155. She passion (4)

156. She is kind. (3)

157. Some time she retirer (4)

158. And came here. (1)

159. She a long time ago (4)

160. The boy younger (2)

161. It's a relative (3)

Appendix A

Language Sample Transcription

162. I went to this one too. (1)

163. Down Sou Carolina (4)

164. Uncle by me one street over (4)

165. Man talking (2)

166. Car accident upstate. (1)

167. My wife same thing (4)

168. I went down Pennsylvania to take my daughter (1)

169. The somebody drunk (4)

170. Something little the neck (4)

171. And I have something to me too (4)

172. Went to hospital. (1)

173. After I have the seizure (1)

174. But had a stroke before (1)

175. It's a drunk. (3)

176. It's a head on head. (3)

177. Well, but Bronx VA Hospital (4)

Appendix B

Habitual be

Key: P = Participant's Response

1.I be sitting here all day waiting for him to show up.
(p) I be sitting here all day waiting for him to show up.

2.You be asking me questions about something I don't know about.
(P) You be asting me question about something I don't know about.

3. My mother be helping her out with money all the time.
(P) My mother be helping her out with money all the time.

4. His brother be waiting for him after school.
(P) His brother be waiting for him after school.

5. He think he gonna be coming over to my house every day.
(P) He think he go be coming over to my house every day.

6. She be working here from now on.
(P) She be working here from now on.

7. All these men be watching me every day when I pass by.
(P) All these men be watching me every day when I pass by.

8. He be getting married before you know it.
(P) He be getting married before you know it.

9. The cook be cooking all kind of things for us to eat at school.
(P) The cook be cooking all can of the for is to eat at school.

10. She be calling out loud in the classroom every day.
(P) She be going out load in the classroom everyday.

11. The children be running to keep up with their mother.
(P) The children be running to keep up with her mother.

Appendix B

Habitual be

KEY: P = Participant's Response

12. They be bringing these report up here late.
(P) They be bringing these report up here late.

13. I be sick all the time when I work with little kids.
(P) I be sick all the time when I work out with little kid.

14. Why he be smiling all the time?
(P) Why he be smiling all the time?

15. I be so tired when I get home from work.
(P) I be so tired when I git home from work

16. Sara be always trying to please her mother.
(P) Sari be always trying to please her mother.

17. The house be so cold in the morning when we get up.
(P) The house be so col in the morning when we get up.

18. Mike be laying down every time I come by his house.
(P) Mike be laying down every time I come by his house.

19. He best be keeping quiet in the room.
(P) He but be keeping quiet in the room.

20. They ain't ever gonna be doing good at math.
(P) They got it ever going be doing good at math.

21. Don't nobody be fool enough to breakup the fight.
(P) Doing nobody be fool to breakup the fight.

22. You be telling lies all the time.
(P) You be telling lies all the time.

23. She be tripping out.
(P) She be tripping out

Appendix B

Habitual be

Key: P = Participant's Response

24. Denise think she be so fine wearing that hat.
(P) Denise think she be so fine wearing that hat.

25. How do you know she be telling the truth.
(P) How do you know she be telling the truth.

26. The sky be so clear in the morning.
(P) The skies be so clear in the morning.

27. Jane be always dancing when she hear music.
(P) Jane be alway dancing when she hear music.

28. He be so upset when he can't be first.
(P) He be so upset when he can be first.

29. They be bad and get in trouble.
(P) They be bad and get in the trouble.

30. He be saying stuff that don't be true.
(P) He be saying stop that do be true.

APPENDIX C

Multiple Negatives

Key: P = Participant's Response

1. I'm not no good singer. (2)
P: I am not no good singer. (2)

2. It ain't no Black man can't play ball good. (3)
P: It is no Black man can play ball good. (1)

3.Mary don't know nothing about no girl from Brooklyn. (3)
P: Mary don't know nothing about no girl from Brooklyn. (3)

4. I didn't say nobody don't do that music no more. (4)
P: I didn't say nobody do that music no more. (3)

5. I didn't say nothing to nobody about her no way. (4)
P: I didn't say nothing to nobody about her no way. (4)

6. It's a shame nobody can't go on the ride no more. (3)
P: It a shame nobody can go on the ride no more. (2)

7. He didn't tell Steve not to do nothing without no help. (4)
P: He didn't tell Steve nothing to do nothing without no help. (3)

8. Mary not asking her no question. (2)
P: Mary do ask her no question. (1)

9. I ain't signing no petition I don't know nothing about. (4)
P: I ain't sing no petition I don't know nothing about. (4)

10. I ain't going to stay in no empty house not by myself. (3)
P: I can going to stay in no oper house not by myself. (2)

11. Mark didn't show up in no condition to do nothing. (3)
P: Mark didn't show up in no condition to do nothing. (3)

12. No man can't say nothing about nobody here. (4)
P: No man can say nothing about nobody here. (3)

Appendix C

Multiple Negatives

Key: P = Participant's Response

13. They ain't gonna hire no woman before no man. (3)
P: They can going hire no woman before no man. (2)

14. I didn't stay around long enough for nobody not to tell me no lie. (4)
P: I didn't say around long nuf for nobody don't tell me no lie: (3)

15. Didn't nobody think about picking up no food. (3)
P: Didn't nobody thought about picking ups no food. (3)

16. None of them can't read no books or nothing else. (4)
P: Nuf of them can read no books or nothing else. (2)

17. These boys don't know nothing about no ballet dancing. (3)
P: These boys do know nothing about no ballerina bell dancing. (3)

18. There ain't no kids in my class using no drug. (3)
P: They it no kid my class using no drug. (2)

19. I didn't do nothing no more than nobody here. (4)
P: I didn't do nothing no more than nobody here. (4)

20. Ain't nothing you can do with nobody who got no talent. (4)
P: Ain't nothing you can do with nobody who got no talent.(4)

21. Mike didn't leave no ice cream for no one here. (3)
P: Mike didn't leave no ice cream for no one here. (3)

22. Anybody didn't get invited can't see no movie here. (3)
P: Anybody didn't get invited can see no movie here. (2)

23. Any girl that can run a mile that fast don't need no more training. (2)
P: Any girl that can run a mile that fast do need no more training. (1)

Appendix C

Multiple Negatives

Key: P = Participant's Response

24. I don't never see no stars in the sky nowhere. (3)
P: I don't never see no stars in the skies nowhere. (3)

25. She didn't have nothing to give me or nobody. (3)
P: She didn't have nothing to gave me on nobody. (3)

26. I ain't never seen nobody with no sense like you. (4)
P:I can't it never seen nobody with no sense look you. (3)

27. I don't know nobody with no name like that. (3)
P: I do know nobody with no name like that. (2)

28. John don't have nothing to give for no gift. (3)
P: John do have nothing to gave for no gift. (2)

29. You're not gonna get nothing for no junk car. (3)
P: You're not going get nothing for no junk car. (3)

30.I guess it don't make no difference. (2)
P: I guess it do make no difference. (1)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler sentence correct
D = different word used
C = negative pair correct
P = positive form
FI = filler sentence incorrect
O = omission of negative

1.Lucy wouldn't never have stopped teasing him.
PR: wouldn't, never (C)

2.The shoes couldn't be given to nobody.
PR: couldn't, nobody (C)

3. The hat shouldn't fit no small head.
PR: shouldn't, no (C)

4.He don't never reach the bus on time.
PR: don't, never (C)

5.There can't be no cars on the street at this time of night
PR: can (P), no

6. Sam would surely have made that mistake.
PR: would (FC)

7. The boys names didn't never go on the list.
PR: didn't, never (C)

8. Bill wouldn't invite nobody but his cousin to the prom.
PR: wouldn't, nobody (C)

9. Sam couldn't make no mistake like that.
PR: can (P), (O)

10. Mary shouldn't have nothing to do with it.
PR: shouldn't, nother (D)

11. The sun ain't never going to shine today.
PR: (O), never

12. The children would open the door for someone when the mother was working.
PR: wouldn't (FI) (N)

Appendix D

Negative Contraction Sentences

Key:
PR= participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

12.The young ladies don't act like no saints
PR: do (P), no

13. Nobody can't go on that train ride again.
PR: nobody, can (P)

14. The strange didn't offer no assistance to the old lady.
PR: didn't, no (C)

15. The rain wouldn't cause no accident.
PR: wouldn't, no (C)

16. The telephone ringing couldn't cause nothing to happen to the baby's hearing.
PR: doing (D), nother (D) (I)

17. Lucy would have made some stops on her way home.
PR : won't (FI)(D)(N)

18. The clock shouldn't never stop ringing so suddenly.
PR: shouldn't, never (C)

19. John ain't found no girl he really likes.
PR: not (D) (N), no

20. Nobody don't come to the movie alone.
PR: nobody, didn't (D)(N)

21. I can't tell you nothing else about the theft.
PR: can (P), nothing

22. Nobody didn't answer the phone messages.
PR: nobody, didn't (C)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

23. I would have had something left if I gave her more food.
PR: would (FC

24. Ken wouldn't have nothing to lose.
PR: wouldn't, nothing (C)

25. I couldn't never have given him permission to go
PR: couldn't, never (C)

26. Nobody shouldn't give him the time of day.
PR: nobody, shouldn't (C)

27. It ain't nobody business if I go to the show.
PR: nothing (D) (N), nobody

28. Mary can't never was dishes without breaking a plate.
PR: can (P), never

29. Lucy could always have stopped teasing him.
PR : couldn't (FI) (N)

30. Didn't nothing fall from the roof.
PR: didn't, nothing (C)

31. James wouldn't never have offered him the ride.
PR: wouldn't, never (C)

32. The mother couldn't allow nobody to touch the injured child.
PR: couldn't, nobody (C)

33. Sam shouldn't make no mistake like that.
PR: shouldn't, no (C)

Appendix D

Negative Contraction Sentences

Key:

P = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI= filler incorrect
O = omission of negative word

34. The rain don't never was all the dirt away
PR: do not (D) (N), never

35. The children could open the door for anyone when the mother was working.
PR: could (FC)

36. Can't no telephone calls be made
PR: can (P), no

37. Some men didn't never join the club.
PR: didn't, never (C)

38. I wouldn't give this ugly hat to nobody
PR: wouldn't, nobody (C)

39. She couldn't be able to find no shoes to match the dress.
PR: couldn't, no (C)

40. Shouldn't Sue have said nothing in his defense
PR: shouldn't, nothing (C)

41. No matter what you do for him, he ain't never satisfied.
PR: didn't (D) (N), never

42. The cat can't never catch the mouse.
PR: can (P), never

43. There don't be no cars on the street at this time of night.
PR: do (P), no

44. Nobody can't answer the telephone.
PR: nobody, can (P)

45. Marie didn't make no remarks about the show.
PR: didn't, no (C)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

46. I wouldn't buy no ice cream for lunch.
PR: won't (D) (N), no

47. Could sue have done anything in his defense
PR: could (FC)

48. She couldn't have nothing to lose.
PR: couldn't, nothing (C)

49. My mother shouldn't never have made that type of cake.
PR: shouldn't, never (C)

50. Sally ain't got no hair on her head.
PR: not (D) (N), no

51. Don't nobody claim this lost wallet without proper identification
PR: don't, nobody (C)

52. Can't nothing burn on the stove.
PR: can (P), never (D) (N)

53. Lucy should have stopped teasing him.
PR: shouldn't (FI) (N)

54. We didn't write to nobody in the class.
PR: didn't, nobody (C)

55. Wouldn't nothing please her but cookies
PR: won't (D) (N), nothing

56. Couldn't Mary have never made this hat alone
PR: couldn't, never (C)

57. I shouldn't give this ugly hat to nobody.
PR: shouldn't, nobody (C)

Appendix D

Negative Contraction Sentences

Key:
PR = participant response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

58. Nobody ain't going to believe her
PR: nobody, can (D) (P)

59. Someone should be willing to help him.
PR: should (FC)

60. Red can't never be the school's color.
PR: can (P), never

61. She didn't have nothing to brag about.
PR: didn't, nobody (D)(N)

62. Sally wouldn't never have eaten all the pie from the children.
PR: would (P), never

63. Couldn't nobody have the right to change her wedding date but Mary.
PR: couldn't, nobody (C)

64. The mother shouldn't allow no children to play in the house.
PR: shouldn't, no (C)

65. The baby's clothes don't never stay clean.
PR: didn't (D) (N), never

66. The mother should allow the children to play in the back yard.
PR: should (FC)

67. Her pocketbook can't have no zipper inside.
PR: can (P), no

68. The car didn't never need any repairs.
PR: didn't, never (C)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

69. The cat wouldn't allow nobody near her kittens.
PR: wouldn't, nobody (C)

70. Lucy couldn't have made no stops on her way home.
PR: come (D), no

71. She should have something great to talk about.
PR: should (FC)

72. Ken shouldn't have nothing to lose.
PR: shouldn't, nobody (D) (N)

73. The telephone ain't never going to stop ringing.
PR: can't (D) (N), never

74. Your house don't be no cooler than mine
PR: didn't (D)(N), no

75. Mary can't write to nobody in her class.
PR: can (P), nobody

76. Travis didn't have no place to sleep.
PR: didn't, no (C)

77. I should ask jean to sing that song
PR: should (FC)

78. Ken wouldn't lose no sleep over his wrecked car.
PR: wouldn't, no (C)

79. I couldn't see nothing from here.
PR: couldn't, nothing (C)

80. The children shouldn't never have missed their school bus today.
PR: shouldn't, (O)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

81. Her pocket book ain't got no straps
PR: at (D), no

82. I don't get letters from nobody anymore.
PR: don't, nobody (C)

83. It makes sense to try calling her again.
PR: no (added)

84. John can't bring nothing to the picnic.
PR: can (P), nobody (D) (N)

85. Jack didn't give nobody a chance to drive the car.
PR: didn't, nobody (C)

86. The dogs wouldn't do nothing to the children.
PR: wanted (D), nothing

87. The water couldn't never reach the top of the pail that quickly.
PR: couldn't, never (C)

88. Bill shouldn't invite nobody but his cousin to the prom.
PR: shouldn't, nobody (C)

89. The food she brought is enough for everyone.
PR: enough = else (D) (FI)

90. I ain't got nobody's telephone number.
PR: can (D) (P), nobody

91. No matter how much you give him to eat he can't never get enough
PR: can (P), never

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = Filler incorrect
O = omission of negative word

92. Didn't nothing come in the mail for him today.
PR: didn't, no thing (D)

93. All of Jim's clothes wouldn't never have fitted in the bag.
PR: would (P), never

94. Couldn't nobody pay for his dinner?
PR: couldn't, nobody (C)

95. There is something odd happening around her today.
PR: (FC)

96. Fred shouldn't make no dinner for his friends.
PR: shouldn't, no (C)

97. The children don't never come to school early.
PR: do (P), never

99 Mary can't sing without no music.
PR: can (P), no

100.The painting didn't never sell at the listed price.
PR: didn't, never (C)

101.Sally wouldn't be happy if nobody saw her new dress.
PR: couldn't (D) (N), nobody

102. She does bring her lunch to work sometimes.
PR: FI does = did (D)

103. The cat couldn't allow no mice in the house.
PR: couldn't, no (C)

104. She shouldn't have nothing to brag about.
PR: shouldn't, no

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

105. His beard ain't never been shaved.
PR: can (D) (P), never

106.She don't have no butter on her bread.
PR: didn't (D) (N), no

107. She can't be nobody special to him.
PR: can (P), nobody

108. Some of the young ladies do act like little angles.
PR: (FC)

109. The baby didn't sleep no more than two hours.
PR didn't, no (C)

110. Jack wouldn't have it no other way.
PR: wouldn't, no (C)

111. Marie couldn't let nothing stand in her way.
PR: couldn't, nother (D)

112. The fisherman shouldn't never have sailed out after midnight.
PR: shouldn't, never (C)

113. No house ain't as pretty as mine.
PR: can (D) (P), no

114. There is someone who did come to the movie along.
PR: (FC)

115. These clothes don't belong to nobody living here.
PR: don't, nobody (C)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D= different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

116.Mary can't send nothing by mail.
PR: can (P), nothing

117. The red ball didn't hit nobody.
PR: didn't, nobody (C)

118. Marie wouldn't let nothing stand in her way.
PR: wouldn't, nobody (C)

119.She couldn't never have talked on the phone that long.
PR: couldn't, never (C)

120. She does give something to the church.
PR: (FC) can (P), no

121.Shouldn't nobody pay for his dinner?
PR: shouldn't, nobody (C)

122 Can't nobody be as happy about the wedding as her mother.
PR: can (P), nobody

123 I ain't never forgiven my friend.
PR: can (D) (P), never

124. Jean didn't hear nothing about her test.
PR: didn't, nobody (D) (N)

125. He wouldn't never have skated on thin ice.
PR: wouldn't, never (C)

126. The telephone can always be turned up louder.
PR: (FC)

127. The policeman couldn't allow nobody near the accident.
PR: couldn't, nobody (C)

Appendix D

Negative Contraction Sentences

Key:
PR= participant response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

128. Children shouldn't refuse to eat no meat.
PR: shouldn't, no (C)

129. His beard don't never grow too long
PR: do (P), never

130. I can't go to no doctor today.
PR: can (P), on (D)

131. He didn't never find the right house.
PR: didn't, never (C)

132. William's pants can be pressed with the steam iron.
PR: (FC)

133. The lifeguard wouldn't be able to save nobody.
PR: wouldn't, nobody (C)

134. The softball couldn't break through no windows on the first floor.
PR: couldn't, no (C)

135. Marie shouldn't let nothing stand in her way.
PR: shouldn't, nothing (C)

136. I ain't never heard that song before.
PR: didn't (D) (N), never

137. Williams shoes don't need no polish.
PR: do not (un-contracted form), no (C)

138. Someone can answer the telephone beside me
PR: (FC)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word
C = negative pair correct
P = positive form
FI = filler incorrect
O = omitted negative

139. Can't nobody house be as big as Mr. Brown's house.
PR: can (P), nobody

140. The maid didn't do no chores before lunch
PR: didn't, no (C)

141. The hat wouldn't fit no small head.
PR: wouldn't, no (C)

142. Couldn't nothing prevent the race from beginning.
PR: couldn't, nothing (C)

143. The lake shouldn't never have dried up so quickly.
PR: shouldn't, never (C)

144. Something can still be done about it now.
PR: (FC)

145. Ain't no food in this refrigerator.
PR: ain't, no (C)

146. Mary don't write to nobody in her class.
PR: didn't (D), (N), nobody

147. Can't nothing he said be true.
PR: can (P), nothing

148. Sam didn't ask nobody to come with him.
PR: didn't, nobody (C)

149. I wouldn't find nothing at this store.
PR: wouldn't, no thing (D)

150. Somebody did go to the show with James.
PR: (FC)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

151. James couldn't never have offered him the ride.
PR: couldn't, never (C)

152. Nobody shouldn't turn the homeless man away from the shelter.
PR: nobody, shouldn't (C)

153. Ain't nobody laughing at you..
PR: it (D), nobody

154. He can't never reach the bus stop on time.
PR: can (P), never

155. Didn't Sam do nothing with the money.
PR: didn't, nothing (C)

156. The children did have something to do after their nap.
PR: (FC)

157. She wouldn't never have stopped talking on the phone.
PR: wouldn't, never (C)

158. Cheryl couldn't have nobody but her brother for her escort to the dance.
PR: couldn't, nobody (C)

159. The rain shouldn't cause no car accident.
PR: shouldn't, no (C)

160. Red don't never be chosen as the school color.
PR: do not, never (C)

161. I can't find no shoes to match this dress.
PR: can (P), no

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negatives word

162. Ken always did want to go back to school.
PR: (FC)

163. John didn't never bring his wife to the office.
PR: did (P), never

164. We went ahead and voted since nobody wouldn't accept the other position.
PR: nobody, would (P)

165. Jack couldn't have it no other way.
PR: couldn't, no (C)

167. I ain't never seen a man that tall.
PR: can't (D) (N), never

168. Marie did say some nice things about the show.
PR: (FC)

169. Her pocketbook don't have no zipper inside.
PR: didn't (D) (N), no

170. I can't get nobody to write the letter.
PR: can (P), nobody

171. Mary didn't give me no valid reason why she was late.
PR: didn't, no (C)

172. The children wouldn't refuse no treats.
PR: wouldn't, no (C)

173. I couldn't give nothing to the charity.
PR: couldn't, no thing (D)

174. He would certainly have skated on thin ice.
PR: FC

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

175. Sally shouldn't never have eaten all the pie from the children.
PR: shouldn't, never (C)

176. Ain't no way you can save this computer program.
PR: it (D), no

177. Don't nobody seem as happy about the wedding as her mother.
PR: did not (D) (N), nobody

178. This furniture can't be nothing but trash.
PR: can't, nothing (C)

179. Didn't nobody believe her story.
PR: didn't, nobody (C)

180. The food would be given to anyone but Harry.
PR: (FC)

181. Wouldn't nothing happen to him in her care.
PR: wouldn't, nothing (C)

182. Lucy couldn't never have stopped teasing him.
PR: couldn't, never (C)

183. Cheryl shouldn't have nobody but her brother to escort her to the dance.
PR: shouldn't, nobody

184. The food she brought ain't enough for nobody.
PR: it (D), nobody

185. The sun can't never shine on the flowers behind the house.
PR: can (P), never

186. Sam would make a mistake like that.
PR: (FC)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

187. Mary didn't let nothing stand in her way.
PR: didn't, nothing

188. The cars wouldn't never stop honking.
PR: wouldn't, never (C)

189. Couldn't you be happy if nobody opposed the interview.
PR: couldn't, nobody (C)

190. The teacher shouldn't agree to no homework for the weekend.
PR: shouldn't, no (C)

191. There don't never be any food left when John is here.
PR: do (P), never

192. Mary would have something to do with it.
PR: (FC)

193. Can't no food be left out of the refrigerator.
PR: can (P), no

194. Mary didn't never finish washing the dishes.
PR: didn't, never (C)

195. Wouldn't nobody have the right to change her wedding date but Mary.
PR: wouldn't nobody

196. I couldn't buy no ice cream for lunch.
PR: couldn't, no (C)

197. Jack shouldn't read nothing about it in the paper.
PR: shouldn't, nothing (C)

198. Sam could have easily have made that mistake.
PR: (FC)

Appendix D

Negative Contraction Sentences

Key:
PR = participant response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI = filler incorrect
O = omission of negative word

199. He ain't never going to get there on time.
PR: can't (D) (N), never

200. Sally don't see no reason to apologize.
PR: don't, no (C)

201. Jack can't get nobody to give him a ride home.
PR: can (P), nobody

202. Didn't no member vote for the president.
PR: didn't, no (C)

203. The teacher wouldn't agree to no homework for the weekend.
PR: didn't (D) (N), no

204. The food could be given to anybody but Harry.
PR: (FC)

205. She couldn't have nothing to brag about.
PR: couldn't, no thing (D)

206.The water shouldn't never reach the top of the pail that quickly.
PR: shouldn't, never (C)

207. She ain't worried about no exam.
PR: it (D), no

208. Don't nobody wait for Sam to finish his food.
PR: do not (D), nobody

209. There can't be nothing on your dress.
PR: can (P), no thing (D) (I)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = both negatives incorrect
N = negative form
FC = filler correct
O = omission of negative word
D = different word used
C = negative pairs correct
P = positive form
FI = filler incorrect

210. The mother could allow the children to play in the house.
PR: (FC)

211. Nobody didn't bring drinks for the kids.
PR: nobody, didn't (C)

212. She wouldn't have nothing to do with all that money.
PR: wouldn't, no thing (D)

213. The cars couldn't never have been honking in the first place.
PR: couldn't, never (C)

214. Sally shouldn't be unhappy if nobody saw her new dress.
PR: shouldn't, nobody (C)

215. Sam ain't giving nobody the keys to his car.
PR: didn't (D) (N), nobody

216. Sam should have admitted the mistake.
PR: (FC)

217. There can't never be any food left when John is here.
PR: can (P), never

218. I didn't have nothing to eat but ice cream.
PR: didn't, nothing (C)

219. The lake wouldn't never have dried up that quickly.
PR: wouldn't, never (C)

220. We went ahead and voted since nobody couldn't be late.
PR: nobody, couldn't (C)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler correct
D = different word used
C = negative pair correct
P = positive form
FI= filler incorrect
O = omission of negative word

221. My mother shouldn't give no answer to the question.
PR: shouldn't, no

222. James should have offered him the ride.
PR: (FC)

223. The telephone don't never be turned up loud.
PR: did (P), never

224. William's pants can't be pressed with no steam iron.
PR: can (P), no

225. Her clothes didn't never look clean
PR: didn't, never (C)

226. Wouldn't nobody pay for his dinner?
PR: wouldn't, nobody (C)

227. The teacher couldn't agree to no homework for the weekend.
PR: couldn't, no (C)

228. James could have offered Jim a ride home.
PR: (FC)

229. She shouldn't have nothing more to do with the rest of the money.
PR: couldn't (D) (N), nothing

230. The people ain't never going to stop coming back for free food.
PR: can (D) (P), never

231. Mary don't sing without no background music.
PR: didn't (D) (N), no

232. Nobody can't leave me here alone.
PR: nobody, can (P)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler sentence correct
D = different word used
C = negative pair correct
P = positive form
FI = filler sentence incorrect
O = omission of negative

233. Didn't no mail come for Leslie today.
PR: didn't, no (C)

234. James would always have offered him the ride.
PR: (FC)

235. The cat wouldn't allow no mice in the house.
PR: wouldn't, no (C)

236. Couldn't nothing change the situation.
PR: couldn't, no thing (D)

237. The baby shouldn't never eat his dessert before his vegetable.
PR: shouldn't, never (C)

238. I ain't brought no shoes to match this dress.
PR: can't (D) (N), no

239. Jack don't give nobody a chance to buy him a drink.
PR: can (D) (P), nobody

240. Someone would come to vote after nine o'clock.
PR: (FC)

241. Ken can't eat nothing after midnight.
PR: can (P), no thing (D) (I)

242. Didn't the guard keep nobody off the grass?
PR: didn't, nobody (C)

243. The telephone ringing wouldn't cause nothing to happen to the baby's hearing.
PR: would (P), nother (D) (I)

Appendix D

Negative Contraction Sentences

Key:
PR = participant's response
I = negative pair incorrect
N = negative form
FC = filler sentence correct
D = different word used
C = negative pair correct
P = positive form
FI = filler sentence incorrect
O = omission of negative

244. That type of bird couldn't never have come here in the winter.
PR: couldn't, never (C)

245. Shouldn't nobody be willing to help him?
PR: shouldn't, nobody (C)

246. Somebody could come to vote after nine o'clock.
PR: (FC)

247. Ain't nobody claiming this lost wallet.
PR: it (D), nobody

248. The telephone can't never be turned up loud.
PR: can (P), never

249. They didn't give nothing to charity.
PR: didn't, nothing (C)

250. The mother wouldn't never allow the children to cross the street alone.
PR: wouldn't, never (C)

Appendix E

Plural Sentences

List A (SAE Initial Mass/ Count Nouns)

S = stimulus C = correct
P = participant I = incorrect

(S) 1. Six horses pulled the country wagon that was filled with the hay for the hayride.
(P) 1. Six horses pull the county wagon that was full with the hay for the hayride. (C)

(S) 2. A million ants crawled up the wall and into the pie that was cooling in the window.
(P) 2. A million ant crawled up the wall and into the pie that was cooling in the window. (I)

(S) 3. Many squirrels live in the old oak tree in the park.
(P) 3. Many squirrels live in the old tree in the park. (C)

(S) 4. Several chipmunks were gathered near the pond to drink water.
(P) 4. Service chipmunk was gathered near the pond to drink water. (I)

(S) 5. A dozen hotdogs were given to the homeless woman for lunch.
(P) 5. A dozen hotdog was given to the homeless woman for lunch. (I)

(S) 6. A hundred dollars were missing from his bank account.
(P) 6. A hundred dollars were missing from his bank account. (C)

(S) 7. Many kids are attending the new school in the next town.
(P) 7. Many kid are tending the new school in the next town. (I)

(S) 8. Seven babies were born at Mercy Hospital at midnight on New Year's Eve.
(P) 8. Seven Babies were born at Mercy Hospital at midnight on New Year's Eve. (C)

(S) 9. Ten houses were painted with black and red shutters on Main Street.
(P) 9. Ten houses were painted with black and red shutters on Main Street (C)

(S) 10. A thousand grasshoppers were killed when the men sprayed the field.
(P) 10. A thousand grasshopper was killed when the man sprayed the field. (I)

Appendix E

Plural Sentences

List B (AAVE Initial Mass/Count Nouns)

S = stimulus C = correct
P = participant I = incorrect

(S) 1. Six horse pulled the country wagon that was filled with the hay for the hayride.
(P) 1. Six horse pull the country wagon that was full with the hay for the hayride. (C)

(S) 2. A million ant crawled up the wall and into the pie that was cooling in the window.
(P) 2. A million ants crawls up the wall and into the pie that was cooling in the window. (I)

(S) 3. Many squirrel live in the old oak tree in the park.
(P) 3. Many squirrels live in the old tree in the park. (I)

(S) 4. Several chipmunk were gathered near the pond to drink water.
(P) 4. Several chipmunks was gathering near the pond to drink water. (I)

(S) 5. A dozen hotdog were given to the homeless woman for lunch.
(P) 5. The dozen hotdog was given to the homeless woman for lunch.

(S) 6. A hundred dollar were missing from his bank account.
(P) 6. A hundred dollars was missing his bank account. (I)

(S) 7. Many kid are attending the new school in the next town.
(P) 7. Many kid are attending the new school in the next town. (C)

(S) 8. Seven baby were born at Mercy Hospital at midnight on New Year's Eve.
(P) 8. Seven babies was born at Mercy Hospital at midnight on New Year's Eve. (I)

(S) 9. Ten house were painted with black and red shutters on Main Street.
(P) 9. Ten house was painting with black and red shutters on Main Street. (C)

(S) 10. A thousand grasshopper were killed when the men sprayed the field.
(P) 10. A thousand grasshopper was killed when the men sprayed the field. (C)

Appendix E

Plural Sentences

List C (SAE Final Mass/ Count Nouns)

S = stimulus C = correct
P = participant I = incorrect

(S) 1. The country wagon that was filled with hay for the hayride was pulled by six horses.
(P) 1. The country wagon that was fill hay for the hayride was pulled by six horses. (C)

(S) 2. Crawling up the wall and into the pie that was cooling in the window were a million ants.
(P) 2. Crawling up the wall and into the pie that was cooling in the window were a million ants. (C)

(S) 3. In the old oak tree in the park live many squirrels.
(P) 3. In the old tree in the park live many squirrels. (C)

(S) 4. Gathered near the pond to drink water were several chipmunks.
(P) 4. Gathered the pond to drink the water was several chipmunk. (I)

(S) 5. The homeless woman was given for lunch a dozen hotdogs.
(P) 5. The homeless woman was given for lunch a dozen hotdogs. (C)

(S) 6. Missing from his bank account were a hundred dollars.
(P) 6. Missing from his bank account was a hundred dollars. (C)

(S) 7. The new school in the next town is attended by many kids.
(P) 7. The new school in the next town is attending by many kid (I)

(S) 8. Born at midnight on New Year's Eve at Mercy Hospital were seven babies.
(P) 8. Born at midnight on New Year's Eve at Mercy Hospital was seven babies. (C)

(S) 9. On Main Street, black and red shutters were painted on ten houses.
(P) 9. On Main Street, black and red shutter was painting on ten houses. (C)

(S) 10. The men sprayed the field and killed a thousand grasshoppers.
(P) 10. The men sprayed the field and killed a thousand grasshoppers. (C)

Appendix E

Plural Sentences

List D (AAVE Final Mass/Count Nouns

S = stimulus C= correct
P =Participant I = incorrect

(S) 1. The country wagon that was filled with hay for the hayride was pulled by six horse.
(P) 1. The county wagon was filled with hay for the hayride was pull by six horse. (C)

(S) 2. Crawling up the wall and into the pie that was cooling in the window was a million ant.
(P) 2. Crawling up the walls and into the pie that was cooling in the winder was a million ants. (C)

(S) 3. In the old oak tree in the park live many squirrel.
(P) 3. In the old tree in the park live many squirrel. (C)

(S) 4. Gathered near the pond to drink water were several chipmunk.
(P) 4. Gathered near the pond to drink water was sever chipmunk. (C)

(S) 5. The homeless woman was given for lunch a dozen hotdog
(P) 5. The homeless woman was given for lunch a dozen hotdog. (C)

(S) 6. Missing from his bank account were a hundred dollar.
(P) 6. Missing from his bank account was a hundred dollars. (I)

(S) 7. The new school in the next town is attended by many kid .
(P) 7. The new school in the next town is attended by many kid. (C)

(S) 8. Born at midnight on New Year's Eve at Mercy Hospital were seven baby.
(P) 8. Born at midnight on New Year's Eve at Mesin Hospital was seven babies. (I)

(S) 9. On Main Street, black and red shutters were painted on ten house.
(P) 9. On Main Street, black and red shuckles was painting on the ten houses. (I)

(S) 10. The men sprayed thee field and killed a thousand grasshopper.
(P) 10. The man sprayed the field and killed a thousand grasshopper. (C)

Appendix E

Plural Sentences

List E (SAE Initial Non-Count Nouns)

S = stimulus C = correct
P = participant I = incorrect

(S) 1. Black horses pulled the country wagon that was filled with the hay for the hayride.
(P) 1. Black horses pull the country wagon that was filled with hay for the hayride. (C)

(S) 2. Large ants crawled up the wall and into the pie that was cooling in the window.
(P) 2. Large ants crawls up the wall and into the pie that was cooling in the winder. (C)

(S) 3. Brown squirrels live in the old oak tree in the park.
(P) 3. Brown squirrels live in the old tree in the park. (C)

(S) 4. Baby chipmunks were gathered near the pond to drink water.
(P) 4. Baby chipbunk were gathered to the pond to drink water. (I)

(S) 5. Turkey hotdogs were given to the homeless woman for lunch.
(P) 5. Turkey hotdog was given to the homeless woman for lunch. (I)

(S) 6. Silver dollars were missing from his bank account.
(P) 6. Silver dollars was missing his bank account. (C)

(S) 7. Small kids are attending the new school in the next town.
(P) 7. Small kid are tending the new school in the next town. (I)

(S) 8. Male babies were born at Mercy Hospital at midnight on New Year's Eve.
(P) 8. Male babies was born at Mercy Hospital at midnight on New Year's Eve. (C)

(S) 9. The houses were painted with black and red shutters on Main Street.
(P) 9. The houses that was painting with black and red shutters on Main Street. (C)

(S) 10. Large grasshoppers were killed when the men sprayed the field.
(P) 10. Large grasshoppers was killed when the men sprayed the field. (C)

Appendix E

Plural Sentences

List G (SAE Final Non-Count /Mass Nouns)

S = stimulus C = correct
P = participant I = incorrect

(S) 1. The country wagon that was filled with the hay for the hayride was pulled by black horses.
(P) 1. The county wagon was filled with hay for the haydrive was pull by black horses. (C)

(S) 2. Crawling up the wall and into the pie that was cooling in the window were large ants.
(P) 2. Crawling up the wall and into the pie that was cooling in the window was large ant. (I)

(S) 3. In the old oak tree in the park live brown squirrels.
(P) 3. In the old tree in the park live brown squirrels. (C)

(S) 4. Gathered near the pond to drink water were baby chipmunks.
(P) 4. Gathering near the pond to drink water was baby chipblun. (I)

(S) 5. The homeless woman was given for lunch turkey hotdogs.
(P) 5. The homeless woman was given for lunch turkey hotdog.

(S) 6. Missing from his bank account were silver dollars.
(P) 6. Missing from his bank was silver dollar. (I)

(S) 7. The new school in the next town is attended by small kids.
(P) 7. The new school in the next town is tending by small kid. (I)

(S) 8. Born at midnight on New Year's Eve at Mercy Hospital were male babies.
(P) 8. Born at midnight on New Year's Eve at Mercy Hospital was male babies. (C)

(S) 9. On Main Street, black and red shutters were painted on the houses.
(P) 9. On Main Street, black shuckles was painting on the houses. (C)

(S) 10. The men sprayed the field and killed large grasshoppers.
(P) 10. The man sprayed the field and killed the large grasshopper. (I)

Appendix F

Sentence Completion Task

Large Gang Stimuli

Key:
S = stimulus sentence
P = participant's responses
Past = past tense /D/
Present = 3rd person /Z/

1. Guide
S: I asked my brother to guide us along the trail.
P: Whenever we go on vacation my brother guides. (present)
P: Yesterday he guides. (past)

2. Drag
S: Little children like to drag their blankets wherever they go.
P: The baby took his blanket and drag. (past)
P: Each time he goes to his grandmother he drags. (present)

3. Scream
S: When I saw the ghost I tried not to scream.
P: He scared me so that I scream. (past)
P: Each time she sees a ghost she screamed. (present)

4. Blame
S: He tired to blame me for the accident.
P: Whenever he's in a fight he blames. (present)
P: Yesterday I blame. (past)

5. Sign
S: I need to sign the check.
P: Whenever he writes a check he signs. (present)
P: Yesterday the banker signed. (past)

6. Brush
S: I have to brush my teeth.
P: Whenever she wakes up she brush. (present)
P: When I woke up I brushes. (past)

7. Scratch
S: My cat likes to scratch.
P: Every time I leave my cat alone he scratches. (present)
P: When I saw the chair I knew he had scratches. (past)

Appendix F

Large Gang Stimuli (cont.)

Key:
S = stimulus sentence
P = participant's response
Past = past tense /D/
Present = 3rd person /Z/

8. Snap
S: The rainstorm caused the tree limb to snap.
P: During the last storm the antenna snap. (past)
P: Each time it rains part of the big old tree snap. (present)

9. Ease
S: The driver tried to ease the big truck into the small parking spot.
P: Each time he parks he ease. (present)
P: Yesterday he eases. (past)

10. Wave
S: As the bus pulled away everyone started to wave good-bye.
P: Whenever he sees his mother at the bus stop he wave. (present)
P: Yesterday he wave. (past)

Small Gang

1. Load
S: The man had to load the truck.
P: When he goes to work he load. (present)
P: Last night he load. (past)

2. Beg
S: The poor person had to beg.
P: Whenever he wants food he begs. (present)
P: Yesterday he beg. (past)

3. Climb
S: I told him not to climb the tree.
P: Every October he goes apple picking and climbed. (present)
P: Yesterday he climbs. (past)

4. Ruin
S: I tried not to ruin the joke.
P: Whenever he tells a joke he ruins. (present)
P: Last night he ruined. (past)

Appendix F

Small Gang

Key:
S = stimulus sentence
P = participant's response
Past = past tense /D/
Present = 3rd person /Z/

5. Kiss
S: He tried to kiss the baby.
P: As soon as he sees the baby he kisses. (present)
P: Yesterday he kiss. (past)

6. Push
S: The girl had to push the swing.
P: Whenever we go to the park she pushes. (present)
P: Last week the boy pushed. (past)

7. Touch
S: I asked him not to touch anything.
P: Whenever we go to the park she touch. (present)
P: Yesterday he touches. (past)

8. Step
S: Be careful not to step on my toes.
P: Whenever he dances with me he steps. (present)
P: Last week he step. (past)

9. Pause
S: It is nice to take a pause.
P: When she runs out of breath she pause. (present)
P: The first time she pauses. (past)

10. Carve
S: It was time to carve the turkey.
P: Every Thanksgiving, when it's time to eat, my father carve. (present)
P: Last year my brother carve. (past)

High Frequency

1. Use
S: John wants to use the car.
P: He asks his father before he use. (present)
P: Yesterday he use. (past)

Appendix F

High Frequency

Key:
S = stimulus sentence
P = participant's response
Past = past tense /D/
Present = 3rd person /Z/

2. Stop
S: He didn't want to stop for the light.
P: Whenever he sees a red light he stop. (present)
P: Yesterday he stops. (past)

3. Laugh
S: It feels good to laugh.
P: Whenever he hears a joke he laughs. (present)
P: Last night we laugh. (past)

4. Live
S: He wanted to live in Manhattan.
P: According to the address he live. (present)
P: Until last year we live. (past)

5. Move
S: It was time to move the car.
P: She goes out every morning and move. (present)
P: Yesterday he moves. (past)

6. Need
S: It's healthy to need other people.
P: Now that she's a mother she knows how much attention a baby needs. (present)
P: Yesterday I needed. (past)

7. Train
S: The manager's job was to train new employees.
P: Whenever he hires new employee he trains. (present)
P: Yesterday the manager trained. (past)

8. Reach
S: It's hard for me to reach the top shelf.
P: She stretches and reach. (present)
P: Last night I reach. (past)

9. Pass
S: Charley wanted to pass the other car.
P: Whenever he's on the highway he passes. (present)
P: Yesterday he pass. (past)

Appendix F

High Frequency

Key:
S = stimulus sentence
P = participant's response
Past = past tense /D/
Present = 3rd person /Z/

10. Like
S: I taught my son to like all kind of food.
P: When he eats breakfast he like. (present)
P: He ate something at the party that he like. (past)

Low Frequency

1. Pave
S: The autumn is a good time to pave the driveway.
P: Every September he pave. (present)
P: Last year he pave. (past)

2. Knot
S: The sailor learned to knot the rope.
P: Whenever he pulls down the sail he knotted. (present)
P: Last week I knot. (past)

3. Stuff
S: It was time to stuff the turkey.
P: Every Thanksgiving my mother cooks dinner and stuff. (present)
P: This year I stuff. (past)

4. Type
S: The secretary's job was to type the letters.
P: I dictate them and she type. (present)
P: Last week she type. (past)

5. Drown
S: It is possible for a person to drown.
P: It is sad when someone drowning. (present)
P: Last summer three people drowned. (past)

6. Pitch
S: He tried to pitch a strike.
P: They win every time he pitches. (present)
P: Yesterday someone else pitches. (past)

Appendix F

Low Frequency (cont.)

Key:
S = stimulus sentence
P = participant's response
Past = past tense /D/
Present =3rd person /Z/

7. Weed
S: I like to weed the garden
P: My daughter usually plants and weed. (present)
P: Last week she weed. (past)

8 Pace
S: Lions like to pace in their cages.
P: Until the caretaker brings the food the lion paces. (present)
P: Yesterday he pass. (past)

9. Sneeze
S: Sometimes it's hard not to sneeze.
P: When there is dust in the air she always sneezes. (present)
P: I almost sneeze. (past)

10. Hook
S: They tried to hook the fish.
P: He buys the bait and then hooks. (present)
P: Last week I hook. (past)

Bisyllabic Words

1. Decline
S: He didn't want to decline the nomination
P: Yesterday he decline. (past)
P: Each time he's nominated he accepted. (present)

2. Equip
S: The cook had to equip the kitchen.
P: After he uses the materials he equip. (present)
P: Yesterday he equipped. (past)

3. Transform
S: The designer tried to transform the room.
P: An artist takes materials and transform. (present)
P: Yesterday he transform. (past)

Appendix F

Bisyllabic words (cont.)

Key:
S = stimulus sentence
P = participant's response
Past = past tense /D/
Present = 3rd person /Z /

4. Behave
S: I told the children to behave.
P: When he is with his grandmother he usually behave. (present)
P: Yesterday she behave. (past)

5. Arouse
S: They tried to arouse the drunkard.
P: Each time she passes she arose. (present)
P: Yesterday she arose (past)

6. Release
S: The warden wanted to release the prisoner.
P: Whenever that lawyer sits on the parole board he releases. (present)
P: Yesterday he release. (past)

7. Exceed
S: We didn't want to exceed the speed limit.
P: Whenever he drives he exceed. (present)
P: Yesterday he exceed. (past)

8. Attach
S: The salesman had to attach the tag.
P: Before he puts it up for sale he attach. (present)
P: Yesterday he attach. (past)

9. Address
S: He had to address the envelopes.
P: Each day he stamps and addressed. (present)
P: Yesterday he address. (past)

10. Compute
S: The cashier tried to compute the difference.
P: Everyday the cashier counts the money and pute. (present)
P: Yesterday he pute. (past)

Appendix F

Trisyllabic Words (cont.)

Key:
S = stimulus sentence
P = participant's responses
Past = past tense /D/
Present = 3rd person /Z/

1. Autograph
S: The actor stopped to autograph the program.
P: Whenever his fans see him in public he autograph. (present)
P: I gave him the program and he autographs. (past)

2. Reproduce
S: They tried to reproduce the drawing.
P: Whenever he copies great works of art he reduces. (present)
P: Last time they reduce. (past)

3. Summarize
S: The newscaster had to summarize the story.
P: The audience doesn't like it when that newscaster summary. (present)
P: Yesterday he summary. (past)

4. Discipline
S: Part of a parent's job is to discipline their children.
P: The children don't like when their father discipline. (present)
P: Yesterday he discipented. (past)

5. Imitate
S: The mother told the children not to imitate anyone.
P: John doesn't like it when his sister inapate. (present)
P: Last night he inapate. (past)

6. Overlap
S: They tried not to overlap the schedule.
P: I like it when my husband's schedule laps (present)
P: Last week it laps. (past)

7. Circulate
S: It's fun to circulate at a party.
P: She always meets someone when she circulate. (present)
P: Last week he circulate. (past)

Appendix F

Trisyllabic Words (cont.)

Key:
S = stimulus sentence
P = participant's responses
Past = past tense /D/
Present = 3rd person /Z/

8. Disable
S: My opponent tried to disable my car.
P: Each time he tries he di-able. (present)
P: Last week my car was di-able. (past)

9. Tolerate
S: We tried to tolerate the noise.
P: Everyone thinks he's easy because he tolerate. (present)
P: Yesterday we tolering. (past)

10. Nominate
S: I wanted to nominate my friend Bill.
P: Each time Bill agrees to run for office Jane nominate. (present)
P: Last year he nominate. (past)

Final Consonant Controlled

1. Boot
S: The soccer player tried to boot the ball.
P: As he gets closer to the goal he boot. (present)
P: Yesterday he boot. (past)

2. Boost
S: When the battery died he had to boost it.
P: The AAA serviceman always boos. (present)
P: Yesterday he booses. (past)

3. Rate
S: It was his job to rate the movie.
P: Disney films are always rated. (past)
P: When the film is violent he rates. (present)

4. Raft
S: He liked to raft on the river.
P: Whenever he went on vacation he raft. (past)
P: Each time he goes to Colorado he raft. (present)

Appendix F

Final Consonant Controlled (cont.)

Key:
S = stimulus sentence
P = participant's responses
Past = past tense /D/
Present = 3rd person /Z/

5. Bake
S: My mother loves to bake.
P: As Christmas gets closer my mother bakes. (present)
P: Last night I bake. (past)

6. Bask
S: It's unhealthy to bask in the sun.
P: She relaxes when she bass. (present)
P: Last summer I baf. (past)

7. Lick
S: The baby tried to lick the ice cream cone.
P: She always tastes and lick. (present)
P: Last night I licks. (past)

8. Link
S: The new highway will link the two towns.
P: The new highway winds around the mountain and link. (present)
P: Last year two roads links. (past)

9. Grasp
S: He tried to grasp the ring.
P: She always wins the prize when she grasp. (present)
P: Last night I grasp. (past)

10. Grab
S: Someone tried to grab my purse.
P: A mugger usually runs fast after he grab. (present)
P: Last week he grabbed. (past)

11. Shell
S: It was fun to shell the peas.
P: I usually help him when he shell. (present)
P: I never shells. (past)

12. Shelve
S: The librarian has many books to shelve.
P: Each night the librarian stacks the books and shelves. (present)
P: Last night she shelf. (past)

Appendix F

Final Consonant Controlled

Key:

S = stimulus sentence
P = participant's responses
Past = past tense /D/
Present = 3rd person /Z/

13. Clap
S: It's easy to teach babies to clap their hands.
P: When his daddy comes in the room he claps. (present)
P: He saw the clown and he claps. (past)

14. Clasp
S: The skier forgot to clasp his boots.
P: First he puts on his gloves then he claps. (present)
P: Yesterday I claps. (past)

15. Pat
S: It's better to pat your skin dry.
P: First she puts on lotion then she paks. (present)
P: Yesterday I pat. (past)

16. Pant
S: The dog started to pant loudly.
P: The dog smells the food and panted. (present)
P: After she ran she pant. (past)

17. Chat
S: We stopped to chat.
P: Whenever she sees us she stops and chatted. (present)
P: Over lunch they chatted. (past)

18. Chant
S: Many people find it relaxing to chant.
P: When she wants to relax she chanted. (present)
P: Last night I chanted. (past)

19. Braid
S: My mother loves to braid my hair.
P: Before I went to school she braid. (past)
P: Whenever she combs my hair she braids. (present)

20. Brand
S: The cowboy had to brand all the calves.
P: First he ropes them then he branded. (present)
P: Yesterday he brand. (past)

Appendix G

Affix /D/ Sentence Completion Task

Participant's Response Chart

Large Gang	Employs /D/	Zero Affix	Substitutes /Z/	Other errors
Guided			+	
Dragged			+	
Screamed	+			
Blamed		+		
Signed	+			
Brushed			+	
Scratched			+	
Snapped		+		
Eased			+	
Waved		+		
Small Gang	**Employs /D/**	**Zero Affix**	**Substitutes /Z/**	**Other Errors**
Loaded		+		
Begged		+		
Climbed			+	
Ruined	+			
Kissed		+		
Pushed	+			
Touched			+	
Stepped		+		
Paused			+	
Carved		+		
High Frequency	**Employs /D/**	**Zero Affix**	**Substitutes /Z/**	**Other errors**
Used		+		
Stopped			+	
Laughed		+		
Lived		+		
Moved			+	
Needed	+			
Trained	+			
Reached		+		
Passed		+		
Liked		+		

Appendix G

Affix /D/ Sentence Completion Task

Participant's Response Chart

Low Frequency	Employs /D/	Zero Affix	Substitutes /Z/	Other errors
Paved		+		
Knotted		+		
Stuffed		+		
Typed		+		
Drowned	+			
Pitched			+	
Weeded		+		
Paced		+		
Sneezed		+		
Hooked		+		
Bi-syllable	**Employs /D/**	**Zero Affix**	**Substitutes /Z/**	**Other errors**
Declined		+		
Equipped	+			
Transformed		+		
Behaved		+		
Aroused				+ (arose)
Released		+		
Exceeded		+		
Attached		+		
Addressed		+		
Computed		+		
Trisyllable	**Employs /D/**	**Zero Affix**	**Substitutes /Z/**	**Other errors**
Autographed			+	
Reproduced		+		
Summarized		+		
Disciplined				+ (Disciplented)
Imitated		+		
Overlapped			+	
Circulated		+		
Disabled				+ (di-able)
Tolerated				+ (tolering)
Nominated		+		

Appendix G

Affix /D/ Sentence Completion Task

Participant's Response Chart

Stimuli	Employs /D/	Zero Affix	Substitutes /Z/	other errors
Single Final Consonant				
1. Boot		+		
2. Rate	+			
3. Bake		+		
4. Lick			+	
5. Grab	+			
6. Shell			+	
7. Clap			+	
8. Pat		+		
9. Chat	+		+	
10. Braid				
Final Consonant Cluster				
1. Boost				+ (booses)
2. Raft		+		
3. Bask				+ (baf)
4. Link			+	
5.Grasp		+		
6.Shelve				+(shelf)
7.Clasp				+ (claps)
8. Pant		+		
9. Chant	+			
10. Brand		+		

Appendix H

Affix /Z/ Sentence Completion Task

Participant's Response Chart

Large Gang	Employs /Z/	Zero Affix	Substitutes /D/	Other errors
Guides	+			
Drags	+			
Screams			+	
Blames	+			
Signs	+			
Brushes		+		
Scratches	+			
Snaps		+		
Eases		+		
Waves		+		
Small Gang	**Employs /Z/**	**Zero Affix**	**Substitutes /D/**	**Other Errors**
Loads		+		
Begs	+			
Climbs			+	
Ruins	+			
Kisses	+			
Pushes	+			
Touches		+		
Steps	+			
Pauses		+		
Carves		+		
High Frequency	**Employs /Z/**	**Zero Affix**	**Substitutes /D/**	**Other errors**
Uses		+		
Stops		+		
Laughs	+			
Lives		+		
Moves		+		
Needs	+			
Trains	+			
Reaches		+		
Passes	+			
Likes		+		

Appendix H

Affix /Z/ Sentence Completion Task

Participant's Response Chart

Low Frequency	Employs /Z/	Zero Affix	Substitutes /D/	Other errors
Paves		+		
Knots			+	
Stuffs		+		
Types		+		
Drowns				+(drowning)
Pitches	+			
Weeds		+		
Paces	+			
Sneezes	+			
Hooks	+			
Bi-syllable	**Employs /Z/**	**Zero Affix**	**Substitutes /D/**	**Other errors**
Declines				+(accepted)
Equips		+		
Transforms		+		
Behaves		+		
Arouses				+ (arose)
Releases	+			
Exceeds		+		
Attaches		+		
Addresses			+	
Computes		+		
Trisyllable	**Employs /Z/**	**Zero Affix**	**Substitutes /D/**	**Other errors**
Autographs		+		
Reproduces	+			
Summarizes				+ (summary)
Disciplines		+		
Imitates		+		
Overlaps	+			
Circulates		+		
Disables		+		
Tolerates		+		
Nominates		+		

Appendix H

Affix /Z/ Sentence Completion Task

Participant's Response Chart

Stimuli	Employs /Z/	Zero Affix	Adds past tense/D/	other errors
Single Final Consonant				
1.Boot		+		
2. Rate	+			
3. Bake	+			
4. Lick		+		
5. Grab		+		
6. Shell		+		
7. Clap	+			
8. Pat				+ (paks)
9. Chat			+	
10. Braid	+			
Final Consonant Cluster				
1. Boost				+ (boos)
2. raft				+ (raf)
3. Bask				+ (bass)
4. Link		+		
5.Grasp		+		
6.Shelve	+			
7.Clasp				+ (claps)
8. Pant			+	
9. Chant			+	
10. Brand			+	

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