

African-American English and Linguistic Complexity in Preschool Discourse: A Second Look

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Very little is known about the oral language production skills of young African-American children despite the obvious importance of such information for a host of practical and theoretical purposes. Some of our recent work has begun characterizing the expressive language behaviors of young African-American children with a view toward developing norm-referenced statements useful to the clinician, educator, and researcher.

We have described the complex syntax skills of 45 poor, urban, preschool, African-American boys and girls (Craig & Washington, 1994) and found that the percentage frequencies of utterances containing complex syntax ranged across subjects from 0 to 25. Complex syntax was defined as the occurrence of any one of eleven different types, ranging in complexity from simple infinitives referencing the same subject as the main subject (for example: "he don't need to stand up") to clauses joined by a variety of conjunctions ("and," "but," "so," "because," "since," "before," "when," "until," "while," "like"). Differences in utterance opportunities, chronological age in months, and gender failed to help

explain variations in amounts of complex syntax used among the children.

In our search for factors with potential to explain this sample variability, we examined a relationship between complex syntax and African-American English (AAE). This interest derived in part from another study that characterized the same children's utterance productions in terms of their use of nonstandard forms (Washington & Craig, 1994). The nonstandard forms used by the children included 16 different types identified from previous descriptions of African-American adults and youths. A number of these included zero markings, in particular: copula or auxiliary, subject-verb agreement, pronoun case, possessives, past tense, -ing, infinitival "to," and plurals.

Zero markings may or may not include morphemes expressed in a standard English (SE) rendering of the same sentence. For example: zero copula generates sentences like "the bridge out" and "the bridge is out," but the rules for the inclusion and exclusion of specific morphemes are unclear. In other words, the latter inclusion of the copula is required in SE but is optional in AAE. In our language samples, when AAE forms or the zero markings of specific forms were not in use, the children's utterances were consistent with SE renderings (Washington & Craig, 1994). Three distinct subject subgroupings were observed based on the amounts of AAE forms in the children's utterances, performed with exploratory multivariate hierarchical cluster analyses with complete linkage (Johnson, 1967) using the distance-based "nearest neighbor" criterion (Woods, Fletcher, & Hughes, 1986). Further, we found a moderately strong, positive, statistically significant correlation between amounts of complex syntax and amounts of AAE. In other words, children producing higher levels of complex syntax also evidenced higher levels of AAE forms in their utterances.

Pertinent literature does not suggest a potential positive relationship between AAE and syntactic complexity. Although some early investigations in this area demonstrated that AAE

ABSTRACT: This study is a follow-up to that of Craig and Washington (1994) and probes further their finding of a potential positive relationship between amounts of African-American English (AAE) and linguistic complexity in the discourse of young, poor, urban African-American boys and girls. The present study used the earlier outcomes to predict a statistically significant positive relationship between AAE form use and relational semantic complexity, and nonsignificant correlations for simpler semantic relations. Findings confirmed these predictions and are interpreted as support for the continuity hypothesis proposed by Terrell and Terrell (1993).

KEY WORDS: African-American English, semantic complexity, preschoolers

was not a deficient form of standard English, a prevailing prior assumption to these early studies (Baratz, 1969; 1970; Dillard, 1972; Fasold & Wolfram, 1970; Labov, 1971; Wolfram & Fasold, 1974), research did not go beyond these outcomes to explore a potentially positive relationship with aspects of linguistic complexity. Confirmation of a positive relationship between AAE and linguistic complexity has a number of important implications. Such a relationship would provide new empirical support for theoretical viewpoints that emphasize differences between AAE and English as the parent language (Bailey & Maynor, 1989; Labov, 1972; Taylor, 1988; Wolfram, 1987). It would further underscore the inappropriateness of viewing AAE as a deficient form of SE, and would emphasize the current need for norm-referenced statements about AAE.

The purpose of this study was to probe further a potential relationship between AAE and linguistic complexity by examining AAE and complexity in the semantic domain. Perhaps the correspondence between AAE and syntactic complexity we observed is isolated to syntax, and will not be apparent for other aspects of linguistics. This seems possible because AAE forms are morphosyntactic in nature rather than semantic. Alternatively, perhaps any linguistic analysis with some performance spread across subjects would yield a comparable distributional correspondence to the outcomes we obtained. The syntax analysis only involved advanced sentence types and did not test whether simpler sentence forms were unrelated to AAE usage. If, however, a positive relationship is found between another aspect of linguistic complexity and AAE, then AAE and more general linguistic complexity may be related. In order to examine how robust the correspondence may be between AAE and linguistic complexity, this study describes findings from a different analysis of linguistic complexity on the data set reported previously (Craig & Washington, 1994).

A prepositional analysis was selected for this purpose. Like complex syntax, which involves a clause-level unit of analysis, prepositional phrases are relatively free from the effects of AAE. AAE, at least in the northern regions of the United States where the present subjects resided, operates at a morphosyntactic level (Baratz, 1969; Dillard, 1972; Fasold, 1981; Stewart, 1970; Taylor, 1988; Taylor & Peters, 1976; Washington & Craig, 1994; Wolfram, 1971; Wolfram & Fasold, 1974). In addition, prepositional phrases are readily detectable and frequent in the utterances of young children. Developmentally, they reflect changes in the child's maturing cognition so that complexity increases with chronological age (E. Clark, 1973; H. Clark, 1973; Johnston, 1979; Johnston & Slobin, 1979; Miller & Ervin-Tripp, 1964; Washington & Naremore, 1978). Semantics were examined only for one part of speech, after the example of Miller (1981), who demonstrated the efficiency of holding one part of speech constant (question forms) while examining the semantic roles of the part of speech. Discerning the semantics of particular constituents can be difficult because semantic roles and other types of relational semantics may derive part of their meaning from the words themselves, but also part from their grammatical function. The advantage of maintaining the same part of

speech is that it allows one to tease apart the effects of one system on the other so that relative semantic complexity can be observed. All these reasons combined to recommend the semantic analysis of prepositional phrases for the present research purposes.

METHOD

Subjects

The same 45 children who were subjects in our previous research reports (Craig & Washington, 1994; Washington & Craig, 1994) also served as subjects in this study. All were African-American preschoolers from urban, low-income homes (annual income < \$10,000) in metropolitan Detroit. The sample included 21 boys and 24 girls. They ranged in age from 4–5-1/2 years of age. All but two used AAE. None of the subjects was receiving special education services and all were judged by their teachers to be functioning normally in the classroom. All passed a bilateral hearing screening at 25 dB for 500, 1,000, and 4,000 Hz (ANSI, 1969).

The children were recruited from an "at-risk" preschool program enrolling 396 children, 250 of whom were African-American. Twenty-eight of the latter were judged to be "poor communicators" by their teachers. The remainder were stratified by gender and then randomly selected on a continuous basis until a sample of 62 children was identified whose only risk factor was low family income. The data collection protocol included administration of both formal and informal procedures. Forty-five of these boys and girls had 20-minute language samples collected in a free play context and they served as subjects in this and the Craig and Washington (1994) and Washington and Craig (1994) reports. Additional information about the subject selection procedures is available in the two previous reports.

Data Collection

The data collection protocol involved administration of the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981), collection of a 10-minute language sample during picture description, and collection of a 20-minute language sample during free play. The order of administration of these tasks was randomly determined for each subject. The sample collected during free play constituted the data base for the analyses reported in the present study.

The children were allowed to select one of three toy sets for use during the free play sample. The toy sets were comprised of small and medium sized action toys of potential interest to children of these ages, and included Barbie and Ken dolls with a Burger King play set; action figures, cars, and props; and the Fisher-Price School.

The language samples were collected during adult-child discourse. The children wore a lapel microphone and the language samples were audio-recorded. The three adults collecting the samples were experienced researchers with special expertise in testing children. They were African-American females who used AAE themselves as well as SE,

and were observed to code-switch to AAE in conversation with African-Americans. They were instructed to use AAE with the children and subsequent checks of the audiotapes revealed that all three examiners used morphosyntactic AAE forms at comparable levels across subjects.

Scoring

A transcript was prepared for each subject and checked for accuracy by an African-American experimenter familiar with AAE. This process has been described elsewhere as well (Craig & Washington, 1994; Washington & Craig, 1994). Utterances were defined as one or more words and included stereotypic conversational forms such as "mhm." Segmentation decisions were based on terminal intonation contours and pause durations (Miller, 1981), and discontinuity of reference between clauses linked by conjunctions that appeared to serve an utterance-initial pragmatic connective function (Gallagher & Craig, 1987). These procedures yielded approximately 4,000 intelligible utterances. The AAE forms used by the children were described in Washington and Craig (1994) and are presented in the Appendix.

All prepositions, defined as lexical items that precede a noun, pronoun, or noun phrase that do not occur alone and do not initiate a clause (see Crystal, 1985), were identified. This operational definition resulted in a restricting of the potentially scorable set of prepositions to those occurring only as part of a prepositional phrase, so that "this came off it" was scored, whereas "it came off" was not. This more conservative scoring approach was adopted to help ensure that the lexical items selected for examination were functioning as prepositions and not as a component of a childlike verb constituent.

Prepositional phrases were scored for their relational meanings. The children produced three major semantic types of prepositional phrases, including identifications, movements, and more complex relative relationships. Identifications simply named entities and locations. Movements coded changes toward or away from a place or position. The prepositions *in*, *into*, *on*, and *onto* were coded as movements rather than identifications when the contiguous verb expressed an action. Relative relationships expressed hypothetical similarities, spatial alignments, approximations, co-occurring or temporal relationships, and potential means to accomplish ends. Identifications and movements generally are considered cognitively less complex than the types of prepositions designated as relative relationships, and those serving a naming function are the earliest developing in SE (Brown, 1973; E. Clark, 1973; H. Clark, 1973; Johnston, 1979; Johnston & Slobin, 1979; Miller & Ervin-Tripp, 1964; Washington & Naremore, 1978). A definition and example of each is presented in Table 1.

Reliability

Transcription reliabilities have been reported elsewhere (Craig & Washington, 1994; Washington & Craig, 1994). Ten percent of the utterances of each transcript were

retranscribed by an independent observer. The number of agreements divided by the number of agreements plus disagreements was high—87% for morphemes and 95% for utterance segmentation. Scoring reliabilities also were high—95% for identification of prepositional phrases and 88% for scoring of the three subtypes.

RESULTS

The methods resulted in the identification of 627 prepositional phrases for analysis. Three subjects produced fewer than five prepositional phrases, a number considered too small for scoring purposes. The mean number of prepositional phrases for the other 42 subjects was 14.9, with a standard deviation of 8.7.

Table 2 presents percentage frequency distributions of the semantic subtypes. The children's use of the three types of prepositional phrases were then examined relative to their use of AAE forms. Before statistical treatment, variances in the percentage frequencies were stabilized using the arcsine transformation. An experiment-wide alpha level of .05 was established and a Bonferroni-correction applied for the three related data sets so that $p = .016$.

A Pearson Product Moment Correlation revealed nonsignificant correlations between amounts of AAE and simpler prepositional phrases scored as identifications ($r = -.16$, $p > .05$) and movements ($r = -.26$, $p > .05$). As predicted, however, a moderately strong, statistically significant, positive correlation ($r = .46$, $p < .016$) was found between amounts of AAE and prepositional phrases expressing more complex relative relationships.

DISCUSSION

Our earlier research with this subject sample revealed a positive relationship between a child's use of AAE forms and complex sentence types (Craig & Washington, 1994). This outcome then successfully predicted a positive relationship in this study between AAE and complexity for another linguistic dimension. A moderately strong, statistically significant, positive correlation was found between the percentage frequencies of occurrence of utterances containing an AAE form, and those coding more complex semantic relations within prepositional phrases. Also as predicted, no significant relationships were found between simpler prepositional meanings and AAE form use.

These findings provide strong support for a relationship between linguistic complexity and AAE for this cohort of 45 poor, urban, African-American preschoolers. It will be important to replicate this finding with other subjects in order to validate an AAE-linguistic complexity hypothesis and to explore the breadth of its application.

A clear explanation for an AAE-linguistic complexity hypothesis is not suggested by the literature on AAE. In retrospect, this seems best understood in terms of the limits placed on the kinds of questions we have typically asked about this population. Most speech- and language-based

Table 1. Scoring definitions and examples for the semantics of each prepositional subtype.

<i>Definition</i>		<i>Example</i>
Identification statements		
Spatial or locational naming: Prepositions referring to one static place or position	<i>in</i> <i>on</i> <i>over</i> <i>at</i> <i>out</i>	"he's in the room" "it won't rain on they head" "you don't have no toys over here" "they at the beach" "it rainin' out there"
Specification: Prepositions identifying a componential relationship to a larger set	<i>of</i>	"put on some other kind of shoes"
Intended goal: Prepositions referring to the recipient of an object or action, as well as intended purposes	<i>for</i> <i>with</i>	"They goin' shoppin' for some radio" "I wanna play with the ghostbusters"
Movement statements		
Prepositions referring to changes toward one place or position, or away from one place or position	<i>to</i> <i>in (into)</i> <i>from</i> <i>off</i> <i>out of</i> <i>up</i> <i>down</i> <i>on (onto)</i>	"the boy goin' to school" "he's putting it in the box" "they tryin' to get away from a monster" "she fell off the bicycle" "you drink out of it" "them pullin' them up the hill" "one people goin' down the stairs" "how do you put this on this one?"
Relative relationships		
Similarity: Prepositions identifying comparable events, entities, or locations	<i>like</i> <i>as</i>	"he skating like Santa Claus" "the same color as these"
Alignments and approximations: Prepositions referring to relative positionings between entities and approximations	<i>over</i> <i>about</i> <i>on top of</i> <i>through</i> <i>behind</i> <i>onto</i> <i>across</i> <i>above</i> <i>along</i>	"see you just put this top back on and then you pour the stuff over these" " about 12 dollars" "you put it on top of it" "we can go through there" "it was a car right behind him" "they holdin' onto each other" "the woman said don't go across the school yet" "right there above it" "all of them slide along there"
Means: Prepositions referring to methods by which actions, events, etc. transpire	<i>with</i> <i>by</i> <i>in</i>	"she cut the thing with the knife" "he go by car" "they get there in they car"
Simultaneity: Prepositions referring to spatial or temporal co-occurrences	<i>with</i>	"he go downstairs with a bookpad"
Temporal relationships: Prepositions naming a single time or the order and duration of events	<i>in</i> <i>for</i> <i>at</i> <i>after</i>	"he was slippin' in the mornin' time" "Brandon had to play for a hour" "Yup I open at twelve o'clock" " after school he spilt his papers"

Table 2. Means (*M*) and standard deviations (*SD*) and their correlations (*r*) and associated probabilities (*p*) for each semantic subtype.

	<i>Identifications</i>	<i>Movements</i>	<i>Relatives</i>
% Frequencies ^a			
<i>M</i>	42.2	37.2	20.4
<i>SD</i>	15.6	14.4	15.9
AAE			
<i>r</i>	-.16	-.26	.46
<i>p</i>	.29	.09	.002

^a *n* = 42 subjects.

research with African-American children has focused on refuting a deficiency model of AAE relative to SE (Baratz, 1970; Dillard, 1972; Fasold & Wolfram, 1970; Labov, 1971; Wolfram & Fasold, 1974), or has attempted the development of scoring adjustments to address negative biases in widely used clinical assessment instruments (Cole & Taylor, 1990; Evard & Sabers, 1979; Haynes & Moran, 1989; Seymour & Seymour, 1981; Stockman, 1986; Terrell & Terrell, 1993; Vaughn-Cooke, 1986; Washington & Craig, 1992a; 1992b). Despite persistent arguments by many scholars about the need to establish normative descriptions of AAE for children (Adler & Birdsong, 1983; Terrell & Terrell, 1983; Vaughn-Cooke, 1986), remarkably little published research is available.

A significant barrier to pursuing research of this type has been a lack of a theoretically compelling heuristic for isolating the effects of AAE from other aspects of the linguistic system. This study, like that of Craig and Washington (1994), offers one way to tease apart these potential co-influences. The two investigations used units of analysis that were largely unaffected by AAE. Whereas AAE operates at a morphosyntactic level, both clauses and prepositional phrases were units large enough to allow taxonomic decisions independent of the specific AAE forms involved in their production. These studies indicate that future research with this population would be facilitated by the determination of similar types of scoring units.

Overall, this line of research provides empirical support for the continuity hypothesis proposed by Terrell and Terrell (1993). They suggest that AAE use distributes across the population based on extrinsic variables such as geographic location, income, occupation, and education. They also identify one possible intrinsic variable, chronological age. Our research with this specific cohort indicates that increased amounts of AAE, complex sentences, and semantic relations for prepositions all reflected an increase in the number of types used by the child, not simply the repetitive use of a small set. This was examined directly in the previous two studies by comparing the number of different types to overall levels of usage. In the present study, the interpretation of an increase in repertoire size is consistent with the increased use of a third semantic relation when AAE use increased. Expanded repertoires of children using higher levels of AAE suggests higher levels of linguistic proficiency overall for these children. Linguistic proficiency, then, may be another

intrinsic variable responsible for the AAE continuum proposed by Terrell and Terrell.

Linguistic complexity, greater linguistic proficiency, and AAE use warrant further investigation. It will be important to pursue these findings with other African-American subjects, especially of other ages and socioeconomic status. This information will be important for educational planning purposes and will suggest new directions for research with this population. A robust relationship between AAE and linguistic proficiency would imply a need to develop a child language theory specific to AAE.

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APPENDIX

Scoring System for the African-American English Forms

<i>Definition</i>	<i>Examples</i>
Zero copula or auxiliary “is,” “are” and modal auxiliaries “will,” “can,” and “do” are variably included	“the bridge out” “how you do this”
Subject-verb agreement A subject and verb that differ in either number or person	“what do this mean”
Fitna/sposeta/bouta Abbreviated forms of “fixing to,” “supposed to,” and “about to,” coding imminent action, (Examples of utterances that were not scored for this form were: “they <i>fixin</i> it,” “what are we <i>supposed to</i> do to that,” “what <i>about</i> they lunch?”)	fitna: “she fitna backward flip” sposeta: “when does it sposeta go” bouta: “this one bouta go in the school”
Ain’t “ain’t” as a negative auxiliary	“why she ain’t comin”
Undifferentiated pronoun case Nominative, objective, and demonstrative cases of pronouns occur interchangeably	“him did and him”
Multiple negation Two or more negative markers in one utterance	“I don’t got no brothers”
Zero possessive Possession coded by word order, so that the possessive -s marker is deleted, or the nominative or objective case of pronouns is used rather than the possessive	“he hit the man car,” “kids just goin’ to walk to they school”
Zero past tense “-ed” is not always used to denote regular past constructions, or the present tense form is used in place of the irregular past form	“and this car crash” “and then them fall”
Zero “-ing” Present progressive morpheme “-ing” is deleted	“and the lady is sleep”
Invariant “be” Infinitival “be” with a variety of subjects coding habitual action (“it’s gonna be far away” was an example of when habitual “be” was not scored); or to state a rule	“and this one be flying up in the sky” “if he be drunk I’m taking him to jail”
Zero “to” Infinitive marker “to” is deleted	“now my turn shoot you”
Zero plural Variable inclusion of plural marker “-s”	“ghost are boys”
Double cop/aux Two copula or modal forms for a single verb form	“I’m is the last one ridin on”
Regularized reflexive Reflexive pronouns “himself” and “themselves” are expressed using “hisself” and “theyself”	“he stands by hisself”
Indefinite article “a” regardless of vowel context	“Brandon had to play for a hour, didn’t he?”
Appositive pronoun Both a pronoun and a noun reference the same person or object	“the teacher she’s goin’ up here”
Remote past “been” “been” is used to mark action in the remote past, (“hi, what you been doing” is an example of an utterance containing “been” that was not AAE form)	no examples of this form were found
