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In this study, African American English (AAE)-speaking children's comprehension of 2 different types of double negative sentences was examined and contrasted with that of a comparison group of Standard American English (SAE)-speaking children. The first type of double negative, negative concord, involves 2 negative elements in a sentence that are interpreted together as single negation. The second type of double negative, called true double negation, involves 2 negatives that are interpreted as independent negatives. A cross-sectional cohort of 61 (35 AAE, 26 SAE) typically developing children ranging in age from 5;2 (years;months) to 7;11 participated. The children responded to story-based grammatical judgment tasks that required them to differentiate between negative concord and true double negation. Results revealed no statistically significant differences between AAE- and SAE-speaking children in the way they interpreted negative concord and true double negation. However, there were significantly more correct responses to negative concord sentences across combined groups. In particular, the older children (i.e., 7-year-olds) produced more correct responses to negative concord than did the younger group (i.e., 5-year-olds). Explanations for these findings are framed in terms of children's knowledge about sentences with 2 negatives, the constraints affecting the interpretation of 2 negatives that include negative concord, and the clinical importance of negative concord for assessing specific language impairment in child AAE speakers.

KEY WORDS: negation, African American English, linguistic differences, language comprehension, negative concord

Historically, studies of African American English (AAE) have focused on identifying and describing the features of the dialect. Only recently have some studies shifted from description to explanation, using linguistic theory to account for specific feature function and constraints underlying the grammar (Coles, 1998; Green, 1993; Jackson, 1998; Jackson et al., 1996; Johnson, 2001; Mufwene, Rickford, Bailey, & Baugh, 1998; Sells, Rickford, & Wasow, 1996). This shift toward examining the underlying mechanisms has been instrumental in moving the study of dialect forward to include studies that are clinically applicable for identifying language impairments (Craig & Washington, 1994; McGregor, Williams, Hearst, & Johnson, 1997; Oetting & McDonald, 2001; Seymour, Bland-Stewart, & Green, 1998; Stockman, 1996; Washington, 1996). These recent investigations have addressed the challenges of differentiating typically developing AAE speakers from those who use AAE and have specific language impairment (SLI), and

they have contributed to our knowledge base concerning the nature of AAE grammar.

In order to devise a truly comprehensive theory of SLI that takes into account AAE child speakers, the underlying mechanisms of AAE morphology and syntax must be rigorously examined in both receptive and expressive domains. A theory of SLI depends on developing foundational knowledge about normal processes used by child speakers and determining how these processes are changed by children with SLI. For many African American children this involves understanding the processes underlying the use of major linguistic features of AAE, which may be contrastive or noncontrastive with Standard American English (SAE) (Seymour et al., 1998).

Contrastive features of AAE are those considered to be different from the features that characterize SAE, such as aspectual *be* (i.e., "Shaq *be* playin basketball"), where there is no interpretable complement or counterpart in SAE. Those features that are noncontrastive have similar or matching constituents with SAE, such as negative concord. For example, negative indefinite *no*, when used in a negative sentence (i.e., "He don't like *no* sports"), does have an interpretable counterpart in SAE (i.e., "He doesn't like *any* sports"). Seymour et al. (1998) indicated that a focus solely on AAE features that are contrastive with SAE may be problematic diagnostically, because on the surface contrastive features may appear to be very similar to those features that characterize language impairment. However, a focus on noncontrastive features with SAE may protect against perceiving language difference (i.e., AAE) as language impairment and may help to establish what is vitally important for characterizing language impairment, particularly with AAE-speaking children.

Although some work has begun to contribute to our understanding of the production of AAE features by children (e.g., Haynes & Moran, 1989; Hyter, 1996; Pollock et al., 1998; Stockman & Vaughn-Cooke, 1992; Washington & Craig, 1994) and the processes underlying these productions (Green, 1993), comprehension has been largely ignored for its potential to inform us of what AAE speaking children know about language. Knowing that a child produces a sentence type does not necessarily mean the child will fully comprehend the same sentence, particularly if it is heard without the context of familiar routines and nonlinguistic cues (Miller & Paul, 1995, as cited in Paul, 2001).

The purpose of this investigation was to contribute important, new information to this knowledge base by examining comprehension of one major feature of child grammar, negation, by young typically developing AAE-speaking children. More specifically, this investigation examined and described the comprehension of negative concord, a clause-level syntactic construction with some potential as a clinical marker of SLI in child AAE speakers. Clause-level syntactic processes such as negative concord should be better linguistic markers for identifying SLI in AAE-speaking children than morphological markers, which are used for identifying SLI in Standard English dialects, because clause-level syntactic markers do not contrast with SAE. Accordingly, children may have an intuitive linguistic knowledge about negative concord because it is a noncontrastive feature with SAE found in many early grammars (Bellugi, 1967; Klima & Bellugi, 1973; Stokes, 1976), and by implication its interpretation should be largely unaffected by AAE grammar.

Negative concord is a linguistic phenomenon that occurs in many standard and nonstandard dialects of languages. Negative concord is a complex, clause-level syntactic process and is part of the negation system that many African American children develop in the acquisition of AAE grammar. Negative concord may be defined as the expression of two negative elements in a syntactic environment or sentence where they are in agreement and, therefore, are interpreted together as a single negation (Martin, 1992). The two negatives are not interpreted separately as truly independent negatives (i.e., true double negation), but are dependent on each other for a single negative reading. Example 1 illustrates negative concord and a true double negative sentence, where the negatives are interpreted independently.

Example 1.

a. "He don't have *no* friends" ("He doesn't have any friends" or "He has no friends")
b. "He don't like going there with *no* friends" ("He doesn't like going there without friends")

In 1a, both of the negatives are interpreted as a single negation, thus a negative concord reading. However, in 1b, the negative that occurs in the phrase "with *no* friends" is interpreted independently of the negative auxiliary *don't*, which occurs earlier in the sentence and is thereby considered true double negation.

In developing grammars, negative concord is believed to share certain properties with interrogatives under a concept of movement, which is essentially a formal, linguistic explanation for how these two syntactic constructions are formulated in the deep structure (Haegeman, 1995; Martin, 1992; Progovac, 1994). Specifically, both constructions, negative concord and *wh-* questions, share or obey similar restrictions on syntactic contexts. These contextual restrictions have an effect on the establishment of dependent relationships between syntactic elements and ultimately influence the interpretation of negative concord sentences and

wh- questions (see Chomsky, 1986, and Radford, 1988, for a review on syntactic movement operation; see Coles, 1998, for a review on a concept of movement for negative concord in AAE; see deVilliers & Roeper, 1995, for a review on barriers to *wh*- movement for young children).

Studies have shown that responses to *wh*- questions may have merit for assessing development of comprehension skills in young AAE speakers (Craig & Washington, 1994; Craig, Washington, & Thompson-Porter, 1998). Other studies have suggested that by examining comprehension of *wh*- questions using grammatical judgment tasks, one may gain knowledge of children's syntactic understanding of structurally dependent relationships and the constraints affecting interpretation of complex constructions (Seymour, Bland, Champion, deVilliers, & Roeper, 1992). If the formulation of negative concord in the deep structure is similar to that of *wh*- questions and children's knowledge of the structural properties of negative concord can be tested using grammatical judgment tasks, then negative concord may also have merit for assessing the development of comprehension skills in young AAE-speaking children. This seems particularly critical, as deficits in comprehension of complex syntax have been widely reported in children with language learning disorders (Gerber, 1993; Roth & Spekman, 1989).

The following questions were addressed in this investigation:

1. Do child speakers of AAE perform differently than the comparison group of child speakers of SAE on story-based grammatical judgment tasks requiring them to understand the structural differences for minimally paired double negative sentences, where one of the paired sentences should be interpreted as negative concord and the other paired sentence should receive a true double negation interpretation?
2. Do child speakers of AAE and SAE vary in the frequency of correct responses to both types of double negative sentences? If so, do children differ in their ability to comprehend these constructions based on dialect, age, and gender?
3. Were any of the items on the story-based grammatical judgment tasks more difficult for child AAE speakers to interpret than for the comparison group of child SAE speakers? If so, do child AAE speakers construe more of the minimally paired double negative sentences as negative concord?

Method

Participants

Sixty-one typically developing children (29 boys and 32 girls) participated in the study. The target group consisted of 35 African American, AAE-speaking children, and the comparison group included 26 SAE-speaking children. The comparison group had 25 European American children and 1 biracial child of African American and European American heritage. The children ranged in age from 5;2 (years;months) to 7;11 (M = 6;4) and attended urban public schools in the northern United States. Table 1 presents the participants' descriptive information.

Participant Selection

A 15–20 min sample of each child's speech and language was videotaped prior to conducting the experiment. The speech and language sample was elicited by means of a picture description task with 15 action pictures. Each participant was engaged by a bidialectal African American doctoral student who was familiar with AAE and comfortable using some of the vocabulary and pronunciations styles of AAE when communicating with African American participants. Specifically, certain words were pronounced with intonation and stress patterns considered to be characteristic of many AAE speakers and less characteristic of the majority of mainstream English speakers, such as changing the diphthong in "my" to a single vowel or monophthong, "mah" (see Rickford & Rickford, 2000, for a review of AAE vocabulary and pronunciation). The African American doctoral student code-switched from SAE to AAE to

Table 1. Mean age in years and standard deviations of participants by age group, gender, and dialect.

	AAE				SAE			
	Male		Female		Male		Female	
Age group	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
5-year-olds	5.75	0.025	5.75	0.019	5.66	0.007	5.66	0.049
6-year-olds	6.16	0.010	6.33	0.044	6.25	0.031	6.33	0.028
7-year-olds	7.25	0.015	7.25	0.009	7.58	0.033	7.25	0.035

Note. AAE = African American English; SAE = Standard American English.

establish rapport when communicating with the African American participants and to indirectly acknowledge and permit the use of AAE. Many speakers of AAE code-switch to SAE or a more standard variety of English in situations where they perceive the use of AAE to be unacceptable, such as with unfamiliar conversational partners or listeners and in more formal settings, such as school (Rickford & Rickford, 2000). SAE was used when communicating with the European American participants for similar reasons to establish rapport.

Each child's language sample was examined and scored for the presence of grammatical and/or phonological features of AAE by graduate students trained to identify AAE dialect features. This brief interaction was designed to establish the native dialect of each child. If any African American child used any of the phonological or grammatical features consistent with AAE, he or she was included in the target group. As a result, only those children whose ethnic backgrounds suggested that AAE was their primary or native dialect—not those children who may use AAE features occasionally—were selected. Similarly, only those children who used SAE as their native dialect and did not use any of the features consistent with AAE were included in the comparison group. Of the participants, all of the African American children used some phonological and/or grammatical features of AAE and were included in the target group. None of the European American children used any AAE features and were included in the comparison group. However, there was one biracial child of African American and European American heritage who used only SAE and none of the features of AAE when spoken to with AAE vocabulary and intonation patterns. Consequentially, the biracial child was included in the comparison group.

Group assignment was determined by primary dialect (i.e., AAE or SAE dialect). However, the children were also matched by age range and gender. The children were from working class backgrounds (based on residence, parental occupation, and/or level of education; principal/teacher/administrative official report; and participation in a reduced or free lunch program).

School records, reports from the school speech-language pathologist, and teacher/administrator reports confirmed that all children selected for the target and comparison groups were native English speakers and free from any speech and/or language delay or disorder. None of the children selected had any hearing, cognitive, or social–emotional impairments.

Experimental Task

The Double Negative Comprehension (DNc) Task featured five short stories presented with corresponding pictures. Each story comprised a minimally paired set of double negative sentences and one single negative sentence. Each minimally paired set comprised one true double negative (TN) sentence, where the negatives were not expected to be interpreted as a single negation, and one negative concord (NC) sentence, where the double negatives were expected to be interpreted in agreement or as a single negation. Single negative sentences served as control items. The control item in each story was consistent with that particular story line and corresponding pictures. Example 2, represented in Figures 1–3, illustrates one of the stories with the minimally paired set of double negative target sentences and a single negative sentence.

Example 2.

a. A man wanted to feed a hungry baby. He did feed a baby, but… He *didn't* feed the baby with *no* hair.
b. He tried everything to feed the hungry baby. He had a bottle and he had a spoon. He did feed the hungry baby, but… He *didn't* feed the baby with *no* bottle.
c. The man wanted to feed the animals too, but he didn't feed the one under the table that meows.

In 2a, the negatives are interpreted separately and a true double negative response is expected, whereas in 2b, the negatives are interpreted in agreement and a negative concord response is expected. In 2c, there is

Figure 1. A true double negative item from the DNc grammatical judgment task. In the item depicted, a man is sitting at a table and preparing to feed one of two hungry babies; the baby with hair or the baby without hair. A correct response to the verbal prompt, "He didn't feed the baby with no hair, which one did he feed?", would be to point to the baby with hair.

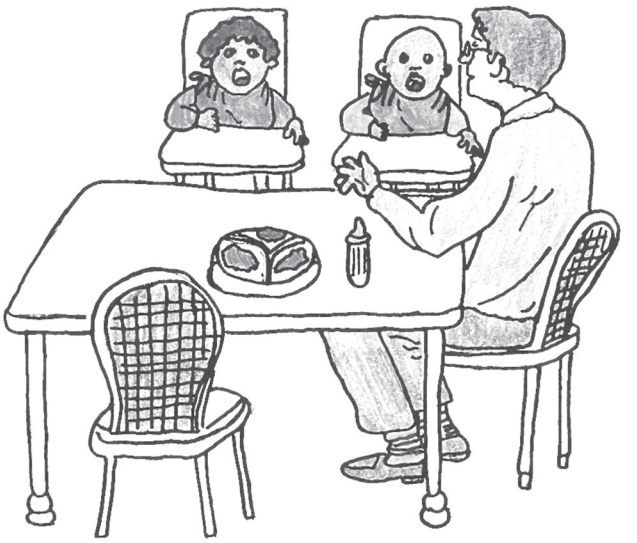
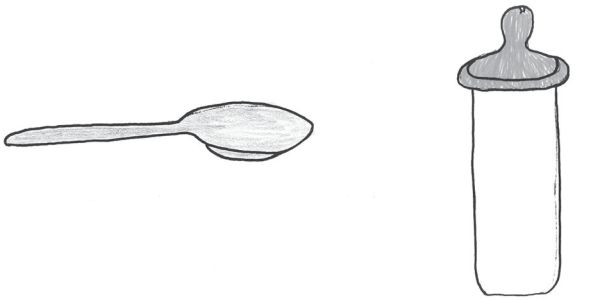


Figure 2. A negative concord item from the DNc grammatical judgment task. In the item depicted, there are two feeding utensils, a spoon and a bottle, one of which must choose to feed a hungry baby. A correct response to the verbal prompt, "He didn't feed the baby with no bottle, which one did he use?", would be to point to the spoon.



only one negative to interpret and a single negative reading is expected.

All stories were prerecorded by the African American experimenter so that there was no rise of intonation or stress placed on either of the negatives in the minimally paired set of double negative target sentences and on the single negative in the control sentence to influence children's interpretation.

Procedure

An African American doctoral student administered the DNc Task to all children. Each child was taken to a room separate from his or her general classroom to avoid any noise or distractions and was then told, "I want you to look at some pictures and listen to the stories that go along with the pictures. Listen carefully, because there will be some questions about each story that you will have to answer." Each child was presented with all five stories consecutively. All stories had three pictures presented sequentially, matching the events in the stories. The stories were presented in random order. There was a fixed order of appearance for the minimally paired set of double negative target sentences because of story construction, which is illustrated above in Example 2. The control items were presented in random order to limit the effect of the fixed order of appearance for the minimally paired set of double negative target sentences. The children were asked to respond to questions about each story by pointing to some object in a picture. Administration of the entire DNc Task was approximately 20 to 30 min for each child.

Reliability

Responses were recorded online by the examiner, an African American doctoral student, and coded for each target sentence as follows: 0 = marked interpretation of double negatives independently; 1 = marked interpretation of double negatives as negative concord. Twenty percent of each child's responses were randomly selected for recoding in order to confirm the overall accuracy of coding decisions. The supervising doctoral student trained a master's level graduate student in

Figure 3. A control item from the DNc grammatical judgment task. In the item depicted, a man is choosing to feed one of two animals, the cat or the dog, which are both beside the man's feet. A correct response to the verbal prompt, "He didn't feed the one that meows, which one did he feed?", would be to point to the dog.

communication disorders at the University of Massachusetts on coding responses prior to the recoding stage. The graduate student reviewed participants' responses from videotape to conduct reliability coding. Agreement was determined for scores of individual responses to items. Interjudge agreement for all coding was very high, with over 90% for both double negative sentence types (i.e., 98% for TN items and 97% for NC items). The differences between the examiner and the reliability coder were attributed to the differences in scoring responses online versus viewing a videotape. In the case of a disagreement, the examiner and the reliability coder reached an agreement by discussion.

Data Analysis

Means and standard deviations were computed for the correct responses on TN and NC sentence types of the DNc Task and for other grouping variables (i.e., dialect, gender, and age). To discover if the proportion of correct responses for each of the sentence types differed by dialect, paired *t* tests were run. To further examine group differences and determine if there were any interactions among the groups for correct responses on the DNc Task, separate 2 × 2 × 3 (Dialect × Gender × Age) factorial analyses of variance (ANOVAs) were calculated for each of the sentence types. Next, in order to find out whether specific items on the DNc Task were more difficult for one dialect group than for the other, given variations in score distributions, a Mann–Whitney *U* was computed. Finally, to assess whether groups differed on individual items on the DNc Task, logistic regression was calculated.

Results

Distribution Analysis

There was no significance difference between dialect groups (AAE and SAE) on the DNc Task. Mean scores for correct responses on the DNc Task revealed that children in this study understood the differences in meaning between sentences with two independent negatives (i.e., true double negation) and those sentences with two negatives in agreement (i.e., negative concord). A paired comparisons *t* test confirmed, however, that there were significantly more correct responses for the NC sentence types, $t(60) = -2.17$, $p = .034$, with a moderate effect size ($d = .41$). Table 2 presents the mean scores and standard deviations for correct responses to TN and NC sentence types by dialect.

Accuracy by dialect, gender, and age for each sentence type (TN and NC) on the DNc Task was computed with separate 2 × 2 × 3 (Dialect × Gender × Age) factorial ANOVAs with planned comparisons on age. The first planned comparison (Age 1) was defined as the difference between children 5 and 6 years old. The second comparison (Age 2) was defined as the difference between children 5 and 7 years old. The third comparison (Age 3) was defined as the difference between children 6 and 7 years old. Results revealed that there were no statistically significant interactions between any of the levels for TN sentence types. There was one significant main effect for Age 2 contrasts with NC sentence types, $F(1, 49) = 4.70$, $p = .035$. However, there were no other significant main effects and no other interactions. The

Table 2. Mean scores and standard deviations on the double negative comprehension task between children by dialect based on correct responses to sentence types.

	Sentence types			
	TN		NC	
Dialect	*M*	*SD*	*M*	*SD*
AAE[a]	3.51	1.07	3.97	1.01
SAE[b]	3.77	1.03	4.19	1.27
Combined groups[c]	3.62	1.05	4.07	1.12*

Note. Maximum score = 5.00 for each sentence type (e.g., TN and NC). AAE = African American English; SAE = Standard American English; TN = true negative sentences (negatives interpreted independently); NC = negative concord sentences (negatives interpreted as a single negation).

[a]$n = 35$. [b]$n = 26$. [c]$n = 61$.

*There was a significant difference (i.e., $p = .034$) in performance on TN and NC sentence types for combined groups (i.e., AAE and SAE speakers).

Table 3. Mean scores and standard deviations on the double negative comprehension task between children by age based on correct responses to sentence types.

	Sentence types			
	TN		NC	
Age	*M*	*SD*	*M*	*SD*
5-year-olds[a]	3.60	1.05	3.75	1.12
6-year-olds[b]	3.63	1.01	3.92	1.21
7-year-olds[c]	3.65	1.71	4.65	0.79*

Note. Maximum score = 5.00 for each sentence type (e.g., TN and NC). TN = true negative sentences (negatives interpreted independently); NC = negative concord sentences (negatives interpreted as a single negation).

[a]$n = 20$. [b]$n = 24$. [c]$n = 17$.

*There was a significant difference (i.e., $p = .035$) in performance on TN and NC sentence types for the older children (i.e., 7-year-olds) compared to the younger children (i.e., 5- and 6-year-olds).

significant main effect for Age 2 contrasts with NC sentence types indicated that the older children, 7 years of age, had more correct responses. Table 3 presents the mean scores and standard deviations for correct responses on TN and NC sentence types by age.

Item Analysis

A nonparametric test was performed on the frequency of correct responses for the TN and NC sentence types to determine if there were differences between dialect speakers in the number of correct responses, taking into account differences in the score distributions. The Mann–Whitney *U* did not show any difference in rank scores by type of dialect spoken. Item difficulties (e.g., proportion correct) for the TN sentence types ranged from .54 (*SD* = .50) to .93 (*SD* = .24) and from .77 (*SD* = .42) to .87 (*SD* = .34) for the NC sentence types. Logistic regression was used to examine differential item functioning (Swaminathan & Rogers, 1990). Each item was regressed on three variables: the total scale score (i.e., number correct for TN or number correct for NC), code for dialect group (i.e., AAE or SAE), and interaction of Total Score × Dialect Group Code. No items were found to exhibit differential item functioning at $p = .05$. However, the odds ratio of 9.92 for NC Item 2 ($p = .08$) indicated that children in the SAE dialect group were 9.9 times more likely to get that item number correct, suggesting somewhat of a dialect effect for the one item on the DNc Task. Table 4 presents the means and standard deviations for the total score distributions and adjusted odds ratios for each item on the DNc Task.

Table 4. Mean scores and standard deviations for the total score distributions and the adjusted odds ratio (AOR) for items on the double negative comprehension task based on correct responses to sentence types.

	TN			NC		
Item no.	*M*	*SD*	AOR	*M*	*SD*	AOR
1	.79	.41	2.82	.79	.41	1.10
2	.54	.50	0.47	.84	.37	9.92[a]
3	.70	.46	1.51	.80	.40	0.22
4	.66	.48	0.57	.77	.42	3.39
5	.93	.25	1.77	.87	.34	0.63

Note. TN = true negative sentences (negatives interpreted independently); NC = negative concord sentences (negatives interpreted as a single negation). *N* = 61. Items that were less than one were easier for AAE-speaking children and items greater than one were easier for SAE-speaking children.

[a]The SAE-speakers were 9.9 times more likely to answer Item 2 correctly than the AAE speakers, indicating a moderate language effect ($p = .08$).

Discussion

The outcome of this study demonstrated that typically developing children, both speakers of AAE and SAE, comprehend negative concord and that story-based grammatical judgment tasks are efficient at measuring young children's knowledge of this complex linguistic feature. Children appear to be sensitive to the interpretative differences necessary to distinguish negative concord from sentences with two negatives as early as 5 years of age and, as expected developmentally, this ability increases with age.

Overall, the children in this study performed similarly on the DNc Task. This outcome suggests that AAE-speaking children generally understand the structural differences for double negative sentences that are interpreted as negative concord and true independent negation. However, the significant difference in overall correct responses for NC versus TN sentence types may indicate that negative concord is easier to interpret than true double negative sentences. Under binary choice conditions with subtle differences between the structures, such as the experimental task used in this study, negative concord may be the default particularly when children are unsure of how to interpret double negatives. This may be because children have not yet learned the complete negation system, which includes restrictions on syntactic contexts for double negatives. Mastery of basic negation and the rules of acquisition are well documented in the literature for young English-speaking children (e.g., Brown, 1973; deVilliers, 1979; Drozd, 1993; Klima & Bellugi, 1973). However, questions remain about the nature of syntactic negation and how children process superfluous negatives. It is not uncommon to hear young children 4 and 5 years of age producing doubled negative sentences (e.g., "I don't want none") that are interpreted as negative concord regardless of dialect spoken. Therefore, in acquiring the rules of interpreting double negatives, negative concord is the first to be attained, followed by the rules for interpreting true double negation. The rules for interpreting negative concord may be first because redundant information is easier to process than additional negative information. This notion of children acquiring different types of negation, including developing negative concord before mastering true double negation, may be a universal process (Sharpe, Eakin, Cote, Lacroix, & Macnamara, 1996). Similar processing patterns have been found in Polish- (Skowronski & Yan, 1992), Chinese- (Jou, 1988), and French-speaking children (Segui & Bertoncini, 1978, as cited in Sharpe et al., 1996).

The significant main effects for the Age 2 (i.e., 5- and 7-year-olds) contrast with NC sentence types showed that children in the older age group (i.e., 7-year-olds)

had more correct responses when compared to the younger children. Although younger children interpreted negative concord constructions, the older children were better at judging when two negatives were to receive a negative concord reading. Many features of grammar are acquired by the time children are preschool age, approximately 3 to 3½ years of age (e.g., Brown's Stage III, Early Stage IV). However, double negatives, including those interpreted as negative concord are a later developing grammatical feature, as are many aspects of grammar, particularly syntax negation forms. Specifically, negative indefinites (e.g., *nobody, no one, nothing*), the determiner *no* used before nouns in a full sentence (e.g., *No cookies for you today*), and negative derivational morphemes or prefixes such as *un-* and *dis-* are acquired after Brown's Stage V; double negatives continue to be difficult for children Stage V and beyond (Owens, 1996). The late acquisition of double negation and the gradualness in further development once the concept begins to emerge may be due to the processing demands of interpreting negative information, particularly double negation, versus interpreting affirmative information (e.g., Sharpe et al., 1996).

The reliability of the grammatical judgment task in this study was acceptable when used with this sample of AAE and SAE speaking children. Based on the total score distribution, no one item was any more difficult than any other for the children to understand. Similarly, there was no statistical significance in the degree of difference for items on the grammatical judgment task. Both AAE and SAE speakers performed similarly on items. However, the odds ratio of 9.92 for NC Item 2 ($p = .08$) indicated that children in the SAE dialect group were 9.9 times more likely to get that item number correct, suggesting somewhat of a dialect effect for the one item on the DNc Task. This item was constructed similarly to the other items across the DNc Task. Despite that, NC Item 2 may have contained a semantic ambiguity. The choice of words for this story or the phrasing of the minimally paired double negative sentences may have contributed to this near-significant difference between AAE- and SAE-speaking children. Example 3 illustrates the story and the minimally paired double negative sentences for Item 2 and the control item.

Example 3.

> A boy wanted to cut down something with his tools. He did cut something, but… He didn't cut down the fence with no gate. He tried everything to cut down the fence. He had an axe and he had a saw. He did cut down the fence, but… He didn't cut down the fence with no axe. He wanted to cut down a tree, but… He didn't cut down the tree with leaves.

Some of the AAE-speaking children may not have fully understood the difference between the tools used for cutting and chopping, which may have prompted them to interpret the two negatives as a true double negative instead of the expected negative concord interpretation.

Clinical Implications

The result of this investigation of children's ability to comprehend negative concord has clinical implications for the identification of SLI, specifically in AAE-speaking children. The current study addressed (a) syntactic instead of the morphological aspects of AAE, (b) comprehension rather than expressive language skills, and (c) one feature of AAE that is a noncontrastive feature of SAE.

Children speaking AAE, unlike those speaking SAE, exhibit specific characteristics of the grammar that contain unmarked or uninflected morphology. Some of these same characteristics are found in the language of children with SLI. Accordingly, using morphology to identify SLI in child AAE speakers presents a problem. Specifically, some of the morphological differences found in the language of children with SLI may not be due to perceptual differences, missing features, deficit agreement systems, or an extended optional infinitives period. Rather, morphological differences may be due to an inability to create syntactically complex utterances. That is, some of the morphological differences found in the language of children with SLI may be due to an underlying deficit involving certain syntactic operations. Therefore, syntactic explanations for the morphological differences found in the dialect of children speaking AAE may provide additional diagnostic support for identifying SLI because studies have found that children with SLI have difficulty with syntax.

A study done by van der Lely (1998) suggested that the linguistic characteristics found in the language of children with grammatical SLI might reflect problems with the syntactic computational system, which includes problems with the operations involving syntactic movement. Accordingly, some children with SLI may exhibit difficulties with syntactic movement operations, which notably reduce the complexity of grammar. Specifically, structurally complex grammar includes *wh-* questions, and passives, which necessitate syntactic movement operations. Deficits underlying such grammatical structures contribute to the general syntactic simplicity of the utterances of children with SLI. The results of the current study suggest that negative concord is represented and interpreted in the grammar similarly to *wh-* questions, which involve similar movement operations. Therefore, if a child has difficulty in comprehending questions, that child may also have difficulty comprehending

negative concord. Connecting negative concord with other syntactic operations involving movement may have implications for identifying SLI particularly in child AAE speakers.

Comprehension data may provide a more effective way of investigating children's difficulties with language, especially data from child AAE speakers compared to production data. There are a number of syntactic rules and regulations that characterize AAE grammar and account for the great variability in the use of AAE (Craig & Washington, 1994). Examination of the comprehension of AAE rules in a decontextualized format, such as with grammatical judgment tasks, should result in diminished variability of responses and present a more transparent observation of the child's underlying processes or knowledge of AAE grammar. This may be particularly true of complex syntax constructions involving movement operations. Craig and Washington (1994) and Craig et al. (1998) revealed that child AAE speakers with SLI had difficulty understanding complex sentences. By implication, examining production of negative concord may not show children's knowledge of the underlying processes that affect interpretation of this complex clause-level process as well as grammatical judgment tasks, because production data can vary from child to child and from dialect to dialect. Therefore, by testing comprehension skills the type and the variety of utterances found in children's expressive language might be controlled for more easily. Also, a feature such as negative concord may not be present consistently and regularly in a general conversational exchange or narrative, but a grammatical judgment task testing knowledge of negative concord may more readily provide enough data to draw some important conclusions about children's language regardless of the dialect spoken.

Lastly, negative concord is one feature of AAE that may be considered a noncontrastive feature with SAE because the properties of negative morpheme *no* appear to function similarly to indefinite morpheme *any* under operations of negation. Consequently, the underlying constraints or conditions affecting the interpretation of *no* seem to apply equally for *any* under operations negation. The results of this study revealed that negative concord is interpretable by both AAE- and SAE-speaking children. Thus, syntactic operations, rather than morphology, may be a more appropriate way of addressing those features of a child's grammar that are noncontrastive and consistent across dialects.

There are some limitations of this study that warrant discussion. These limitations include a small number of participants and a limited number of task items with some illustrative difficulty. Although there were 61 participants in this study, a larger data set would have made a more representative population sample. More participants would have provided more inferential power for interpreting performance between groups. Second, more items and better illustrated stories might have resulted in more precise responses for the sentence types and might have provided more information regarding item functioning across groups. Better stories for both sentence types might have eliminated some of the difficulty or degree of difficulty with interpreting true double negatives.

Further exploration of negative concord is needed with a larger sample of typically developing, as well as with language impaired, child AAE speakers. Future directions include extending this study to include investigation of other negative morphology that would entail negative concord (e.g., negative indefinites, such as *no one, nobody, nothing*) and true double negation (e.g., derivational morphemes or negative prefixes, such as *un-* and *dis-*) to further document specific feature functioning and the possibility of double negative sentence types, specifically negative concord as a clinical marker for identifying SLI in child AAE speakers.

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References

Bellugi, U. (1967). *The acquisition of negation*. Unpublished doctoral dissertation, Graduate School of Education, Harvard University, Cambridge, MA.

Brown, R. (1973). *A first language: The early stages*. Cambridge, MA: Harvard University Press.

Chomsky, N. (1986). *Barriers*. Cambridge, MA: MIT Press.

Coles, D. (1998). *Barrier constraints on negative concord in African American English*. Unpublished doctoral dissertation, University of Massachusetts, Amherst.

Craig, H., & Washington, J. (1994). The complex syntax skills of poor, urban, African-American preschoolers at

school entry. *Language, Speech, and Hearing Services in Schools, 25*, 181–190.

Craig, H., Washington, J., & Thompson-Porter, C. (1998). Performances of young African-American children on two comprehension tasks. *Journal of Speech, Language, and Hearing Research, 41,* 445–457.

deVilliers, J. G. (1979). Form and function in the development of sentence negation. *Papers and Reports on Child Language Development, 17*, 57–64.

deVilliers, J. G., & Roeper, T. (1995). Relative clauses are barriers to *wh*-movement for young children. *Journal of Child Language, 22,* 389–404.

Drozd, K. F. (1993). *A unification categorical grammar of child English negation*. Unpublished doctoral dissertation, University of Arizona, Tucson.

Gerber, S. (1993). *Language-related learning disabilities: Their nature and treatment*. Baltimore: Paul H. Brookes.

Green, L. (1993). *Topics in African American English: The verb system analysis*. Unpublished doctoral dissertation, University of Massachusetts, Amherst.

Haegeman, L. (1995). *The syntax of negation*. Cambridge, MA: Cambridge University Press.

Haynes, W., & Moran, M. (1989). A cross-sectional developmental study of final consonant production in southern Black children from preschool through first grade. *Language, Speech, and Hearing Services in the Schools, 20*, 400–406.

Hyter, Y. (1996). Ties that bind: The sounds of African American English. *American Speech-Language-Hearing Association Special Interest Division 14 Newsletter*, *2*, 3–6.

Jackson, J. E. (1998). *Linguistic aspect in African-American English speaking children: An investigation of aspectual* be. Unpublished doctoral dissertation, University of Massachusetts, Amherst.

Jackson, J., Ramos, E., Hall, F., Coles, D., Seymour, H., Dickey, M., et al. (1996). They be taggin', don't they? The acquisition of invariant *be*. In A. Stringfellow, D. Cahana-Amitay, E. Hughes, & A. Zukowski (Eds.), *BUCLD 20 Proceedings 1* (pp. 364–373). Somerville, MA: Casacadila Press.

Johnson, V. E. (2001). *Fast mapping verb meaning from argument structure*. Unpublished doctoral dissertation, University of Massachusetts, Amherst.

Jou, J. (1988). The development of comprehension of double negation in Chinese children. *Journal of Experimental Child Psychology*, *45*, 457–471.

Klima, E. S., & Bellugi, U. (1973). Syntactic regularities in the speech of children. In C. A. Ferguson & D. I. Slobin (Eds.), *Psycholinguistics papers* (pp. 333–354). Edinburgh, U.K.: Edinburgh University Press.

Martin, S. (1992). *Topics in the syntax of nonstandard English*. Unpublished doctoral dissertation, University of Maryland, College Park.

McGregor, K., Williams, D., Hearst, S., & Johnson, A. (1997). The use of contrastive analysis in distinguishing difference from disorder: A tutorial. *American Journal of Speech-Language Pathology, 6*(3), 45–56.

Mufwene, S., Rickford, J., Bailey, G., & Baugh, J. (Eds.). (1998). *African-American English: Structure, history, and use*. New York: Routledge.

Oetting, J., & McDonald, J. L. (2001). Nonmainstream dialect use and specific language impairment. *Journal of Speech, Language, and Hearing Research, 44*, 207–223.

Owens, R. (1996). *Language development: An introduction* (4th ed.). Boston: Allyn and Bacon.

Paul, R. (2001). *Language disorders from infancy through adolescence: Assessment and intervention*. St. Louis, MO: Mosby.

Pollock, K., Bailey, G., Berni, M., Fletcher, D., Hinton, L., Johnson, I., & Weaver, R. (1998, November). *Phonological characteristics of African American Vernacular English (AAVE): An updated feature list*. Seminar presented at the convention of American Speech-Language-Hearing Association, San Antonio, TX.

Progovac, L. (1994). *Negation and positive polarity: A binding approach*. Cambridge, MA: Cambridge University Press.

Radford, A. (1988). *Transformational grammar: A first course*. Cambridge, MA: Cambridge University Press.

Rickford, J. R., & Rickford, R. J. (2000). *Spoken soul: The story of Black English*. New York: Wiley.

Roth, F., & Spekman, N. (1989). Higher-order language processes and reading disabilities. In A. Kamhi & H. Catts (Eds.), *Reading disabilities: A developmental language perspective* (pp. 159–198). Boston: College-Hill.

Sells, P., Rickford, D., & Wasow, T. (1996). Negative concord in African American vernacular English. *Natural Language and Linguistic Theory*, *14,* 591–627.

Seymour, H., Bland, L., Champion, T., deVilliers, J. G., & Roeper, T. (1992, November). Wh- *movement in children of divergent language backgrounds*. Seminar presented at the annual convention of American Speech-Language-Hearing Association, San Antonio, TX.

Seymour, H., Bland-Stewart, L., & Green, L. (1998). Difference versus deficit in child African American English. *Language, Speech, and Hearing Services in Schools*, *29,* 96–108.

Sharpe, D., Eakin, L., Cote, M., Lacroix, G., & Macnamara, J. (1996). The acquisition of negation interpretation rules. In A. Stringfellow, D. Cahana-Amitay, E. Hughes, & A. Zukowski (Eds.), *BUCLD 20 Proceedings 2* (pp. 694–705). Somerville, MA: Casacadila Press.

Skowronski, T., & Yan, G. (1992). Cross-cultural test of an asymmetry of language knowledge dimensions: A Polish-Chinese study. *Polish Psychological Bulletin*, *23*, 263–281.

Stockman, I. (1996). The promises and pitfalls of language sample analysis as an assessment tool for linguistic minority children. *Language, Speech, and Hearing Services in Schools*, *27*, 355–366.

Stockman, I., & Vaughn-Cooke, F. (1992). Lexical elaboration in children's locative action constructions. *Child Development, 63,* 1104–1125.

Stokes, N. H. (1976). *A cross sectional study of the acquisition of negation structures in Black children*. Unpublished doctoral dissertation, Georgetown University, Washington, DC.

Swaminathan, H., & Rogers, H. J. (1990). Detecting differential item functioning using logistic regression procedures. *Journal of Educational Measurement*, *27*, 361–370.

van der Lely, H. K. J. (1998). SLI in children: Movement, economy, and deficits in the computational-syntactic system. *Language acquisition, 72*(2–4), 161–192.

Washington, J. (1996). Issues in assessing the language abilities of African American children. In A. Kamhi, K. Pollock, & J. Harris (Eds.), *Communication development and disorders in African American children* (pp. 35–54). Baltimore: Paul H. Brookes.

Washington, J., & Craig, H. (1994). Dialectal forms during discourse of poor, urban, African American preschoolers. *Journal of Speech and Hearing Research, 37*, 816–823.

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