HHS Public Access

Author manuscript

Am J Speech Lang Pathol. Author manuscript; available in PMC 2015 November 10.

Published in final edited form as:

Am J Speech Lang Pathol. 2013 November ; 22(4): 604–614. doi:10.1044/1058-0360(2013/12-0122).

Children's Marking of Verbal –s by Nonmainstream English Dialect and Clinical Status

Lesli H. Cleveland[a] and **Janna B. Oetting**[b]

[a]Eastern Washington University, Cheney

[b]Louisiana State University, Baton Rouge

Abstract

Purpose—Children's marking of verbal –s was examined by their dialect (African American English [AAE] vs. Southern White English [SWE]) and clinical status (specific language impairment [SLI] vs. typically developing [TD]) and as a function of 4 linguistic variables (verb regularity, negation, expression of a habitual activity, and expression of historical present tense).

Method—The data were language samples from 57 six-year-olds who varied by their dialect and clinical status (AAE: SLI = 14, TD = 12; SWE: SLI = 12, TD = 19).

Results—The AAE groups produced lower rates of marking than did the SWE groups, and the SWE SLI group produced lower rates of marking than did the SWE TD group. Although low numbers of verb contexts made it difficult to evaluate the linguistic variables, there was evidence of their influence, especially for verb regularity and negation. The direction and magnitude of the effects were often (but not always) consistent with what has been described in the adult dialect literature.

Conclusion—Verbal –s can be used to help distinguish children with and without SLI in SWE but not in AAE. Clinicians can apply these findings to other varieties of AAE and SWE and other dialects by considering rates of marking and the effects of linguistic variables on marking.

Keywords

verbal; s; English dialects; specific language impairment

In Mainstream American English (MAE), grammar differences between children with and without specific language impairment (SLI) have been repeatedly documented (cf. Oetting & Hadley, 2009; Tager-Flusberg & Cooper, 1999). Similar comparative work examining children with and without SLI has not been completed to the same extent in other dialects of English, such as African American English (AAE) or Southern White English (SWE). One of the barriers to this work has been the apparent overlap of some grammar structures that are produced by typically developing (TD) children who speak nonmainstream dialects of English and by children with SLI who speak MAE.

Correspondence to Lesli H. Cleveland: lcleveland@ewu.edu.

Editor: Carol Scheffner Hammer

Associate Editor: Nicole Terry

Verbal –s (e.g., *Riley wears a princess dress* and *Graham has a bike*), which is typically referred to as "third person singular" in MAE, is an overlapping grammar structure (Oetting & McDonald, 2001; Seymour, Bland-Stewart, & Green, 1998; Stockman, 1996; Washington & Craig, 1994). The overlap and subsequent difficulty of examining this structure within assessment occurs because verbal –s can be zero marked or omitted in nonmainstream dialects of English, and it can also be zero marked or omitted by MAE-speaking children with SLI beyond 5 years of age, which is the age at which their TD peers are no longer producing zero-marked forms (Leonard, Camarata, Brown, & Camarata, 2004; Leonard, Camarata, Pawlowska, Brown, & Camarata, 2006; Rice & Wexler, 1996; Rice, Wexler, & Cleave, 1995). Thus, the same zero-marked forms (e.g., *Riley wear a princess dress* and *Graham have a bike*) can be produced by a child for two very different reasons—one reason relates to typical processes involving dialect differences, and the other relates to atypical processes involving a clinical language impairment (LI).

Seymour et al. (1998) referred to overlapping grammar structures, such as verbal –s, as contrastive because their use varies across different dialects of English. These researchers and others such as McGregor, Williams, Hearst, and Johnson (1997) recommended that contrastive grammar structures be excluded within language assessment. As an alternative, these researchers recommended focusing assessment on grammar structures that do not contrast across dialects. In support of this recommendation, the Diagnostic Evaluation of Language Variation (DELV) tests (i.e., risk items on the DELV: Screener [Seymour, Roeper, & de Villiers, 2003] and the DELV: Norm-Referenced [Seymour, Roeper, & de Villiers, 2005]) were designed with noncontrastive grammar structures only.

Other researchers such as Oetting and McDonald (2001) have argued that contrastive structures should not be ignored within assessment because they provide important information about how children use their dialects to communicate and how children who speak the same dialect differ as a function of their language abilities. Using data from children who spoke AAE and children who spoke SWE, Oetting and McDonald showed that a set of 35 contrastive grammar structures could be used to differentiate children with and without SLI. In fact, 90% of the children studied were correctly classified as either TD or SLI using a single discriminate analysis that included the contrastive structures. Other contrastive grammar studies have also found some statistically reliable group differences between nonmainstream English–speaking children with and without SLI (Garrity & Oetting, 2010; Oetting & Garrity, 2006; Oetting & Horohov, 1997; Oetting & Newkirk, 2008). Within these studies, the contrastive grammar structures that showed group differences included some forms of auxiliary *be*, past tense, and relative clause markers.

In the current study, we focused on verbal –s to provide more information about the utility of this contrastive structure for diagnostic purposes and more about children's use of this structure across and within different nonmainstream dialects of English. Literature to support the study came from previous studies of verbal –s marking by nonmainstream English–speaking adults and children. The adult work focused on rates of zero marking within AAE and SWE and on the ways in which at least four different linguistic variables (i.e., verb regularity, negation, expression of a habitual activity, and expression of historical present tense) influence a speaker's rates of marking within these dialects. In contrast, the

child work focused on the rates at which children with and/or without LIs overtly mark verbal –s. Unlike the adult work, the child studies have not always differentiated the types of verbal –s contexts examined, nor have they examined the effects of linguistic variables on marking or considered how linguistic contexts may (or may not) impact the verbal –s marking of children with LIs. The current study differs from previous ones by considering all verbal –s contexts that are produced by children and by examining the effects of four linguistic variables on the children's marking options.

Verbal –s Marking by Adults Who Speak Nonmainstream Dialects of English

The adult dialect literature repeatedly describes verbal –s as zero marked more often in AAE than in any other U.S. dialect of English, including SWE, and data-driven studies of adult speakers support this description (Cukor-Avila, 2001; Fasold, 1972; Green, 2002; Labov, 1969; Labov & Harris, 1986; Wolfram, 1969, 1991; Wolfram & Schilling-Estes, 1998; Wolfram & Thomas, 2002). In Labov and Harris (1986), AAE-speaking adults zero marked verbal –s > 50% of the time, with the majority zero marking this structure > 90% of the time. Wolfram (1969) also documented high rates of zero marking for verbal –s in 48 AAE speakers, although the rates were higher for the speakers who were identified as lower and upper working class (71% and 57%; n = 12 per group) than for the speakers who were identified as lower and upper middle class (10% and 1%; n = 12 per group).

Comparable rates of marking for SWE-speaking adults are more difficult to find. Wolfram and Thomas (2002) documented a 4% and 1% rate of zero marking by eight younger (15–27 years) and six older (77–94 years) White speakers from a rural enclave of North Carolina. Also, Cukor-Avila (2001) reported that only two of the five SWE adult speakers she studied from Texas zero marked verbal –s contexts. From her findings and a review of previous studies that included SWE speakers from Alabama, Louisiana, and Mississippi, Cukor-Avila concluded that zero marking of verbal –s, although present in SWE before World War II, is infrequent and perhaps even nonexistent in contemporary adult dialects of SWE.

The adult dialect literature also indicates that a speaker's marking of verbal –s is influenced by a number of linguistic variables. Two of these linguistic variables include a verb's regularity and the presence of negation within the verb clause. Fasold (1972) noted that in AAE, some irregular verbs such as *have* (e.g., *Keely has a book*) are zero marked for verbal –s less often than regular verbs (e.g., *Keely runs*), and verbs produced without negation (e.g., *Keely does*) are zero marked less often than verbs produced with negation (e.g., *Keely doesn't*). Data supporting his claims came from 12 participants who produced a 53% rate of zero marking for *has* as compared to a 65% rate for regular verbs and a 63% rate of zero marking for *does* as compared to an 88% rate for *doesn't*. Wolfram and Schilling-Estes (1998) described adult speakers of SWE as also producing higher rates of zero marking for the negated form of *do* than for other verbs.

The expression of a recurring or habitual activity is also thought to influence adult AAE and SWE speakers' marking of verbal –s. In fact, researchers such as Green (2002) and Labov and Harris (1986) posited that a primary or dual function of verbal –s in adult AAE is to

express a habitual activity rather than, or in addition to, indicating subject–verb agreement. Although limited data exist to test this hypothesis, supporting examples are available in the literature. AAE examples from Green and from Labov and Harris include *I goes to school*, *The devil haves us in a state of sin*, *I dos that*, and *She bes with us now*. As shown by these examples, overt marking of verbal –s to express a habitual activity can include first, second, and third person plural subjects. These types of utterances, along with low rates of overtly marked verbal –s contexts with third person singular subjects, provide support for the claim that verbal –s is a habitual marker rather than, or in addition to, a marker of subject–verb agreement in adult AAE. Although a similar description for verbal –s has not been posited for adult SWE, verbal –s marking with first, second, and third person plural subjects has also been documented for SWE speakers. Wolfram and Schilling-Estes's (1998) SWE examples include *Some people likes to talk a lot* and *Me and my brother gets in fights.*

Finally, the expression of historical present tense (e.g., *so I goes back to the store*) has been shown to affect adults' marking of verbal –s in personal narratives, and verbs marked for historical present tense can also include first, second, and third person subjects. *Historical present tense* reflects the use of present tense when describing an event in the past (Quirk, Greenbaum, Leech, & Svartvik, 1985). Myhill and Harris (1986) documented historical present tense use in AAE narratives and further showed verbal –s contexts to be overtly marked more often in the retelling of past events (50%) than in any other context (4%). Wolfram (1991) also listed the use of historical present tense as a feature of adult SWE.

Verbal –s With AAE- and SWE-Speaking Children With and Without SLI

Studies have also been completed with nonmainstream English–speaking children, and a number of those studies have included verbal –s within the analyses (Burns & Camarata, 2006; Craig & Washington, 2004; Horton-Ikard & Ellis Weismer, 2005; Jackson & Pearson, 2010; Johnson, 2005; Oetting & Garrity, 2006; Oetting & McDonald, 2001; Seymour et al., 1998; Thompson, Craig, & Washington, 2004; Washington & Craig, 1994; Washington, Craig, & Kushmaul, 1998). Two of these studies involved a comparison between children with and without LIs (Oetting & Garrity, 2006; Seymour et al., 1998). Seymour et al. (1998) examined children's marking of regular verbal –s using language samples from 14 AAE-speaking children, ages 5–8 years. Half of the children presented with an LI, and the others served as controls. Although the rate of overt marking by the children with LIs was lower than that of the controls (32% for LI vs. 44% for controls), the difference was not statistically significant.

Oetting and Garrity (2006) also used language samples to examine children's marking of regular verbal –s contexts. The participants included 93 children, ages 4–6 years, who spoke either AAE or SWE, one third of whom were classified as SLI. Results showed that the children's average rate of overt marking for verbal –s varied by their dialect (AAE M = 12% vs. SWE M = 83%) but not their clinical status (SLI M = 44% vs. controls M = 65%). Although the rate of overt marking by the children with SLI was lower than the rate by the controls, the difference was not statistically significant. This result is consistent with the findings of Seymour et al. (1998).

Within a treatment study, Burns and Camarata (2006) examined four AAE-speaking children's overt marking of regular verbal –s along with their use of temporal adverbs such as *always*. The children, ages 4–6 years, were classified as having SLI, and the treatment targeted verbal –s and other grammar structures. Following the adult AAE literature, this study focused on verbal –s contexts that expressed a habitual activity only. At pre- and mid-treatment, three of the four children produced adverbs to express a habitual activity (e.g., *He always eat cookies*), but by posttreatment, these children decreased their use of adverbs and increased their overt marking of verbal –s (e.g., *He eats cookies*). The fourth child, who presented with more severely impaired language skills than the others, never produced an adverb or an overtly marked verbal –s morpheme to express a habitual activity. From these findings, Burns and Camarata concluded that an LI in AAE might be indicated if a child fails to overtly mark verbal –s to express habitual activities.

Finally, Johnson (2005) completed a study of AAE-speaking children's comprehension of verbal –s as an agreement marker. The participants were 30 children, ages 4–6 years, and the stimuli involved two types of sentences: *Show me the picture where the ducks swim in the water* and *Show me the picture where the duck swims in the water*. Although the children heard one of these sentences, they were given two pictures, one showing one duck in the water and the other showing two ducks in the water. Also, all verbs started with an /s/ cluster so that the /s/ was co-articulated with the plural on the subject (e.g., *ducks swim*). In this way, the stimuli were designed to mask the plural marker on the subject. Johnson reasoned that if the AAE-speaking children understood the verbal –s morpheme as an agreement marker, they would point to the picture of one object upon hearing a sentence with a verbal –s morpheme and the picture of two objects upon hearing a sentence without it. Results showed that regardless of age, the AAE-speaking children did not complete the task at levels greater than chance. Johnson reported her findings as showing that AAE-speaking children do not interpret the verbal –s morpheme as a marker of agreement.

Conclusions by Johnson (2005) and by Burns and Camarata (2006) are interesting because they are heavily tied to the adult dialect literature, which has described the verbal –s morpheme as possibly functioning differently in AAE speakers than in MAE speakers. If this is the case for child AAE speakers (and, perhaps, for child SWE speakers), then it may explain why previous studies of verbal –s, which have focused on contexts marking agreement, have not led to group differences between children with and without LIs. A study of verbal –s marking in contexts that do and do not require subject–verb agreement is needed for exploration of this possibility. Two verbal –s contexts in adult AAE and SWE that do not require agreement include those expressing a habitual activity and those expressing historical present tense. Recall that both of these contexts can be overtly marked regardless of the person and number of the subject. Therefore, overt marking of these contexts cannot be attributed to agreement requirements.

In summary, documented differences exist in the rates at which AAE- and SWE-speaking adults mark verbal –s, and the rates of marking appear to be influenced by at least four linguistic variables (i.e., verb regularity, negation, expression of a habitual activity, and expression of historical present). There also appear to be differences in the rates at which AAE- and SWE-speaking children mark verbal –s, but more research is needed to fully

understand these differences as a function of the linguistic variables that influence AAE- and SWE-speaking adults. Finally, although two studies of verbal –s marking have failed to find statistical differences between children with and without LIs in AAE (with one also failing to find a difference in SWE), there is a need to further evaluate the diagnostic utility of this grammar structure while also considering a wider range of verbal –s contexts than has been previously examined. In the current study, we addressed these needs by examining children's marking of verbal –s by their dialect (AAE vs. SWE) and clinical status (SLI vs. TD) and as a function of four linguistic variables (verb regularity, negation, expression of a habitual activity, and expression of historical present).

Method

Participants

The data were archival and included examiner–child language samples from 57 children (for original studies, see Oetting, 1999; Oetting & Horohov, 1997; see also Oetting & Garrity, 2006; Oetting & McDonald, 2001, 2002; Ross, Oetting, & Stapleton, 2004). At the time of data collection, all of the children lived in native English-speaking homes and attended regular kindergarten in a rural parish in southeastern Louisiana. The area is situated on the Mississippi River and maintains a large port industry involving natural and synthetic products. The children's socioeconomic status was estimated by asking their parents to complete a voluntary questionnaire requesting parental education levels and occupations as well as the number of years the family had lived in the area.

Questionnaires were returned for 32 (56%) of the 57 children. Regarding education, four of the children's mothers had not completed high school, 15 had completed high school, 10 had completed 2 years of college or vocational training beyond high school, and three had completed college. Parental occupations (from both mothers and fathers) were reported to range from skilled craft, clerical, and sales groups to small business, minor professional, and technical groups. All families who returned a questionnaire also reported that they had lived in the area for more than 10 years.

Twenty-six children were classified as African American and speakers of AAE, and 31 were classified as either White (n = 30) or Asian Pacific (n = 1) and speakers of SWE. As documented in Oetting and McDonald (2002), the children's dialect type was documented through blind listener judgments of each child's language sample. The density of the children's nonmainstream English grammar structures was also estimated by asking the listeners to rate each child's dialect using a 7-point scale (1 = *no use of nonmainstream English*, 7 = *heavy use of nonmainstream English*). The AAE-speaking children's mean dialect rating was 5.59 (SD = 1.26), and the SWE-speaking children's mean dialect rating was 3.81 (SD = 0.96). Consistent with descriptions of adult AAE and SWE, the nonmainstream dialect ratings of the AAE-speaking children were higher than the ratings of the SWE-speaking children, $F(1, 55) = 36.89$, $p < .001$, $\eta_p^2 = .40$.

Across the two dialects, 26 children were classified as SLI, and 31 served as TD controls. Children classified as SLI were diagnosed as having an LI and receiving services from a school speech-language pathologist (SLP). These children presented average intelligence, as

evidenced by a standard score > −1 *SD* of the mean on the Columbia Mental Maturity Scale (CMMS; Burgemeister, Blum, & Lorge, 1972); passed a hearing screening; and scored ≤ −1 *SD* of the mean on the Peabody Picture Vocabulary Test—Revised (PPVT–R; Dunn & Dunn, 1981). Children in the TD group did not present a history of receiving speech and language services, and they scored > −1 *SD* on both the CMMS and the PPVT–R.

For descriptive purposes, all of the children also completed three subtests that make up the syntax quotient of the Test of Language Development—Primary, Second Edition (TOLD–P: 2; Newcomer & Hammill, 1988), and the Goldman Fristoe Test of Articulation (GFTA; Goldman & Fristoe, 1986). All but two children who were classified as SLI earned a standard score on the TOLD–P:2 that was < −1 *SD* of the normative mean (i.e., the two SLI scores were 89 and 91), and all but one who were classified as TD earned a standard score that was > −1 *SD* of the normative mean (i.e., TD score was 83). Finally, none of the children produced an articulation error involving final /s/ or /z/ on the GFTA, which indicated that the children's articulation abilities were adequate for examining their marking of verbal –s contexts.

Table 1 provides group profiles of the children's test scores. A 2 × 2 analysis of variance (ANOVA) with dialect (AAE vs. SWE) and clinical status (SLI vs. TD) as between-subject variables indicated that the children's test scores varied by their clinical status but not their dialect: CMMS, $F(1, 53) = 8.42$, $p < .01$, $\eta_p^2 = .14$; PPVT–R, $F(1, 53) = 105.10$, $p < .001$, $\eta_p^2 = .67$; TOLD:P–2, $F(1, 53) = 104.02$, $p < .001$, $\eta_p^2 = .66$; and GFTA, $F(1, 53) = 25.40$, $p < .001$, $\eta_p^2 = .32$. For all four tests, the scores were lower for the SLI group than for the TD group.

Language Sample Elicitation, Transcription, and Coding

Language samples were elicited from the children and were audio recorded by a graduate student or faculty member during a play session in a quiet room within each child's school. Toys used during the play session included a car garage/gas station, people, picnic/park set, Legos®, baby doll, baby care–related toys, and three pictures of children engaged in activities (e.g., fishing, visiting the doctor, buying groceries; Arwood, 1985). In our transcription and morphological coding of the samples, we adhered to the guidelines outlined by Miller and Iglesias (2004), and we used Systematic Analysis of Language Transcripts (SALT; Miller & Iglesias, 2004) software to facilitate and check the transcriptions. The total number of complete and intelligible utterances produced by each child group was 2,553 for the AAE SLI group, 2,652 for the AAE TD group, 2,777 for the SWE SLI group, and 4,613 for the SWE TD group. The number of utterances examined for each group varied in part because the number of samples included within each group varied. Also, and as discussed by Oetting and McDonald (2001), the samples came from two studies, and the samples in the first study were longer than those in the second study.

To evaluate the children's marking of verbal –s, we examined every complete and intelligible utterance in which the verbal –s morpheme could have been produced or was produced. These contexts were then coded as overtly marked or zero marked and as a function of the four linguistic variables. For analyses of verb regularity and negation, verbal –s contexts were limited to those with third person singular subjects (e.g., *she, he, it*), but for

analyses of habitual activity and historical present tense, verbal –s contexts included those with third person singular subjects and those overtly marked with first, second, and third person plural subjects (e.g., *I, you, we, they*).

For verb regularity, verbs were identified as regular (e.g., *walk, jump, see*) or irregular (i.e., *have, do, say*), and following the adult dialect literature, irregular forms of *have* and *do* included auxiliaries and main verbs. For negation, the children's productions of *don't* and *doesn't* were classified as +negation, and their productions of *do* and *does* were classified as −negation. This analysis did not include *has* and *hasn't* because there was only one token of *hasn't* in the samples. This analysis also did not include the irregular verb *say* or any regular verbs because when these verbs are expressed with negation, the negative morpheme is produced with the auxiliary rather than the verb (e.g., *She doesn't swim*).

The habitual meaning of the verbal –s contexts was determined by examining the verb phrase and the surrounding context of the utterances. All utterances with a temporal adverb or an expressed habitual activity were coded as +habitual, and all others were coded as −habitual. Examples of verb phrases coded as +habitual were *She gets whooping all the time* and *It always do.* Examples of verb phrases coded as −habitual were *The little boy wants to slide, The daddy fit in here,* and *Who want to slide on that slide?*

For historical present, the analysis was limited to regular verbs because all contexts that were classified as +historical present tense involved regular verbs except for 21 with the verb *say*. Had we included the irregular verbs, the analysis of historical present tense would have been confounded by the regularity of the verbs. When coding for historical present, we first attempted to code all verbal –s contexts as narrative or nonnarrative given that the adult literature describes historical present tense as occurring in narrative contexts. Following Labov (1972), a *narrative* was defined as having at least two clauses with a sequential ordering that could not be reversed. However, many of the children's verbal –s contexts were produced in nonnarrative or primitive narrative contexts that did not meet Labov's criterion. When this occurred, +historical present tense was determined when the surrounding context of the utterance or clause encoded past tense but the clause of the verbal –s context indicated present tense. All other verbal –s contexts were coded as −historical present. As an example, a verb that was produced by an SWE-speaking child with SLI and coded as +historical present tense was *hides.* The verb was produced while the child was telling the examiner about the movie "Home Alone." During the story, the examiner asked the child to tell her why the boy was home alone, and the child responded, *Because he was lost. Because his family was (in a different plane) on a different plane*. The examiner then asked the child to tell her what the main character did to the strangers, and the child responded, *He hides the junk, like tools up in the door.* Here, *hides* was coded as +historical present tense because of the child's earlier use of past tense in the story.

Reliability

Interrater reliability of the language sample transcriptions was examined as part of the original studies and was > 90%. Reliability for the identification of the verbal –s contexts and the coding of verb regularity, negation, habituation, and historical present tense within the samples was completed by randomly selecting 20% of the samples and having a second

graduate student independently code the verbal –s contexts using printouts from SALT. Interrater agreement of the coding ranged from 93% per sample to 100%.

Results

Frequency of Verbal –s Contexts

The study samples contained 1,145 verbal –s contexts with third person singular subjects that could be coded as overtly marked or zero marked and 14 overtly marked verbal –s contexts with first, second, or third person plural subjects, for a total of 1,159 samples. In addition, the samples contained 97 other verbal –s contexts that were excluded from the analyses. These included omission of auxiliary *has* preceding *got* (*n* = 64), overtly marked –s on verbs in noninverted *wh*-questions (*n* = 16), reduced infinitives (*n* = 8), overtly marked –s on verbs with another tense marked in the verb phrase (*n* = 6), and regularized overt marking of verbal –s with the verb *do* (*n* = 3). Although excluded from the analyses, an example of each of these contexts and a report of their frequencies for each group is provided in Appendix Table A1.

The number of verbal –s contexts that were produced by each group ranged from 196 to 501 (i.e., AAE SLI = 196, AAE TD = 215, SWE SLI = 233, SWE TD = 501). When the children's number of verbal –s contexts was divided by their total number of utterances, statistical differences were not detected in the average rates at which the groups produced verbal –s contexts within their samples: AAE SLI = .08 (*SD* = .04), AAE TD = .08 (*SD* = .04), SWE SLI = .09 (*SD* = .04), SWE TD = .11 (*SD* = .04).

Overall Rate of Overt Marking

The overall percentage of overtly marked verbal –s contexts averaged 14.07 (*SD* = 16.69) for the AAE SLI group, 21.42 (*SD* = 16.44) for the AAE TD group, 64.25 (*SD* = 16.90) for the SWE SLI group, and 89.42 (*SD* = 9.80) for the SWE TD group. A 2 × 2 ANOVA with dialect (AAE vs. SWE) and clinical status (SLI vs. TD) as between-subject variables revealed a significant main effect for dialect, $F(1, 53) = 221.98$, $p < .001$, $\eta_p^2 = .81$, and group, $F(1, 53) = 16.80$, $p < .001$, $\eta_p^2 = .24$, and a significant two-way interaction between dialect and group, $F(1, 53) = 5.05$, $p = .029$, $\eta_p^2 = .08$. Follow-up analyses of the interaction indicated that the difference between the AAE and SWE dialects held for both the SLI and TD groups: AAE SLI vs. SWE SLI, $t(24) = -7.60$, $p < .001$, $d = -2.99$, and AAE TD vs. SWE TD, $t(29) = -14.47$, $p < .001$, $d = -5.02$. However, the difference between the children with and without SLI held for only those who spoke SWE, $t(29) = -5.26$, $p < .001$, $d = -1.82$.

Rate of Overt Marking by Four Linguistic Variables

Table 2 lists the frequencies of verbal –s contexts that could be considered for each of the four linguistic variables. As can be seen, the number of verbal –s contexts varied across the linguistic variables, and for some, the number of verbal –s contexts for one or more of the child groups was low. The data were also skewed, with the AAE groups demonstrating positive skews and the SWE groups demonstrating negative skews. These findings indicate that a parametric approach to the analysis was inappropriate. Given this, we calculated

percentage data (i.e., number of overtly marked contexts/(number of overtly marked contexts + number of zero-marked contexts)) for each child when possible and then examined differences between or within the groups using nonparametric statistics. Between-group differences were examined using Mann–Whitney *U* tests, and within-group differences were examined using Wilcoxon signed-ranks tests.

Verb regularity—Table 3 presents the percentage of verbal –s contexts that were overtly marked with regular and irregular verbs. As can be seen, the rates of overt marking were higher for the regular verbs than for the irregular verbs for the AAE SLI, SWE TD, and SWE SLI groups, and the difference between these two contexts was statistically significant for the SWE groups, SLI: $Z = 2.22$, $p = .026$; TD: $Z = 2.63$, $p = .008$. The direction of the effect (regular Y irregular) differs from what has been reported in the adult literature. However, the irregular example in the adult literature was with the verb *have*. Given that *have*, *do*, and *say* are the only verbs that take irregular verbal –s marking, it could be that effects for verb regularity in the adult literature apply to *have* only. To check this possibility, we calculated the children's rates of overtly marked *have*, *do*, and *say*. As shown in Table 3, the results confirmed our hypothesis because for three of the groups (both AAE groups and the SWE TD group), the children's rates of overt marking for *have* were higher than their rates of overt marking for *do* and *say*. For both AAE groups, the children's rates of overt marking for *have* were also higher than their rates of overt marking for regular verbs.

Negation—Recall that the analysis of negation was limited to verbal –s contexts involving *do*. As shown in Table 4, the AAE TD group and both SWE groups overtly marked *do* contexts with negation at lower rates than *do* contexts without negation, and the difference was statistically significant for the SWE TD group, $Z = -2.81$, $p = .005$. Negation did not influence the verbal –s marking of the AAE-speaking children with SLI because their rate of overtly marked forms of *do* in both contexts was .00. Results also indicated that the SWE SLI group overtly marked *do* in –negation contexts at lower rates than the SWE TD group, $U = 32$, $p = .001$. No other comparisons led to within-dialect differences between the children with and without SLI.

Habitual activity—Table 5 presents the rate of verbal –s contexts that were overtly marked in contexts that were classified as +habitual and −habitual. As can be seen, the rates of overt marking for the AAE TD group and both SWE groups were lower in contexts that expressed a habitual activity than in contexts that did not, and the difference between these two contexts was statistically significant for the SWE SLI group, $Z = -2.80$, $p = .005$. In addition, in SWE but not in AAE, children with SLI overtly marked −habitual contexts at lower rates than the TD controls, $U = 60$, $p = .034$.

We next considered the 14 overtly marked verbal –s contexts that included a first, second, or third person plural subject. All but two were produced by the SWE groups (AAE TD = 2, SWE SLI = 4, SWE TD = 7); six were classified as +habitual, and eight were classified as −habitual. These findings further show that +habitual contexts were no more likely to be overtly marked with a verbal –s morpheme than −habitual contexts. The verbal –s contexts with first, second, or third person plural subjects also did not lead to differences between children with and without SLI for either dialect group because all were overtly marked.

Finally, given that temporal markers have been discussed in the literature as helping speakers express a habitual activity, we examined the children's use of these markers within +habitual contexts. Examples of temporal markers produced by the children included *always, a lot of times, all the time*, and *sometimes*. Although these markers were produced by all four child groups, they were infrequent (i.e., produced in < 25% of the contexts classified as +habitual; AAE SLI = 24%, AAE TD = 16%, SWE SLI = 18%, and SWE TD = 24%).

Historical present tense—Only 24 regular verb contexts with historical present tense were identified in the language samples, and all but one was produced by the SWE groups (AAE TD = 1, SWE SLI = 14, SWE TD = 9). Given these low numbers, we were unable to calculate percentages of marking for each child or complete statistical analyses. Nevertheless, for both SWE-speaking groups, the proportion of verbs that were overtly marked for verbal –s was higher in contexts that expressed historical present tense than in contexts that did not (SWE SLI: +historical present = 13/14 verbs = .93 overtly marked vs. −historical present = 108/141 = .77 overtly marked; SWE TD: +historical present = 9/9 verbs = 1.00 overtly marked vs. −historical present = 283/307 = .92 overtly marked). The 14 overtly marked verbal –s contexts with first, second, or third person plural subjects showed a different pattern because four were classified as historical present tense and 10 were not.

Discussion

We examined children's marking of verbal –s as a function of their nonmainstream English dialect (AAE vs. SWE) and clinical status (SLI vs. TD) and as a function of four linguistic variables (verb regularity, negation, expression of a habitual activity, expression of historical present tense). The results showed that the AAE-speaking children produced lower rates of overt marking than the SWE-speaking children. For the children who spoke SWE, rates of overt marking were also lower for the SLI group than for the TD group. Within the SWE groups, differences between those with and without SLI surfaced for all verbal –s contexts considered together, *do* contexts classified as −negation, and regular verb contexts classified as −habitual. Finally, although low numbers of verbal –s contexts made it difficult to evaluate the effects of the four linguistic variables, there was evidence of their influence on the children's marking of verbal –s. The influence was primarily demonstrated by visual inspection of the four group's data, although statistical differences were documented with both SWE groups for verb regularity, the SWE TD group for negation, and the SWE SLI group for habitual activity.

Some of the rate-based findings documented for the children studied here were consistent with findings in previous studies of adults. For example, the AAE- and SWE-speaking children differed in their rates of overt marking, and this same finding has been documented in the adult literature. That we were able to identify a dialect difference between AAE- and SWE-speaking children's rates of marking regardless of their clinical status attests to the strength of the sociolinguistic difference between these two dialects.

The rates at which the AAE-speaking children overtly marked verbal –s were also consistent with the adult literature. Labov and Harris's (1986) AAE adult speakers zero marked verbal

–s contexts > 50% of the time, and the majority of them zero marked these contexts > 90% of the time. Wolfram's (1969) lower working class adults zero marked verbal –s contexts 71% of the time. These rates of zero marking reflect a rate of overt marking that ranges from 10% to 50% for Labov and Harris's speakers and a rate of 29% for Wolfram's speakers. The AAE-speaking TD group studied here overtly marked verbal –s in regular and irregular verb contexts 22% of the time; this rate falls in line with rates reported within the adult AAE literature.

Rates of overt marking by the SWE-speaking children were also relatively consistent with—albeit slightly lower than—what has been reported in the adult literature. Recall that verbal –s contexts have been zero marked ~5% of the time or less in previous SWE studies, and this rate of zero marking reflects a ~95% or greater rate of overt marking. In comparison, the SWE-speaking TD group that was studied here overtly marked verbal –s in regular and irregular verb contexts 93% and 80% of the time, respectively, with rates dropping to 44% in negative contexts. These findings suggest that overt marking of verbal –s by SWE-speaking children occurs less often than the adult literature indicates, especially when irregular verbs and negative contexts are considered. These data also show that SWE-speaking children overtly mark verbal –s contexts at rates that are lower than the ~100% rate that has been documented for same-aged, MAE-speaking children (Rice, Wexler, & Hershberger, 1998).

Regarding the four linguistic variables, some of the evidence demonstrating their influence aligned with the adult literature. Effects of verb regularity for the AAE-speaking children were consistent with the adult literature when rates of marking for the three irregular verbs, *do*, *have*, and *say*, were considered separately. Recall that both AAE child groups presented higher rates of overt marking for the irregular verb *have* than for the irregular verbs *do* and *say* and for the regular verbs; Fasold (1972) reported a similar finding for adult AAE speakers' marking of *have*. Interestingly, the SWE TD child group also presented higher rates of overt marking for *have* than for *do* and *say*. This finding has not been discussed in the adult SWE literature, but it is consistent with the AAE literature and shows similarity across child AAE and SWE. Also, effects for negation were consistent with the adult literature, and they also showed similarity across child AAE and SWE because for both dialect groups (AAE TD, SWE SLI, and SWE TD), rates of overt marking were lower in *do* contexts with negation than without. Effects for verb regularity and negation for both child AAE and SWE are striking given the dramatic difference in the overall rates at which the AAE- and SWE-speaking children overtly marked verbal –s.

Findings that did not align with the adult literature related to the direction and magnitude of the effects that were documented for habitual activity and historical present tense. Descriptions of adult AAE speakers often discuss verbal –s as a marker to express an ongoing or habitual activity (Green, 2002; Labov & Harris, 1986). This adult literature motivated Burns and Camarata (2006) to focus their study on verbal –s contexts that expressed a habitual activity. This adult literature also led Johnson (2005) to interpret her AAE-speaking children's chance performance on a verbal –s comprehension probe as being possibly related to the habitual function of the structure rather than to its subject–verb agreement function in AAE.

Given the adult literature and these two child studies, it was surprising that the children studied here, especially those who spoke AAE, did not produce higher rates of overt marking in habitual verb contexts than in nonhabitual contexts. It was also surprising that children with and without SLI did not differ in their rates of marking for contexts that were classified as +habitual. Instead, no difference by clinical status was found in the AAE speakers, and in the SWE speakers, −habitual contexts rather than +habitual contexts led to group differences between children with and without SLI. Together, these findings caution against the practice of limiting one's analysis of verbal –s to habitual verb contexts. These findings also caution against a description of child AAE (and SWE) that characterizes verbal –s as a marker of habitual activity *rather than* a marker of subject–verb agreement. Green's (2002) characterization of verbal –s as serving a dual function—to express a habitual activity in addition to marking subject–verb agreement—remains viable for the child AAE and SWE dialects studied here; however, we would qualify this characterization by noting that children's use of verbal –s to express a habitual activity without also marking subject–verb agreement is rare. Recall that we found only 14 overtly marked verbal –s structures with first, second, or third person plural subjects, and only six indicated a habitual activity.

Analyses for historical present tense were limited by the number of verb contexts we could examine. The proportions of verbs that were overtly marked by the SWE groups were visually higher in contexts that expressed historical present tense than in those that did not, and the direction of this effect is consistent with the adult SWE literature. However, we were unable to test the statistical significance of the difference because none of the child groups produced a significant number of historical present tense contexts (i.e., total for all groups combined = 24). Given the adult AAE and SWE literature, the low numbers of historical present tense contexts identified within the data were unexpected.

Future studies are needed to determine if children's use of historical present tense increases as AAE- and SWE-speaking children age or as their production of complex narratives increases. However, an alternative hypothesis—that the use of historical present tense is receding in AAE and/or SWE as these dialects evolve—also should be explored in any future study of this narrative device. In a separate study of a different narrative structure (i.e., preterite *had* + V-*ed*, as in *Then she had called the house*) and using the same samples studied here, Ross et al. (2004) identified a number of narratives ($n \sim 70$) that included a preterite *had* + V-*ed* structure. These findings suggest that the low number of historical present tense that were identified in the current study cannot be solely tied to the children's inability to produce narratives.

Clinical Implications

The implications of the findings are fourfold. First, the current findings indicate that dialect differences involving the rates at which verbal –s is overtly marked in AAE and SWE are so robust that they can be observed in children regardless of their language abilities. Given this, SLPs should expect rate-based dialect differences between the children they serve if their caseload includes AAE- and SWE-speaking children. By extension, clinicians might also expect rate-based dialect differences among children with (and without) LI in communities where other nonmainstream dialects of English are spoken.

Second, the findings provide support for considering verbal –s within the assessment of children who speak SWE but not AAE when the goal is to identify children with LI. For AAE, verbal –s should not be used by clinicians to rule in or out an LI because the AAE-speaking children studied here overtly marked this structure at very low rates and their rates of marking did not vary by their clinical status, even when various linguistic variables such as verb regularity, negation, and so on were considered. For nonmainstream dialects of English other than AAE and SWE (and for other communities of AAE and SWE child speakers), the findings suggest that the diagnostic utility of verbal –s depends on the rate at which the TD children overtly mark the structure. Based on the findings reported here, the diagnostic utility of verbal –s will likely be low if TD children overtly mark the structure at very low rates (e.g., < 25%). Nevertheless, the findings do not indicate that verbal –s should be ignored or excluded within a speech and language evaluation of any child. Although the identification of LI is an important goal of an evaluation, additional objectives of an evaluation include documenting the strengths and weaknesses of children's language systems as related to their communication abilities and academic achievement. To accomplish these goals, verbal –s marking with different types of verbs and within a number of different linguistic contexts needs to be assessed to better understand how children use their language systems to communicate orally, read, and write.

The third implication of the findings relates to SLPs' knowledge of AAE- and SWE-speaking children's verbal –s systems. Without adequate knowledge and a solid literature base about children's dialects, clinicians may unknowingly perpetuate inaccurate or imprecise information when they are engaged in conversations with other professionals, parents, and children. Based on the findings documented here, and considering some of the previous studies (including our own), inaccurate or imprecise information about children's dialects could include describing AAE as the only nonmainstream American English dialect that zero marks verbal –s; characterizing verbal –s in AAE and SWE as a marker of habitual activity *rather than* a marker of subject–verb agreement; and discussing verbal –s in AAE and SWE as an optionally marked structure without noting children's dialect-specific rates of marking or the influence of linguistic variables on their rates of marking. In the online supplemental materials, we offer a detailed description of verbal –s marking in child AAE and SWE that is based on the current data. We hope this description can be used to guide clinical discussions and future studies of other nonmainstream English-speaking children.

Finally, it is important to revisit the 97 verbal –s contexts that were excluded from the analyses because, although infrequent, they are likely to be encountered by SLPs. The most frequently excluded context, omission of auxiliary *has* preceding *got*, was not surprising because omission of auxiliaries is a well-documented pattern of nonmainstream English (Oetting & McDonald, 2001; Washington & Craig, 1994; Wolfram, 1991; Wolfram & Schilling-Estes, 1998). Elided or omitted auxiliary *have* preceding *got* is also noted in informal English (Quirk et al., 1985). The other excluded contexts together accounted for < 3% of the children's verbal –s responses, and they were produced by all four child groups. Given this, a child's production of these structures should not be viewed as problematic unless their frequency is extraordinarily high and outside the range produced by the child's dialect community.

Limitations of the Study and Future Directions

Like many of the verbal –s studies that motivated the current one, ours was limited by the number of participants and the number of dialect varieties represented within the data. In addition, the participants who provided the dialect data were recruited from one rural area in one southern state. We recognize these limitations, but studies with a low number of participants whose sociodemographic background is well established are often necessary when language samples are explored and when the grammar structures and dialects of interest are not well described in the literature. Small group studies also help researchers explore various topics that can be further evaluated in larger studies.

Another limitation relates to the age of the archived language samples. The language samples were collected more than 15 years ago, so one may question the relevance of the findings for children who are currently receiving services by SLPs. It is well known that dialects evolve, with some grammatical structures receding and others intensifying over time (Wolfram, 2004). Moreover, there is evidence that the adult verbal –s system reviewed in the current work reflects contemporary varieties of AAE and SWE that did not exist in the same form in the early 1900s (cf. Cukor-Avila, 2001; Dubois & Horvath, 2003a, 2003b; Poplack & Tagliamonte, 1989; Schneider, 1983). Recall also that we compared our child data to previous studies of adults and found some differences. Given this, the relevance of the child AAE and SWE dialects studied here for children who are currently receiving services remains an open question that can only be answered with data from new participants. We are currently collecting new data, and we hope that other researchers will do the same.

Acknowledgments

This study was completed as part of the first author's doctoral dissertation, but some analyses were redone or narrowed to increase accuracy and improve readability. We thank the children, parents, and school personnel who participated in the study; the graduate students who collected, transcribed, and coded the language samples; and the doctoral students, Kyomi Gregory, Ryan Lee, Jessica Richardson, Andrew Rivère, Christy Seidel, and Tina Villa, who along with Brandi Newkirk-Turner, Sonja Pruitt-Lord, and Melanie Schuele, provided feedback on an earlier draft of this article.

Appendix

Appendix Table A1

Contexts that were excluded from the analyses.

	AAE		SWE	
Contexts	**SLI**	**TD**	**SLI**	**TD**
Omission of auxiliary has preceding got (e.g., *My momma Ø got a toy like this*)	21	11	14	18
Verbal –s marking on main verbs in noninverted *wh*-questions (e.g., *What this goes to*)	7	0	6	3
Reduced infinitives (e.g., *She just wanna eat it*)	3	4	0	1
Verbal –s marking with another tense marked in verb phrase (e.g., *Maybe the momma can fits*)	1	3	0	2
Regularized verbal –s marking with do (*e.g., That's what he usually /dʊz/*)	1	0	1	1
Total	33	18	21	25

References

Arwood, EL. Apricot I language kit. Portland, OR: Apricot; 1985.

Burgemeister, B.; Blum, H.; Lorge, I. Columbia Mental Maturity Scale. San Antonio, TX: The Psychological Corporation; 1972.

Burns, F.; Camarata, SM. Morphological intervention with African American English speaking children: Verbal –s; Paper presented at the American Speech-Language-Hearing Association annual convention; Miami, FL. 2006 Nov.

Craig HK, Washington JA. Grade-related changes in the production of AA English. Journal of Speech, Language, and Hearing Research. 2004; 47:450–463.

Cukor-Avila, P. Sociocultural and historical contexts of African American English. Philadelphia, PA: John Benjamins; 2001. Co-existing grammars: The relationship between the evolution of African American and White Vernacular English in the South. In S. L. Lanehart (Ed.); p. 93-128.

Dubois S, Horvath BM. The English vernacular of the Creoles of Louisiana. Language Variation and Change. 2003a; 15:255–288.

Dubois S, Horvath BM. Verbal morphology in Cajun Vernacular English. Journal of English Linguistics. 2003b; 31:34–59.

Dunn, L.; Dunn, L. Peabody Picture Vocabulary Test—Revised. Circle Pines, MN: AGS; 1981.

Fasold, RW. Tense marking in Black English. Arlington, VA: Center for Applied Linguistics; 1972.

Garrity AW, Oetting JB. Auxiliary BE production by AAE-speaking children with and without specific language impairment. Journal of Speech, Language, and Hearing Research. 2010; 53:1307–1320.

Green, L. African American English: A linguistic introduction. Cambridge, MA: Cambridge University Press; 2002.

Goldman, R.; Fristoe, M. Goldman Fristoe Test of Articulation. Circle Pines, MN: AGS; 1986.

Horton-Ikard R, Ellis Weismer S. Distinguishing African-American English from developmental errors in the language production of toddlers. Applied Psycholinguistics. 2005; 26:597–620.

Jackson JE, Pearson BZ. Variable use of features associated with African American English by typically developing children. Topics in Language Disorders. 2010; 30:135–144.

Johnson VE. Comprehension of third person singular /s/ in AAE-speaking children. Language, Speech, and Hearing Services in Schools. 2005; 36:116–124.

Labov W. Contraction, deletion, and inherent variability of the English copula. Language. 1969; 45:715–762.

Labov, W. Language in the inner city: Studies in Black Vernacular English. Philadelphia: University of Pennsylvania Press; 1972.

Labov, W.; Harris, WA. Diversity and diachrony. Philadelphia, PA: John Benjamins; 1986. Defacto segregation of Black and White vernaculars. In D. Sankoff (Ed.); p. 1-24.

Leonard LB, Camarata SM, Brown B, Camarata MN. Tense and agreement in the speech of children with specific language impairment: Patterns of generalization through intervention. Journal of Speech, Language, and Hearing Research. 2004; 47:1363–1379.

Leonard LB, Camarata SM, Pawłowska M, Brown B, Camarata MN. Tense and agreement in the speech of children with specific language impairment during intervention: Phase 2. Journal of Speech, Language, and Hearing Research. 2006; 49:749–770.

McGregor KK, Williams D, Hearst S, Johnson AC. The use of contrastive analysis in distinguishing difference from disorder: A tutorial. American Journal of Speech-Language Pathology. 1997; 6:45–56.

Miller, J.; Iglesias, A. Systematic Analysis of Language Transcripts, English and Spanish (Version 8) [Computer software]. Madison, WI: Waisman Center; 2004.

Myhill, J.; Harris, WA. Diversity and diachrony. Philadelphia, PA: John Benjamins; 1986. The use of verbal –s inflection in BEV. In D. Sankoff (Ed.); p. 1-24.

Newcomer, P.; Hammill, D. Test of Language Development—Primary, Second Edition. Austin, TX: Pro-Ed; 1988.

Oetting J. Children with SLI make use of argument structure cues to learn novel verbs. Journal of Speech, Language, and Hearing Research. 1999; 42:1261–1274.

Oetting JB, Garrity AW. Variation within dialects: A case of Cajun/Creole influence within child SAAE and SWE. Journal of Speech, Language, and Hearing Research. 2006; 49:16–26.

Oetting, JB.; Hadley, P. Morphosyntax in child language disorders. In: Schwartz, RG., editor. The handbook of child language disorders. New York, NY: Psychological Press; 2009. p. 341-364.

Oetting JB, Horohov JE. Past-tense marking by children with and without specific language impairment. Journal of Speech, Language, and Hearing Research. 1997; 40:62–74.

Oetting JB, McDonald JL. Nonmainstream dialect use and specific language impairment. Journal of Speech, Language, and Hearing Research. 2001; 44:207–223.

Oetting JB, McDonald JL. Methods for characterizing participants' nonmainstream dialect use in child language research. Journal of Speech, Language, and Hearing Research. 2002; 45:505–518.

Oetting JB, Newkirk B. Subject relatives by children with and without SLI across different dialects of English. Clinical Linguistics & Phonetics. 2008; 22:111–125. [PubMed: 18253870]

Poplack S, Tagliamonte S. There is no tense like the present: Verbal –s inflection in early Black English. Language Variation and Change. 1989; 1:47–84.

Quirk, R.; Greenbaum, S.; Leech, G.; Svartvik, J. A comprehensive grammar of the English language. London, United Kingdom: Longman; 1985.

Rice M, Wexler K. Toward tense as a clinical marker of specific language impairment in English-speaking children. Journal of Speech and Hearing Research. 1996; 39:1239–1257. [PubMed: 8959609]

Rice M, Wexler K, Cleave P. Specific language impairment as a period of extended optional infinitive. Journal of Speech and Hearing Research. 1995; 38:850–863. [PubMed: 7474978]

Rice M, Wexler K, Hershberger S. Tense over time: The longitudinal course of tense acquisition in children with specific language impairment. Journal of Speech and Hearing Research. 1998; 41:1412–1431.

Ross S, Oetting JB, Stapleton B. Preterite Had+Ved: A developmental narrative discourse marker in AAE. American Speech. 2004; 79:167–193.

Schneider EW. The origin of the verbal –s in Black English. American Speech. 1983; 58:99–113.

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

Seymour, H.; Roeper, T.; de Villiers, J. Diagnostic Evaluation of Language Variation—Screener. San Antonio, TX: Harcourt Assessment; 2003.

Seymour, H.; Roeper, T.; de Villiers, J. Diagnostic Evaluation of Language Variation—Norm Referenced. San Antonio, TX: Harcourt Assessment; 2005.

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

Tager-Flusberg H, Cooper J. Defining the phenotype of SLI. Journal of Speech, Language, and Hearing Research. 1999; 42:1275–1278.

Thompson CA, Craig HK, Washington JA. Variable production of African American English across oracy and literacy contexts. Language, Speech, and Hearing Services in Schools. 2004; 35:269–282.

Washington JA, Craig HK. Dialectal forms during discourse of urban, African American preschoolers. Journal of Speech and Hearing Research. 1994; 37:816–832. [PubMed: 7967568]

Washington JA, Craig HK, Kushmaul AJ. Variable use of African American English across two language sampling contexts. Journal of Speech and Hearing Research. 1998; 41:1115–1124.

Wolfram, W. A linguistic description of Detroit Negro speech. Washington, DC: Center for Applied Linguistics; 1969.

Wolfram, W. Dialects of American English. Englewood Cliffs, NJ: Prentice Hall Regents; 1991.

Wolfram, W. Urban African American Vernacular English: Morphology and syntax. In: Kortmann, B.; Burridge, K.; Meshtrie, R.; Schneider, EW.; Upton, C., editors. A handbook of varieties of English. Berlin, Germany: Mouton de Gruyter; 2004. p. 319-340.

Wolfram, W.; Schilling-Estes, N. American English. Malden, MA: Blackwell; 1998.

Wolfram, W.; Thomas, ER. The development of African American English. Malden, MA: Blackwell; 2002.

Table 1

Description of the participant groups: African American English (AAE) speakers and Southern White English (SWE) speakers either with speech-language impairment (SLI) or without it (typically developing [TD]).

	AAE		SWE	
Variable	**SLI (*n* = 14) *M* (*SD*)**	**TD (*n* = 12) *M* (*SD*)**	**SLI (*n* = 12) *M* (*SD*)**	**TD (*n* = 19) *M* (*SD*)**
Age in months	76.36 (6.08)	74.50 (3.85)	76.58 (8.33)	76.11 (6.04)
CMMS[a]	95.40 (5.17)	101.25 (4.22)	99.25 (6.21)	104.26 (8.80)
PPVT–R[b]	72.43 (9.38)	102.25 (13.16)	75.00 (8.28)	104.89 (11.51)
TOLD–P:2[c]	72.64 (5.98)	101.83 (10.76)	76.25 (9.36)	104.84 (13.24)
GFTA[d]	73.93 (22.93)	95.58 (6.22)	61.33 (29.28)	92.58 (13.46)

[a] Standard score on the Columbia Mental Maturity Scale, $M = 100$, $SD = 15$.

[b] Peabody Picture Vocabulary Test—Revised.

[c] Syntax quotient of the Test of Language Development—Primary, Second Edition.

[d] Percentile rank of the Goldman Fristoe Test of Articulation.

Table 2

Number of verbal –s contexts for each of the four linguistic variables: verb regularity, negation, expression of a habitual activity, and expression of historical present tense.

	AAE		SWE	
Linguistic variable	**SLI**	**TD**	**SLI**	**TD**
Verb regularity				
Regular verbs (e.g., *walk, jump, see*)	135	152	155	316
Irregular verbs (e.g., *do, have, say*)	61	63	78	185
Negation				
+Negation (e.g., *don't, doesn't*)	31	23	21	53
−Negation (e.g., *do, does*)	8	15	28	50
Expression of a habitual activity				
+Habitual (e.g., *She gets a whooping all the time*)	115	85	86	198
−Habitual (e.g., *The little boy wants to slide*)	20	67	69	118
Expression of historical present tense				
+Historical present tense (e.g., *It gets me really scared;* produced when the child is describing a past event)	0	1	14	9
−Historical present tense (e.g., *The little boy wants to slide*; produced when the child is describing an event in the present)	135	151	141	307

Table 3

Percentage of overtly marked verbal –s contexts, by verb regularity.

	AAE				SWE			
	SLI		TD		SLI		TD	
Verb regularity	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
Regular verbs	17	20	22	15	71†	28	93◈	09
Irregular verbs	08	18	22	23	37†	34	80◈	21
Have	46	51	38	52	44	48	96	11
Do	00	00	13	31	46	40	72	29
Say	00	00	32	47	83	37	70	45

Note. Like symbols indicate statistically significant differences between contexts for each group and between clinical groups within each dialect. Tests of dialect differences within the SLI and TD groups were not conducted because these differences were tested in an earlier analysis of variance.

Table 4

Percentage of overtly marked verbal –s contexts, by negation.

	AAE				SWE			
	SLI		TD		SLI		TD	
Negation	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
+Negation	00	00	06	18	33	44	44†	48
−Negation	00	00	19	38	62$^{\blacklozenge}$	42	100$^{\dagger\blacklozenge}$	00

Note. Like symbols indicate statistically significant differences between contexts for each group and between clinical groups within each dialect. Tests of dialect differences within the SLI and TD groups were not conducted because these differences were tested in an earlier analysis of variance.

Table 5

Percentage of overtly marked regular verbal –s contexts, by habitual context.

	AAE				SWE			
	SLI		TD		SLI		TD	
Habitual context	***M***	***SD***	***M***	***SD***	***M***	***SD***	***M***	***SD***
+Habitual	19	28	19	16	64[◆]	37	88	24
−Habitual	16	30	25	21	76[◆†]	30	94[†]	09

Note. Like symbols indicate statistically significant differences between contexts for each group and between clinical groups within each dialect. Tests of dialect differences within the SLI and TD groups were not conducted because these differences were tested in an earlier analysis of variance.