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## **Sociolinguistic Variation in Brown's Sarah Corpus**

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### **1. Introduction**

This paper examines the use of sociolinguistic variation in the Sarah corpus (Brown, 1973) with the goal of approaching the problem of how variable input might affect the acquisition of the target language (Miller, 2007; Miller & Schmitt, 2010). Sociolinguistic variation (Labov, 1969) is a pervasive feature in natural language. It involves the use of alternative forms in the same linguistic environment to express the same meaning and the use of variant forms is constrained by both linguistic (e.g. syntactic category, phonological context) and extralinguistic (e.g. style, SES) factors. Recent research has indicated that initially children have knowledge of only some, but not all, of the factors governing the use of the variant forms (Labov, 1989; Roberts, 1997), suggesting that children acquire both the categorical properties and the variable properties of the target language simultaneously. An important question is whether variable rules affect the acquisition of the categorical properties of the target language.

The paper is meant as a descriptive overview of Sarah and her parents' production of variable forms; however, I will raise questions in the paper about how the study of variable input on acquisition might inform our understanding of language acquisition more generally. There are several studies that use the Sarah corpus as empirical evidence yet the variable input to which she was exposed has received little attention; as such, the findings presented in this review may have implications for previous work. This paper focuses on three empirical domains: non-agreeing *don't* (1a), *ain't* (1b), and *negative concord* (1c).

- (1) a. He don't hear me (Sarah, 3;5)
- b. It ain't too big (Sarah, 5;0)
- c. I don't got no paper today (Sarah, 4;9)

The Sarah corpus contains 139 recording sessions. During all of the recording sessions, there were always 1 - 2 university research assistants present. As such, it is possible that Sarah and her parents may have produced fewer forms that were highly stigmatized. Comparing production of the three construction types may allow us to determine whether certain forms were perceived as more

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stigmatized than others. Comparing Sarah's own production of these three constructions with her input (her parents' production) will shed light on whether Sarah patterns with her parents in her usage of the variable forms or whether she produces more or less of these forms in her own speech. This paper asks the following questions:

- i. Do Sarah's parents produce stigmatized variable forms in child-directed speech?
- ii. Does Sarah pattern with her parents in the distribution of non-agreeing *don't*, *ain't*, and negative concord?
- iii. How does the use of non-agreeing *don't*, *ain't*, and negative concord change over Sarah's development?

## 2. Non-agreeing *don't*

Non-agreeing *don't*, shown in (2), is generally associated with the speech of working-class speakers (Blanton, 1974; Cheshire, 1982; Dillard, 1985; Feagin, 1979; Gramley & Patzold, 1992; Oetting & McDonald, 2001; Wolfram & Schilling-Estes, 1998; Wolfram & Christian, 1976).

- (2) a. He don't go putt putt no more (Sarah's mother, File11)  
b. And, the stupid store don't open until 9:30 (Sarah's mother, File60)  
c. She don't know what's in store for her (Sarah's mother, File131)

Recent work has also linked the use of non-agreeing *don't* to the Root Infinitive (RI) Stage in English-speaking children (Guasti & Rizzi, 2004; Schütze, 2010). This research has shown that several English-speaking children in the CHILDES database produce non-agreeing *don't* between 2 – 3 years of age, an age that is generally associated with the RI Stage. (Schütze & Wexler, 1996; Wexler, 1998, 2000, 2011). Yet a closer look at the data suggests that Sarah's use of non-agreeing *don't* is different from that of the other children and, as such, it may not be actually be related to the RI Stage. I suggest that the difference that arises between Sarah's use of non-agreeing *don't* and that of the other children is related to the input: only Sarah's parents produce non-agreeing *don't* in their own speech. In what follows I compare Sarah to Nina, as both children produce similar amounts of non-agreeing *don't* in their own speech yet their parents' production is different (with respect to non-agreeing *don't*). Throughout this section I will compare Sarah's use of *ain't*, non-agreeing *don't*, and negative concord to Nina's use (Suppes, 1974), as Nina was clearly from a home where standard English was spoken. It is possible that the other children in previous work on non-agreeing *don't* and the RI Stage may have been exposed to nonstandard forms in the input.<sup>1</sup>

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<sup>1</sup> Ross produces some nonstandard forms in his own speech (one token of *ain't* at 4;1 years of age and his younger brother Marky also produces this form) and

In order to examine the use of *don't* and *doesn't* in the corpus, I carried out automated searches (using the CHILDES KWAL command on the \*tiers) of *don't* and *doesn't* and then went through the output files by hand filtering out only those tokens that had an overt 3SG subject. Table 1 compares the use of non-agreeing *don't* in the Sarah corpus and Nina corpus, for both parents and children.

Table 1. Percentage of non-agreeing *don't* in the input and in child production.

	Parent Production		Child Production	
	don't+3SG	doesn't+3SG	don't+3SG	doesn't+3SG
<b>Sarah</b>	27 (38/140)	73 (102/140)	42 (40/95)	58 (55/95)
<b>Nina</b>	0 (0/94)	100 (94/94)	50 (65/130)	50 (65/130)

Table 1 shows that while only Sarah's, but not Nina's, parents produce non-agreeing *don't* in the input, both Sarah and Nina nonetheless produce similar amounts of non-agreeing *don't* in their own speech. This suggests that children produce non-agreeing *don't* even if they are not exposed to it in the input. However, if we examine the use non-agreeing *don't* across development, differences between Sarah and Nina begin to emerge. Table 2 shows the use of non-agreeing *don't* during the RI Stage and after the RI Stage.

Table 2. Percentage of Non-agreeing *don't* during the RI Stage.

	Before 3;0	After 3;0
	RI Stage	Post RI Stage
<b>Sarah</b>	2.17 (1/46)	97.82 (45/46)
<b>Nina</b>	97.46 (77/79)	2.53 (2/79)

Table 2 shows that only Nina, but not Sarah, uses non-agreeing *don't* during the RI Stage. Nina begins using non-agreeing *don't* at 2;1 (File12) while it is virtually absent in Sarah's production until 3;0 years of age (File42). Moreover, Nina starts out using non-agreeing *don't* almost exclusively from 2;1 to 2;4

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personal correspondence with both Ross and Brian MacWhinney indicates that Ross was exposed to nonstandard varieties of English through his best friend's family and through his classmates at school at about 3;5 years of age and on. Adam is African American and so it is not completely clear whether he was exposed to AAVE forms through friends or family. The CHILDES manual reports that he was only exposed to standard forms of English; however, Schutze (2004) notes that Adam shows a high rate of finite *be* omission which he suggests may be linked to exposure to AAVE.

years of age (File20) and then afterwards, for all the recordings made at age 2;5, Nina alternates between *don't* and *doesn't* with 3SG subjects. Finally, from 2;5 on, Nina produces *doesn't* with 3SG subjects almost exclusively, with only one token of non-agreeing *don't* at 3;0 and another at 3;2. This suggests a developmental pattern where Nina starts out producing only *don't* with 3SG subjects, then both forms, and then ends up only producing the target form *doesn't*. In contrast, Sarah, from the beginning until 3;7 years of age, produces both forms *don't* and *doesn't* with 3SG subjects. This period of alternating between both forms is followed by a brief period of exclusive use of *doesn't* with 3SG subjects (from 3;8 – 4;2 years of age), followed by a final period from 4;3 – 5;1 where Sarah again uses both variants, producing 28 tokens of non-agreeing *don't* during this last period. In other words, while Nina produces non-agreeing *don't* only during what is considered to be the RI Stage (until 3 years of age), Sarah does not start using non-agreeing *don't* until after the RI Stage and she continues to use it up until the last recordings (5 years of age). This difference in age of use is an indication that Sarah's use of non-agreeing *don't* is not part of the RI Stage (see Miller in prep for further discussion of the RI stage and Sarah's use of non-agreeing *don't*).

Returning to the questions in the introduction, the results indicate that Sarah's parents use non-agreeing *don't* in child-directed speech, even in this more formal context of being recorded and in the presence of university research assistants. The results also indicate that Sarah's production of non-agreeing *don't* across development is different from that of Nina's, a child exposed to an input without tokens of non-agreeing *don't* and that, unlike Nina, Sarah is variable from the outset, using both *don't* and *doesn't* interchangeably from the earliest recordings.

### 3. Use of *ain't*

The negative form *ain't* is one of the most typical and highly stigmatized features of modern English (Palacios Martínez, 2010). While pervasive in many varieties of English, there are very few studies that focus on the variable use of *ain't* in adult speakers (but see Nevins & Parrott, 2007 and also Cheshire, 1991 and Palacios Martínez, 2010 for work on British English) and no work, as far as we know, that examines variable use of *ain't* in young American English-speaking children.

In adult speech, the use of *ain't* alternates with the negative forms of the auxiliaries *have* (*haven't*, *hasn't*), *be* (*isn't*, *am not*, *aren't*), and *do* (*don't*, *doesn't*) as shown in (3a), (3b), and (3c), respectively (Nevins & Parrot 2010).

- (3) a. He ain't been home. (examples taken from Nevins & Parrot 2010)  
b. He ain't gonna go/ She ain't nice.  
c. He ain't got any.

In order to examine the use of *ain't* in the Sarah corpus, automated KWAL searches on the \*tiers for *ain't* were carried out and then filtered out by hand. The results show that Sarah produces 52 tokens of *ain't* and limits her use of *ain't* almost entirely to contexts where *be* is possible (as in 3b). Sarah produces only two tokens where *ain't* does not alternate with *be*: *That ain't taste good* (File92) and *I ain't comb my hair when I get up* (File90). By far, the most frequent subject occurring with *ain't* (and negative *be*: *isn't*, *aren't*, *am not*) in Sarah's production is the 3<sup>rd</sup> person singular (negative *be* occurred with 3SG subjects 32/33 times (i.e., *isn't*); *ain't* occurred with 3SG subjects 45/51 times). Both *ain't* and *isn't* occurred far more often with expletive subjects than with any other 3SG subject. For this reason, I focus just on 3SG subjects occurring with *isn't* or *ain't* in the discussion that follows. Table 3 shows Sarah's use of *ain't* and *isn't* when used as a copula, an auxiliary and in tag questions.

Table 3. Distribution of *ain't* and *isn't* in Sarah's speech.

<i>ain't</i> = copula <i>be</i>	<i>ain't</i> = aux <i>be</i>	<i>ain't</i> = tag <i>be</i>	<i>isn't</i> = copula	<i>isn't</i> = aux	<i>isn't</i> = tag
86.27 (44/51)	11.76 (6/51)	1.96 (1/51)	64.51 (20/31)	0 (0/31)	35.48 (11/31)

- (4) a. He *ain't/isn't* happy.                      Copula  
       b. He *ain't/isn't* working.                 Aux  
       c. He's working, *ain't/isn't* he?        Tag

The data in Table 3 indicate that while both *ain't* and *isn't* are used as copulas, only *ain't* occurs as an auxiliary and only *isn't* is used in tag questions. The use of *ain't* is virtually absent in the speech of Sarah's parents (they produce one token of *ain't* each). Because Sarah uses *ain't* so often and because her parents use other nonstandard forms (like non-agreeing *don't*), it is safe to assume that her parents also use *ain't* but were avoiding it during the recording sessions because they recognized its stigmatized status.

A closer look at Sarah's production across development shows that she begins producing *ain't* very late in acquisition. She produces her first token of *isn't* at 2;10 years of age (File32) and continues to produce *isn't* steadily until 5;0 years of age (File134). However, she doesn't begin producing *ain't* until 4;1 (File90 with a 1SG subject; File91 with a 3SG subject) but she continues to produce *ain't* with 3SG subjects steadily until 5;0 (File136). One important question is why Sarah begins producing *ain't* so late in acquisition. Is it because her parents rarely used this form with her when she was younger or is it due to the variable nature of *ain't* (the fact that it alternates with negative *be* depending on social contexts)? Unfortunately, this question is impossible to answer with the Sarah corpus because her parents did not use *ain't* during the recording sessions. Further work is needed to address this question.

A second finding is that Sarah's use of negative *isn't* and *ain't* does not appear to be in free variation. Instead, the data suggest that at least initially

(from 2;0 – 4;0) Sarah uses *isn't* mainly in declarative sentences, producing very few tokens of interrogatives. However, once Sarah begins producing *ain't* at 4;0 years of age, there appears to be a shift where she stops producing *isn't* in declaratives and instead uses *ain't* exclusively in declaratives and, at the same time, almost exclusively produced *isn't* in interrogatives (tag questions). Most, but not all, of Sarah's interrogatives with *isn't* are tag questions (*isn't it?*); only one of the interrogatives produced by Sarah was with *ain't*, which was also a tag question (*ain't it?* File135). Table 4 illustrates this finding.

Table 4. Sarah's production of *isn't* and *ain't* in declarative and interrogative sentences according to age.

AGE	<i>isn't</i>		<i>ain't</i>	
	Declarative	Interrogative	Declarative	Interrogative
2;0 – 4;0	94.4 (17/18)	5.6 (1/18)	0	0
4;1 – 5;0	7.1 (1/14)	92.9 (13/14)	96.2 (50/52)	3.8 (2/52)

Again, it may be the case that Sarah's parents produce *ain't* more often in declarative sentences than in tag questions. We cannot tell from this data. However, both declarative and interrogative *ain't* and *isn't* are possible in adult speech, and in some varieties of English, *ain't* is more common in interrogatives than in declaratives (Anderwald, 2002; Cheshire, 1981). Future research will undoubtedly shed light on whether the distribution of *ain't* and *isn't* found in Sarah's speech represents a categorical rule in her grammar at this stage in development or whether she is simply copying distributional patterns found in adult speech.

#### 4. Negative Concord

Negative concord involves the presence of two or more negatives in the same clause that do not cancel each other out, as illustrated in (5).

- (5) a. She didn't have no clothes (Sarah, 3;7)  
 b. They don't have that baby no more (Sarah, 4;9)

Although there are few studies on the acquisition of negative concord in nonstandard English (Coles-White, 2004; Coles-White, de Villiers, & Roeper, 2004; Henry, Maclaren, Wilson, & Finlay, 1997), this feature is typical of many nonstandard varieties of English across the world (Huddleston et al. 2004:847); however, the frequency of use differs among varieties, being variably produced in some varieties to almost categorically produced in others (like varieties of AAVE) (Howe 2005). Negative concord occurs regularly with various indefinites, including plural nouns, mass nouns, and also with adverbials. However, it has been reported that fewer dialects allow negative concord with

singular count nouns (Cheshire 1982, Labov 1972), but see Howe (2005) for some examples of this.

In order to examine the use of negative concord in the Sarah corpus, automated searches (using the CHILDES KWAL command on the \*tier) were carried out for all tokens of *no*, *no one/nobody*, *nothing*, and *none* and then all tokens involving negative concord, like those shown in (6), were extracted by hand. To arrive at a percentage of actual versus possible occurrences of use, a second KWAL search was carried out on all tokens of *any*, *anyone/anybody*, and *anything*. Then all tokens of *any* (e.g. *any*, *anything*, *anyone/anybody*) that were in a context licensed by negation and could possibly have occurred as double negative constructions if *any* were changed to a negative (e.g. *no*, *no one/nobody*, *nothing*, *none*), as illustrated in (7), were extracted by hand.

- (6) a. She don't walk no more (Sarah, 4;5)  
b. We didn't have no mask (Sarah, 4;3)  
c. I don't get nothing (Sarah, 5;0)

- (7) a. We didn't sing any/no songs (Sarah, 4;5)  
b. Because she don't have any/no clothes (Sarah, 4;4)  
c. I don't have any/none (Sarah, 3;9)

The results indicate that Sarah produced more constructions involving negative concord (65.43% of the time) than constructions with *any* licensed by negation (34.57% of the time). On the other hand, Sarah's parents showed the opposite pattern, producing very few constructions with negative concord when compared to Sarah.

Looking across development, the results show that Sarah begins producing both types of constructions at 3;6 years of age and continues to produce both right up through the last recordings. However, Table 5 indicates that the distribution of her usage of these constructions differs.

Table 5. Percentage of double negative and negative + *any* constructions in the Sarah Corpus.

	Sarah			Parents (mom and dad)			
<i>nothing</i>	89.47 (17/19)	<i>anything</i>	10.53 (2/19)	<i>nothing</i>	8.47 (5/59)	<i>anything</i>	91.52 (54/59)
<i>no + NP</i>	66.67 (20/30)	<i>any + NP</i>	33.33 (10/30)	<i>no + NP</i>	8.42 (8/95)	<i>any + NP</i>	91.58 (87/95)
<i>none</i>	0	<i>any</i>	100 (9/9)	<i>none</i>	0	<i>Any</i>	100 (35/35)
<i>no more</i>	77.78 (14/18)	<i>any more</i>	22.22 (4/18)	<i>no more</i>	18.42 (7/38)	<i>any more</i>	81.57 (31/38)
<i>nobody no one</i>	66.67 (2/3)	<i>anybody anyone</i>	33.33 (1/3)	<i>nobody no one</i>	0	<i>anybody anyone</i>	100 (8/8)
Total	65.43 (53/81)	Total	34.57 (28/81)	Total	8.51 (20)	Total	91.48 (215)

When comparing Sarah's use of *nothing* v. *anything*, we find that Sarah produces negative concord (e.g. *I don't get nothing*) almost categorically. However, she shows the opposite pattern when comparing *none* to *any*. In the latter case, Sarah patterns with her parents in preferring constructions like *I don't have any* over constructions like *I don't have none*. The two contexts where Sarah shows the highest amount of variable usage of double negatives and constructions with *any* licensed by negation is in her production of *no more* v. *any more* (e.g. *She don't walk no more* v. *She don't walk anymore*) and in her production of *no+NP* v. *any+NP* (e.g. *I don't want no trouble* v. *I don't want any trouble*).

There are two possible interpretations of these findings. Either Sarah is over-regularizing her use of negative concord in some contexts, using it much more often than her parents, or her parents are producing fewer tokens of negative concord because of the formality of the experimental procedure. Given the findings on *ain't* above, it appears that the formality of the task may have contributed to their avoidance of negative concord constructions. Further work is needed to determine how Sarah's usage of negative concord compares to that of children who are not exposed to negative concord in the input.

## 5. Discussion and Conclusion

The goal of this paper was to examine the use of sociolinguistic variation in the input to Sarah and determine whether she also produced these forms in her own speech. There were three questions that this paper set out to answer:

- i. Do Sarah's parents produce stigmatized forms in child-directed speech?
- ii. Does Sarah pattern with her parents in the distribution of non-agreeing *don't*, *ain't*, and negative concord?
- iii. How does the use of non-agreeing *don't*, *ain't*, and negative concord change over Sarah's development?

The answer to the first question is yes. The results show that Sarah's parents produce both non-agreeing *don't* and negative concord at least some of the time in child-directed speech; however, they produce almost no tokens of *ain't*. Because Sarah produces so many tokens of *ain't* in her own speech, it seems safe to conclude that her parents also produce *ain't* in the input and are avoiding *ain't* in the more formal context of being recorded by university researchers. These findings provide some insight on the use of stigmatized forms in child-directed speech.

The second question is much harder to answer because Sarah's parents may have produced fewer tokens of the constructions under study given the formality of the task. Nevertheless, the results indicate that overall Sarah produces many more tokens of these three nonstandard constructions than her parents do.

Finally, Sarah's production of the three constructions seems to vary across development. With respect to non-agreeing *don't* and negative concord, she appears to show variable production from the earliest recordings until the last recordings. However, with *ain't*, she doesn't begin producing any tokens until 4 years of age. Moreover, the data suggest that Sarah's production of *ain't* and negative concord is constrained by linguistic context. However, no clear patterns were found for the distribution of non-agreeing *don't* v. agreeing *doesn't*. While this study is very small and the results should be interpreted cautiously, it is a first step in determining the variable nature of the input to Sarah and how that might have affected her own production patterns.

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