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Smith, J. and Durham, M. and Fortune, L. (2007) *"Mam, ma troosers is fa'in doon!" Community, caregiver and child in the acquisition of variation in Scottish dialect.* Language Variation and Change, 19 (1). pp. 63-99. ISSN 1469-8021

http://eprints.gla.ac.uk/6168/

Deposited on: 22 June 2009

"Mam, my trousers is fa'in doon!": Community, caregiver, and child in the acquisition of variation in a Scottish dialect

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ABSTRACT

Recent work on acquisition in sociolinguistic research suggests that some aspects of the structured variation found in adult speech are evident in children's speech from the very start of language acquisition, and input from the primary caregiver is crucial in this process. In this article we contribute to this research by conducting a cross-sectional analysis of the acquisition of variable forms in a Scottish dialect. Two linguistic variables are targeted in the speech of eleven children (2;10–3;6) and their primary caregivers. Quantitative analysis of over 5000 contexts of use demonstrates that one variable is conditioned by social and linguistic constraints in the speech of the caregiver and these constraints are matched by the children. In contrast, the other variable is influenced by a complex array of linguistic constraints only. We explore the ramifications of these findings for understanding the mechanisms involved in acquisition of variation from the very earliest stages.

Over the past few decades, sociolinguistic research has concentrated on the structured heterogeneity inherent in all speech and how this variation is conditioned by both internal and external linguistic constraints (e.g., Weinreich, Labov, & Herzog, 1968). The predominant focus of this research has been on adolescent and adult speech[1], but what about variation at the source, that is, the acquisition of variable forms from the very youngest age, as shown in (1)?

(1) Mam my tr [ʌʉ]sers *is* fa'in d [u:] n…they*'re* too big. (Kieran 3;3)

Chambers (2003:174) made the common-sense observation that "when children acquire their mother tongues, they evidently acquire the local variants and the

norms of their usage too." Moreover, Roberts and Labov (1995:101) suggested that form/function asymmetries such as those in (1) are not inherently difficult to deal with as "children acquire variable rules at about the same time as they are acquiring related categorical rules." Chambers (2003:174) went even further, stating that, "There are no studies indicating a time gap between the acquisition of grammatical competence and the development of sociolinguistic competence." This suggests that not only does a child learn that there are, say, two forms for the word *butter*—[bʌte] and [bʌʔe]—but at the same time also "knows" when it is appropriate to use one or the other depending on the social context of use. The question is how do they acquire such knowledge? Labov implicated the primary caregiver in this process when he stated that "Linguistic variation is transmitted to children as stylistic differentiation on the formal/informal dimension ... formal speech variants are associated by children with instruction and punishment, informal speech with intimacy and fun" (Labov, 2001:437). Although these claims seem intrinsically right, the situation may be more complex. Kerswill (1996:199) pointed out that "exactly when a child acquires a feature of his or her first dialect depends on the linguistic level, the complexity of the conditioning, and the child's age." In other words, not all linguistic variables will be acquired at the same time and in the same way.

With these observations in mind, we set out to contribute to the question of how and when children acquire the complex patterns of variation witnessed in adolescent and adult speech through the analysis of caregiver and child talk in a Scottish dialect. The study aims to assess the impact of different influences on the acquisition schedule, including external effects such as caregiver input, as well as dialect specific linguistic constraints on the variation. This may shed light on the "initial state" in language variation and hence the patterns seen in later life. We first turn to previous research in this field.

PREVIOUS RESEARCH

In the vast majority of the literature on acquisition studies, variation in child speech is considered to be merely a developmental stage, wherein variable forms will be "corrected" as the acquisition process progresses towards categoricity (e.g., Brown, 1973). The speech of the caregiver is characterized by modifications at the syntactic, semantic, and phonetic level (e.g., Cross, 1977; Fernald & Simon, 1984; Ferguson, 1964; Grieser & Kuhl, 1988; Snow, 1994), and is said to be "a simpler, cleaner corpus from which to learn language" (Snow, 1995:180).[2] At the same time, there is virtually no mention of the *systematic* patterns of variation reported in adult-to-adult speech in either caregiver or child talk. Foulkes, Docherty, and Watt (2005:177) pointed out that this might in part be a result of the fact that relatively standard language varieties have been the focus of investigation. However, in recent years attention has turned to the acquisition of more nonstandard varieties, and these studies converge in showing that variation should not be considered "a by-product of the learning process, but an integral part of

acquisition itself" (Roberts, 2005:154). Just as in adult speech, variation in caregiver and child speech is conditioned by highly structured social and linguistic constraints on use. Equally important is where the results diverge, suggesting that age, caregiver input, and the type of variable under study all have an impact on how and when structured variation is acquired. The impact of external and/or internal influences may not be equal across all variables, or indeed, in all varieties.

Roberts (1994; 1997a; 1997b; 2002) examined acquisition of a number of phonetic/phonological variables by children aged 3;2 to 4;11 in South Philadelphia. For (–t, d) deletion, she reported, "children as young as three have acquired the phonological and grammatical constraints . . . [however] their mastery of the social constraints on this variable rule is far less complete" (Roberts, 1997a:358). With (-ing) on the other hand, both linguistic and social constraints were evident in 3 and 4 year olds. In contrast, Labov (1989) reported that social and stylistic constraints are acquired before articulatory and grammatical constraints with (-ing). Kovac and Adamson (1981) in their study of finite *be* deletion found that although five-year-olds had the deletion phenomenon evident in adult speech, they had not yet mastered the linguistic constraints on use. Youssef (1991:96) in a longitudinal study of verbal marking in a child (age 2;4 to 4;9) exposed to Trinidadian Creole and Standard English, found that both social and linguistic constraints are acquired at the same time. The child used Trinidadian Creole and Standard English forms from the outset, but crucially, these were "specialised to differential usage with particular addressees." She concluded that "the acquisition of stylistic awareness and the specification of appropriate linguistic behaviour to accommodate it is associated with the acquisition of forms per se" (Youssef, 1991:96, see also Youssef, 1990, 1993, 1996).

Foulkes, Docherty, and Watt (1999, 2005) looked at the speech of 40 children aged 2 to 4 in Tyneside, England, focusing on the realizations of word-medial intersonorant and word-final prevocalic (t), which is "the locus of a particularly complex pattern of sociolinguistic and phonetic variation" (Foulkes et al., 2005:185). They found that "the children demonstrate a sophisticated mastery of many aspects of the adult patterns, producing qualitatively different phonetic variants in appropriate phonological contexts" and show sensitivity to lexically restricted variants (Foulkes et al., 1999:15). However, "in order to assess how the children acquire variable forms we must take account of variability in the actual input the children receive, as well as that which characterizes the mature dialect" (Foulkes et al., 2005:178). Caregiver analysis revealed that their speech to children displays a dramatic decrease in vernacular variants compared to adult–adult speech. Moreover, higher rates of the vernacular variants were used when talking to boys rather than girls.

Roberts (2002) reported similar findings for caregiver talk from a pilot study of the pronunciation of (ay) in words such as *kite* in Memphis, Tennessee. In southern United States dialects the vernacular variant is often a long monophthong, [aː], and the more standard variant is [aɪ]. Roberts found that all four caregivers used higher rates of the standard diphthong [aɪ] when talking to their children, in com-

parison to when they are talking to another adult. In fact, one of the mothers was "especially straightforward in using C[hild] D[irected] S[peech] to instruct her child in the pronunciation of new vocabulary containing long (ay)" (Roberts, 2002:342). She concludes that in doing so, the caregivers are "taking the role of teachers of language seriously" (Roberts 2002:343), in this case by teaching their children the sociolinguistic constraints on variability from the earliest stage of language development.

Kerswill and Williams (2000) also considered both caregiver and child speech in their study of 48 children in three age groups (4, 8, 12) and their principal caregiver from Milton Keynes. They examined three variables whose sociolinguistic patterning in the south and east of England is well known: *th*-fronting, *h*-dropping, and *t*-glottaling. These showed more style shifting with the older children compared to the younger ones, leading them to the tentative conclusion that "children slowly gain sociolinguistic maturity in a manner that involves a gradual increase in the number of styles that are perceived and treated in an adult way" (Kerswill & Williams, 2000:105). Moreover, caregiver influence is much greater for 4-year-olds than among the older children (Kerswill & Williams, 2000:106). For example, in their later analysis (Kerswill & Williams, 2005:1030) they found a strong correlation between caregiver and the youngest children in the use of the (ou) vowel. These findings led them to the conclusion that "it is here that we might find clues to the initial transmission of dialect features and sociolinguistic competence" (Kerswill, 1996:181).

Henry, McLaren, Wilson, and Finlay (1997) proposed that neither caregiver input nor sociolinguistic factors could account for the different ages of acquisition of some syntactic structures. Instead, the child is sensitive to "subtle grammatical differences" (Henry et al., 1997:269), which have an impact on when a variable is acquired. Their research on negative concord showed that although rates of the vernacular form in the caregiver input were the same across two nonstandard dialects, the periods of acquisition differed substantially. With one dialect, the child simply has to learn new lexical items to acquire negative concord, and does so at around the age of 3;3. With the other dialect, the child must acquire optional parameter settings for the standard and nonstandard forms, as the variable input triggers underlying representations in the grammar that allows the child to formulate high-level rules governed by internal constraints. In this case, the child acquires the rules of negative concord much later, at around age 4;6, and only then does the child begin to match the frequencies of caregiver use.

These studies clearly demonstrate that "a complete acquisitional model demands the inclusion of all forms of language, those which are variable and those which are categorical" (Roberts, 1997a:354). However, the differing results regarding how and when variables are acquired lead to a number of specific questions:

1. Does caregiver input differ from more general community norms across all linguistic variables?
2. Are variable forms in evidence from the start of the acquisition process, that is, learned at the same time as categorical forms?
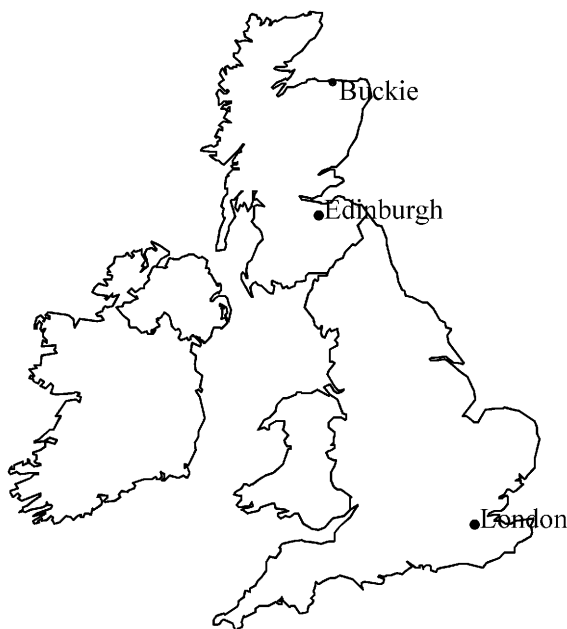
FIGURE 1. Map showing location of Buckie.

3. What effect does caregiver input have on the child's acquisition of forms, not only in terms of frequency of use but also external and internal constraints on the variability?
4. Is sociolinguistic competence acquired at the same time as grammatical competence?
5. Are all linguistic variables acquired at the same time and in the same way?

In this article we attempt to address these questions with an analysis of two linguistic variables from different areas of the grammar in a Scottish dialect. Following Foulkes et al. (2005), a further dimension will come from comparison with the adult community norms. We thus have a three-way triangular comparison of community, caregiver, and child across two different variables during a crucial stage of acquisition.

THE DATA

The data come from a small fishing town, Buckie (population 8,000), which is situated on the northeast coast of Scotland, as shown in Figure 1 (see detail in Smith, 2000a). The dialect spoken in this area exhibits a plethora of variable, but highly structured, grammatical forms (Smith, 2000a, 2000b, 2001; Smith & Tagliamonte, 1998; Tagliamonte & Smith, 2003). As the dialect is relatively isolated, both in geographical and sociocultural grounds, the speech community forms a

linguistically homogeneous group that provides a highly controlled environment for tracking the emergence of structured variation in child language.

Caregiver/child corpus

The caregiver/child corpus contains 24 dyads aged between 2;6 and 4;0 (Smith, 2003–2005). This age group was specifically targeted because it has been claimed that "the 3- to 4-year old level is a critical period for the acquisition of dialectal norms of the speech community" (Roberts & Labov, 1995:110). In addition, the effects from standard norms in the classroom context and other potential outside inputs are minimized (e.g., Kerswill, 1996). In addition, children by these ages are at a stage where full clauses are used, allowing for the analysis of morphosyntactic variation, such as agreement phenomena, negation, and tense formation.

To control the sample as much as possible, the participant selection process was guided by the following criteria: (1) both parents must have been born and raised in the community, (2) there were no referrals for speech or language therapy, (3) the mother was the main caregiver (i.e., there was no substantial time with extended family, childminders, etc.), and (4) no child was in formal nursery education.[3]

Data collection.   Collection of naturalistic data from young children poses two major problems. The first is the amount of data required. For example, Roberts (2002:336) estimated that 8–14 hours of young children's speech is required to collect data comparable to that found in 1–2 hours of adult speech. The second problem is the elicitation of vernacular data. The Observer's Paradox (Labov, 1972) is exacerbated in the case of young children, where the presence of an outsider in the home can render the child literally "speechless." To mitigate these problems, the caregivers themselves were requested to undertake a series of recorded sessions with their child, in a variety of situations in which interaction takes place, such as mealtimes, trips in the car, walks, and even visits to the bathroom (!). Lightweight minidisc recorders (Sony MZ-R700) and lapel microphones (Sony ECM-T145) were provided to allow freedom of movement and to be as unintrusive as possible. Although there are obvious disadvantages in terms of quality of sound, this data collection technique has proven to be extremely successful in eliciting large amounts of highly vernacular, interactional speech, as evidenced in the following extract between Lucy, age 3;4 (child) and her mother Lesley (caregiver). A gloss is provided in the Appendix.

Child:	I'm gan in here.
Caregiver:	Dinna go in the washin' machine!
Child:	How? How? How?
Caregiver:	Eh fit you mean how?
Child:	How? How can I nae go in the washin' machine?

Caregiver:	Cos it'll maybe go- get switched on. And then you'll be stuck in it. And you'll droon!
Child:	Fit?
Caregiver:	You'll droon.
Child:	I'll go awa', won't I? You'll be lookin' far your- your Lucy is at, won't you? And you winna ken far to get to my clais, will you?
Caregiver:	No I'll be greetin'.
Child:	I'll be gleetin' an' a'.
Caregiver:	Bet you. If you got stuck in 'ere. That wouldna be very nice, would it?
Child:	Nuh. I'd be missin' Lewis and Amanda and Katie, wouldn't I?
Caregiver:	Uhuh. Missin' a' your friends. Was you havin' fun ower at Katie's the day?
Child:	But I could phone the bobbies.
Caregiver:	Could you?
Child:	I could phone the bobbies. Kick the bobbies- kick the washin' machine, so they can get me oot.
Caregiver:	Aye.
Child:	That's a good idea.
Caregiver:	It is.
Child:	They can kick 'at bit and 'at bit. And they can get me out!

Recordings for each child/caregiver dyad amounted to ten hours of data, five hours of which are fully transcribed. The corpus currently stands at approximately 500,000 words. In this article we use a subset of the data, with 11 dyads, shown in Table 1, in which the children are arrayed from youngest to oldest.

Adult-to-adult corpus

A fully transcribed corpus of adult-to-adult community speech is stratified by age and sex, and amounts to approximately 300,000 words. This corpus was collected using sociolinguistic interviews by the first author who comes from the community in question. The data is highly informal in nature, containing narratives from the past and local gossip (see detail in Smith, 2000a). The sample is shown in Table 2.

These two data sets differ. The caregiver/child corpus represents a range of situational contexts, both formal and informal. The adult corpus, on the other hand, represents one context of use—an informal style as close to vernacular norms as can be possibly achieved within the sociolinguistic interview situation. In this case, the adult sample represents the norms of usage in everyday conver-

TABLE 1. *Caregiver/child corpus*

Caregiver's name	Child's name	Sex	Child's age at time of recording
Sheila	Ricky	M	2;10
Alice	Max	M	2;11
Mary	Isabel	F	3;0
Donna	Stephen	M	3;2
Paula	Kerry	F	3;2
Fran	Lyle	M	3;3
Kim	Annie	F	3;3
Lesley	Lucy	F	3;4
Molly	Luke	M	3;5
Gabby	Ellie	F	3;5
Ruth	Kieran	M	3;6

TABLE 2. *Adult corpus*

Age	Male	Female
22–31	8	8
50–60	7	7
80+	4	5

sation from which caregiver/child interaction can be directly compared.[4] We now turn to the two variables under analysis.

THE *HOOSE* VARIABLE

The first variable is the alternation between the diphthong /ʌʉ/ and the monophthong /uː/ as in (2), herein referred to as the *hoose* variable.

(2) a. Come [ʌʉ]t here! I can blow bubbles [uː]tside. (Ellie, 3;5)
    b. N[ʌʉ]w oh you ken n[uː]w. (caregiver)
    c. It's r[uː]nd the wrong way, no turn it r[ʌʉ]nd! (caregiver)
    d. You need to come d[uː]wn here, put that d[ʌʉ]wn! (caregiver)

This lexically conditioned variable belongs to the OUT (au) class (Wells, 1982) in words that have the orthographical form ⟨ow⟩ or ⟨ou⟩ as in *now*, *house*, and *down* (e.g., Johnston, 1997:474). It is neither phonetic nor phonological in any accepted sense; instead, it involves the variable use of two phonemes in a restricted lexical set. The alternation in present day varieties has its roots in

diachrony as it "results from an important difference in the direction taken by the fifteenth century Great Vowel Shift in the north from that taken in the midlands and south of England" (Robinson, *Concise Scots Dictionary*, 1987:xiv). More northern areas retained the original monophthong, while in the south it became a diphthong. Thus, the monophthongal variant is in fact a relic, which is considered stereotypical of Scots or more northern varieties of English (e.g., Stuart-Smith, 2003).

Previous research on the hoose *variable*

With synchronic studies of this variable, particular attention is paid to class strat-ification, style-shifting, age, and lexical conditioning. Macaulay and Trevelyan (1973)[5] in their study of native Glasgow speakers found that the variable is strat-ified by class: the lower classes using more of the monophthongal variant and the higher classes using more of the diphthong. Macaulay (1991) found the same class stratification in Ayr, southwest Scotland. However, in this data set, the mon-ophthong is *absent* in the middle-class speakers, suggesting that it is stigmatized. In addition to class stratification, Macaulay and Trevelyan (1973:56) also found a sex difference, with males using slightly higher rates of the monophthong com-pared to females in their Glasgow data. However, this extra-linguistic condition-ing "is less clear at the age of ten though it is fairly well established by the age of fifteen."

Eremeeva and Stuart-Smith's (2003:1208) findings generally replicate these results. The use of the monophthong "is still a vigorous feature of working-class speech, and in particular working-class boys," which has remained stable over the last 30 years. It also shows stylistic stratification, as the monophthong was not present in the reading list data.

Romaine's (1975, 1979) study of Edinburgh schoolchildren also revealed that males use higher rates of the local form. She too found age differentiation. The younger children—6-year-olds—used the monophthongal variant more frequently than older children. Moreover, "the younger speaker does not maintain stylistic consistency and thus both standard and non-standard forms occurs side by side" (Romaine, 1979:57).

Macafee (1994) focused on the lexical distribution of the variable in Glasgow working-class speech. She reported that seven different words—*about*, *our*, *round*, *down*, *out*, *now*, *house*—showed over 50% use of the monophthongal variant. An additional eight words were found to be variable—*mouth*, *crown*, *hour*, *Town-head*, *Southside*, *count*, *powder*, *gown*—although the monophthong was used much less with these words. In other words, the variability is subject to lexical constraints.

These findings demonstrate that this variable is stratified by class, sex, and style—it is used most by working-class males in spontaneous informal speech. It exhibits the patterning of a sociolinguistic marker (Labov, 1994:196). This, in tandem with its lexical constraints on use, make the *hoose* variable a good test site for gauging the acquisition of (socio)linguistic competence.

TABLE 3. *Overall distribution of monophthong in the caregiver and child data*

Caregivers		Children	
N	%	N	%
1498	43	1005	37

Note. Total $N = 2503$.

Circumscribing the variable context

As stated earlier, this variable belongs to the OUT class, realized orthographically as ⟨ow⟩ or ⟨ou⟩. However, as with many other lexically conditioned variables, this orthography "cannot be used as an infallible guide to membership" (Johnston, 1997:474), hence, particular lexical items do not participate in the variation. These include *shout*, *row* (an argument), *allowed*, *clown*, *cloud*, *bounce*, *tower*, *mountain*, *mount*, *loud*.[6] Moreover, which lexical items form part of this monophthong/ diphthong alternation differs from dialect to dialect. Establishing which items were part of the variable context was made easier by the fact that the first author is a native speaker of the dialect, thus each individual lexical item that appears with ⟨ow⟩ or ⟨ou⟩ orthographically was checked to see if it was indeed part of the variable context.

In those cases in which enough data were available, the first 150 tokens from the variable context were extracted from each caregiver and child. Although these numbers subsequently changed because of exclusions and/or lack of data, most speakers still have over 100 tokens. The data were then coded for a number of social and linguistic constraints that are specifically designed to shed light on the questions we put forth earlier.

Results for the hoose *variable*

We turn to the first question posed earlier: Does caregiver talk differ from general community norms, and if so, in what way?

Overall distribution of the hoose *variable.*   Use of this variable in the adult-to-adult data revealed near categorical use of the local form. From a sample of 200 tokens, only 2 appeared with the diphthong. This suggests that the monophthong represents the community norm, despite the fact that it is a relic form, which may in fact be somewhat stigmatized with certain groups of speakers. Diphthong use is restricted to, for example, representation of "outsider" speech, and thus can be hypothesized to represent a true code switch to the standard.[7] Table 3 shows the overall distribution of the monophthong across caregiver and child.
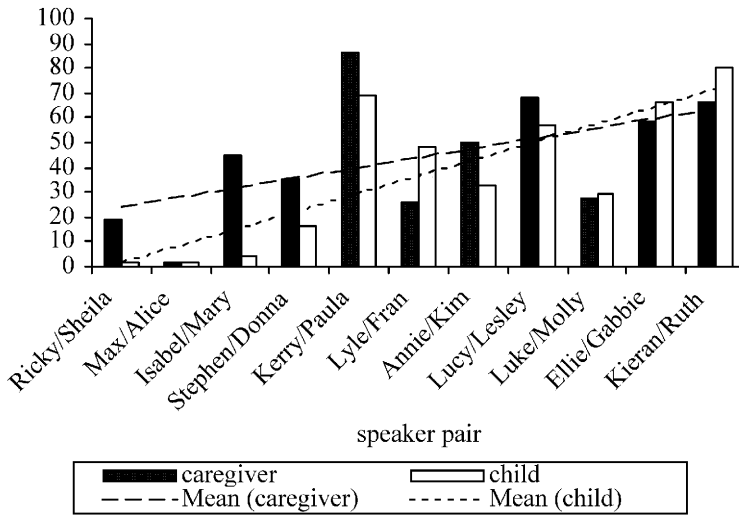
FIGURE 2. Overall distribution of monophthong by caregiver/child pairs.

When compared to the adult-to-adult categorical results, an entirely different picture emerges. There is robust variability in both caregiver and child speech, with 43% and 37%, respectively, of the local variant. This is in line with the findings of Foulkes et al. (2005), and Roberts (2002) detailed earlier, who showed that caregiver speech differs quite considerably from adult-to-adult talk. Moreover, in these data, the children's speech is very close to, and may therefore reflect, caregiver input.

Individual speaker pairs.   We now divide the data by individual speaker pairs in order to see whether all children use the variable forms and how closely the child matches the caregiver in terms of frequency of nonstandard use. This will allow us to go some way toward answering the main research questions. Figure 2 provides the overall distributions by individual caregiver/child pairs. The *N*s and percentages are shown in the Appendix, Table 8.

Two main points emerge once the data are divided in this way. First, not all children are variable: Ricky, Max, and Isabel are near-categorical in their use of the standard form. Note that these are the youngest children in the sample. However, the older children use more of the local variant. Second, this pattern is generally matched by the caregivers—the older the child, the more the caregiver uses the local monophthongal form. These findings are in line with Foulkes et al. (2005:201) in that caregiver talk "gradually becomes more similar in character to that of interadult mode as the children get older." The same is true of the children's speech in these data. The mean lines on Figure 2 highlight these trends.

Sex is said to affect the use of one variant or the other (Foulkes et al., 2005). However, these data do not partition in this way. For example, the three pairs who
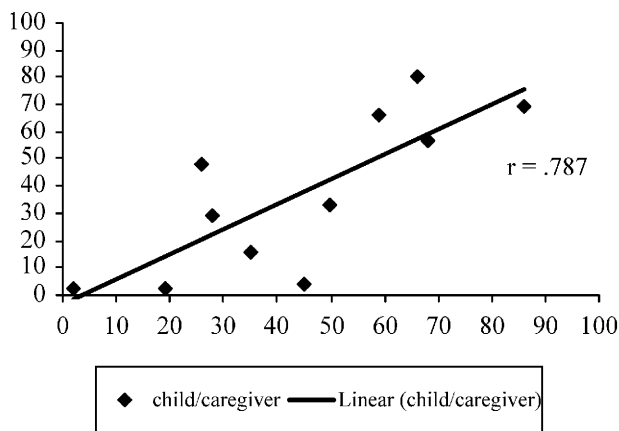
FIGURE 3. Correlation between children/caregivers.

show the lowest rates of the local form include two boys and one girl. The highest rates include two girls and one boy. Thus, the variation is conditioned by age, and not sex.

As well as an increase in use of the local form with age, Figure 2 suggests a correlation between the caregivers' use and the children's use. We now test this in order to see whether this is statistically significant. Figure 3 shows a 1-tailed Pearson's correlation test yielding a significant result ($r = .787$, $df = 9$, $p < .005$). In other words, there is a strong relationship between the caregivers and children. When the caregivers have higher rates of the local variant *hoose*, the children do too. This result is replicated in Kerswill and Williams (2005:1030) for the phonetic variable (ou) with 4-year-olds in Milton Keynes, suggesting that such correlations between caregiver and child may extend to other types of variables as well.

Stylistic constraints on use.   We now turn to the question of constraints, specifically, do children match their caregivers in terms of linguistic and social constraints on the variable use? We start by testing Labov's proposal that variation is transmitted to children by their caregivers along a stylistic continuum from formal to informal. To circumvent the problem of establishing a priori what is formal and informal, we divide the data into four contexts of use: Play as in (3a), Routine as in (3b), Teaching as in (3c), and Discipline as in (3d).[8]

(3) a. Right, I'm gan to write d[u:]n- I'm gonna write d[u:]n fit shoppin' I need. (Kerry, 3;2)
    b. I'll get this pizza [u:]t. (caregiver)
    c. No it's br[ʌʉ]n, it's br[ʌʉ]n, see it's br[ʌʉ]wn. (Stephen, 3;2)
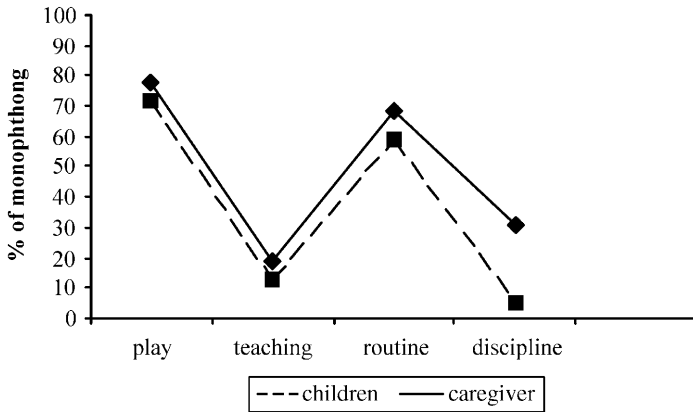   d. Behave! Get up! N[ʌʉ] behave! (caregiver)

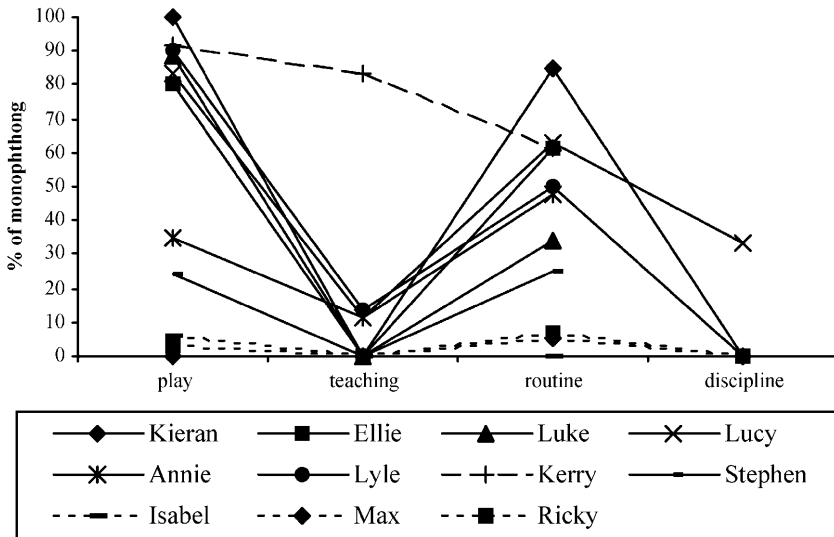FIGURE 4. % of monophthong by situational context.

FIGURE 5. % of monophthong for children by situational context.

If Labov's predictions are right, we would expect to see higher rates of use of the local variant in Routine and Play and lower rates in Teaching and Discipline. Although the data are not continuous, we present the results in line graph format for illustration purposes only. Figure 4 shows the expected pattern of use, not only in the caregiver data but in the child data also. A 1-tailed Pearson's test yields a strong correlation ($r = .963$, $df=2$, $p < .05$). In fact, the consistent patterning of use is quite remarkable, given how young the children are. But is this pattern consistent across individual speakers? Do all caregivers
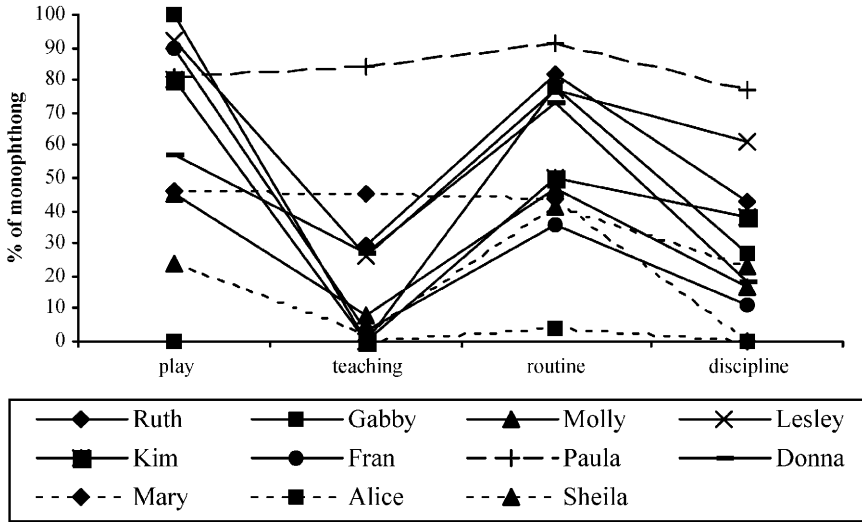
FIGURE 6. % of monophthong for caregivers by situational context.

have the constraint? Do all children? Figures 5 and 6 divide the data by individual speaker.

Figure 5 shows the use of the local variant by individual child. It shows that the youngest speakers—Isabel, Max and Ricky—have low rates across all contexts of use, as they use the diphthong nearly categorically. However, note the children who use both variants. All but one, Kerry, have acquired the stylistic constraints proposed by Labov, that is, higher rates of the local form in Routine and Play, lower rates in Teaching and Discipline. Kerry patterns completely differently. She has, for example, 83% use of the local variant in the formal Teaching context where all the other children have below 14%. Why this is the case becomes evident when we consider the caregivers' individual use. Figure 6 shows the results. Mary, Sheila, and Alice, the caregivers of the youngest, categorical children, shown with the broken lines, demonstrate rather idiosyncratic use of the local form. For example, Mary shows no differentiation between Routine, Teaching, or Play. The caregivers of the variable children, on the other hand, show the expected pattern of use. All that is, except one, Paula, who is Kerry's mother. This indicates the important role of input: Paula's use of the *hoose* variable is not stylistically stratified, and neither is her daughter's.

Lexical constraints on use.   Recall that this variable is lexically conditioned in terms of where and how often the variants appear (e.g., Macafee, 1994). In other words, it has linguistic constraints on use. To test for these constraints in the caregiver/child data, we coded separately every word that appeared more than twenty times in the data set, as in (4)–(15). Note the lexical item *now* is divided into the discourse marker use, as in (15), lexical adverb use, as in (10), and its variant *a-now* (*just now*), as in (9). In these data, the categorical speakers, Ricky,

Max, and Isabel, and the caregiver, Alice, are removed from the analysis, as their inclusion may "blur" the variable speakers results.

(4) *down*
    a. Calm d[ʌʉ]wn! (caregiver)
    b. Mam my trousers is- keep falling d[u:]wn. (Ellie, 3;5)
(5) *round*
    a. Along down down r[ʌʉ]nd round out. (caregiver)
    b. It's r[u:]nd the wrong way. (caregiver)
(6) *about*
    a. How ab[ʌʉ]t drawing an apple? (caregiver)
    b. Ken fit I had a dream ab[u:]t at night? (Lucy, 3;4)
(7) *our*
    a. Did you take [ʌʉ]r bucket of rubbish away? (caregiver)
    b. Is it like [u:]r garden? (Kerry, 3;2)
(8) *brown*
    a. Purple and br[ʌʉ]wn. (Annie, 3;3)
    b. Do you think they'll be br[u:]wn on one side? (caregiver)
(9) *anow*
    a. Fitt's that an[ʌʉ]w? (Lyle, 3;3)
    b. Oh I see my jammies an[u:]w. (Lyle, 3;3)
(10) *now* (adverb)
    a. Stop it n[ʌʉ]w! (caregiver)
    b. Eh can we do tatties n[u:]w? (caregiver)
(11) *out*
    a. You put that ain [ʌʉ]t. (Lyle, 3;3)
    b. I'm pouring it [u:]t. (Luke, 3;5)
(12) *house*
    a. I want to make [inc] h[ʌʉ]se. (Kerry, 3;2)
    b. I thought he had ain in the green h[u:]se. (caregiver)
(13) *mouth*
    a. Dinna put things in your m[ʌʉ]th. (caregiver)
    b. Into your m[u:]th with it. (caregiver)
(14) *how*
    a. H[ʌʉ]w did he break his leg anyway? (caregiver)
    b. You do na ken h[u:]w to stand still. (caregiver)
(15) *now* (discourse marker)
    a. N[ʌʉ]w, so we've got a bit missing there. (caregiver)

Figure 7 shows the results. Table 10 in the Appendix shows both the *N*s and percentages of use. A number of observations can be made from this view of the data. First, the lexical item *now* is highly differentiated according to function: the local variant *a-now*, as in (9), has the highest rate of use, followed by the adverb *now*, as in (10). In contrast, the discourse marker *now*, as in (15), is categorically realized with the diphthong. This pattern of differentiation according to lexical function is matched in the child speech.

    Second, some lexical items show very high rates of the local form (e.g., *out*, *down*), whereas others show much lower rates (e.g., *how*, *round*). Again,
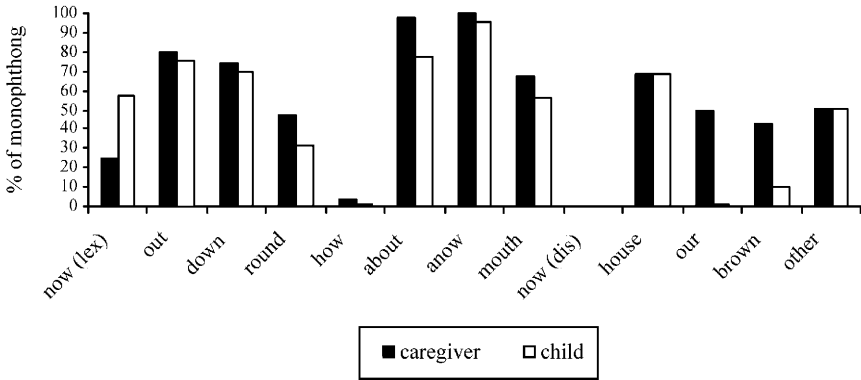
FIGURE 7. % of monophthong by lexical item.

the caregivers and children show similar rates across the individual lexical items. Compare, for example, *out*, *down*, and *mouth*. The only exceptions to these are the lexical items *brown*, *our*, and *now* (lex). The first two have very few tokens in the caregiver data ($N = 7$, $N = 10$), but after careful examination of the data, we have as yet no explanation for the much higher rates for *now* (lex) in the child data.

Thus, the children show a close match with the caregivers in terms of propensity of use of the local variant with certain lexical items and also show distinction in use according to function. In other words, they have acquired the internal constraints on use.[9]

Multivariate analysis.   However, these influencing factors are not independent of each other. Thus, we now conduct a multivariate analysis of the contribution of lexical item and situational context to the probability of the monophthong in these contexts of use. This will allow us to determine which of these contextual factors contribute statistically significant effects to the appearance of the monophthong when both are considered simultaneously. Factor weights above .5 can be considered as favoring the local form and those below .5 as disfavoring. As usual, the data are divided into caregivers and children for comparison. The near categorical speakers noted earlier are excluded from the analysis. Lexical items that have less than 20 tokens in either caregiver or child data are collapsed into "other." For the children, Discipline has been removed due to few contexts of use ($N = 19$).

Table 4 basically confirms what we have demonstrated in the distributional analyses. Note the very close matching between the caregiver and the child groups in terms of lexical item—again, if a word favors the local form in the caregivers, it does so with the children too. The only exception to this is with the adverb *now*. For situational context, across both groups, Play and Routine are favored, and Teaching disfavored. Discipline in the caregiver data also disfavors. Note too that

TABLE 4. *Variable rule analysis of the contribution of lexical item and situational context to the use of the monophthong in caregiver and child speech*

	Caregivers	Children
Corrected mean	.52	.41
Log likelihood	−484.100	−367.455
Lexical item		
Now	.23	.56
Down	.72	.71
Out	.77	.76
House	.63	.74
About	.98	.77
Round	.53	.55
How	.03	.02
Other	.52	.58
Range	*95*	*75*
Situational context		
Play	.76	.66
Routine	.67	.57
Discipline	.30	N/A
Teaching	.18	.19
Range	*58*	*47*
	Total $N = 1048$	Total $N = 714$

the hierarchy of constraints is the same for both caregivers and children in this factor group: Play > Routine > (Discipline) > Teaching.

Summary of findings for the hoose *variable*

In summary, a number of main points arise from the quantitative analysis of use of the *hoose* variable across caregiver, community, and child.

1. Caregiver input differs from general community norms. There is much more use of the standard variant in caregiver talk.
2. Children appear to start with one form only, the standard form.
3. Caregivers use lower rates of the local variant with younger children.
4. There is a significant correlation between caregivers and children with respect to frequency of use. Indeed, input appears to play a big role with this particular variable. This is highlighted by Kerry and Paula in Figures 5 and 6.
5. Once the children start using both forms, they quickly acquire the external stylistic constraints on its use as suggested by Labov. The children also show evidence of acquisition of linguistic internal constraints (matching with lexical items and differentiation according to function in the case of *now*).

Thus the data suggest that most of the children have acquired (socio)linguistic competence with this variable at this early stage. We now turn to the second variable under analysis.

-*s* IN THIRD-PERSON-PLURAL CONTEXTS

The second variable is the use of -*s* in third-person-plural contexts.

(16) a. So what *are* they doing on Tuesday in the picture? What'*s* the boy and the girl doing on Tuesday? (caregiver)
    b. *Does* teachers have the video camera on? (caregiver)
    c. There'*s* just two wheels. (Isabel, 3;0)
    d. Where's your ribs? (Kieran, 3;6)
    e. My trousers *is* falling doon. (Kieran, 3;6)
    f. Your leggies *are* cold. Your feeties *is* cold as well, *aren't* they? (caregiver)

This variable has been analyzed extensively in the sociolinguistic literature, as it occurs in many varieties of English worldwide (e.g., Cheshire, 1982; Clarke, 1997:229; Cukor-Avila, 1997; Fasold, 1972; Godfrey & Tagliamonte, 1999; Labov, Cohen, Robins, & Lewis, 1968; Poplack & Tagliamonte 1989, 2005; Schneider, 1983; Singler, 1991; Wolfram, 1969). For present purposes, we provide a brief summary only of findings from synchrony and diachrony.

Previous research on -s

The present indicative paradigm has changed substantially since Middle English. During this period, a number of surface inflections existed throughout the paradigm: -*est*, -*eth*, -*s*, and -*en* and these were geographically delimited (e.g., Barber, 1997:166–171; Denison, 1993:12/13; Fischer, van Keemenade, Koopman, & van der Wurff, 2000:70). By the 16th century, the northern form -*s*, circumscribed to third-person-singular contexts only, was the main inflection used.

In Scots and more northern varieties, inflection was not limited to third-person-singular contexts, but appeared in third-person plural, as well. Specifically, "when the subject is a noun, adjective, interrogative or relative pronoun, or when the verb and subject are separated by a clause, the verb takes the termination -*s* in all persons" (Murray, 1873:211). Thus, the split in use of -*s* is not between singular or plural, or person, but instead involves the type of subject and adjacency in these third-person-plural contexts. This pattern of use, referred to as the Northern Subject Rule, is in fact a relic dating back to the 13th century when expressions "such as, *the men syts* are not vulgar corruptions, but strictly grammatical in the Northern dialect" (Murray, 1873:212).

Despite this "rule" dating back more than seven hundred years, this very specific pattern of use is still found in present day dialects in which -*s* is used variably in plural noun phrases (NPs), but never or very rarely with the pronoun *they* (e.g., Hackenberg, 1972; Tagliamonte, Smith, & Lawrence, 2005; Wolfram & Christian, 1975). In fact, the categorical versus variable use is generally circumscribed to dialects that are either from more northern areas of the British Isles or speakers who are descendents of these peoples who have remained relatively immune to mainstream developments (e.g., Hackenberg, 1972; Montgomery, 1989; Wolfram & Christian, 1975).

Not surprisingly then, this is the pattern found in the Buckie dialect, at least in the adult-to-adult data (see e.g., Adger & Smith, in preparation). But, what about

TABLE 5. *Overall distribution of -s in third-person-plural contexts*

Community				Caregivers				Children			
pro *they*		NP		pro *they*		NP		pro *they*		NP	
N	%	N	%	N	%	N	%	N	%	N	%
1274	1	605	60	373	1	331	66	131	1	180	65

the children? How do they fare in the acquisition of this specific constraint on use? In the acquisition literature, it is reported that the particular standard inflection (i.e., on third-person-singular contexts) is acquired relatively late, as the child must "know" whether the subject is singular or plural; whether it is a first, second, or third person; and whether the event is in the present tense (e.g., Brown, 1973). Generally, "two and three year old children gradually go through a stage during which they sporadically omit . . . the third person singular present tense +s inflection on verbs, so alternating between e.g., *Daddy wants one* and *Daddy want one*" (Galasso, 2004:99). In Buckie, the children are faced with yet another constraint on use: the distinction between subject types in third-person plural. To further confound the acquisition process, they also have to learn that NP subjects appear variably with *-s*.

Social constraints may also be predicted to operate. Use of *-s* with plural NPs in other dialects is largely confined to the working classes (e.g., Wolfram & Christian, 1975), and despite it being "strictly grammatical in the Northern dialect," it does go against the rules of Standard English.

Thus we are presented with yet another ideal situation in which to test the acquisition of (socio)linguistic norms. How do the caregivers treat these forms in interaction with their children, and how in turn do they respond? We now turn to the analysis.

Circumscribing the variable context

Only third-person-plural contexts of present indicative were included. The historic present was not included and neither were cases in which it is difficult to tell whether the statement refers to past or present (e.g., with the verbs *put* and *cut*).

Results

Overall distribution of use of -s. Table 5 shows the results for *-s* in third-person-plural contexts across community, caregiver, and child. Three points emerge from overall distribution of *-s* in Table 5. First, the constraint from the 13th century, when *-s* appears in full NP contexts but not pronominal *they*, remains intact today across all three groups of speakers, even the children. Thus, these young speakers have acquired this very specific categorical vs.
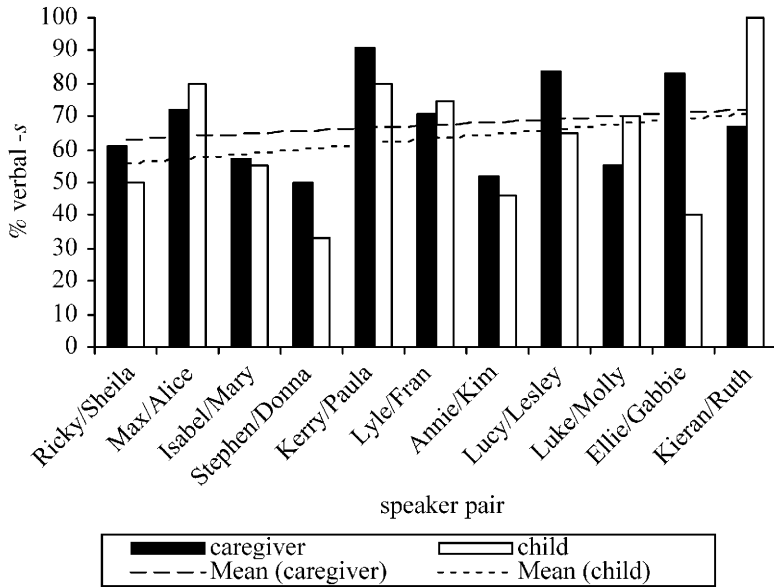
FIGURE 8. Overall distribution of verbal -s.

variable rule from the start of the acquisition process. Second, unlike the *hoose* variable, the caregivers exhibit higher rates of nonstandard use compared to general community norms: compare 66% to 60%. Thus, the prediction that caregivers might actually use more standard variants when interacting with their offspring is not borne out with this particular variable. Third, the children match very closely their caregivers' frequency of use: compare 65% to 66%. In fact, we have a situation in which the children's speech mirrors the caregivers, who in turn mirror the community norms in terms of frequency of use.

We now concentrate on the variable contexts of use only, excluding the categorical contexts of pronominal *they*.

Individual speaker.   We begin by looking at individual speaker pairs. Figure 8 shows the results. Table 11 in the Appendix shows both the *N*s and percentages of use. Recall that with the *hoose* variable, the youngest children had one form only, and it was the standard form. In sharp contrast to this, all children are variable in the use of -s with plural NPs, regardless of age. Moreover, all caregivers also use both forms, regardless of the age of their child. These trends are highlighted by the mean lines on Figure 8.

Recall that matching between caregiver and child was statistically significant for the *hoose* variable (see Figure 3). Figure 9 shows the results for verbal -s. Figure 9 shows a 1-tailed Pearson's correlation test that yields a nonsignificant result ($r = .363$, $df = 9$, $p > .10$). In other words, there is no significant matching between caregivers and their children as a group. We return to this point later.
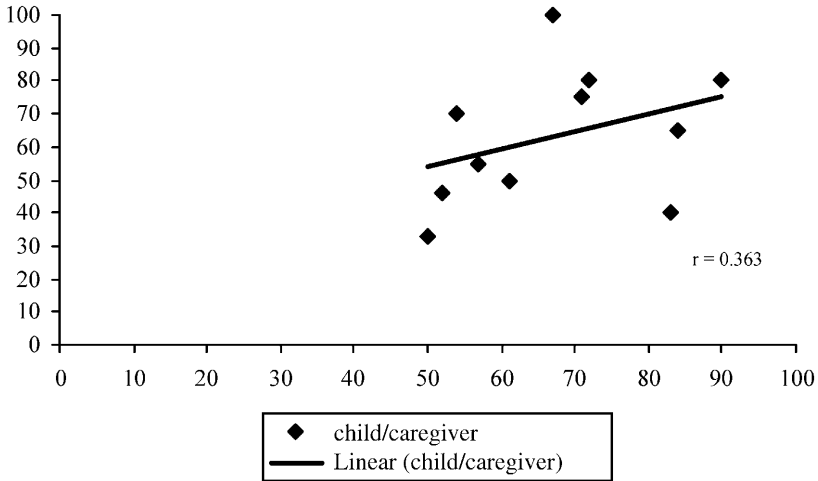
FIGURE 9. Correlation of children/caregivers for verbal -s.

Stylistic constraints.   As with the *hoose* variable, we examine when and where the nonstandard variant occurs, and again begin with the formality constraints proposed by Labov (2001:437).

Figure 10 shows the use of -s in third-person plural NP contexts across differ-ent situational contexts. We have not included Discipline here because of small Ns (see Table 12 in Appendix).

Figure 10 shows that there is a dip in Teaching with the caregivers, but nothing like as dramatic as for the *hoose* variable. The children show little or no differ-entiation in use across the three different styles.[10] In addition, there is no corre-lation between the caregivers and the children ($r = .182$, $df = 2$, $p > .10$). What then is governing the variability? We have shown that there is no matching of frequencies of use with the caregiver and no evidence of style-shifting. We have demonstrated, however, that the children have acquired the rather specific cat-egorical versus variable rule in the use of third-person contexts. Within the vari-able contexts, we explore further a number of linguistic factors that are cited as favoring the use of -s in plural NP contexts.[11]

Linguistic constraints.   Plural existentials, as in (17), show the highest rate of -s marking in all dialects studied and, in fact, use of -s in these contexts is reported in all social classes (e.g., Hay & Schreier, 2004).[12]

(17) a. *There's* jelly sweeties for yous. (Ellie, 3;5)
     b. *There are* elephants at the party. (caregiver)

Figure 11 shows the results when these contexts are separated from other NP types. (Ns and % are shown in Table 13 in the Appendix). Note that the effect

FIGURE 10. % of verbal -s by situational context.
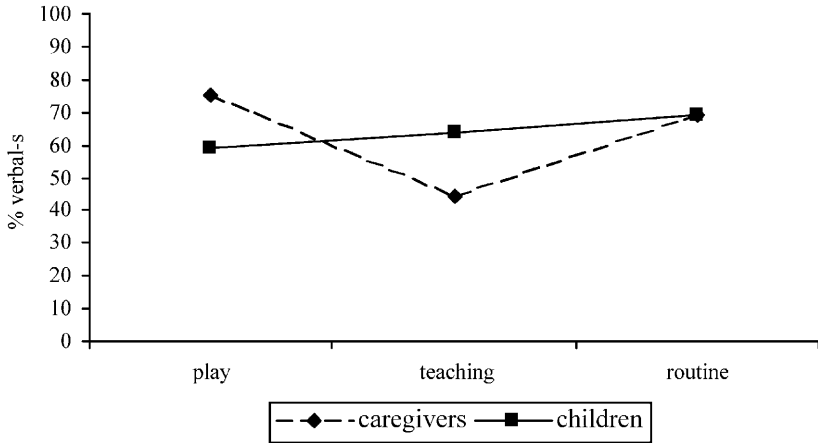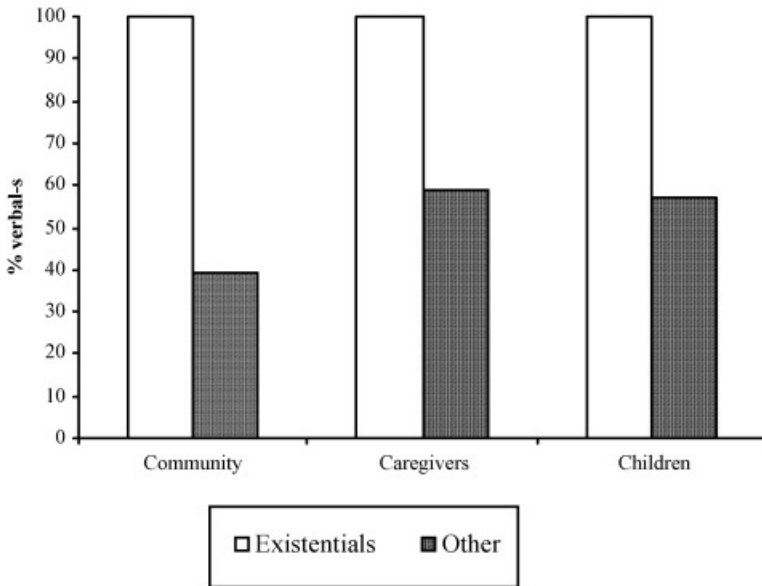

FIGURE 11. Distribution of verbal -s by subject type.

is consistent across community, caregiver, and child. There is almost categori-cal use of -s in existential contexts, but much lower rates in other types of syntactic structures. Moreover, this is not a "mistake," with the full agreement pattern not yet acquired, instead, the children are following community norms

TABLE 6. *Overall distribution of* -s *by demonstratives* this/that *versus other*

Community				Caregivers				Children			
this/that		Other		*this/that*		Other		*this/that*		Other	
N	%	N	%	N	%	N	%	N	%	N	%
20*	100	374	36	65	100	172	43	36	100	91	45

*The total number of contexts of use for the community data is comparatively low com-
pared to caregiver and child. This is explained by the different discourse styles in the data
in which caregiver/child interaction involves identification of objects using demonstra-
tive pronouns.

of use. Given their near-categorical status, existentials are now removed from
further analysis.

Perhaps not surprisingly, *here* in subject position in plural contexts, as in (18),
is also nearly categorical—from a total of 16 tokens (children $N = 4$, caregivers
$N = 12$), 15 (94%) appear with -*s*. This context is also excluded from analysis.

(18) *Here's* my bubbles. (Max, 2;11)

Another possible linguistic internal influence not reported in the literature is the
use of the demonstrative pronouns *this* and *that*. In the Buckie dialect, these
"singular" forms appear with plural subjects, in alternation with the standard
forms *these* and *those*, as in (19).

(19) a. *These are* sweeties. (Lucy, 3;4)
      b. *This is* ladies' trousers. (caregiver)
      c. Mam, *is that* stickers? (Luke, 3;5)

In fact, *this* and *that* are the majority forms used in these plural contexts. From
a total of 140 tokens of demonstrative pronouns, only 19 (14%) use the standard
form *those* or *these*. In these 19 cases, only one appears with -*s*, as in (20), that is,
they are categorically standard.

(20) Whose mincemeat pies is these? (Max, 2;11)

The opposite pattern is evident for *this/that*, however. Table 6 shows the results
for use of -*s* in the 121 contexts in which these nonstandard demonstratives are
used across the three groups of speakers. The results are conclusive—there is
categorical use of -*s* with the demonstrative pronouns *this* and *that* across the
three groups of speakers, but nearly categorical use of the standard form with
these and *those*. Thus, the children have acquired yet another constraint on the use
of -*s* in plural contexts—*that/that* triggers -*s*, *these/those* does not. Given the
lack of variability in these contexts, all pronominal demonstratives—*this*, *that*,
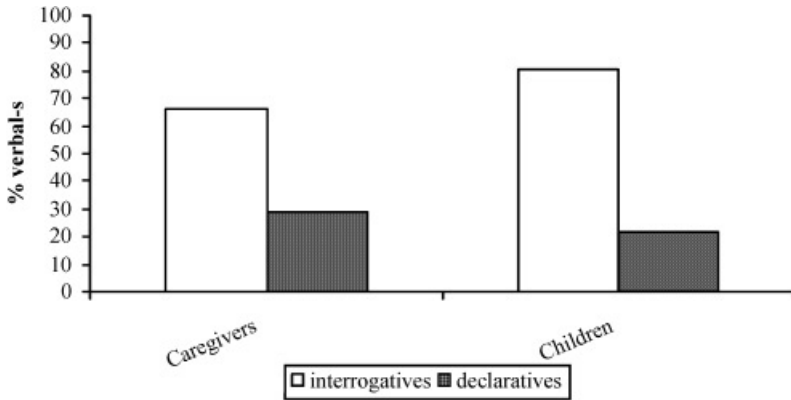*these* and *those*—are removed from further analysis.

FIGURE 12. Distribution of -s by sentence type.

We now turn to the fully variable contexts of use. Given their syntactic structure, interrogatives, as in (21–22), may also show higher rates of -s marking in comparison to declaratives. In fact, use of -s in this context has a long history as Murray (1873:212) cited question forms as being an environment in which -s is permitted in northern dialects.

(21) a. What do bees say? (caregiver)
     b. Fit *does* hens make? (caregiver)
(22) a. *Are* any mannies there? (Luke, 3;5)
     b. *Does* teachers have the video camera on? (caregiver)

In the adult data, there are only 7 examples of interrogatives, too few to be used for comparison, thus we compare caregiver and children only. We include both yes/no interrogatives, as in (22), and *wh*-interrogatives, as in (21). Figure 12 shows the results (see Table 14 in the Appendix). Again, the effect is consistent across caregiver and child, that is, there are higher rates of -s in interrogative constructions.

A last constraint reported in the literature is in the type of verb. Montgomery (1989:257) noted that Appalachian English has higher frequencies of -s marking on copula *be*, as in (23), when compared to main verbs, as in (24).[13]

(23) a. Your ains *is* upstairs. (caregiver)
     b. My paints *are* in here. (Lucy, 3;4)
(24) a. Cos the peoples *goes* shopping. (Isabel, 3;0)
     b. When the spiders *go* down there… (Kerry, 3;2)

Figure 13 shows the results across the three different groups of speakers, with *N*s and percentages shown in Appendix Table 15. The same picture emerges—higher rates of -s across the verb *be* when compared to other verbs across all groups. The
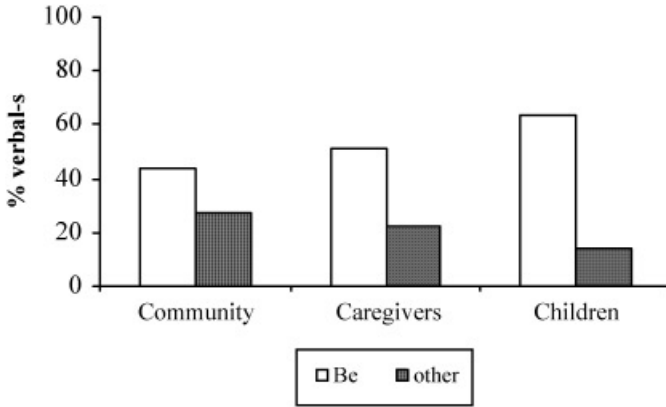
FIGURE 13. Distribution of -s by verb type.
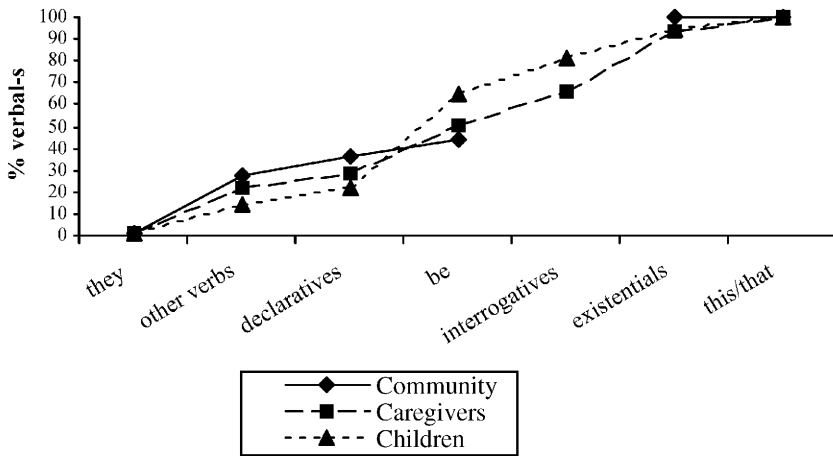
FIGURE 14. Summary of frequencies of use by linguistic constraints across community, caregiver and child.

community and caregivers do not treat these verbs equally, and neither do the children.

We have examined a number of internal constraints on the use of verbal -s across community, caregiver, and child. These reveal remarkable similarities, not only in terms of conditioning of use, but also with respect to frequencies across the different contexts. For comparative purposes, these are summarized graphically in Figure 14.

TABLE 7. *Variable rule analysis of the contribution of verb type, syntactic structure, and situational context to use of* -s *in third-person-nonpronominal contexts*

	Caregivers	Children
Corrected mean	.41	.42
Log likelihood	−95.791	−42.785
Verb type		
be	.58	.66
other	.29	.27
Range	*29*	*39*
Syntactic form		
interrogative	.78	.78
declarative	.30	.31
Range	*48*	*47*
Situational context		
Play	.51	[.42]
Routine	.62	[.58]
Teaching	.29	N/A
Range	*33*	
	Total *N* = 172	Total *N* = 91

Multivariate analysis. Having eliminated the (nearly) categorical contexts, we now evaluate the multivariate analysis of the use of *-s* in the fully variable contexts of use. Table 7 shows the results, which include *be* versus other verbs, questions versus declarative, and situational context. Teaching in the child data is removed because of small *N*s (*N* = 3). We do not include the community data, as only one point of comparison could be made (verb type). Table 7 basically confirms the distributional analysis. The children have acquired the linguistic constraints on use, but not the stylistic constraints. Note too that in the caregiver data, whereas Teaching disfavors the nonstandard form, Play neither favors nor disfavors it.

Summary of results for -s

In summary, for the morphosyntactic variable, we find the following.

1. Caregiver input is very similar to general community norms in terms of rates of use of *-s* with NPs. In addition, they use roughly the same rate of verbal *-s* regardless of the age of the child.
2. Children acquire the NP/pro constraint from the start of the acquisition process.
3. In the variable contexts, children start both with forms with NPs (*-s* and no *-s*) at the outset.
4. From the available data, children do not acquire the external stylistic constraints on its use, as suggested by Labov (i.e., formal speech variants used in formal contexts and informal speech variants in informal contexts). However, they do acquire a number of complex grammatical constraints, which are integral to both community and caregiver speech.
5. Input again plays a big role with verbal *–s*, but only in terms of internal constraints.

Having now looked in detail at a number of internal and external constraints across two variables, we are now in a position to return to our original questions.

(a) Does caregiver input differ from more general community norms across all linguistic variables?

Our results show that it depends on the linguistic variable under analysis. With the *hoose* variable, the community norm was to use the local variant nearly categorically. Caregivers differed quite considerably from this, using it only 43% of the time (Table 3). In other words, caregiver talk was highly modified towards the standard form. With the -*s* variable, on the other hand, caregiver speech showed the same rates of use as general community norms (Table 5), suggesting that there is no specific "caregiverese" with this variable.

(b) Are variable forms in evidence from the start of the acquisition process (i.e., learned at the same time as categorical forms?)

This, again, depends on the linguistic variable under analysis. With the *hoose* variable, the younger children had one form only, and it was the standard form (Figure 3). The older the children in the sample, the more use of the local form. We hypothesized from this that the children start with one categorical form and build on this. With verbal -*s* on the other hand, all children, regardless of age: (1) had acquired the variable versus categorical use of -*s* in third-person contexts, and (2) were variable in their use of -*s* with plural NP contexts (Table 5 and Figure 8).

(c) What effect does caregiver input have on the child's acquisition of forms, not only in terms of frequency of use, but also in terms of external and internal constraints on the variability?

Again, the answer differs depending on the variable. With the *hoose* variable, caregiver input had an undisputed effect, both in terms of lexical and stylistic constraints, and matching of frequencies of use (Figures 5, 6, and 7). In contrast with -*s*, there was no statistically significant matching of frequencies of use between caregiver and child (Figure 9), nor was there matching with stylistic constraints (Figure 10). However, analysis of linguistic constraints demonstrated acquisition of complex syntactic structures, and moreover, matching of frequencies of use within these differing contexts (Figures 11, 12, and 13).

(d) Is sociolinguistic competence acquired at the same time as grammatical competence?

With the *hoose* variable, yes, evidenced from the stylistic and lexical constraints the children had mastered. With -*s*, no. The children showed complex

grammatical competence in use of the variable forms, but little evidence of socio-linguistic competence.

And the final question:

(e) Are all linguistic variables acquired at the same time and in the same way?

From the evidence presented above, no.

In summary, the results for these two variables provide support for some of the claims presented in the introduction regarding the acquisition of variation, but not for others. In only one of the two variables in these data are variable forms acquired at the same time as categorical forms; in only one of the two variables is variation transmitted on a stylistic dimension; in only one of the two variables is sociolinguistic competence acquired at the same time as grammatical competence.

Discussion

How can these highly differentiated results across two linguistic variables be explained? Recall Kerswill's (1996:199) suggestion that "exactly when a child acquires a feature of his or her first dialect depends on the linguistic level, the complexity of the conditioning, and the child's age." Certainly this study dem-onstrates that not all variables are acquired in the same way or at the same time. But, are linguistic level, complexity of conditioning, and age the key factors in the acquisition process? Linguistic level differentiates the two vari-ables under analysis in these data: one is morphosyntactic and the other is the alternation between two phonemes in a particular lexical set. Their complexity of conditioning also differs. With the *hoose* variable, the child has to learn which lexical items participate in this alternation. With verbal -*s*, the child has to learn, first, how to differentiate the type of subject in third-person-plural contexts, then, within the variable contexts, make a distinction between whether it is an interrogative, declarative, or existential, and which verb it occurs with. In other words, use of -*s* involves more complex linguistic configurations in comparison to the *hoose* variable. Because of this, it might be predicted that the child would acquire the "simpler" variable first and the more "complex" one later. However, the results show the opposite. With the morphosyntactic variable, the children have both forms -*s* and no -*s*—right from the start, whereas with the *hoose* variable, the youngest children start with one form only. Age and complexity do not go hand in hand. When we consider the issue of com-plexity within verbal -*s* only, the patterns of use for social constraints appear relatively straightforward; the standard form should be used in more formal contexts. In contrast, the set of linguistic constraints on use are more complex. However, the children acquire the internal constraints, but not the stylistic con-straints. Thus, neither linguistic level, complexity, or age can fully explain the patterns of acquisition found in these data. What other explanations can be appealed to?

Foulkes et al. (2005:199) suggested that "it may be more enlightening to take a closer look at the full range of choices available to adults and assess the socio-

linguistic meanings of those choices within the community." From this, "the choices parents make serve to introduce children to socially structured linguistic alternatives." We agree, but suggest further, that it may be whether or not the community has any (at least conscious) choice that influences the talk used by caregivers, and subsequently, how variation is acquired by the child. With these particular variables, the caregivers "know" that *house* has widespread, prestigious currency outside the community, whereas *hoose* is local and familiar. From this, they "know" when and where it is appropriate to use one variant or the other, and with this knowledge, they "teach" their children the sociolinguistic rules of use. Hence, we see not only much lower rates of the local monophthongal variant in caregiver talk when compared to community norms, but also stylistic switching. Following Foulkes et al. (2005) and Roberts (2002), we might also presume that, given this knowledge, the diphthong is given prominence in caregiver speech in order to "bias [children] toward the more positively evaluated variant" (Foulkes et al., 2005:199). This appears to be most extreme with the youngest children who use only the diphthong. In fact, use of the standard, as opposed to the local form, may provide an alternative scenario to more traditional accounts of caregiver talk, which serves to "simplify and enhance linguistically relevant cues" (Liu, Kuhl, & Tsao, 2003:3) in order to "assist the child's analysis of linguistic materials" (Garnica, 1977:81). Verbal –s, on the other hand, does not exhibit divergence from community norms in caregiver speech, nor does it show extreme stylistic shifting. The caregiver talks to the child in the same way as she would talk in adult-to-adult interaction. We suggest that the caregivers do not "modify" their linguistic behavior with this variable, as they are not consciously aware of the forms they are using in the first place. Thus, they are unable, at least overtly, to help the children acquire sociolinguistic competence. If the caregivers are not aware of the social impact of the variants, then the children are not either. In other words, we suggest that a guiding principle in the acquisition of (socio)linguistic competence may lie in whether the variable is a marker or an indicator (Labov, 1994:78) in the community in which the child is growing up.

However, in focusing on the "failure" to gain sociolinguistic competence in the use of -s, what should not be overlooked is the mastery of complex linguistic constraints from the earliest stages of the acquisition process, and the fact that the frequencies of use in the caregiver data are matched in almost every case by the child. We have not discussed here which mechanisms may give rise to the acquisition of these very dialect specific frequencies and forms, for example, whether the variability is within the grammar itself or the result of some extra-grammatical processes (cf. Henry et al., 1997). This is the subject of future research (Adger & Smith, in preparation). However, what we hope we have highlighted is the interdependence of community, caregiver, and child in the acquisition of a grammar that has variation at the source.

NOTES

  1.   There have also been a number of studies on acquisition of variation in primary school children (e.g., Gleason & Perlmann 1985, Houston, 1969, Purcell, 1984, Romaine, 1984).

2.   But see Davis & Lindblom, 2001; Newport, Gleitman, & Gleitman, 1977, for a different analysis of caregiver talk.

3.   No child was in formal schooling, but most went twice weekly to a locally run play group.

4.   A more direct comparison with the caregivers would be to include the young female community members only. However, with both variables, the patterns of use were the same across age and sex in the community data, thus the entire data set was used.

5.   Macaulay and Trevelyan (1973) distinguished four different variants in their study of different social groups in Glasgow (but see Romaine (1975:121) for criticism of this approach). In Macaulay's 1991 study, the variable is divided between monophthong and diphthong only.

6.   Various explanations can be offered as to why these items do not show the "expected" alternation. Some words entered the language after the Great Vowel Shift (e.g., *clown*, *row*, *allowed*), thus they would never have been pronounced with the high back monophthong. Others are borrowings from French (e.g., *tower*, *mountain*), whereas others form a separate group (e.g., *found*, *ground*) in which the variation occurs between the standard /ʌʉ/ and the local variant /ʌ/, that is, [fʌʉnd] → [fʌn] in this dialect, at least. Others may simply be the result of "lexical erosion" (Johnston, 1997:474). As Stuart-Smith (2003:123) pointed out "the consequences of lexical drain on the phonology of Urban Scots are difficult to predict, though we would assume that it can only increase the rarity of alternation and gradually pull lexical incidence towards that of Scottish Standard English."

7.   This may lend support to Macafee's (1997:521) claim that these two different phonemes belong to different dialect systems.

8.   It should be noted that these contexts of use are not unproblematic and overlap sometimes occurs. For example, there may be ambiguity between Play and Teaching, as teaching often is done through play in these early years. A set of guiding principles was adopted (e.g., if during Play a specific question was asked, such as "What colour is it?" then it was coded as Teaching). There were no cases of the child disciplining the caregiver. The child's utterance was coded as Discipline if it took place in the context of being disciplined by the caregiver.

9.   Preceding and following phonological context were also coded for. However, as this variable is essentially part of a lexical set, analysis revealed major skewing in the data. For example, in the case of preceding segment /d/, 217 of the total 221 tokens were the lexical item 'down'. Furthermore, for the preceding segment /b/, 77 out of the total 78 tokens were the lexical item 'about'. For preceding segment /r/, 130 out of the total 181 tokens were the lexical item 'round'. The same was true of following phonetic context. For this reason, phonetic context is not considered in this analysis.

10.   Because of small *N*s, we cannot divide the data into individual speakers across the different contexts of use.

11.   These constraints are not exhaustive. A number of others are reported in the literature, including copula versus auxiliary *be*, polarity, and NP configuration (e.g., Montgomery, 1997). However, because of bad data distribution (e.g., very small numbers of tokens in negative contexts and an abundance of copula constructions), we could not test for these constraints in the current study.

12.   Two explanations are proposed to account for this. The first is that, as *there* is in subject position, no agreement is triggered (e.g., Meechan & Foley, 1994). The second is that *there's* is analyzed as a prefabricated unit, instead of a separate expletive + verb construction (e.g., Cheshire, 1999).

13.   Given their different syntactic status, it might be hypothesized that there would be a difference between main verbs, copula *be*, and auxiliary *have*, *do*, and *be*. However, in these data the split was between copula and auxiliary *be* versus other verbs across all groups, thus the data are grouped accordingly.

REFERENCES

Adger, David, & Smith, Jennifer. (in preparation). *Variation and minimalism: A combined account*.
Barber, Charles. (1997). *Early Modern English*. Edinburgh: Edinburgh University Press.
Brown, Roger. (1973). *A first language*. Cambridge, MA: Harvard University Press.
Chambers, Jack. (2003). *Sociolinguistic theory*. Oxford: Blackwell.
Cheshire, Jenny. (1982). *Variation in an English Dialect: A sociolinguistic study*. Cambridge: Cambridge University Press.
———— (1999). Taming the vernacular: Some repercussions for the study of syntactic variation and spoken grammar. In J. C. Conde-Sylvestre & J. M. Hernandez-Campoy (eds.), *Cuadernos de filologia inglesa* 8:59–80.

Clarke, Sandra. (1997). English verbal -s revisited: The evidence from Newfoundland. *American Speech* 72(3):227–259.

Cross, T. G. (1977). Mothers' speech adjustments: The contributions of selected child listener variables. In C. E. Snow & C. A. Ferguson (eds.), *Talking to children: Language input and acquisition*. New York: Cambridge University Press. 151–188.

Cukor-Avila, Patricia. (1997). Change and stability in the use of verbal -s over time in AAVE. In Edgar W. Schneider (ed.), *Englishes around the world*. Amsterdam: Benjamins. 295–306.

Davis, Barbara, & Lindblom, Bjorn. (2001). Phonetic variability in baby talk and development of vowel categories. In Francisco Lacerda, Claes von Hofsten, & Mikael Heimann (eds.), *Emerging cognitive abilities in early infancy*. Mahwah, NJ: Erlbaum. 135–171.

Denison, David. (1993/2004). *English historical syntax: Verbal constructions*. Longman Linguistics Library. London: Longman.

Eremeeva, V., & Stuart-Smith, J. (2003). A sociophonetic investigation of the vowels OUT and BIT in Glaswegian. *Proceedings of the 15th International Congress of Phonetic Sciences*, Barcelona. 1205–1208.

Fasold, Ralph. (1972). *Tense marking in Black English*. Arlington, VA: Center for Applied Linguistics.

Ferguson, Charles. (1964). Baby talk in six languages. *American Anthropologist* 66:103–114.

Fernald, A., & Simon, T. (1984). Expanded intonation contours in mothers' speech to newborns. *Developmental Psychology* 20:104–113.

Fischer, O., van Keemenade, A., Koopman, W., & van der Wurff, W. (2000). *The syntax of Early English*. Cambridge: Cambridge University Press.

Foulkes, Paul, Docherty, Gerry, & Watt, Dom. (1999). Tracking the emergence of structured variation: Realisations of (t) by Newcastle children. *Leeds Working Papers in Linguistics and Phonetics* 7:1–25.

——— (2005). Phonological variation in child-directed speech. *Language* 81:77–206.

Galasso, Joseph. (2004). The acquisition of inflection and the dual mechanism model: A case study. *Proceedings of the 2004 Child Language Research Forum Stanford*. 98–108.

Garnica, O. K. (1977). Some prosodic and paralinguistic features of speech to young children. In C. E. Snow & C. A. Ferguson (eds.), *Talking to children: Language input and acquisition*. Cambridge: Cambridge University Press. 63–88.

Gleason, J. B., & Perlmann, R. Y. (1985). Early bilingual development: One language or two? *Journal of Child Language* 16:161–179.

Godfrey, Elizabeth, & Tagliamonte, Sali A. (1999). Another piece for the verbal -s story: Evidence from Devon in southwest England. *Language Variation and Change* 11(1):87–121.

Grieser, D. L., & Kuhl, P. K. (1988). Maternal speech in infants in a tonal language: Support for universal prosodic features in parentese. *Developmental Psychology* 24:14–20.

Hay, Jen, & Schreier, Daniel. (2004). Reversing the trajectory of language change: Subject–verb agreement with *be* in New Zealand English. *Language Variation and Change* 16:209–235.

Hackenberg, Robert. (1972). *Appalachian English: A sociolinguistic study*. Doctoral dissertation, Georgetown University.

Henry, A., MacLaren, R., Wilson, J., & Finlay, C. (1997). The acquisition of negative concord in non-standard English. In E. Hughes, M. Hughes, & A. Greenhill (eds.), *Proceedings of the 21st Annual Boston University Conference on Language Development*. Somerville, MA: Cascadilla Press.

Houston, S. (1969). A sociolinguistic consideration of the Black English of children in northern Florida. *Language* 45:599–607.

Johnston, Paul. (1997). Regional variation. In Charles Jones (ed.), *The Edinburgh history of Scots*. Edinburgh: Edinburgh University Press. 433–513.

Kerswill, Paul. (1996). Children, adolescents and language change. *Language Variation and Change* 8:177–202.

Kerswill, Paul, & Williams, Ann. (2000). Creating a new town koine: Children and language change in Milton Keynes. *Language in Society* 29:65–115.

——— (2005). New towns and koineisation: Linguistic and social correlates. *Linguistics* 43: 1023–1048

Kovac, C., & Adamson, H. D. (1981). Variation theory and first language acquisition. In D. Sankoff & H. Cedergren (eds.), *Variation omnibus*. Edmonton, Alberta: Linguistic Research, Inc.

Labov, William. (1972). *Sociolinguistic patterns*. Oxford: Blackwell.

Labov, William. (1989). The child as linguistic historian. *Language Variation and Change* 1:85–97.

——— (1994). *Principles of linguistic change. Volume 1: Internal factors*. Oxford: Blackwell.

———— (2001). *Principles of linguistic change. Volume 2: Social factors*. Oxford: Blackwell.

Labov, William, Cohen, P., Robins, C., & Lewis, J. (1968). *A study of the non-standard English of Negro and Puerto Rican Speakers in New York City*. Cooperative Research Report 3288. Vols. I & II. Philadelphia: Linguistics Laboratory, University of Pennsylvania, U.S. Regional Survey.

Liu, Huei-Mei, Kuhl, Patricia K., & Tsao, Feng-Ming. (2003). An association between mothers' speech clarity and infants' speech discrimination skills. *Developmental Science* 6:F1–F10.

Macafee, Caroline. (1994). *Traditional dialect in the Modern World: A Glasgow case study*. Frankfurt am main: Peter Lang.

———— (1997). Ongoing change in modern Scots: The social dimension. In Charles Jones (ed.), *The Edinburgh history of the Scots language*. Edinburgh: Edinburgh University Press. 514–548.

Macaulay, Ronald K. S. (1991). *Locating dialect in discourse: The language of honest men and bonnie lassies in Ayr*. New York: Oxford University Press.

Macaulay, Ronald, & Trevelyan, G. (1973). *Language, education and employment in Glasgow*. Final report to the SSRC.

Meechan, Marjory, & Foley, Michele. (1994). On resolving disagreement: Linguistic theory and variation—There's bridges. *Language Variation and Change* 6:63–85.

Montgomery, Michael. (1989). Exploring the roots of Appalachian English. *English World-Wide* 10:227–278.

———— (1997). Making transatlantic connections between varieties of English: The case of plural verbal -s. *Journal of English Linguistics* 25:122–141.

Murray, James. (1873). *The dialect of the southern counties of Scotland*. London: Philological Society.

Newport, E., Gleitman, H., & Gleitman, L. (1977). Mother, I'd rather do it myself: Some effects and non-effects of maternal speech style. In C. Snow & C. A. Ferguson (eds.), *Talking to children: Language input and acquisition*. Cambridge: Cambridge University Press.

Purcell, April. (1984). Code-switching Hawaiian style: Children's accommodation along a decreolizing continuum. *International Journal of the Sociology of Language* 46:71–86.

Poplack, Shana, & Tagliamonte, Sali A. (1989). There's no tense like the present: Verbal -*s* inflection in early Black English. *Language Variation and Change* 1:47–84.

———— (2005). Back to the present: Verbal –s in the (African American) diaspora. In Raymond Hickey (ed.), *Transported dialects: Legacies of non-standard colonial English*. Cambridge: Cambridge University Press. 203–223.

Roberts, Julie. (1994). *Acquisition of variable rules: (-t,d) deletion and (ing) production in preschool children*. Doctoral dissertation, Department of Linguistics, University of Pennsylvania.

———— (1997a). Acquisition of variable rules: A study of (-t,d) deletion in preschool children. *Journal of Child Language* 24:351–372.

———— (1997b). Hitting a moving target: Acquisition of sound changes by Philadelphia children. *Language Variation and Change* 9:249–266.

———— (2002). Child language variation. In J. Chambers, N. Schilling-Estes, & P. Trudgill (eds.), *Handbook of language variation & change*. Oxford: Blackwell.

———— (2005). Acquisition of sociolinguistic variation. In Martin Ball (ed.), *Clinical sociolinguistics*. Oxford: Blackwell. 153–164.

Roberts, Julie, & Labov, William. (1995). Learning to talk Philadelphian: Acquisition of short a by preschool children. *Language Variation and Change* 7:101–112.

Robinson, Mairi. (ed.). (1987). *Concise Scots Dictionary*. Aberdeen, Scotland: Aberdeen University Press.

Romaine, Suzanne. (1975). Approaches to the description of Scots English: Work in progress. Department of Linguistics, University of Edinburgh 8:121–124.

———— (1979). The language of Edinburgh schoolchildren: The acquisition of sociolinguistic competence. *Scottish Literary Journal* 9:55–61.

———— (1984). *The language of children and adolescents*. Oxford: Blackwell.

Schneider, E. W. (1983). The origin of the verbal -s in Black English. *American Speech* 58:99–113.

Singler, John Victor. (1991). Copula variation in Liberian Settler English and American Black English. In Walter F. Edwards & Donald Winford (eds.), *Verb phrase patterns in Black English and Creole*. Detroit, MI: Wayne State University Press. 129–164.

Smith, Jennifer. (2000a). *Synchrony and diachrony in the evolution of English: Evidence from Scotland*. Doctoral dissertation, University of York.

———— (2000b). You Ø na hear o' that kind o' things: Negative *do* in Buckie Scots. *English-World-Wide* 21(2):231–259.

———— (2001). Negative concord in the Old and New World: Evidence from Scotland. *Language Variation and Change* 13(2):109–134.

———— (2003–2005). *Caregiver, community and child in the acquisition of variable dialect features*. ESRC funded project no RES-000-22-0447.

Smith, Jennifer, & Tagliamonte, Sali. (1998). "We was all thegither, I think we were all thegither": Was-regularization in Buckie English. *World Englishes* 17(2):105–126.

Snow, Catherine. (1994). Introduction. In C. Gallaway & B. Richards (eds.), *Input and interaction in language acquisition*. Cambridge: Cambridge University Press. 3–12.

———— (1995). Issues in the study of input: Fine tuning, universality, individual and developmental differences, and necessary causes. In Paul Fletcher & Brian MacWhinney (eds.), *The handbook of child language*. Oxford: Blackwell. 180–193.

Stuart-Smith, J. (2003). The phonology of Modern Urban Scots. In J. Corbett; D. McClure, & J. Stuart-Smith (eds.), *Edinburgh Student Companion to Scots*. Edinburgh: Edinburgh University Press.110–137.

Tagliamonte, Sali, and Smith, Jennifer. (2003). Either it isn't or it's not: Neg/aux contraction in British dialects. *English World-Wide* 23(2):251–282.

Tagliamonte, S., Smith, J., & Lawrence, H. (2005). English dialects in the British Isles in cross-variety perspective: A base-line for future research. In M. Filppula, J. Klemola, M. Palander, & E. Penttilä (eds.), *Dialects across borders*. Selected papers from the 11th International Conference on Methods in Dialectology (Methods XI), Joensuu, August 2002. Amsterdam: Benjamins. 87–117.

Weinreich, Uriel, Labov, William, & Herzog, M. (1968). Empirical foundations for a theory of language change. In W. P. Lehmann & Y. Malkiel (eds.), *Directions for historical linguistics*. Austin, TX: University of Texas Press. 95–188.

Wells, John. (1982). *Accents of English*. Cambridge: Cambridge University Press.

Wolfram, Walt. (1969). *A sociolinguistic description of Detroit Negro speech*. Arlington, VA: Center for Applied Linguistics.

Wolfram, Walt, & Christian, Donna. (1975). *Sociolinguistic variables in Appalachian dialects*. Final report, National Institute of Education grant number 74-0026.

Youssef, Valerie. (1990). The early development of perfect aspect: Adverbial, verbal and contextual specifications. *Journal of Child Language*. 17:295–312.

———— (1991). Variation as a feature of language acquisition in the Trinidad context. *Language Variation and Change* 3:75–101.

———— (1993). Children's linguistic choices: Audience design and societal norms. *Language in Society* 22:257–274.

———— (1996). Varilingualism: The competence underlying code-mixing in Trinidad and Tobago. *Journal of Pidgin and Creole Languages* 11(1):1–22.

APPENDIX

Child:	I'm going in here.
Caregiver:	Don't go in the washing machine!
Child:	Why? Why? Why?
Caregiver:	Eh what do you mean why?
Child:	Why? Why can't I go in the washing machine?
Caregiver:	Cos it'll maybe go- get switched on. And then you'll be stuck in it. And you'll drown!
Child:	What?
Caregiver:	You'll drown.
Child:	I'll go away, won't I? You'll be looking where your- your Lucy is at, won't you?

Child:	And you won't know where to get to my clothes, will you?
Caregiver:	No I'll be crying.
Child:	I'll be crying as well.
Caregiver:	Bet you. If you got stuck in there. That wouldn't be very nice, would it?
Child:	Nuh. I'd be missing Lewis and Amanda and Katie, wouldn't I?
Caregiver:	Uhuh. Missing all your friends. Were you having fun over at Katie's today?
Child:	But I could phone the police.
Caregiver:	Could you?
Child:	I could phone the police. Kick the police-kick the washing machine, so they can get me out.
Caregiver:	Yes.
Child:	That's a good idea.
Caregiver:	It is.
Child:	They can kick that bit and that bit. And they can get me out!

TABLE 8. *Overall distribution of monophthong for caregiver and child pairs*

	Caregiver			Child		Age
	N	%		N	%	(y;m)
Sheila	150	19	Ricky	94	2	2;10
Alice	150	2	Max	150	2	2;11
Mary	150	45	Isabel	47	4	3;0
Donna	75	35	Stephen	37	16	3;2
Paula	135	86	Kerry	67	69	3;2
Fran	150	26	Lyle	58	48	3;3
Kim	151	50	Annie	78	33	3;3
Lesley	150	68	Lucy	150	57	3;4
Molly	150	28	Luke	137	29	3;5
Gabby	142	59	Ellie	137	66	3;5
Ruth	95	66	Kieran	50	80	3;6
Total N	1498			1005		

Note. Total sample $N = 2503$.

TABLE 9. *Overall distribution of monophthong*
by situational context for caregivers
and children

	Caregivers		Children	
	N	*%*	*N*	*%*
Routine	450	68	313	59
Play	159	78	217	72
Teaching	177	19	165	13
Discipline	262	31	19	5
Total *N*	1048		714	

Note. Total sample *N* = 1762.

TABLE 10. *Overall distribution of monophthong*
by lexical item

	Caregivers		Children	
	N	*%*	*N*	*%*
now (lex)	261	25	109	57
out	169	80	91	75
down	137	74	137	70
round	83	47	54	31
how	74	3	100	1
about	52	98	27	78
anow	47	100	26	96
mouth	42	67	9	56
now (dis)	32	0	6	0
house	25	68	36	69
our	10	50	21	1
brown	7	43	20	10
other	109	51	78	51
Total *N*	1048		714	

Note. Total sample *N* = 1762.

TABLE 11. *Overall distribution of* -s *in third-person-plural nonpronominal contexts*

| | Caregiver | | | Child | | Age |
	N	%		N	%	(y;m)
Sheila	75	61	Ricky	12	50	2;10
Alice	53	72	Max	35	80	2;11
Mary	30	57	Isabel	22	55	3;0
Donna	6	50	Stephen	10	33	3;2
Paula	11	90	Kerry	6	80	3;2
Fran	28	71	Lyle	4	75	3;3
Kim	29	52	Annie	13	46	3;3
Lesley	41	84	Lucy	34	65	3;4
Molly	40	55	Luke	27	70	3;5
Gabby	12	83	Ellie	10	40	3;5
Ruth	6	67	Kieran	7	100	3;6
Total N	331	66		180	65	

Note. Total sample N = 511.

TABLE 12. *Overall distribution of* -s *in third-person-plural nonpronominal contexts by situational context*

| | Caregivers | | Children | |
	N	%	N	%
Routine	150	69	98	69
Play	110	75	71	59
Teaching	68	44	11	64
Discipline	3	100	0	0
Total N	331		180	

TABLE 13. *Overall distribution of* -s *in third-person-plural nonpronominal contexts by existentials versus other*

Community				Caregivers				Children			
Existential		Other		Existential		Other		Existential		Other	
N	%	N	%	N	%	N	%	N	%	N	%
210	100	395	39	74	93	257	59	38	95	142	57

TABLE 14. *Overall distribution of* -s *in third-person-plural nonpronominal contexts by sentence type*

Caregivers				Children			
Interrogatives		Other		Interrogatives		Other	
N	%	N	%	N	%	N	%
67	66	105	29	36	81	55	22

TABLE 15. *Overall distribution of* -s *in third-person-plural nonpronominal contexts by verb type*

Community				Caregivers				Children			
Be		Other		Be		Other		Be		Other	
N	%	N	%	N	%	N	%	N	%	N	%
203	44	192	27	126	51	46	22	55	65	36	14