Agreeing when to disagree:
a corpus analysis of variable agreement neutralization in caregiver and child speech

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Background

Learning language requires children to turn limited linguistic input into highly abstract linguistic knowledge. This task is complicated by the fact that many patterns in the input are variable.

The current study examines a variable morphosyntactic pattern in parental input and child production.

Agreement Neutralization

In English, as in many languages, the verb-form depends on the person and number of the subject (Corbett, 2006).

This dependency is often neutralized in locative and existential sentences in spoken English, even in formal registers (Crawford, 2005). When agreement is neutralized, plural subjects appear with singular verbs.

	Singular	Plural
1st pers.	I am	We are
2nd pers.	You are	Y'all are
3rd pers.	She is	They are

- "So linguistically, there's markers" (lecture; Crawford, 2005)
- "Look, here's crackers!" (fiction; COCA)

Such neutralization is not strongly associated with a particular social class (Squires, 2014), but is more common among lower-SES speakers (Meechan & Foley, 1994).

How does this widespread variability influence acquisition of agreement?

Acquisition of Agreement

Children show substantial mastery of the agreement system from the age of 2.5 years.

- Children under 4 frequently omit function words, but when they produce an agreeing verb, they produce the right form (Wexler, 2011; Keeney & Wolfe, 1972).

- 2.5- and 3-year-olds can use a number-marked verb in online comprehension (Lukyanenko & Fisher, in press).

| Informative | Where are the good cookies? Where is the good apple? |
| Uninformative | Can you find the good cookies? Can you find the good apple? |

Lukyanenko & Fisher (in press)

However, some evidence suggests that agreement with plural subjects and in inverted contexts, both features characteristic of neutralization, is more vulnerable to error in production (Theakston & Rowland, 2009).

Current Research Questions

- Do the same patterns previously observed for adult-to-adult speech also appear in child-directed speech?

- Do children neutralize agreement, and if so, do they restrict that neutralization to the appropriate contexts?

- How does children's rate of agreement neutralization align with their parents' production?

Methods

Corpora

Child and caregiver speech from CHILDES (MacWhinney, 2000).
- Sarah: lower SES, ages 2;3 – 5;1 (Suppes, 1974)
- Nina: middle SES, ages 1;11 – 3;3 (Brown, 1973)

Coding

All 3rd person, finite forms of copula BE were hand-coded for:
- Verb form — *is, 's, are, 're, was, were*
- Subject number — *singular, plural*
- Subject type — *NP, quantified, pronoun, conjoined, etc.*
- Order of verb and subject — *SV, VS*
- Sentence type — *existential/locative inversion, other*

Exclusions

- Missing or number-ambiguous subjects (e.g., mine, the green xxx).
- Subject types that independently elicit variable agreement (e.g., conjoined singulars; Lorimor, 2007)
- Sentences in which 's was ambiguous between contracted *is* and *has* or *does* (e.g., She's gone out, What's he like?)

Results

Rate of Contraction
In existentials and locatives

	singular	plural
Written (Crawford, 2005)	48% (2734)	1% (1049)
Spoken (Crawford, 2005)	84% (11687)	5% (1991)
Sarah's parents	80% (563)	0% (18)
Sarah	78% (423)	20% (5)
Nina's mother	68% (1460)	19% (304)
Nina	89% (866)	16% (45)

Rate of Agreement
In existentials and locatives

	singular	plural
Written (Crawford, 2005)	99.8% (1050)	95% (2800)
Spoken (Crawford, 2005)	99% (2003)	73% (13494)
Sarah's parents	100% (388)	15% (80)
Sarah	100% (296)	8% (37)
Nina's mother	99.9% (1206)	90% (329)
Nina	100% (697)	25% (108)

Influences on Agreement (for sentences with plural subjects)

Sentence Type and Development
Stages based on data from lexical verbs and non-agreeing *don't* in Miller (2013).

Sarah

	SV	VS-other	VS-ex/loc
RI Stage (2;5-3;4)	1.00 (10)	–	0.00 (7)
Non-RI (3;4-4;2)	0.87 (23)	0.60 (5)	0.22 (9)
Variable (4;2-5;1)	0.98 (40)	0.57 (14)	0.05 (21)

Nina

	SV	VS-other	VS-ex/loc
RI Stage (1;11-2;5)	0.93 (86)	0.75 (4)	0.14 (14)
Non-RI (2;9-3;3)	0.98 (146)	1.00 (38)	0.27 (94)

Parents

	SV	VS-other	VS-ex/loc
MOT	0.99 (171)	0.71 (31)	0.17 (70)
FAT	0.93 (29)	0.81 (26)	0.00 (10)

	SV	VS-other	VS-ex/loc
MOT	0.99 (491)	1.00 (362)	0.90 (329)

Subject Type

	Sarah		Sarah's parents		Nina		Nina's mother	
	VS other	VS ex/loc	VS other	VS ex/loc	VS other	VS ex/loc	VS other	VS ex/loc
they	1.00 (5)	1.00 (1)	1.00 (19)	1.00 (4)	1.00 (10)	1.00 (14)	1.00 (161)	1.00 (43)
these/those	0.71 (7)	–	0.91 (11)	1.00 (1)	0.95 (22)	–	1.00 (127)	1.00 (1)
NP_pl	0.50 (4)	0.04 (26)	0.61 (23)	0.10 (41)	1.00 (8)	0.11 (54)	1.00 (63)	0.92 (158)
quantified	0.00 (4)	0.10 (10)	0.00 (4)	0.09 (43)	1.00 (4)	0.18 (40)	1.00 (11)	0.83 (126)

Discussion

Caregiver Speech

Frequent neutralization in existentials and locatives with plural but not singular subjects replicates previous findings from adult-to-adult speech.

Caregivers often avoid stigmatized patterns in child-directed speech (Smith, Durham & Fortune, 2007). Frequent neutralization suggests that caregivers are not aware of this pattern (cf. Squires, 2014).

Sarah's parents neutralize more than Nina's mother in existentials and locatives, replicating previous SES findings (Meechan & Foley, 1994).

Sarah's parents also neutralize agreement in other verb-first sentences, similar to patterns of variability in other dialects of English (e.g., York English; Tagliamonte,1998)

Child Speech

Sarah's neutralization echoes her parents' patterns in types and rates of variability: Neutralization does not spread beyond the appropriate contexts as defined by her input.

Nina produces much more neutralization than her mother does, but like her mother's, Nina's neutralization is limited to existentials and locatives.

- Not evidence of overall difficulty learning agreement patterns.
- Not a (fully) frozen form. Nina produces at least one instance of each combination: there is, there's, there are, there're.
- Possible result of reduced scope of planning in child, as compared to adult speech production (McDaniel, McKee, Garrett, 2010).

Future Directions

Some indication that children are sensitive to neutralization in the input (right).

Compare children's processing of matching, neutralized and ungrammatical agreement.

- "There're the good apples!" AGREEING
- "There's the good apples!" NEUTRALIZED
- "There're the good apple!" UNGRAMMATICAL

Lukyanenko & Fisher (in press)
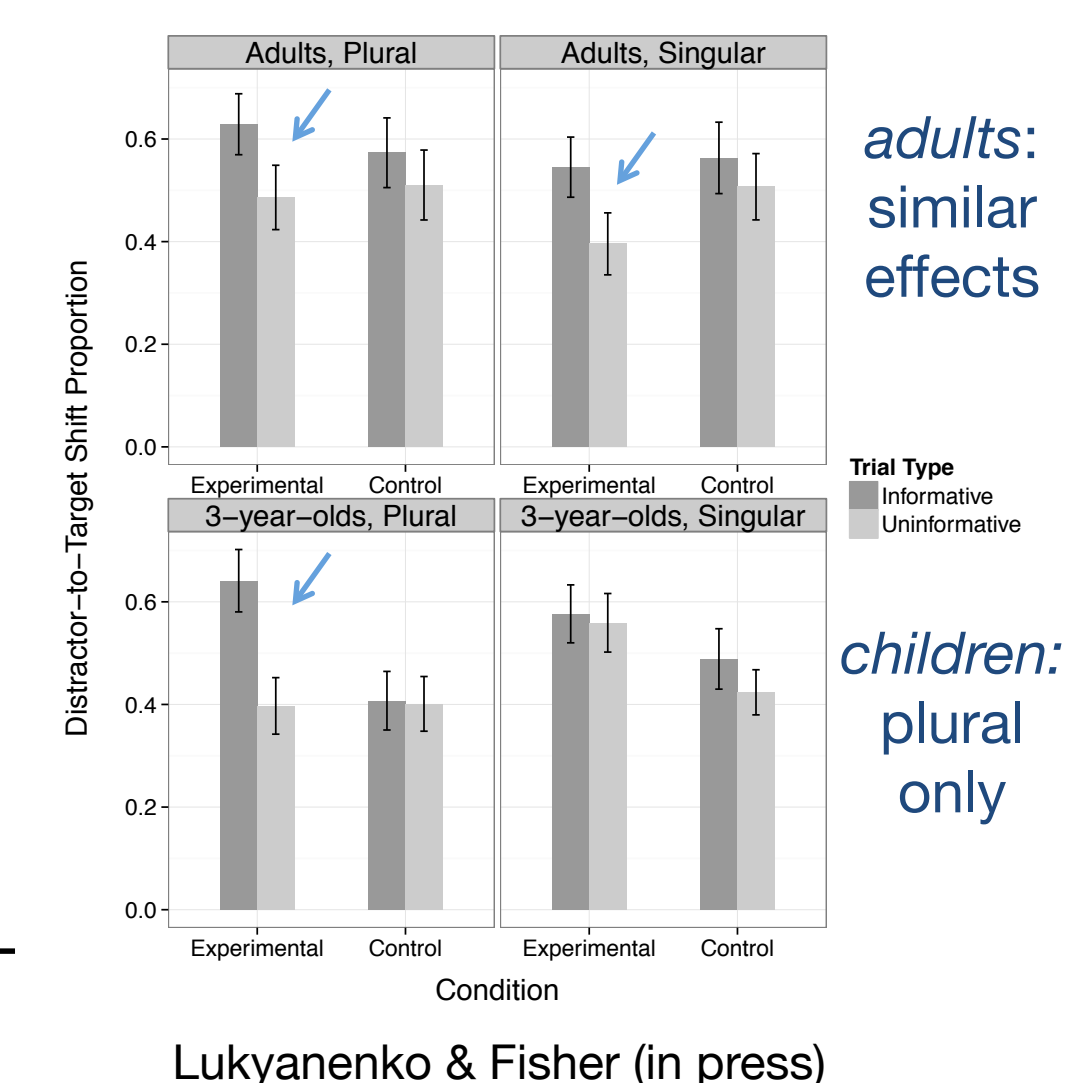
Conclusions

Variability in existentials and locatives does not delay acquisition of agreement in canonical sentences, suggesting that the existential/locative construction is somewhat insulated from the rest of the agreement paradigm (cf. Meechan & Foley, 1994; Sobin, 1997).

References

Brown (1973) *A First Language* | Corbett (2006) *Agreement* | Crawford (2005) *J. English Linguistics* | Davies (2008-) *The Corpus of Contemporary American English* | Lorimor (2007) *Conjunctions and Grammatical Agreement* | Lukyanenko & Fisher (in press) *Cognition* | MacWhinney (2000) *CHILDES* | McDaniel, McKee & Garrett (2010) *J. Child Language* | Miller (2013) *Language Acquisition* | Sobin (1997) *Linguistic Inquiry* | Suppes (1974) *Am. Psychologist* | Tagliamonte (1998) *Language Variation and Change* | Theakston & Rowland (2009) Part 1: Auxiliary BE *JSLHR* | Wexler (2011) in *Handbook of Generative Approaches to Language Acquisition*