Revisiting Children's Pronoun Case Errors:
A Comprehensive Corpus Analysis

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INTRODUCTION

Between ages of 2-4, English speaking children reportedly making pronoun case errors such as 'me go'. The non-nominative subject errors such as 'her said no' are one of the most studied errors (Schütze and Wexler, 1996; Rispoli, 1998). Parents' input might be responsible for such errors: 'Let her open it' could confuse children so that they produce erroneous utterances like 'Her open it' (Tomasello, 2000, 2003). Supporting that explanation is a correlation between the first person singular case errors ('me-fo-I' error) and the proportion of 'me + V' segments parents' input (Kirjavainen et al., 2009). If the phenomenon is general, it should also occur with all pronouns. We evaluate this theory can be responsible for the general overuse of the accusative forms with all accusative forms in more children's data in the CHILDES corpus.

Question 1. What is the frequency and distribution of such case errors?
Question 2. Can 'Let her open it' explain 'Her open it error'?

STUDY 1. The Frequency and Distribution of Pronoun Case Errors

We extracted first and third person singular and plural pronouns from longitudinal data of 46 monolingual English-speaking children from ages 2 to 4 in CHILDES. Any misuses of nominative, accusative, or genitive case were counted as errors. Candidate errors were located using the NLTK python package and were hand-checked by two annotators. Example errors include:

(a) Nominative-for-Accusative
CHI: all of *they* going go in here. (Suppes/021021.cha)
(b) Accusative-for-Nominative
CHI: *me* come back. (Brown/Eve/011000a.cha)
(c) Accusative-for-Genitive
CHI: where's *me* shoes? (Suppes/020228.cha)
(d) Genitive-for-Nominative
CHI: *my* can sing. (Braunwald/010607.cha)
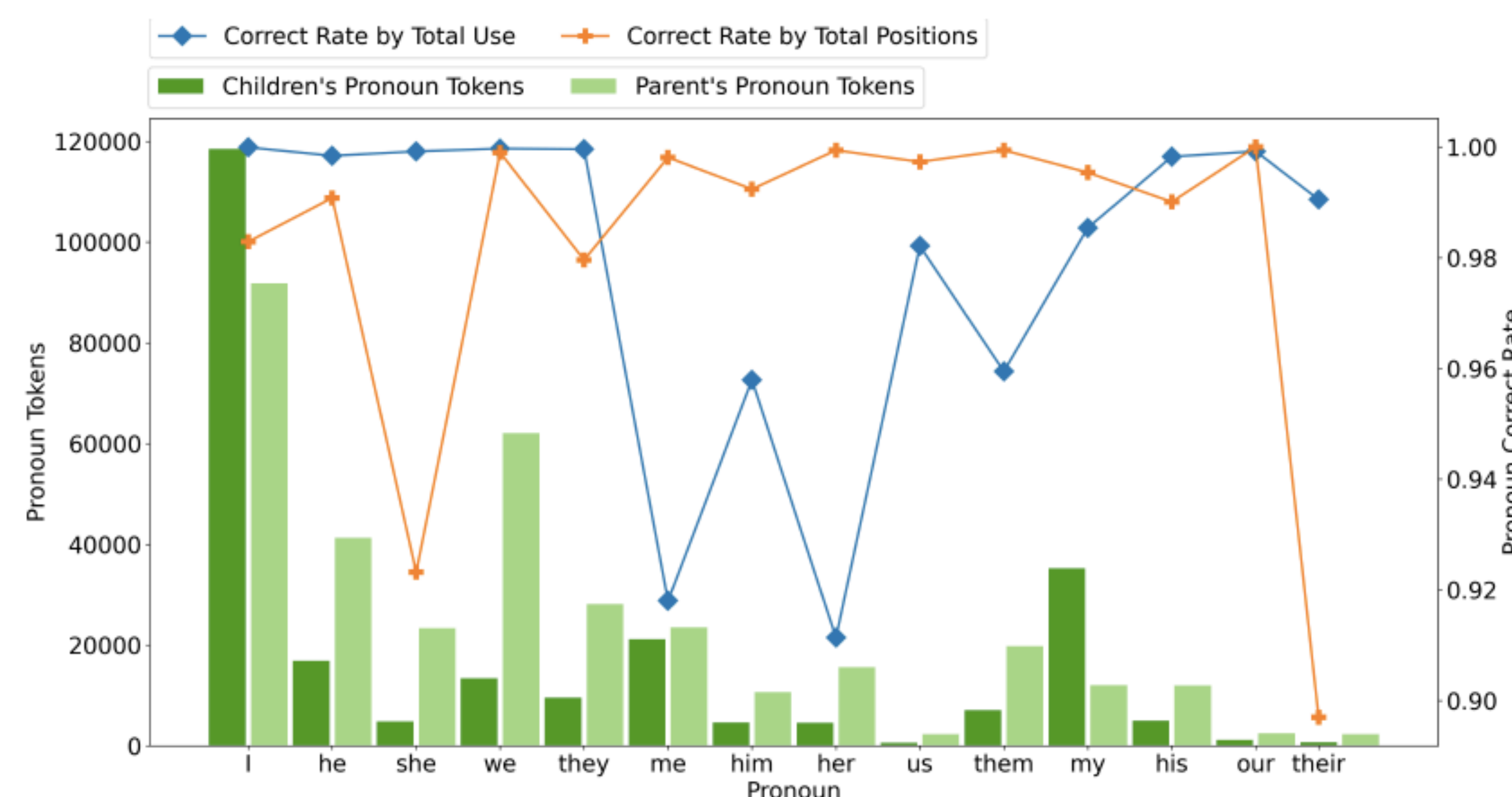(e) Genitive-for-Accusative
CHI: get *my* dressed now. (Thomas/021105.cha)

As shown in the Table 1, children rarely make pronoun case errors, that the accuracy rate is generally over 95% for most of the pronouns, except for 'me' and 'her'. We also investigated the relationship between pronoun correct rate with children's total pronoun production and parents' pronoun input. The results showed that there is no correlation between pronoun correct rate with children's production or parents' input.

Table 1. Summary of Children's Pronoun Case Errors

Pronoun	Tokens	Error Type	Errors	Subs	Pronoun Correct Rate by Use[a]	Pronoun Correct Rate by Argument Position[b]	N children made error	Maximum error/child
I	118607	I-for-me	9	2064	99.99%	98.29%	6	3
he	16966	he-for-him	27	157	99.84%	99.08%	14	8
she	4955	she-for-her	4	412	99.92%	92.32%	4	1
we	13525	we-for-us	4	14	99.97%	99.90%	3	2
they	9703	they-for-them	4	202	99.96%	97.96%	4	1
me	21280	me-for-I	1579	40	91.80%	99.81%	41	858
		me-for-my	165				21	81
him	4732	him-for-he	148	27	95.79%	99.24%	26	26
		him-for-his	51				11	30
her	4650	her-for-she	412	4	91.14%	99.94%	30	169
us	727	us-for-we	13	4	98.21%	99.73%	9	3
them	7181	them-for-they	194	4	95.95%	99.94%	36	42
		them-for-their	97				23	17
my	35329	my-for-I	485	165	98.54%	99.54%	25	124
		my-for-me	31				7	8
his	5109	his-for-he	9	51	99.82%	99.01%	9	1
our	1265	our-for-we	1	0	99.92%	100.00%	1	1
their	845	their-for-they	8	97	99.05%	89.70%	6	2

Figure 1. Pronoun Case Correct Rate VS Children and Parents' Pronoun Production

STUDY 2. Can 'Let her open it' explain 'Her open it' error?'

To test if parental input, such as 'Let her open it', could be responsible for overuse of the accusative form, we extracted all child and parent utterances containing 'me/her/him/them +V' in the corpus.

Proportion of parent's input 'ACC + V' (e.g. 'make *her do* it')
= ('ACC + V' count)/('ACC + V' + 'NOM + V' counts)
Proportion of child's correct 'ACC + V' (e.g. 'help *me open* it')
= (correct 'ACC + V' count) / ('ACC + V' + 'NOM + V' counts)
Proportion child's error 'ACC + V' (e.g. '*Him go* shopping')
= (error 'ACC + V' count) / ('ACC + V' + 'NOM + V' counts)

Table 2. Correlations between three variables

Correlation (n = 46)	Input VS error	Input VS correct use	Error VS correct use
'me + V'	0.10	0.07	0.11
'him + V'	0.07	-0.25	-0.12
'her + V'	-0.21	-0.06	0.31
'them + V'	0.01	0.04	0.23

Table 3. Parent's Input Proportion in Error children and Non-Error children

Input Proportion	children with >1 errors			children with ≤ 1 error			
	N	Mean	SD	N	Mean	SD	t
'me + V'	11	.09	0.12	36	.10	0.16	-0.16
'him + V'	14	.03	0.03	33	.03	0	0.47
'them + V'	18	.09	0.04	29	.10	0.34	-0.65
'her + V'	22	.06	0.08	25	.08	0.3	-0.6

CONCLUSION

1. **The frequency and distribution of pronoun case errors:**
(a) The pronoun case errors are really rare.
(b) Children's errors cluster on 'me-for-I', 'my-for-I', 'her-for-she', 'them-for-they', 'him-for-he' and 'me-for-my'.
(c) Children's errors are not correlated with their own pronoun productions and parents' pronoun input.

2. **Can 'Let *me/him/her/them* do it' in the input explain '*me/him/her/them* do it' error?**
No. There is no correlation between 'ACC+V' segments in parents' input and 'ACC + V' errors. When children hear utterances like 'Let *her* do it', they also make correct utter encases like 'make *her do it*.

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