

Acquisitional trajectories of North American vs British English tags

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LAGB 2023

Old puzzle.

Observation: Tag questions are acquired not before the fourth year of life.

(Brown & Hanlon 1970; Dennis et al. 1982)

(1) We [are] getting mixed up, aren't we? *Sarah, 4;06 (Brown Corpus)*

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Lots of good reasons for late acquisition:

- Syntactically complex (contracted negation, auxiliary matching)
- Pragmatically complex (higher order ToM, multiple contexts of use)
- Many functionally similar linguistic units (right, huh, ok, hey, eh, ...) ¹

¹ ... which may serve as an acquisitional starting base (Cazden 1970) .

Old puzzle, new data.

Problem: BE tag questions seem to be acquired earlier than NAE tags.

(see also: Woods & Roeper 2021)

(1) We getting mixed up, aren't we? *(Sarah, 4;06 – Brown Corpus)*

(2) That's because you like long hair, isn't it? *(Joel, 2;02 – Manchester Corpus)*

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Re-evaluate!

Old puzzle, new data, different questions.

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Questions:

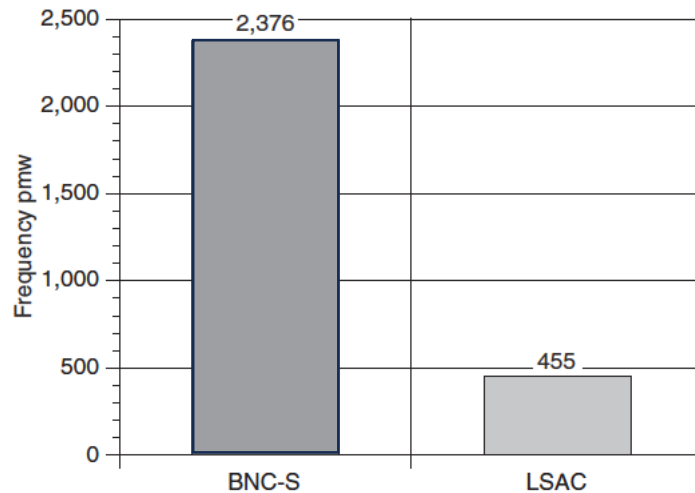
- a) What accounts for the cross-dialectal variation?
- b) Are early tags qualitatively different from new tags?

Answers: Input (a) only affects syntactic, not pragmatic acquisition (b).

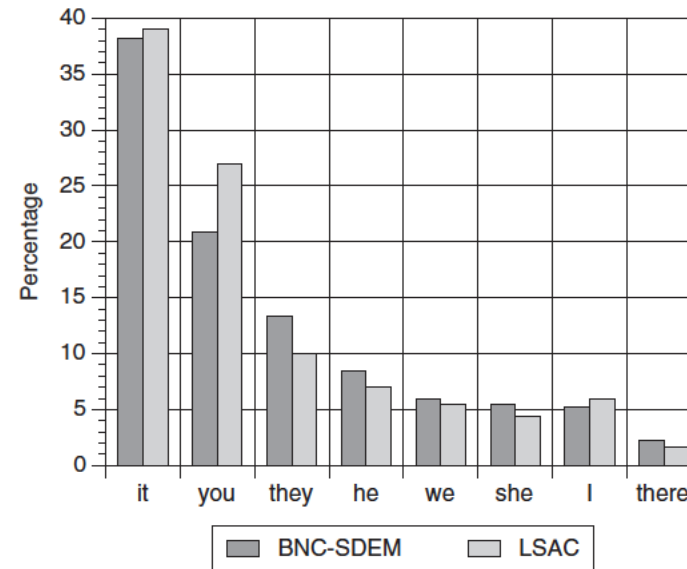
Do BE and NAE speakers use tags differently?

Insights from **Tottie & Hoffmann (2006)** from **BNC** and **Longman** spoken corpora:

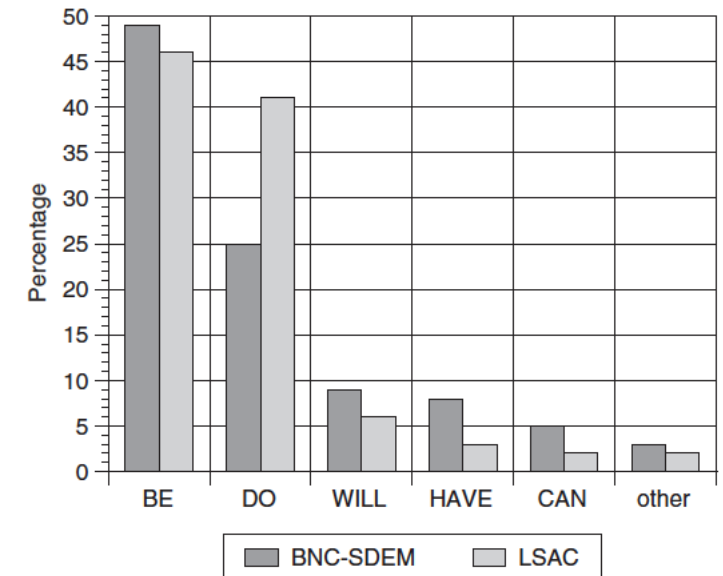
Frequency in Per Million Words



Proportion of **pronouns** in Tags



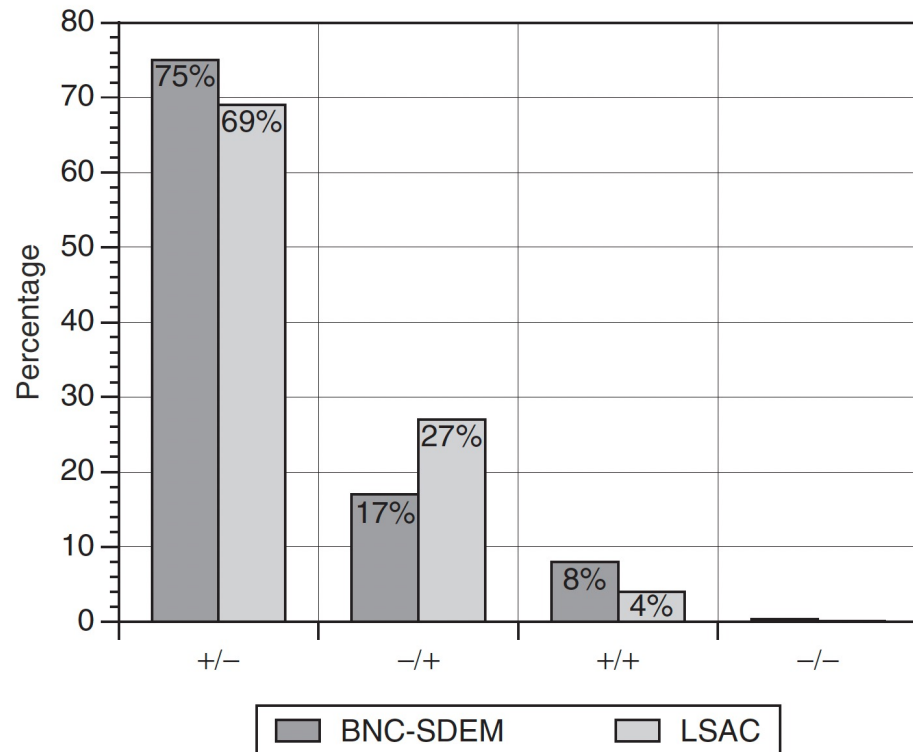
Proportion of **auxiliaries** in tags



Do BE and NAE speakers use tags differently?

Insights from **Tottie & Hoffmann (2006)** from **BNC** and **Longman** spoken corpora:

Variation in anchoring



Top frequencies of AUX(n't) +PRN

Tag	BNC-SDEM			LSAC		
	<i>N</i> = 3,724	%	Rank	<i>N</i> = 2,311	%	Rank
<i>isn't it?</i>	760 ^a	20.4	1	429	18.6	1
<i>is it?</i>	227	6.1	2	115	5	4
<i>aren't they?</i>	133	3.6	3	65	2.8	9
<i>don't you?</i>	99	2.7	4	124	5.4	2
<i>do you?</i>	89	2.4	5	123	5.3	3
<i>don't they?</i>	88	2.4	6	55	2.4	11
<i>aren't you?</i>	82	2.2	7	56	2.4	10
<i>wasn't it?</i>	76	2	8	76	3.3	6
<i>haven't you?</i>	69	1.9	9	21	0.9	25
<i>are you?</i>	63	1.7	10	52	2.3	12
<i>weren't it</i>	62	1.7	11	—	—	—
<i>didn't you?</i>	61	1.6	12	70	3	7
<i>isn't he?</i>	57	1.5	13	43	1.9	13
<i>didn't he?</i>	52	1.4	14	24	1	21
<i>doesn't it?</i>	52	1.4	15	101	4.4	5

Dialectal variation: Children = adults?

BE output (> 4;0) across 15 corpora¹

- 301x *isn't it?*
- 11x *is it?*
- 37x *aren't they?*
- 48x *don't you?*
- 30x *aren't you?*
- 29x *don't they?*
- 35x *can't you?*

NAE output (> 4;0) across 52 corpora¹

- 26x *isn't it?*
- 4x *don't you?*
- 18x *do you?*
- 12x *is it?*
- 8x *doesn't it?*
- 4x *wasn't it?*
- 3x *didn't you?*

¹Results based on Wang browser (<https://naclo.cs.umass.edu/childes-search/>) which excludes some CHILDES corpora.

A closer look at input & output (2;0 - 3;0): Sub-corpus

British English

- Anne, Manchester corpus 2;00.15 - 2;09.10 (MLUw = 1.721 - 2.954) Output = 3877w
- Becky, Manchester corpus: 2;00.07 - 021115 (MLUw = 1.394- 2.782) Output = 52731w
- **4 girls, 4 boys;**
Manchester corpus (Theakston et al. 2001)
Age range: 2;00;07 – 2;11.20
MLUw range: 0.600 - 3.668
Output combined: 320,001 words
- John, Manchester corpus; 2;00.12 – 2;10.11 (MLUw = 1.568 - 3.015) Output = 37866w
- John, Manchester corpus; 2;00,13 - 2;10.24 (MLUw = 1.585 - 2.871) Output = 26642w
- Liz, Manchester corpus; 2;00.07- 2;10.18 (MLUw: 1.518 -3.668) Output = 37894w
- Ruth, Manchester corpus; 2;00.05 – 2;11.20 (MLUw = 0.600-2.814) Output = 38200w

North American English

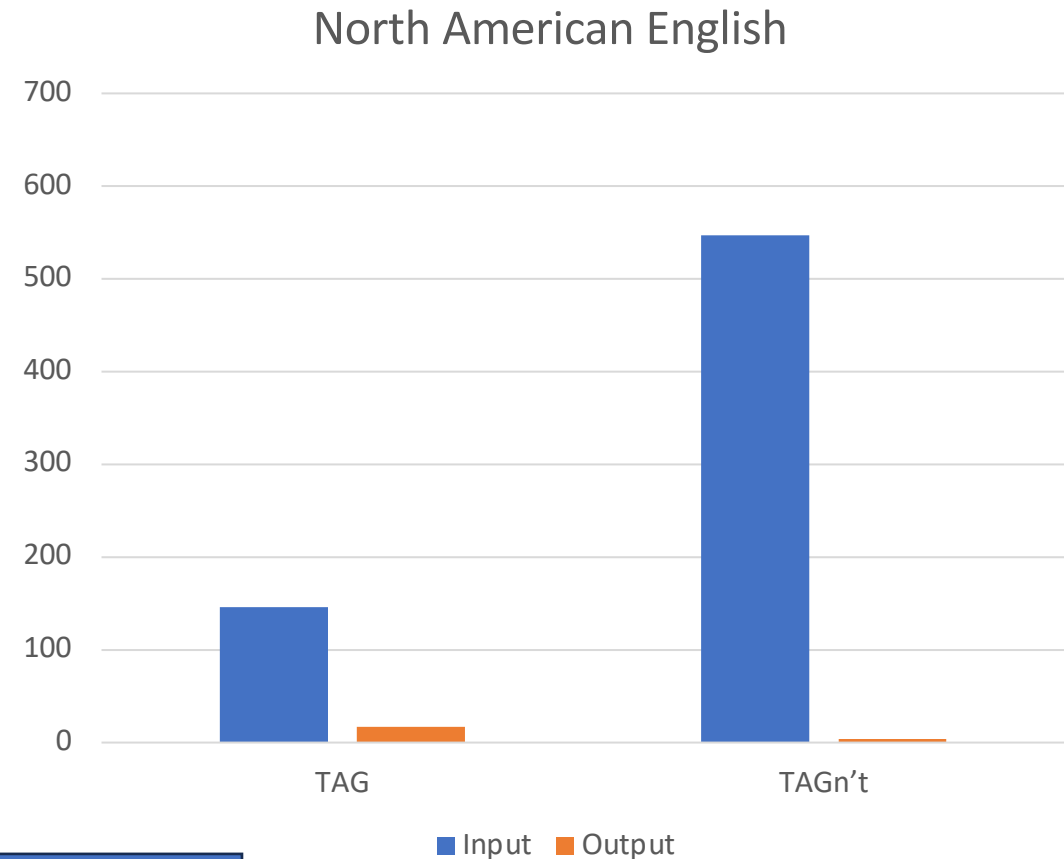
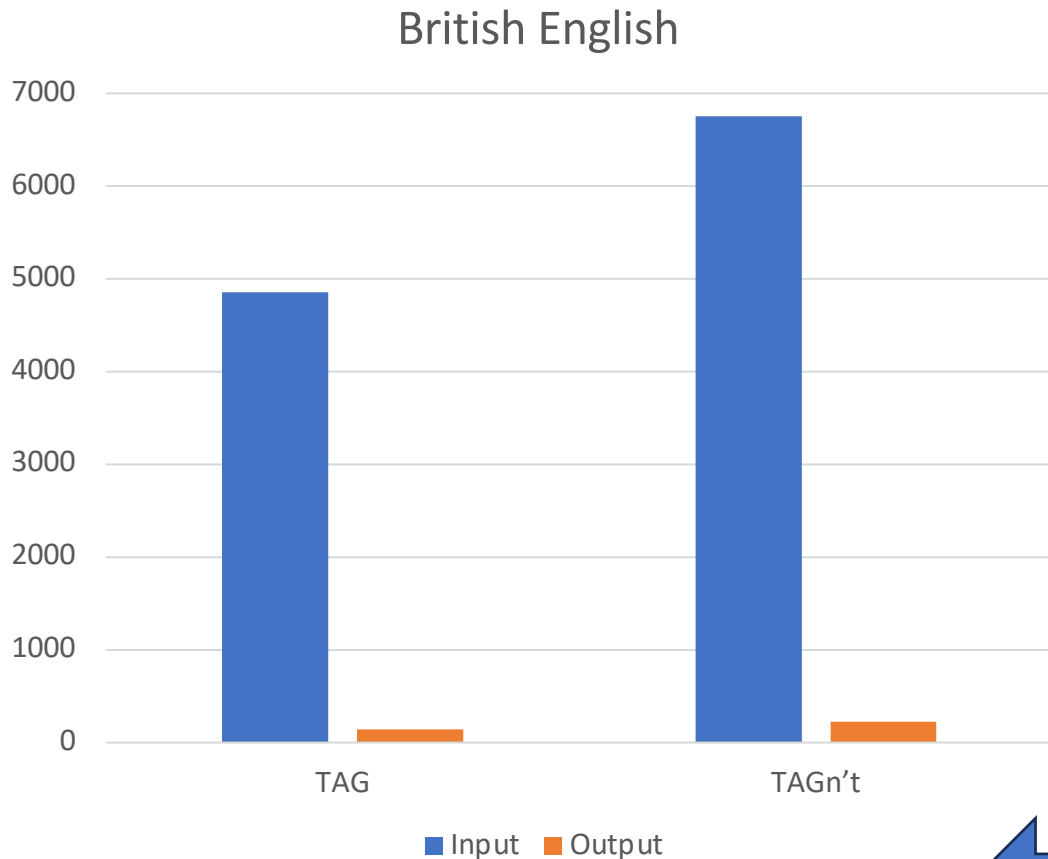
- Adam, Brown corpus: 2;03.04- 2;11.28 (MLUw = 1.824-3.218) Output = 11551w
- Alex, Providence corpus : 2;00.12-2;11.22 (MLUw = 1.386-3.365) Output = 17037
- Ethan, Providence corpus : 2;00.07- 2;11.01 (MLUw = 2.538-3.526) Output = 40352
- William, Providence corpus : 2;00.12-2;11.14 (MLUw 1.439- 3.030) Output = 1434
- **4 girls, 4 boys;**
Brown corpus (Brown 1973)
& Providence corpus (Demuth et al. 2006)
Age range: 2;00;04 – 2;11.28
MLUw range: 1.386 - 5.740
Output combined: 193,907 words
- Sally, Brown corpus; 2;03.05-2;11.30 (MLUw = 1.475-3.367) Output = 14851
- Violet, Providence corpus : 2;00.13-2;11.26 (MLUw = 1.995- 3.657) Output = 14823

A closer look at input & output (2;0 - 3;0)

	British English			North American English		
	Input	Output	1 st Occurrence	Input	Output	1 st Occurrence
not	5,705	2,619	2;00.06	2,664	871	2;00.17
AUX	~57,000	~11,000	2;00.06	~ 47,000	~ 10,000	2;00.04
AUXn't	16,762	4,037	2;00.07	8,541	1,842	2;00.04
AUX+PRN	23,957	2,272	2;00.06	11,625	1,907	2;00.04
AUXn't+PRN	1,172	412	2;00.07	1,620	122	2;02.11
TAG	4,855	139	2;00.07	146	17	2;02.07
TAGn't	6,754	216	2;00.07	547	4	2;04.25

- Across both dialects, **all building blocks** are in place by 3;0.
- NAE children hear and produce notably fewer tags than BE children.

A closer look at input & output (2;0 - 3;0)



← 10x the scale

A closer look at output (2;0 - 3;0)

	British English				North American English			
	Positive anchor	Negative anchor	Isolated	Total	Positive anchor	Negative anchor	Isolated	Total
TAG	42	47	50	139	1	-	16	17
TAGn't	190	-	26	216	1	-	3	4
Total	226	47	76	355	2	0	19	21

- *Majority of BE tags are produced with an anchor.*
 - *Majority of NAE tags are produced **without** an anchor.*
- NAE children < 3;0 don't really produce tag questions at all.

Examples from British English (2;0 - 3;0)

Positive Anchor, Negative Tag:

- (8) Carl: Oh, he's running down the stairs, **isn't he?** (2;03.27)
- (9) Dominic: Belongs with the garage, **doesn't it,** Nina. (2;05.29)
- (10) Joel: Hafta lift it up, **don't you?** (2;06.10)
- (11) Joel: You can have it, **can't you?** (2;07.09)
- (12) Liz: But they're wet, **aren't they?** (2;08.28)

Examples from British English (2;0 - 3;0)

Negative Anchor, Positive Tag:

- (3) Joel: Panda willn't have any friends, **will he?** (2;02.07)
- (4) Becky: We haven't colored a &-um rabbit in, **have we ?** (2;07.02)
- (5) Joel: We don't want it burny, **do we?** (2;08.00)
- (6) Joel: He can't roll over there, **can he?** (2;08. 23)
- (7) Becky: That's going that way, **does it?** (2;08.16)

What have we learned so far?

- The link between syntactic ingredients and late acquisition is dubious.
- The classic view that NAE tags are acquired late is still standing.
- BE tags are much more frequent among adults and children than NAE tags.
- BE tags seem to be nearly flawless as early as the third year of life.
- Acquisition of tags seems a strong argument for input dependency in CLA.
- The large variation in AUX(n't) + PRN speaks against item-based learning.

Input accounts for the cross-dialectal variation in acquisition.

Are early tags qualitatively different from new tags?

Benchmark: use conditions of adult tag questions

Focus	Stance	Types	Illocution
Addressee	Epistemic	Verification, confirmation of information	Statement-question blends
	Deontic	Action-seeking, hortatory, facilitative	Order, command, suggestion, request
Speaker	Attitudinal	Affective, challenging	Evaluation, threat, joke
Interaction	Textual	Focusing, regulatory, phatic	Follow-ups, repairs

(adapted from *Gómez González & Dehé 2020*)

Requires: speech act – clause type mapping, ToM, face, metalinguistic awareness...

Examples from North American English (2;0 - 3;0)

Positive Anchor, Positive Tag:

- (13) Adam: Trailer doesn't - fit in (th)ere.
[trying to press a toy into the truck]
Mother: The trailer doesn't fit in there?
Adam: Fit. It fits. It fit, does it? (2;09.04 – Brown corpus)
→ **Epistemic, information-seeking**

Positive Anchor, Negative Tag:

- (14) Mother: Can you hand that to me, Honey, and I'll put it back?
(...)
Lily: It's heavy, isn't it? (2;10.08 – Providence corpus)
Mother: It's heavy, you're right.
→ **Epistemic, information-seeking**

Examples from British English (2;0 - 3;0)

Positive Anchor, Positive Tag:

(4) Becky: Here go some rabbits.

Becky: We haven't colored a &-um rabbit in, **have we** ? (2;07.02)

Mother: No. You haven't colored the rabbit in yet.

→ **Epistemic, information-seeking or deontic, action-seeking?**

Negative Anchor, Positive Tag:

(8) Mother: You're going to catch him (=Bouncer)?

Carl: I can catch him downstairs.

Carl: Oh, he's running down the stairs, **isn't he**? (2;03.27)

Carl: Yes. Running downstairs. There's woman.

→ **Epistemic, information-seeking**

Heim & Wiltschko (2021): Acquisition of interaction

(15) Abe (2;9): You have a Pluto and a truck, and you didn't bring them in, did you? Huh?

Mother: You didn't bring in your Pluto and truck, **did you?**

Stage 1: requests response

(16) Father: Can you be a scientist and a dart player at the same time?

Abe (3;6): Yep.

Father: Wow!

Abe: That's hard, **isn't' it?**

Father: It's pretty hard.

Stage 2: reflects ground

(17) Abe (4;6): Now it's my turn again.

Father: Uhhuh, good hit!

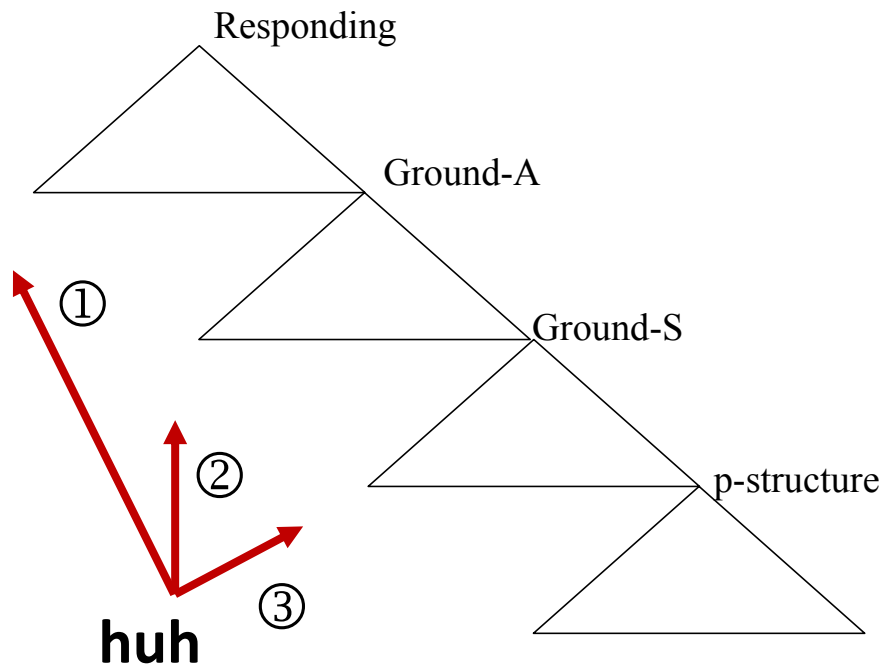
Abe: Daddy, I had a home run, **didn't I?**

Father: You had a good hit.

Stage 3: differentiates grounds

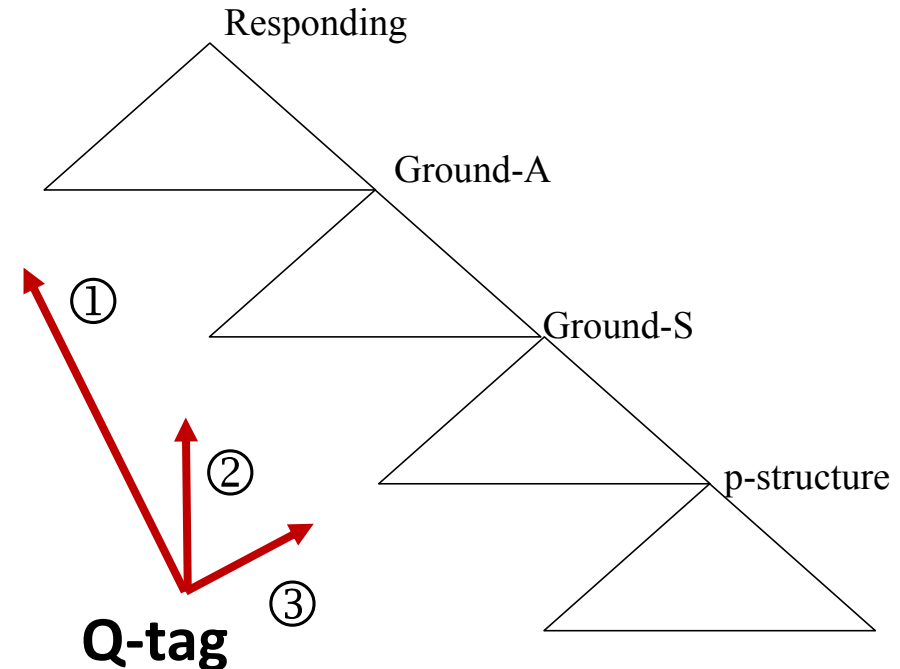
Heim & Wiltschko (2021): Acquisition of interaction

SFPs



- Request for response
- Confirm your ground
- Confirm my ground

Q-tags



- Request for response
- Confirm your ground
- Confirm my ground

The case of Joel – Acquisitional trajectory

- Manchester corpus; 2;00.12 – 2;10.11 (MLUw = 1.568 - 3.015)
- Overall output = 37,866 words; Input = 104,269 words
- Negative Tags: 105 output (~49% of sub-corpus); 1,124 input
- Positive Tags: 49 (~35% of sub-corpus); 986 input

Distribution	Positive anchor	Negative anchor	Isolated	Total
TAG	26	19	4	49
TAGn't	103	-	2	105
Total	129	19	6	154

Targeting	p	BelA	Deontic	Bel _s	Total
TAG	12	6	8	9	35
TAGn't	37	40	1	7	85
Total	49	46	9	16	120

The case of Joel – Acquisitional trajectory

Phase 1: Information-seeking (epistemic) negative tag questions targeting *p*

(18) Investigator: Take her hair out. It's okay .

Joel: That's because you like long hair, **isn't it ?** (02;01.23)

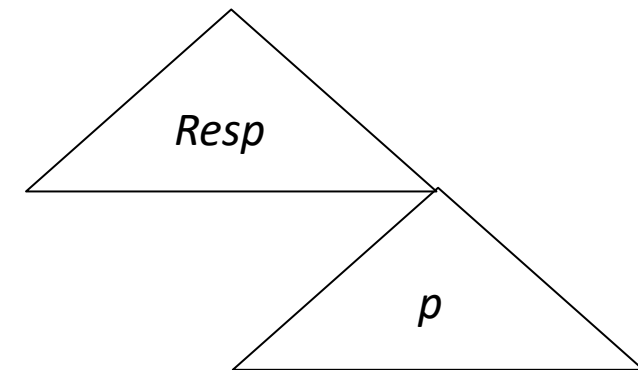
Mother: All the girls at the creche if they've got long hair, they've had it with you, haven't they?

(19) Mother: He's got a dirty bum.

Joel: Got no clothes on.

Joel: Got a dirty bum and no clothes on, **haven't you?** (2;02.14)

Joel: Are you going to change him then? Mummy change him.

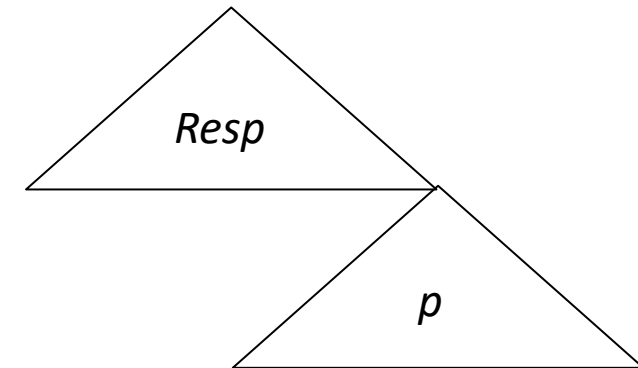


The case of Joel – Acquisitional trajectory

Phase 1: Information-seeking (epistemic) positive tag questions targeting *p*

- (20) Joel: Naughty Bodger.
Mother: Naughty Bodger?
Joel: Is that Bodger, **is it?** (2;05.13)
Mother: That was on yesterday, wasn't it?

- (21) Mother: Pink. That's purple.
Joel: That's not pink, **is it?** (2;06.12)
Mother: No. That's not pink.

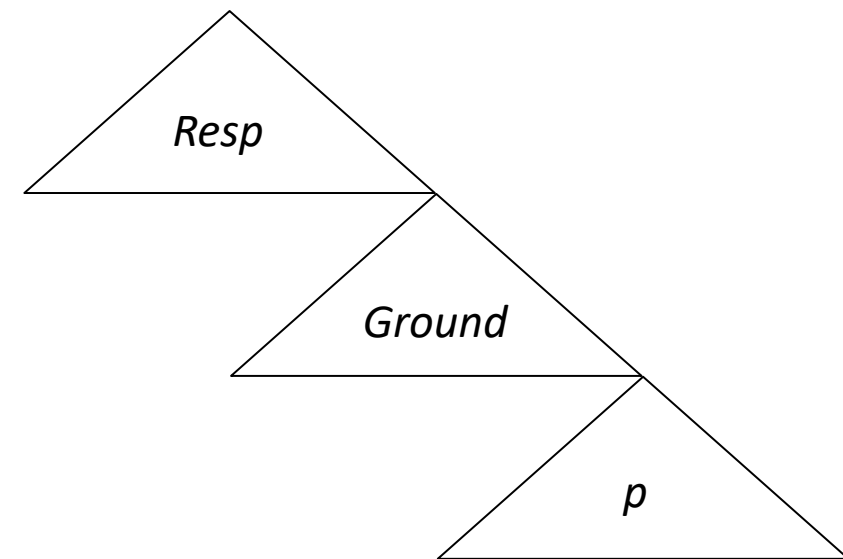


The case of Joel – Acquisitional trajectory

Phase 2: Agreement- or action-seeking (attitudinal/deontic) negative tag questions targeting Bel_A

(22) Investigator: Okay. Put him there.
Joel: He's alright, **isn't he?** (2;06.12)
Investigator: He's alright. Yeah.

(23) Mother: Which one? What does this one look like?
Joel: Look like a hedgehog, **don't he?** (2;06.12)
Mother: He does, doesn't he?
Investigator: He does.

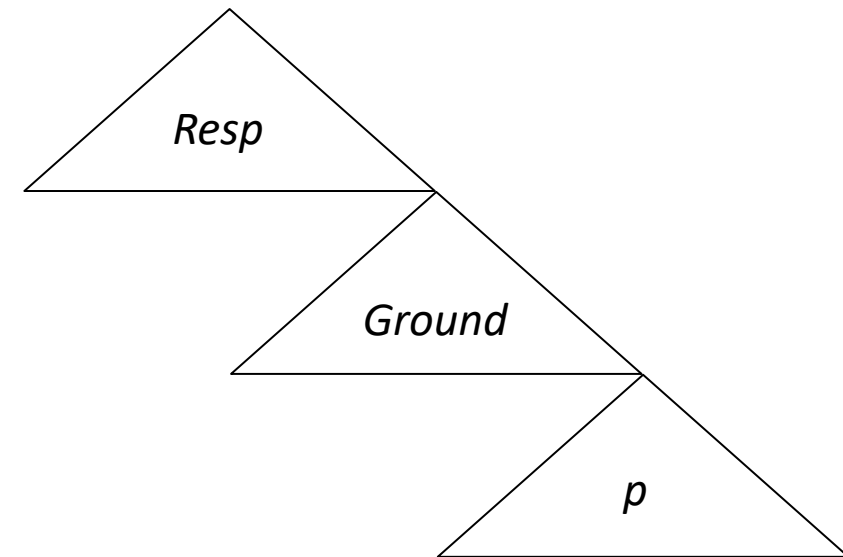


The case of Joel – Acquisitional trajectory

Phase 2: Agreement- or action-seeking (attitudinal/deontic) positive tag questions targeting Bel_A

(24) Joel: Goal.
Joel: That's not a very good one, **is it?** (2;06.26)
Mother: No.

(25) Joel: That was a good one.
Mother: Was it?
Joel: See what was on the back, **shall we?** (2;06.22)
Mother: Let's have a look then.



The case of Joel – Acquisitional trajectory

Phase 3: Agreement-seeking (attitudinal) negative tag questions targeting Bel_S or Bel_A individually

(26) Mother: I know that should do. But there's another one somewhere, isn't there ?

Joel: Should be in that one, **shouldn't it ?**

Joel: Because that one isn't here. (2;10.11)

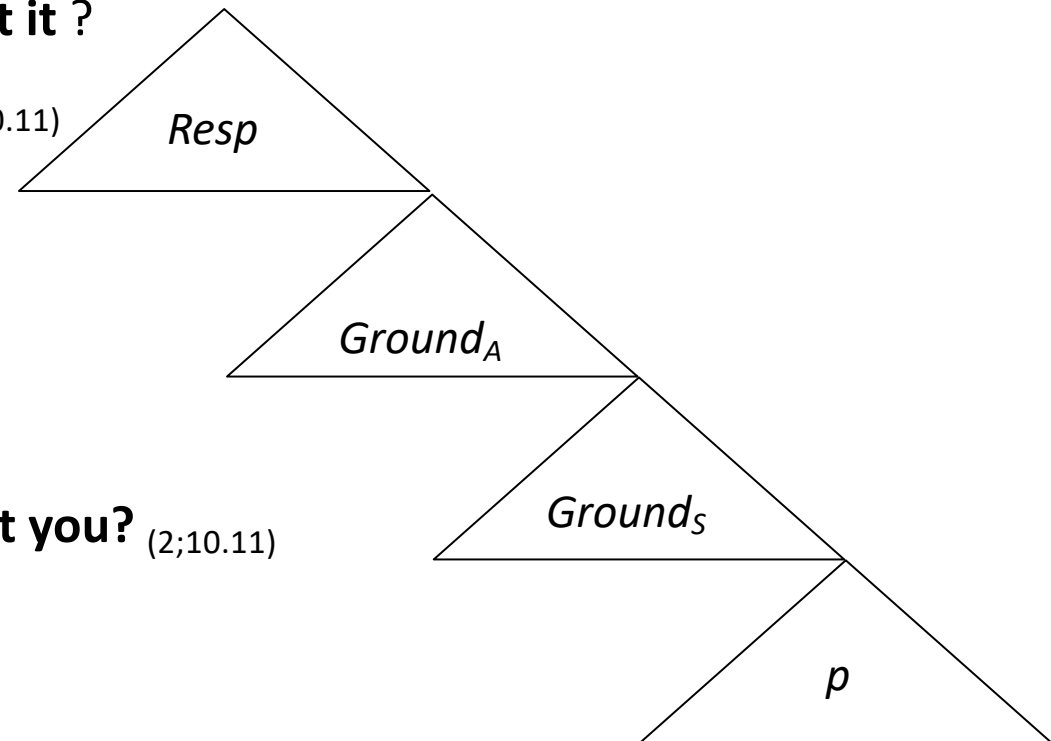
Joel: Do exercises in that one.

(27) Mother: That's the right boot.

Joel: That one's the left boot.

Joel: Because you got it wrong, **didn't you?** (2;10.11)

Mother: Yes. Thank you.

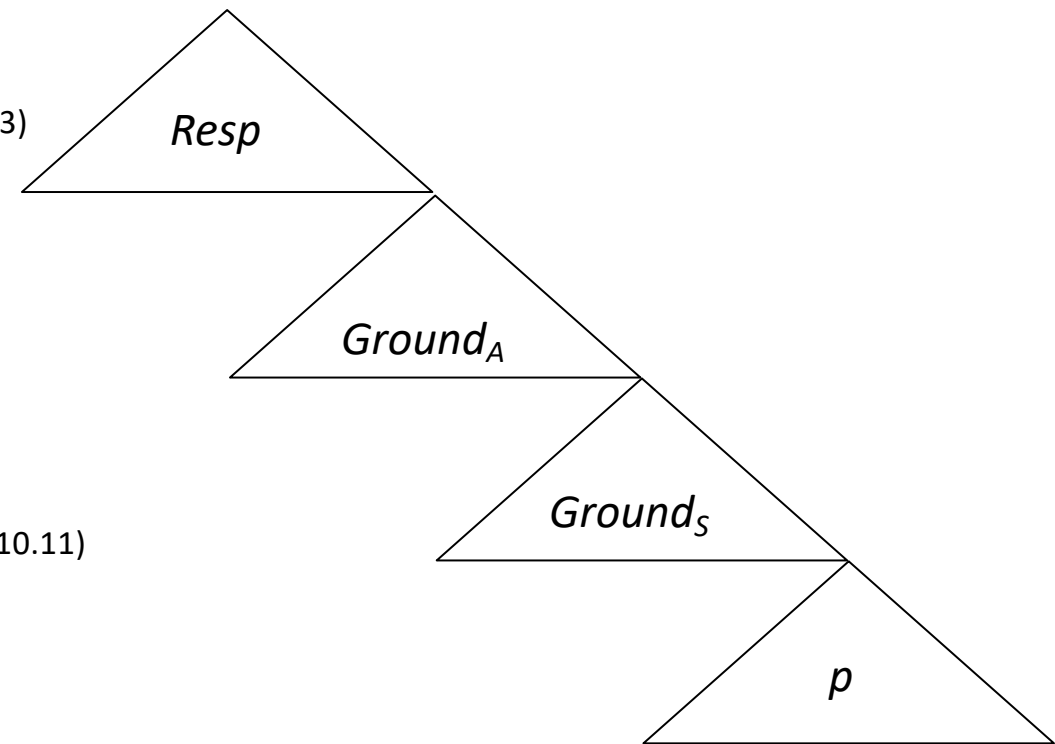


The case of Joel – Acquisitional trajectory

Phase 3: Agreement-seeking (attitudinal) positive tag questions targeting Bel_S or Bel_A individually

- (28) Mother: Who put that [toy] in? Do you know ?
Joel: I don't. Um, I didn't put it in, **did I?** (2;09.13)
Investigator: I don't know .
Joel: I didn't put it in.

- (29) Mother: Shouldn't be in that one, should it ?
Joel: It shouldn't be in that one, **should it?** (2;10.11)
Investigator: No.
Joel: It should be in another pot .



Old puzzle, new data, **new questions & answers.**

Problem: BE tag questions seem to be acquired earlier than NAE tags.

(1) We getting mixed up, aren't we? *Sarah, 4;06 (Brown Corpus)*

(2) That's because you like long hair, isn't it? *Joel, 2;02 (Manchester Corpus)*

Questions: a) What accounts for the cross-dialectal variation?
b) Are early tags qualitatively different from new tags?

Answers: Input (a) only affects syntactic, not pragmatic acquisition (b).

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Questions: a) What accounts for the cross-dialectal variation?
b) Are early tags qualitatively different from new tags.

Answers: Input (a) only affects syntactic, not pragmatic acquisition (b).

- Pace of acquisition seems to strongly correlate with input frequency.
- Potentially larger use variation in BE does not seem to affect pace of acquisition.
- NAE tags may initially be neglected in favour of more frequent interactional language.
- Individual variation across children weigh large on proposals of acquisition (Joel, Adam!)
- Acquisitional trajectory (p -> Bel_A -> Bel_S) shows identical patterns across dialects
- Deontic uses of tags seem item-specific (let's, shall); textual tags are completely absent

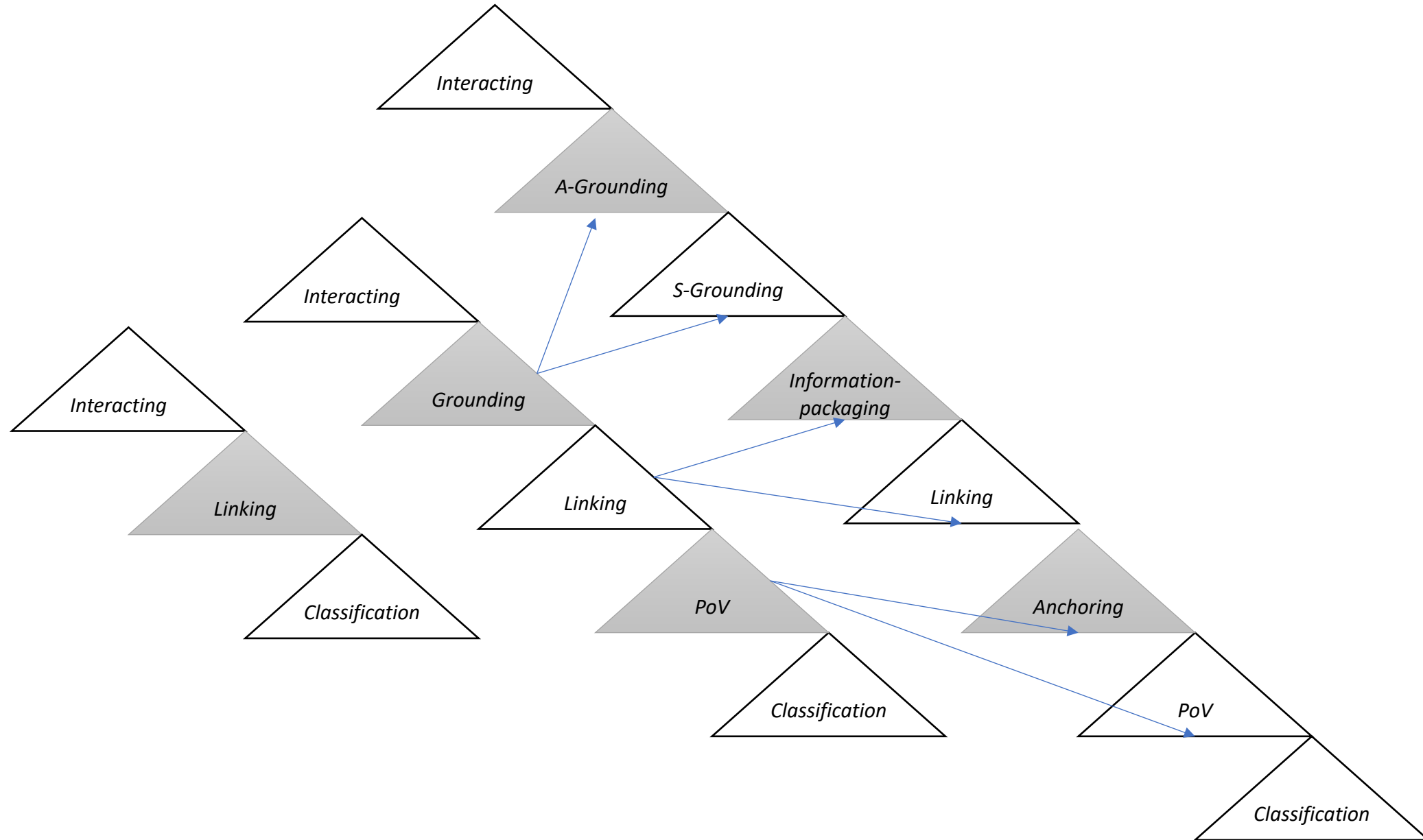
Thank you!

Special thanks to Tom Roeper, Martina Wiltschko and Rebecca Woods.

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Acquisition of the interactional spine



A closer look at input & output (2-3yo): Sub-corpus

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- **Liz**, Manchester corpus; 2;00.07- 2;10.18 (MLUw: 1.518 -3.668) Output = 37894w
- **Ruth**, Manchester corpus; 2;00.05 – 2;11.20 (MLUw = 0.600-2.814) Output = 38200w
- **Carl**, Manchester corpus; 2;00.06 – 2;08.15 (MLUw = 2.144-3.301); Output = 46,847w
- **Dominic**, Manchester corpus; 2;00.07- 2;10.16 (MLUw = 1.388 - 2.792) Output = 41048w
- **Joel**, Manchester corpus; 2;00.12 – 2;10.11 (MLUw = 1.568 - 3.015) Output = 37,866w
- **John**, Manchester corpus; 2;0013 - 2;10.24 (MLUw = 1.585 - 2.871) Output = 26,642w

North American English

- **Lilly**, Providence: 2;00.04 -2;11.25 (MLUw = 1.992-3.737) Output = 40,352w
- **Naima**, Providence corpus : 2;00.04- 2;11.23 (MLUw = 2.688-5.740) Output = 40,507w
- **Sarah**, Brown corpus : 2;03.05-2;11.30 (MLUw = 1.475-2.367) Output = 14,851w
- **Violet**, Providence corpus : 2;00.13-2;11.26 (MLUw = 1.995-3.657) Output = 14,823w
- **Adam**, Brown corpus: 2;03.04-2;11.28 (MLUw = 1.824-3.218) Output = 11,551w
- **Alex**, Providence corpus : 2;00.12-2;11.22 (MLUw = 1.386-3.365) Output = 17,037w
- **Ethan**, Providence corpus : 2;00.07- 2;11.01 (MLUw = 2.538-3.526) Output = 40,352w
- **William**, Providence corpus : 2;00.12-2;11.14 (MLUw 1.429- 3.030) Output = 14,434w