Person and gender in pronoun paradigms: A semantic account of a morphological pattern*

Bronwyn M. Bjorkman[1] Isabelle Boyer[2] Elizabeth Cowper[3]
Daniel Currie Hall[4] Louise Koren[2] Dan Siddiqi[2]

[1]*Queen's University*
[2]*Carleton University*
[3]*University of Toronto*
[4]*Saint Mary's University*

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1 Overview

§2 Confirming a typological pattern in pronoun systems that mark gender:

- Many mark gender only in 3rd person;
- Many of these further restrict gender marking to 3rd singular.

§3 This pattern resists morphological and syntactic explanation. We argue that:

§3.1 It can't be explained by feature geometry;

§3.2 It can't be explained by Impoverishment rules;

§3.3 It could be generated by a difference in syntactic structure… but where does that difference come from?

§4 We propose that it's attributable to a difference in semantic type:

- The ϕ-features of participants (1st and 2nd persons) produce expressions denoting individuals (type e);
- The ϕ-features of non-participants (3rd persons) produce predicates (type $\langle e, t \rangle$).

§5 This is part of our larger project on 'upstaging': Why are some dimensions of morphosemantic contrast realized at the expense of others? Here, person and number upstage gender.

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2 The phenomenon

Greenberg (1966) identifies the following interactions of morphological gender with person and number:

(1) Gender and person:

Universal 44. If a language has gender distinctions in the first person, it always has gender distinctions in the second or third person, or in both (Greenberg 1966: 76).

(2) Gender and number:

Universal 37. A language never has more gender categories in non-singular numbers than in the singular (Greenberg 1966: 75).

Universal 45. If there are any gender distinctions in the plural of the pronoun, there are some gender distinctions in the singular also (Greenberg 1966: 76).

Plank and Schellinger (1997) refine Greenberg's generalizations based on evidence from additional languages:

(3) Plank and Schellinger (1997: 94) on gender, number, and person:

i. A gender distinction in the singular authorizes the same gender distinction in non-singular numbers of the corresponding person.

ii. A gender distinction in 3rd person singular authorizes the same gender distinction in 1st and/or 2nd person non-singular.

iii. A gender distinction in 3rd person non-singular needs no special authorization.

iv. If gender is limited to non-singular, a gender distinction in 3rd person authorizes the same gender distinction in 2nd person, which in turn authorizes the same gender distinction in 1st person.

If X and Y each 'authorize' Z, that means the presence of Z entails the presence of at least one or the other of X and Y. So, for example, any language that has gender distinctions in 1st person plural must also have at least one of:

- gender distinctions in 1st person singular
- gender distinctions in 3rd person singular
- gender distinctions in 3rd and 2nd person non-singular

Even assuming these generalizations remain uncounterexemplified as more languages are examined, it's not obvious how such disjoint implicational universals can be formalized—or whether they should.

Siewierska (2013): "Gender oppositions in personal pronouns are characteristic of the third rather than the first or second person."

In our survey of pronoun systems in 112 languages (Bjorkman et al. 2022, starting from Bliss and Ritter's (2009) database):

- 54 of these languages mark gender on at least some pronouns.
- Gender is marked only in 3rd person in 41 languages.
- Of these, it's limited to 3rd singular in 23.

Only one language we've surveyed so far (Iraqw; Cushitic, Nordbustad 1988) marks gender on participant pronouns (specifically 2nd person ones) but not on 3rd person pronouns.

PARTICIPANTS ONLY	PARTICIPANTS AND NON-PARTICIPANTS		NON-PARTICIPANTS ONLY
2nd only	1st, 2nd & 3rd	2nd & 3rd only	3rd only
Iraqw	Djingli, Ngandi, Rikbaktsa, Slovenian (Lithuanian) (Spanish)	Arabic, Bandjalang, Hausa, Hebrew, Tamazight, Tunica	Ainu, Albanian, Arapesh, Asheninca, Awtuw, Basque, Catalan, Chinook, Cubeo, Dieri, Dutch, (Old) English, German, Godie, Greek, Halkomelem, Hinuq, Ho, IsiXhosa, Kaingang, Kannada, Latin, Latvian, Marshallese, Mixteco, Mohawk, Pakaasnovos, Palauan, Polish, Pomo, Romanian, Salish, Somali, Sotho, Swedish, Telugu, Welsh, Wolaytta, Xokleng, Yimas, Zapoteco
1	6	6	41
	12		

Table 1: *Gender marking by person*

Czech (West Slavic; Janda and Townsend 2002) exemplifies the pattern in which gender contrasts are marked in the 3rd person in both numbers, but not in any other person:

		SING.	PLUR.
1		*já*	*my*
2		*ty*	*vy*
3	MASC.	*on*	*oni*
	FEM.	*ona*	*ony*
	NEUT.	*ono*	*ona*

Table 2: *Czech pronouns: Gender marked in 3rd person only*

Awtuw (Sepik; Feldman 1986) exemplifies the pattern in which gender contrasts are more narrowly confined to 3rd singular:

		SING.	DUAL	PLUR.
1		*wan*	*nan*	*nom*
2		*jen*	*an*	*om*
3	FEM.	*tej*	*ræw*	*rom*
	NON-FEM.	*rej*		

Table 3: *Awtuw pronouns: Gender marked in 3rd person singular only*

3 The theoretical challenge

We adopt the basic assumptions of Distributed Morphology (Halle and Marantz 1993, 1994; Harley and Noyer 1999). Most importantly:

Late insertion: Vocabulary items (VIs) are inserted in the mapping to PF to spell out combinations of features.

Underspecification: To be eligible for insertion, a VI need not realize all the syntactic features on the element being exponed—it just can't realize any features that aren't there. Underspecified VIs may be compatible with multiple slots in a paradigm.

Competition: In the realization of any set of features, the most specified compatible VI is selected.

We also assume what Cowper and Hall (2017) call a **neo-parametric** approach to the features and the syntactic structures in which they appear:

- Features are not universal; the mechanism for acquiring them is (Cowper and Hall 2014).
- The syntactic configuration of features is also not universal, but is constrained by the requirements of feature-checking and semantic composition.

Within this framework, there are various ways to account for asymmetries. We'll start by considering a few that won't work here.

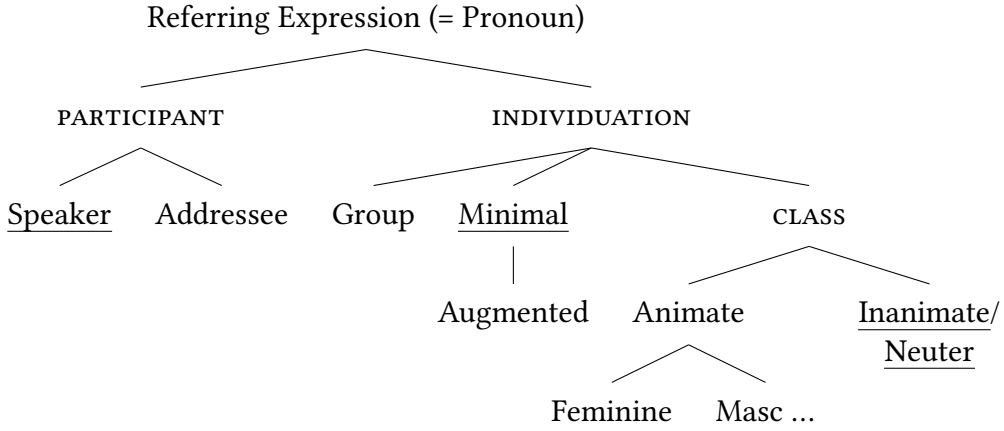
3.1 Feature geometry

Feature geometry offers a DM-compatible way to encode (if not explain) feature dependencies.

In contemporary work, this is often the first type of explanation syntacticians think of for the types of feature dependencies we find in upstaging.

For example, Harley and Ritter (2002) account for Greenberg's (1966: 74) Universal 36 ("If a language has the category of gender, it always has the category of number") by making CLASS (gender) dependent on INDIVIDUATION (number):

(4) Harley and Ritter's (2002: 486) feature geometry for pronouns



But there's no good way of making gender dependent on 3rd person:

- In privative feature systems, 3rd person is represented by the *absence* of a feature such as [PERSON] (Bonet 1991), [PARTICIPANT] (Harley and Ritter 2002) or [PROX] (Ackema and Neeleman 2013).
- In binary systems (e.g., Noyer 1992; Harbour 2016; Cowper and Hall 2019), 3rd person is typically represented by negative feature values.
- So there's no feature that 3rd person has and 1st and 2nd lack.

And feature geometry in general can't account for the kind of typological interaction we see between gender and person:

- If the geometry is universal, gender can't be dependent on 3rd person, because several languages mark gender on participants, too.
- If the geometry is variable, it can't explain why gender marking on participants only (as in Iraqw) is so much rarer than gender marking in 3rd person only.

3.2 Impoverishment

In Distributed Morphology, the operation **Impoverishment** (Bonet 1991; Halle and Marantz 1993) can delete features.

So we could try saying that many (but not all) languages delete gender features in the context of [PARTICIPANT], for example.

Unlike feature geometry, Impoverishment offers a way of saying that some marked feature will be realized only in the *absence* of another marked feature.

But this isn't explanatory, as illustrated in Table 4:

a. Korana

	MASC.	FEM.
1st	*tire*	*tita*
2nd	*sats*	*sas*
3rd	*ll'dib*	*ll'dis*

No impoverishment

b. Québécois

	MASC.	FEM.
1st	ʒ	ʒ
2nd	t	t
3rd	i	a

[FEM] → ∅ / [PART]

c. Unattested

	MASC.	FEM.
1st	ʒ	a
2nd	t	a
3rd	i	a

[PART] → ∅ / [FEM]

Table 4: *Korana, Québécois, and unattested singular pronoun paradigms*

- Table 4a shows the singular pronouns of Korana (Central Khoisan), which distinguish gender in all persons (Siewierska 2013, citing Meinhof 1930).
- The gender-in-3rd-person-only pattern is represented in Table 4b by Québécois. This pattern is derivable by an Impoverishment rule deleting the marked gender feature (non-crucially assumed here to be [FEM]) in the context of marked person ([PART]).
- But an equally simple and natural Impoverishment rule could delete [PART] in the context of [FEM], generating the unattested paradigm in Table 4c, with distinct pronouns for 'I_M', 'you_M', and 'he', but a single form for 'I_F/you_F/she').

So we're back to the question of why person upstages gender, and not vice versa.

3.3 Syntactic structure

Alternatively, we could try to locate the solution in the **syntactic structure**.

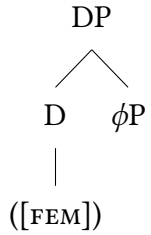
3rd person pronouns often pattern with demonstratives (see, e.g., Ritter 1995; Diessel 1999).

So we might try positing that (in at least some languages) 3rd person pronouns have an additional layer of syntactic structure that participant pronouns lack, and that gender features are on this additional head.

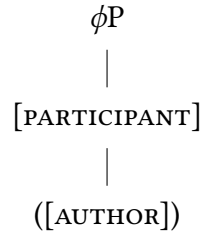
(5) shows what this might look like with D as the additional head:

(5) Structures with gender on D

a. 3rd person



b. 1st or 2nd person



But why should this be? What would prevent a D head from combining with a ϕP that contains [PARTICIPANT]?

4 Proposal

Our proposal: participant and non-participant ϕPs have different semantic types.

This builds on Bjorkman et al.'s (2019) analysis of Heiltsuk. (See also Cowper and Hall In press on Marshallese.)

4.1 Background: The Heiltsuk story

Heiltsuk (Wakashan), known as Haíłzaqvḷa by its speakers, is the language of the Heiltsuk nation, located on the Pacific coast within the province of British Columbia. All data we cite here comes from Rath (1981), a descriptive grammar and dictionary.

Heiltsuk has demonstratives and third-person pronouns that indicate proximity to the speaker, ones indicating proximity to the addressee, and ones indicating neither, but none indicating proximity to a third person.

This is illustrated by the demonstrative paradigm in (6): I–II are speaker-oriented; III–IV are addressee-oriented; and V–VII are not proximal to either discourse participant.

(6) Heiltsuk demonstratives (Rath 1981: 87–88, 91, cited in Bjorkman et al. 2019: 575, 582)

	CLITIC	FULL	GLOSS
I	*gaχʷ*	*gáqʷ*	'this' (here with me)
II	*gatsχʷ*	*gátsqʷ*	'this' (here with me, invisible)
III	*quχʷ*	*qúqʷ*	'that' (there with you)
IV	*quχʷtsχʷ*	*qúχʷtsqʷ*	'that' (there with you, invisible)
V	*qiχʷ*	*qíqʷ*	'that' (over there / under discussion)
VI	*qitsχʷ*	*qítsqʷ*	'that' (over there / under discussion, invisible)
VII	*qkiχʷ*	*qkíqʷ*	'that' (absent / gone)

Theoretical tools adapted from Harbour (2016):

- Person ontology:
  - Unique author (i)
  - Unique addressee (u)
  - Arbitrarily many others (o, o', o'', o''', ...)
- Person features: [±author, ±participant] (see also Cowper and Hall 2019)
- A locative element χ

Bjorkman et al. (2019) treat χ as a function from individuals (type e) to the property of being near those individuals (type $\langle e, t\rangle$):

(7) $[\![\chi]\!] \approx \lambda x\,.\,\lambda y\,.\,\textsc{near}(y, x)$

Features denoting discourse participants—i.e., person feature bundles with a + value for at least one of [±participant] or [±author]—are of semantic type e, and can combine with the locative function χ:

(8) a. $\begin{bmatrix}+\text{author}\\ -\text{participant}\end{bmatrix} = i$ b. $\begin{bmatrix}-\text{author}\\ +\text{participant}\end{bmatrix} = u$ c. $\begin{bmatrix}+\text{author}\\ +\text{participant}\end{bmatrix} = iu$

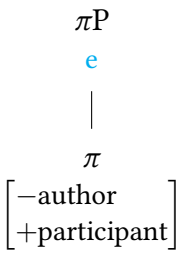
The feature combination [−author, −participant] is not of type e. Rather than denoting an individual, it denotes the property of not being a discourse participant, and is of type $\langle e, t\rangle$:

(9) $\begin{bmatrix}-\text{author}\\ -\text{participant}\end{bmatrix} = \lambda x\,.\,x \in \{o, o', o'', o''', \ldots\}$

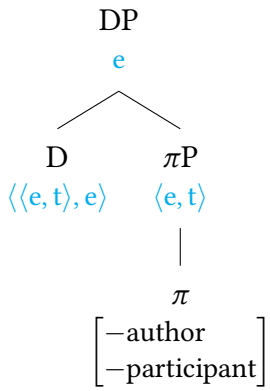
A πP with first- or second-person features can be an argument by itself, as in (10).

A πP with third-person features, as in (11), or one in which participant features combine with χ, as in (12), needs an additional head (D) to make it into an e-type argument.

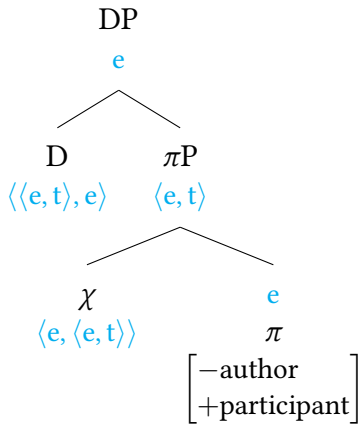
(10) Second person



(11) Third person (V)



(12) Near addressee (III)



4.2 Back to the typological question at hand

Suppose that gender, unlike χ, can only compose with something of type $\langle e, t\rangle$, which they modify intersectively as in (13):

(13) a. $[\![\textsc{masc}]\!] = \lambda F.\lambda x.F(x)$ & $\textsc{masculine}(x)$

b. $[\![\textsc{fem}]\!] = \lambda F.\lambda x.F(x)$ & $\textsc{feminine}(x)$

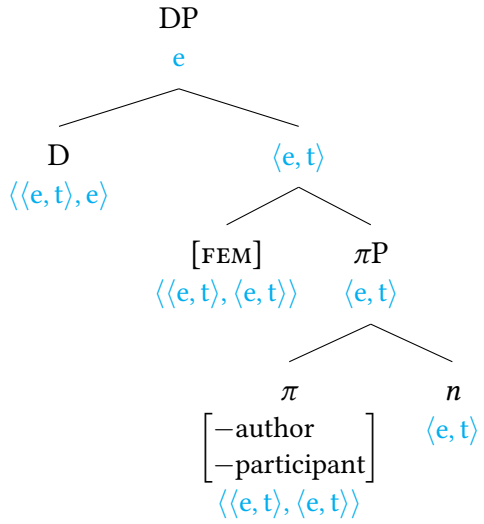
(where $\textsc{masculine}(x)$ and $\textsc{feminine}(x)$ can refer to biosocial and/or grammatical gender, depending on the system; we assume other kinds of gender/animacy/noun class features work the same way)

Additional assumptions:

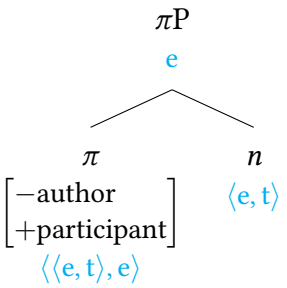
- Pronouns are built on a nominal core (n), which is of type $\langle e, t\rangle$. This is analogous to the 'referring expression' root node of Harley and Ritter's (2002) feature geometry.
- Rather than directly denoting either e-type participants or $\langle e, t\rangle$-type third persons, person feature bundles are functions from $\langle e, t\rangle$ to those types.

If gender is structurally higher than person, then features like those in (13) will be able to compose with third persons, but not with participants:

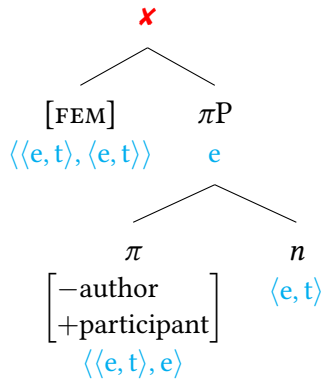
(14) 3rd feminine



(15) 2nd person



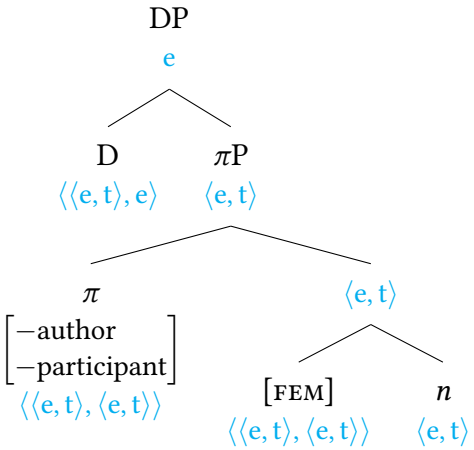
(16) Gender can't combine with a participant



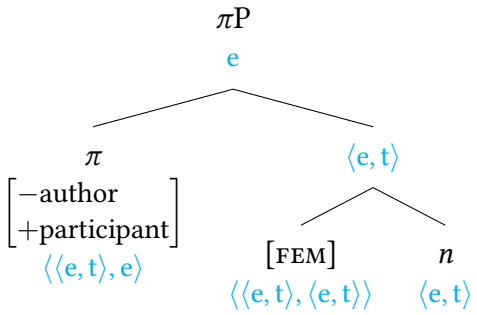
In such a system, only third-person pronouns can have gender features at all; gender contrasts are systematically excluded from the first and second person.

But if gender features are structurally below person features, they will be freely able to combine:

(17) a. Third-person feminine:



b. Second-person feminine:



This predicts two types of systems:

- Languages with gender above person can have gender contrasts only in third-person pronouns.
- Languages with gender below person can have gender contrasts in all persons.

The Iraqw pattern—with gender marking in second person but not third—is not ruled out by this typology, but it's not predicted to be common, either. Under our story, Iraqw would have to have gender low (allowing featural contrasts in all persons), but coincidentally lack distinct vocabulary items to realize those contrasts in third (and first) person.

How does this relate to things other people have said about gender?

- This departs from Kramer's (2016) arguments that gender is always low, on N or *n*.
- Like Ritter (1993), we posit that the locus of gender varies cross-linguistically.

  (More specifically, Ritter says that gender is low in full DPs in Hebrew; since Hebrew has gender marking on participants, we would also place gender low in Hebrew pronouns.)

	MASC.	FEM.
1st	*i*	*i*
2nd	*xa*	*ex*
3rd	*o*	*a*

Table 5: *Hebrew singular clitic pronouns*

5 Conclusions: Remaining puzzles and further research

Two remaining patterns without an explanation:

1. Among participant pronouns, second person is more likely to show gender contrasts than first.
2. In all persons, singular pronouns are more likely to show gender than plural.

5.1 An asymmetry between participants?

Gender is more likely to appear in second persons than in first persons.

- Of 13 languages that show gender on participants, half (7) do not show gender in first persons; **none** show gender in first person but not in second.

PARTICIPANTS ONLY	PARTICIPANTS AND NON-PARTICIPANTS		NON-PARTICIPANTS ONLY
2nd only	1st, 2nd & 3rd	2nd & 3rd only	3rd only
Iraqw	Djingli, Ngandi, Rikbaktsa, Slovenian (Lithuanian) (Spanish)	Arabic, Bandjalang, Hausa, Hebrew, Tamazight, Tunica	Ainu, Albanian, Arapesh, Asheninca, Awtuw, Basque, Catalan, Chinook, Cubeo, Dieri, Dutch, (Old) English, German, Godie, Greek, Halkomelem, Hinuq, Ho, IsiXhosa, Kaingang, Kannada, Latin, Latvian, Marshallese, Mixteco, Mohawk, Pakaasnovos, Palauan, Polish, Pomo, Romanian, Salish, Somali, Sotho, Swedish, Telugu, Welsh, Wolaytta, Xokleng, Yimas, Zapoteco
1	6	6	41
	12		

Table 1 (repeated): *Gender marking by person*

Further complication: Lithuanian and Spanish show gender in participants only because the non-pronominal member of a compound pronoun is inflected for gender.

		SING.	DUAL	PLUR.
1	MASC. FEM.	*àš*	*mù+du* *mù+dvi*	*mẽs*
2	MASC. FEM.	*tù*	*jù+du* *jù+dvi*	*jū̃s*
3	MASC. FEM.	*jìs* *jì*	*jiẽ+du, juõ+du* *jiẽ+dvi, juõ+dvi*	*jiẽ* *jõs*

Table 6: *Lithuanian nominative pronouns (Ambrazas 1997; Plank and Schellinger 1997)*

- We arguably should therefore set these two languages aside.

Of the remaining 11 languages with at least some gender contrasts in participant pronouns:

- 7 mark gender in second person but not in first;
- 4 mark gender in all persons;
- and none mark gender in first person but not second.

Under our proposal, the four languages with gender in both participants are the ones that are taken to be typical of this set; we would explain them as exhibiting 'low' gender.

- Languages marking gender in 2nd person but not 1st would still have to have low gender, if we are correct in analyzing these as involving accidental syncretism.
- A possible—if unsatisfying—explanation is that gender contrasts in first person but not second are possible in principle, but accidentally absent from our sample.
- A slightly more systematic explanation would be that there is a further structural distinction that comes with multiple possible interactions with number and gender.
- We need to examine more languages—and look at these in more depth—to see whether this apparent asymmetry is robust, and if so, how to account for it.

5.2 Interaction with number

Gender also interacts with number:

- 17 of the 54 languages (31%) mark gender only in singular.
- Only two (4%), Marshallese and Palauan, mark gender only in the plural.

This asymmetry is even more pronounced in the 41 languages where gender contrasts are expressed only in the third person:

- 23 of these 41 (56%) mark gender in both 3sg and 3pl.
- 16 of the 41 (39%) mark gender only in 3sg.
- Marshallese and Palauan are the other 5%.

ALL NUMBERS	SINGULAR ONLY	PLURAL ONLY
Ainu, Albanian, Arapesh, Asheninca, Basque, Catalan, Godie, Greek, Halkomelem, Ho, IsiXhosa, Kaingang, Kannada, Latin, Latvian, Mixteco, Mohawk, Pakaasnovos, Polish, Romanian, Sotho, Yimas, Zapoteco	Awtuw, Chinook, Cubeo, Dieri, Dutch, (Old) English, German, Hinuq, Pomo, Salish, Somali, Swedish, Telugu, Welsh, Wolaytta, Xokleng	Marshallese, Palauan
23	16	2

Table 7: *Gender marking by number in languages where gender is marked in 3rd person only*

- Recall that in section 3.1 we saw that Harley and Ritter's (2002) feature geometry encoded the interaction of **number** with gender, but not person.

- While our account links the interaction of person and gender to semantic interpretation, we have no such account for number and gender.

5.3 Where we're going with this

Figuring out how these features interact is part of our larger project on **morphological upstaging**.

- Person is the feature most likely to 'upstage' another in pronoun/demonstrative paradigms, followed by number (Bjorkman et al. 2022).
- In pronouns and demonstratives, we've addressed an apparent tendency to realize person and number at the expense of gender.
- We've also begun looking at verbal agreement, where number so far appears to be the feature most likely to upstage another.

Our long-term goals:

- Identify which upstaging patterns seem robust enough to need explanation.
- Figure out how the features interact.

The story we've told about person and gender today shows one way to derive a 'preference' for one kind of feature over another without stipulating Impoverishment rules or changing the basic assumptions of DM vocabulary insertion. We want to know what other such preferences exist, and why.

References

Ackema, Peter and Ad Neeleman. 2013. Person features and syncretism. *Natural Language & Linguistic Theory* 31(4): 901–950.

Ambrazas, Vytautas, ed. 1997. *Lithuanian grammar*. Vilnius: Baltos Lankos.

Bjorkman, Bronwyn, Elizabeth Cowper, Daniel Currie Hall, and Andrew Peters. 2019. Person and deixis in Heiltsuk pronouns. *Canadian Journal of Linguistics* 64(4): 574–591. doi: 10.1017/cnj.2019.13.

Bjorkman, Bronwyn M., Elizabeth Cowper, Daniel Currie Hall, Jennice Hinds, Louise Koren, and Dan Siddiqi. 2022. Morphological upstaging and 'markedness'. In *Proceedings of the 2021 annual conference of the Canadian Linguistic Association*, ed. Angélica Hernández and Chris Plyley, 13 pp. Canadian Linguistic Association.

Bliss, Heather and Elizabeth Ritter. 2009. A typological database of personal and demonstrative pronouns. In *The use of databases in cross-linguistic studies*, ed. Martin Everaert, Simon Musgrave, and Alexis Dimitriadis, 77–116. Berlin: Mouton de Gruyter.

Bonet, Eulalia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral dissertation, Massachusetts Institute of Technology.

Cowper, Elizabeth and Daniel Currie Hall. 2014. Reductiō ad discrīmen: Where features come from. *Nordlyd* 41(2): 145–164.

Cowper, Elizabeth and Daniel Currie Hall. 2017. The rise of contrastive modality in English: A neoparametric account. *Linguistic Variation* 17(1): 68–97.

Cowper, Elizabeth and Daniel Currie Hall. 2019. Scope variation in contrastive hierarchies of morphosyntactic features. In *Variable properties in language: Their nature and acquisition*, ed. David W. Lightfoot and Jon Havenhill, 27–41. Washington: Georgetown University Press.

Cowper, Elizabeth and Daniel Currie Hall. In press. Morphosemantic features in Universal Grammar: What we can learn from Marshallese pronouns and demonstratives. *Canadian Journal of Linguistics* 67(3).

Diessel, Holger. 1999. The morphosyntax of demonstratives in synchrony and diachrony. *Linguistic Typology* 3(1): 1–49.

Feldman, Harry. 1986. *A grammar of Awtuw*. Canberra: Australian National University.

Greenberg, Joseph H. 1966. *Language universals: With special reference to feature hierarchies*. The Hague: Mouton & Co.

Halle, Morris and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*, ed. Ken Hale and Samuel J. Keyser, 111–176. Cambridge, MA: MIT Press.

Halle, Morris and Alec Marantz. 1994. Some key features of Distributed Morphology. *MIT Working Papers in Linguistics* 21: 275–288.

Harbour, Daniel. 2016. *Impossible persons*. Cambridge, MA: MIT Press.

Harley, Heidi and Rolf Noyer. 1999. Distributed morphology. *Glot International* 4(4): 3–9.

Harley, Heidi and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78(3): 482–526.

Janda, Laura A. and Charles E. Townsend. 2002. *Czech*. Durham, NC: Slavic and Eurasian Language Resource Center, Duke University. Published online at `http://www.seelrc.org:8080/grammar/pdf/compgrammar_czech.pdf`.

Kramer, Ruth. 2016. The location of gender features in the syntax. *Language and Linguistics Compass* 10(11): 661–677.

Meinhof, Carl. 1930. Der Koranadialekt des Hottentottischen. *Zeitschrift für Eingeborenen-Sprachen* 19: 117–153, 188–205.

Nordbustad, Frøydis. 1988. *Iraqw grammar: An analytical study of the Iraqw language*. Berlin: Dietrich Reimer.

Noyer, Robert Rolph. 1992. Features, positions and affixes in autonomous morphological structure. Doctoral dissertation, Massachusetts Institute of Technology.

Plank, Frans and Wolfgang Schellinger. 1997. The unveven distribution of genders over numbers: Greenberg nos. 37 and 45. *Linguistic Typology* 1(1): 53–101.

Rath, John C. 1981. *A practical Heiltsuk-English dictionary with a grammatical introduction*. National Museum of Man Mercury Series. Ottawa: National Museums of Canada.

Ritter, Elizabeth. 1993. Where's gender? *Linguistic Inquiry* 24(4): 795–804.

Ritter, Elizabeth. 1995. On the syntactic category of pronouns and agreement. *Natural Language & Linguistic Theory* 13(3): 405–443.

Siewierska, Anna. 2013. Gender distinctions in independent personal pronouns. In *The world atlas of language structures online*, ed. Matthew S. Dryer and Martin Haspelmath. Leipzig: Max Planck Institute for Evolutionary Anthropology. URL `https://wals.info/chapter/44`.