

A syntactic account of person/number marking in Cheyenne

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Data and generalizations: In Cheyenne (Algonquian; Leman 2011), there are two sets of suffixes that appear in the same position and index 1st and 2nd person plural: Set A and Set B, as shown in Table 1.¹ We present 5 generalizations regarding the distribution of these suffixes in turn below.

Table 1: PERSON-PLURAL SUFFIX

	Set A	Set B
1pl.ex	- <i>me(no)</i>	-(<i>no</i>) <i>ne</i>
2pl	- <i>me</i>	-(<i>no</i>) <i>vo</i>

Generalization #1: In the presence of both 1st person plural and 2nd person plural, 1st person plural will appear. This can be seen in (1). Moreover, both are ambiguous for the number of the 2nd person argument. This generalization is commonly referred to as evidence for a Person Hierarchy in Cheyenne and Algonquian languages (see Macaulay 2009). Generalization #2: Grammatical role is irrelevant, e.g., the lack of contrast in the person-plural suffix between (1a) and (1b).

- (1) a. Né-vóom-e-**meno**
2-see-LOC.DIR-**1PL.EX.A**
'You(SG/PL) saw us(EX)'
- b. Né-vóom-atse-**meno**
2-see-LOC.INV-**1PL.EX.A**
'We(EX) saw you(SG/PL)'

Generalization #3: The presence of a 3rd person argument triggers the Set B forms of this suffix, e.g., with 1st person in (2b) and 2nd person in (3b).

- (2) a. Né-vóom-atse-**meno**
2-see-LOC.INV-**1PL.EX.A**
'We(EX) saw you(SG/PL)'
- b. Ná-vóom-ó-**ne**
1-see-DIR-**1PL.EX.B**
'We(EX) saw her/him'
- (3) a. Né-vóom-e-**me**
2-see-LOC.DIR-**2PL.A**
'You(PL) saw me'
- b. Né-vóom-ó-**vo**
2-see-LOC.INV-**2PL.B**
'You(PL) saw her/him'

Generalization #4: The presence of a 3rd person direct object in ditransitives triggers Set B forms of this suffix with 2nd person plural forms, e.g., (4a), but not 1st person plural forms, e.g., (4b).

- (4) a. Né-méts-é-**nóvo**
2-give-LOC.DIR-**2PL.B**
'You(PL) gave her/him to me'
- b. Né-mét-atse-**meno**
1-give-LOC.INV-**1PL.EX.A**
'We(EX) gave her/him to you(SG)'

¹For brevity, we exclude the inclusive-exclusive distinction within 1st person plurals in Cheyenne.

Generalization #5: In ditransitive reflexive and passive forms, the presence of a 3rd person direct object triggers Set B forms even with 1st person plural forms – compare the Set A suffix with the 1st person plural in (4b) and the Set B suffixes with the 1st person plural in (5).

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| (5) | a. | Ná-mét-áhtsé- nóne
1-give-REFL- 1PL.EX.B
'We(EX) gave <u>her/him</u> to ourselves' | b. | Ná-mét-ané- nóne
1-give-PASS- 1PL.EX.B
' <u>S/he</u> was given to us(EX)' |
|-----|----|--------------------------------------------------------------------------------------------------------|----|-----------------------------------------------------------------------------------------------|

Proposal: First, we propose a probe-goal account of AGREE (Chomsky, 2000), such that the distribution of person plural suffixes is the result of a single articulated probe that is fused for both person and number (see Coon & Bale 2014). The result of this fusion is that the probing occurs for both person and number. The probe is articulated for both person and number such that it is fully satisfied for 1st person and plural features. This thus derives the preference for 1st person plural arguments (Generalization #1).

Second, we propose that this probe can have two probing cycles (see Béjar & Rezac 2009). The first cycle involves the probing of the two structurally highest arguments, i.e both arguments in a transitive form. Since both arguments are being probed simultaneously (following Hiraiwa 2005; contra Preminger 2014), this accounts for why grammatical role is irrelevant in the distribution of these suffixes (Generalization #2).

The articulated probe and simultaneous probing derives the distribution of the 1st person plural suffix. If 1st person plural is present the person specification of the other argument determines the appearance of the suffix (see Deal 2015): the presence of a 3rd person triggers Set B, whereas the absence of 3rd person results in Set A (Generalization #3).

Under the assumption that indirect objects are structurally higher than direct objects in Algonquian languages (see Branigan & MacKenzie 1999 for Innu-aimûn, Bruening 2001 for Passamaquoddy, and Hamilton 2015 for Mi'gmaq), only the subject and indirect object are probed on the first cycle in ditransitives. This is why 3rd person direct objects do not trigger Set B with 1st person plurals.

The link between cycles and suffixes is such that: (a) the ability for a second cycle of probing derives the ability of 3rd person direct objects to trigger Set B suffixes for 2nd person plural, and (b) the limiting of 1st person plural to only the first cycle restricts 3rd person direct objects from triggering Set B suffixes for these forms (Generalization #4).

Support that the structural height of arguments, rather than grammatical role, is important comes from ditransitive reflexives and passives. Since the subject and indirect object are in a way identical in both constructions (depending on the analysis, they are either copies of the same DP (e.g., Hornstein 1999) or members of the same chain (e.g., Reuland 2011), the direct object becomes available for probing on the first cycle, since it counts as the second separate argument. This allows a 3rd person direct object to trigger Set B suffixes in these 1st person plural forms (Generalization #5).

Implications: The apparent person hierarchies involved in the selection of this suffix, i.e., $1 \gg 2 \gg 3$, is epiphenomenal. These effects can be derived syntactically via cyclic articulated probing, argument locality, and the presence/absence of certain persons, e.g., 3rd person DPs for Cheyenne. The presence of, and variation in, locality restrictions suggests that we need to account for the distribution of these suffixes in the narrow syntax.

Selected references: Béjar & Rezac, 2009. Cyclic agree. *Linguistic Inquiry*; Coon & Bale, 2014. The interaction of person and number in Mi'gmaq. *NordLyd*; Deal, 2015. Interaction and satisfaction in ϕ -agreement. *NELS 45*; Leman, 2011. *A reference grammar of the Cheyenne language*; Preminger, 2014. *Agreement and its failures*.