How to talk about groups in a language without group nouns: the case of Passamaquoddy

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1 Introduction

- [1]An Eastern Algonquian language spoken on the Maritime Peninsula of North America (Maine, USA and New Brunswick, Canada)
- Endangered; an estimated 500 speakers in total (Lewis et al., 2016), most (all?) of whom are older than 60
- Two dialects: Passamaquoddy (Maine) and Wolastoqey (New Brunswick), the second also called by the exonym *Malecite/Maliseet*
- Mutually intelligible, differences pertaining to phonology, morphology, lexicon (Grishin, 2023, 17)
- A significant portion of the literature jointly refers to the dialects as simply *Passamaquoddy*
- In this talk, we distinguish between the two (for reasons that will be obvious later); the language as a whole we will call *Passamaquoddy-Wolastoqey* (PW)
- Data presented here comes from four consultants:
  - Two Passamaquoddy speakers from Sipayik (Pleasant Point, ME)
  - One Wolastoqey speaker born in Neqotkuk (Tobique First Nation in NB), relocated to ME at young age
  - One speaker who split time between Neqotkuk and Motahkomikuk (Indian Township, ME) and has features of both Passamaquoddy and Wolastoqey (for the data discussed here, though, patterns with the other Wolastoqey speaker)
- Supplemented with examples from online dictionary (Francis et al., 2024), which does not distinguish between dialects in examples; links to examples footnoted
- PW exhibits hallmark features of other Algonquian languages: polysynthetic, complex polypersonal Agreement, very free word order, animate/inanimate distinction for nouns, obviation...
- The last two will be particularly relevant to us—stay tuned
- Also exhibits a 2-way number distinction on nominals (singular ~ plural)
- Surprising quirk of the lexicon: there are apparently **no singular group nouns** (cf. English *team*, *family*, etc.)

[1]This work would not have been possible without our helpful consultants: Margaret Apt, Edwina Mitchell, Grace Paul, and Roger Paul. We appreciate their time and judgments greatly. We are also grateful to Nina Haslinger, Viola Schmitt, Peter Grishin, anonymous reviewers, and audiences at the MIT Plurals workshop and CLS 61 for their thoughts and comments. Any errors are the sole responsibility of the authors. We welcome all feedback, which can be directed to {jcrobert, haomingl} at mit dot edu.

- Put another way: a singular NP/DP in Passamaquoddy-Wolastoqey only denotes an atomic individual[2] (or *integrated whole*, cf. Moltmann 1997; Wagiel 2021)
- To express the notion of a group, speakers may use a plural noun or a plural free relative—both denoting a plurality of individuals which make up the group in question

(1) litposuwinu-wok Piyel naka Sapet
elected.person-PROX.PL Peter and Elise
'Peter and Elise are a committee (*lit.* are elected persons)' [Wolastoqey]

(2) Elomelu-htit neqt-akutomu-htic-ik 't-ankuwihtu-ni-ya-∅ qanotuwan
IC.increase.AI-3PL.CJ as.one-be.related.AI-3PL.CJ-PROX.PL 3-extend.TI-N-PL-IN.SG longhouse
'As the family grows (*lit.* as the people who are related increase), they extend the longhouse'[3]

(3) mawe= nehpahtik-hoti-c-ik
together= kill.AI-PL-3.CJ-PROX.PL
'Wolf pack (*lit.* those who hunt together)'[4]

- This generalization extends to "substances" which are composed of discrete parts like *grass* or *hair*—mass in English, but countable in PW

(4) n-kisi-htu-n posonut ewehki pskihqi-yil
1-PRF-make.TI-N basket IC.use.TI grass-IN.PL
'I made a basket from (pieces of) grass'[5]

(5) cilkatokot-ul '-piyehsu-m-ol
be.short.II-IN.PL 3-hair-POSS-IN.PL
'His hair (lit. *hairs*) is short'[6]

(6) wolakuk n-kot-uwaqosom-on-ol aptelomultineweya-l
tonight 1-going.to-cook.TI-N-IN.PL rice-IN.PL
'Tonight I am going to cook (grains of) rice'[7]

- Why this might be is an interesting question on it's own; how can we explain cross-linguistic variation?
  - Constraints on the lexicon (e.g., PW has constraints which enforce an atomicity-singularity correspondence, while English does not)
  - Alternative: PW lacks some structure in the nominal spine that would otherwise enable group reference with singular nouns (in the style of Borer 2005, suggested to us by Peter Grishin)
- ...but this is not the question we will explore today
- The translation strategies presented above are sufficient for some cases, but **fall short in other respects**
  - Predicating of groups (*old committee* ≠ *old committee members*)
  - Counting, measure groups (*two teams* ≠ *two players*)
  - Distributivity to groups (*each family* ≠ *each related person*)
- Given PW's lexicon, **how is this kind of group reference achieved?**

[2] There are a few identifiable exceptions to this generalization in the realm of quantification (Bruening, 2008; Li et al., 2025), but we abstract away from this issue in the current study. The point remains that, referentially, singular NPs/DPs in the language cannot denote groups.

[3] https://pmportal.org/dictionary/ankuwihtun

[4] https://pmportal.org/dictionary/nehpahtike

[5] https://pmportal.org/dictionary/pskihq

[6] https://pmportal.org/dictionary/cilkatokot

[7] https://pmportal.org/dictionary/aptelomultinewey

2 Empirical overview

- We'll start with distributivity and work our way back
- Two unambiguously distributive universal quantifiers:
  - *i-pesq*: distributive prefix *i-* plus numeral 'one', necessarily takes a plural complement with which it Agrees in number/animacy/obviation (Wolastoqey only?)
  - *yat-te (wen)*: Demonstrative *yat* + emphatic marker *(o)te*, optional quexistential *wen* if the key is animate
- Can make a predicate true of atoms, but also allows for **interpretations where a predicate is distributed to (contextually-salient) subpluralities**

(7) i=pesku-wok litposuwinu-wok '-kotuw-ewestuwawam-a not kehkimsu-lti-c-ik
I=one-AN.PL council.member-PROX.PL 3-going.to-speak.TA-3OBJ-PL that.AN learn.AI-PL-3.CJ-PROX.PL
'Each committee/each member of the committee will speak to the students.' [Wolastoqey]

(8) i-pesku=wok malsom-ok '-kisi-pson-a-w-a-l mus-ol
I-one=AN.PL wolf-AN.PL 3-can-catch.TA-3OBJ-W-PL-OBV.SG moose-OBV.SG
'Each (pack of) wolves caught a moose' [Wolastoqey]

(9) yat-te wen neqt-akutom-uhti-c-ik 't-opeltom-oni-ya atumopil
that-EMPH who as.one-be.related.AI-PL-3.CJ-PROX.PL 3-have.TI-N-PL car
'Each family/each member of the family owns a car' [Passamaquoddy]

- This second sense of distributivity makes *yat-te*, *i-pesq* compatible with collective predicates like *gather* or *numerous* (cf. quantifiers which exclusively distribute to atoms, such as *each*)

(10) i=pesku-wok sips-ok kisi=maqaha-htu-wok oposi-hkuk
I=one-PROX.PL bird-PROX.PL PRF=gather.AI-PL-PROX.PL tree-LOC.PL
'The flocks of birds each gathered in a different tree' [Wolastoqey]

(11) yat-te neqt-akutomuc-ik elinaqsi-htit
that-EMPH as.one-be.related.AI-PL.CJ IC.be.numerous.AI-3PL.CJ
'Each family is big' [Passamaquoddy]

- Notice that apart from lexical differences Passamaquoddy and Wolastoqey behave exactly the same
- In Passamaquoddy, **groups can also be predicated** of (and that predicate need not be true of the group's members)
- For example, (12) can be true of a long-standing committee with young members, (13) can be true of a new baseball team comprised of elders, etc.

(12) yaliqsenomu-c-ik 'kan-ey-∅
oversee.TA-3.CJ-PROX.PL old-ADJZ-SG
'The steering committee is an old one'
↛ 'The steering committee members are old' [Passamaquoddy]

(13) pil-ey-∅ yut nuci= epeskom-hoti-htit
new-ADJZ-SG this.IN.SG regularly= play.ball.AI-PL-3PL.CJ
'This team is new' ↛ 'These players are new' [Passamaquoddy]

(14) Piyel kis-onuw-a-∅ epeskoma-c-ihi
Peter PRF-buy.TA-3OBJ-SG play.ball-3.CJ-OBV.PL
'Peter bought the ball team' ↛ 'Peter bought the players' [Passamaquoddy]

- In the above examples, things which Agree with the group are singular if there is only one group; exponing plural features obviates the group interpretation (compare (13), (15))

(15) 'kan-eya-k nuci= epeskomhoti-htit
old-ADJZ-PROX.PL regularly= play.ball.AI-3PL.CJ
'The baseball players are old.' ≠ 'This team is old.' [Passamaquoddy]

- A single plural nominal can also be interpreted as multiple groups (in which case plural Agreement is OK)

(16) Piyel '-kisi=wihtom-on-ol epeskom-hoti-c-ik
Peter 3-PRF=name.TI-N-IN.PL play.ball.AI-PL-3.CJ-PROX.PL
'Peter named the teams' ≠ 'Peter named the (individual) ball players' [Passamaquoddy]

- But in Wolastoqey, this kind of group predication is impossible regardless of number Agreement

(17) *pil-ey-∅ epeskome-winu-wok
new-ADJZ-SG play.ball-person-PROX.PL
Int. 'The baseball team is new' [Wolastoqey]

(18) #pil-eya-k 'kani-epeskome-winu-wok
new-ADJZ-PROX.PL old-play.ball-person-PROX.PL
Int. 'The baseball team (with old members) is new' [Wolastoqey]

- It is also **possible to count and compare groups** in Passamaquoddy
- In (19), the verb *nisonul* 'be two' is true of the teams, but obviously not of the total set of baseball players

(19) nisonu-l nuci= epeskom-hoti-htit ehte-k Sipayik
be.two.II-IN.PL regularly= play.ball.AI-PL-3PL.CJ IC.be.there.II-IN.CJ Sipayik
'There are two baseball teams in Sipayik.'
≠ 'There are two baseball players in Sipayik.' [Passamaquoddy]

- See also (20), whose truth conditions are contingent on there being more teams (not more players) in Sipayik than Motahkomikuk

(20) aqameltu-l nuci= epeskom-hoti-htit Sipayik katok Motahkomikuk
be.more.II-IN.PL regularly= play.ball.AI-PL-3PL.CJ Sipayik than Motahkomikuk
'There are more baseball teams in Sipayik than Motahkomikuk'
≠ 'There are more baseball players in Sipayik than Motahkomikuk.' [Passamaquoddy]

- As with group predication, though, amount verbs cannot count groups in Wolastoqey

(21) '-cuwi=oc Piyel '-tomsom-on-ol nihin-ol pskihq-ol
3-must=FUT Peter 3-cut.TI-N-IN.PL be.three.II-IN.PL grass-IN.PL
'Peter needs to cut three blades of grass #three lawns' [Wolastoqey]

(22) {nisu-wok / *nison-ul} sips-ok '-kisi=komutonal-a-w-a-l
{be.two.AI-PROX.PL / be.two.II-IN.PL} bird-PROX.PL 3-PRF=steal.TA-3OBJ-W-PL-OBV.SG
lakalet-ol
frybread-OBV.SG
'Two birds #two flocks stole a frybread' [Wolastoqey]

(23) {nisu-wok / *nison-ul} neqt-akutomu-htic-ik
be.two.AI-PROX.PL / be.two.II-IN.PL as.one-be.related.AI-3PL.CJ-PROX.PL
'Two related people' ≠ 'two families' [Wolastoqey]

- In sum, distributivity to subpluralities is robustly attested in both dialects of the language
- ...however, only Passamaquoddy can predicate of and measure groups
- Under group interpretations, number Agreement is contingent on the number of groups (SG for one group, PL for two or more)
- To translate other kinds of group-sensitive situations, Wolastoqey speakers find a workaround (compare (21), (24)) or concede that it cannot be translated

(24) 't-ahcuwi '-tomsom-on-ol pskihq-ol 'ciw nihin-ol wikuwam-ol
3-must 3-cut.TI-N-IN.PL grass-IN.PL for be.three.II-IN.PL house-IN.PL
'He needs to cut grass for three houses' [Passamaquoddy]

- How shall we make sense of this difference between Passamaquoddy and Wolastoqey?
- There are insights from agreement, but this requires some background on Algonquian features

3 Excursus: animacy and verb classes

- PW's grammatical gender system is based on animacy; however, the distinction is semi-arbitary
  - Notionally-animate things $\subset$ grammatically-animate things
  - Notionally-inanimate things $\not\subset$ grammatically-inanimate things

(25)
a. skitap 'man' AN
b. pqapit 'beaver' AN
c. puhtay 'bottle' AN
d. pskihqimins 'strawberry' AN
e. suwon 'cranberry' IN
f. paksis 'box' IN
g. ponapsq 'rock' IN

- See Greenberg (1954); Hallowell (1955); Dahlstrom (1995) for commentary on the predictability of gender in Algonquian
- (Third-person) animate nouns are further partitioned into *proximate* (PROX) and *obviative* (OBV)
- Possibly pragmatic/discourse-y function in some Algonquian languages (Goddard 1990, a.m.o), but syntactically-conditioned in PW (Grishin et al., 2024)
- Briefly, the highest 3AN in a domain (CP or DP) is PROX while lower 3ANs are marked OBV

(26) psuwis-∅ '-kisi=posokapen-a-l athusossi-yil
cat-PROX.SG 3-PRF=scratch.TA-3OBJ-OBV.SG snake-OBV.SG
'The cat scratched the snake' Grishin et al. (2024)

(27) ckuh-qepu-∅(-wol) Laca-∅ '-temis-ol pemsokhasi-k
to.here-sit.AI-3-OBV.SG Roger-PROX.SG 3-dog-OBV.SG floor-LOC
'Roger's dog sat on the floor' Grishin et al. (2024)

- Observe that if there is no 3AN clausemate, an object 3AN can be PROX

(28) ∅-nomiy-a-n-{∅/*nul} olomuss-{∅/*ol}
1-see.TA-3OBJ-1PL-{PROX.SG/OBV.SG} dog-{PROX.SG/OBV.SG}
'We saw a dog' (Grishin et al., 2024)

- Verbs vary in the animacy of the arguments they can accept
- Four (basic) classes, defined by the verb's valency and the animacy of one of its arguments

Class	SUBJ	OBJ
Animate Intransitive (AI)	AN	n/a
Inaninmate Intransitive (II)	IN	n/a
Transitive Animate (TA)	any	AN
Transitive Inanimate (TI)	AN	IN

Table 1: Animacy of arguments by verb class.

- On table, AN reads PROX or OBV
- With this background, we can more fully explore the interaction of group reference and morphology

4 Data revisited

- Reconsidering the data in §2, we see that nominals under group interpretations for predication, measurement, etc. are **often treated as grammatically inanimate**

(29) Piyel '-kisi=wihtom-on-ol epeskom-hoti-c-ik
Peter 3-PRF=name.TI-N-IN.PL play.ball.AI-PL-3.CJ-PROX.PL
'Peter named the teams' ≠ 'Peter named the (individual) ball players' [Passamaquoddy]

(30) pil-ey-∅ yut nuci= epeskom-hoti-htit
new-ADJZ-SG this.IN.SG regularly= play.ball.AI-PL-3PL.CJ
'This team is new' ≠ 'These players are new.' [Passamaquoddy]

(31) nisonu-l nuci= epeskomhoti-htit ehte-k Sipayik
be.two.II-IN.PL regularly= play.ball.AI-PL-3PL.CJ IC.be.there.II-IN.CJ Sipayik
'There are two baseball teams in Sipayik.'
≠ 'There are two baseball players in Sipayik.' [Passamaquoddy]

(32) aqameltu-l nuci= epeskom-hoti-htit Sipayik katok Motahkomikuk
be.more.II-IN.PL regularly= play.ball.AI-PL-3PL.CJ Sipayik than Motahkomikuk
'There are more baseball teams in Sipayik than Motahkomikuk'
≠ 'There are more baseball players in Sipayik than Motahkomikuk.' [Passamaquoddy]

- Speaker will sometimes prefer animate agreement even under a group interpretation; it's not clear yet if this is conditioned by something else or in free variation

(33) Piyel kis-onuw-a-∅ epeskoma-c-ihi
Peter PRF-buy.TA-3OBJ-SG play.ball.AI-3.CJ-OBV.PL
'Peter bought the ball team' [Passamaquoddy]

(34) nuhu-wok epeskoma-c-ik
three.AI-PROX.PL play.ball.AI-3.CJ-PROX.PL
'Three teams' [Passamaquoddy]

- Matching the nominal in animacy and number undoes the (single) group-predication inference; compare (13), (35)

(35) pil-eya-k nuci= epeskom-hoti-htit
new-ADJZ-PROX.PL regularly= play.ball-PL-3PL.CJ
'The players are new' ≠ 'The team is new.' [Passamaquoddy]

- On the other hand, group distributivity never feeds inanimate agreement (true across all dialects)

(36) i=pesku-wok sips-ok kisi=maqaha-htu-wok oposi-hkuk
I=one-PROX.PL bird-PROX.PL PRF-gather.AI-PL-PROX.PL tree-LOC.PL
'The flocks of birds each gathered in a different tree' [Wolastoqey]

(37) yat-te wen neqt-akutom-uhti-c-ik 't-opeltom-oni-ya atumopil
that-EMPH who.AN as.one-be.related.AI-PL-3.CJ-PROX.PL 3-have.TI-N-PL car
'Each family owns a car' [Passamaquoddy]

- While the animate quexistential *wen* can optionally appear with the distributive operator *yat-te*, the inanimate quexistential *keq* is impossible (even with a group distributivity interpretation)

(38) yat-te (wen) epeskoma-c-ik tom-hotu-wok
that-EMPH who.AN play.ball-3.CJ-PROX.PL win.AI-PL-PROX.PL
'Each team won' [Passamaquoddy]

(39) *yat-te keq epeskoma-c-ik tom-hotu-wok
that-EMPH what.IN play.ball-3.CJ-PROX.PL win.AI-PL-PROX.PL
Int. 'Each team won' [Passamaquoddy]

(40) yat-te (wen) epeskoma-c-ik 't-iyw-a-w-a-l epeskomakon-ol
that-EMPH who.AN play.ball-3.CJ-PROX.PL 3-have.TA-3OBJ-W-PL-OBV.SG ball-OBV.SG
'Each team has a ball' [Passamaquoddy]

(41) *yat-te keq epeskoma-c-ik 't-iyw-a-w-a-l epeskomakon-ol
that-EMPH what.IN play.ball-3.CJ-PROX.PL 3-have.TA-3OBJ-W-PL-OBV.SG ball-OBV.SG
Int. 'Each team has a ball' [Passamaquoddy]

- Given this, a revised summary:
  - Both Passamaquoddy and Wolastoqey exhibit distributivity to subpluralities (on top of atomic distributivity)
  - Regardless of the granularity of distributivity, inanimate agreement is impossible
  - Only Passamaquoddy has group inferences with non-quantified nominals; under group interpretations, Agreeing elements shift in number (and oftentimes animacy)

- These facts lend themselves to an analysis where group distributivity and group formation are separate (at least in the syntax)

5 Proposal for general group reference

- Passamaquoddy's ability to refer to and predicate on groups despite the lack of singular group nouns speaks to the need of a covert semantic mechanism that converts a plurality of group members to a group atom.

- We implement this conversion via the following covert group-forming operator:

(42) $[\![\mathbf{G}_{\text{Cov}}]\!] \coloneqq \lambda P_{\langle e,t\rangle}.\, \lambda g_e.\, \exists x \in \text{Cov}.\, g = \uparrow x$ where Cov is a set of individuals that cover $\bigoplus P$.

- Essentially, **G** takes a set of individuals, and a cover over that set, and returns the set of groups, each of which corresponding to a plurality in the cover.

- A reminder: set of individuals A covers set of individuals P iff $\bigoplus A = \bigoplus P$.

- The identity of the cover is flexible. Take the input set $\{a, b, c, d\}$ as an example.

- On one end of the spectrum, the cover could be the singleton set $\{a \oplus b \oplus c \oplus d\}$; in this case,

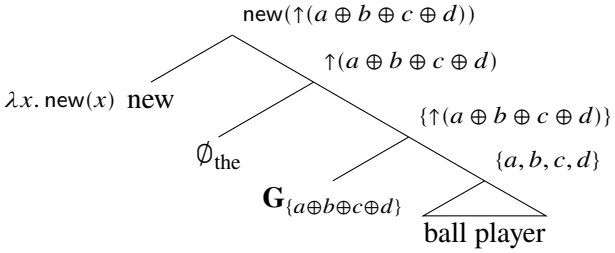
(43) $[\![\mathbf{G}_{\{a\oplus b\oplus c\oplus d\}}]\!](\{a,b,c,d\}) = \{\uparrow(a\oplus b\oplus c\oplus d)\}$.

- We can then refer to the group formed from all the members of the set, $\uparrow(a\oplus b\oplus c\oplus d)$ with the help of a covert definite determiner that returns the unique maximum member from a set:

(44) a. $[\![\emptyset_{\text{the}}]\!] \coloneqq \lambda P.\, \imath x.\, [P(x) \wedge \forall y \in P.\, y \sqsubseteq x]$
b. $[\![\emptyset_{\text{the}}]\!](\{\uparrow(a\oplus b\oplus c\oplus d)\}) = \uparrow(a\oplus b\oplus c\oplus d)$

- Suppose that $\{a,b,c,d\}$ are the salient ball players, and they are a team. (13) can receive the following analysis:

(45)



- In the middle of the spectrum, the cover could made up of non-atomic pluralities, such as $\{a\oplus b, c\oplus d\}$, in this case,

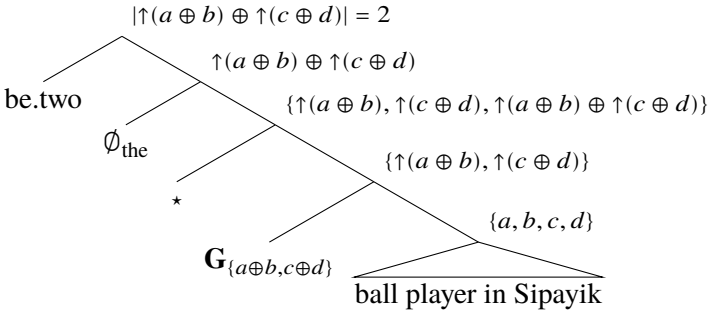
(46) $\mathbf{G}_{\{a\oplus b,c\oplus d\}}(\{a,b,c,d\}) = \{\uparrow(a\oplus b), \uparrow(c\oplus d)\}$.

- Suppose that $\{a,b,c,d\}$ is the set of salient baseball players in Sipayik, a,b are a team, and c,d are another team.
- (46) effectively outputs the set of team group atoms, and therefore enables counting by the number of teams.
- We assume that the star operator $\star$ (Link, 1983) exists and is applied to the set of group atoms when there is plural marking, and that the numerals are predicates of individuals.

(47) $[\![\star]\!] \coloneqq \lambda P.\, \lambda x.\, \exists P' \subseteq P.\, x = \bigoplus P' \wedge P' \neq \emptyset$
(47) $[\![\text{be.two}]\!] \coloneqq \lambda x.\, |x| = 2$

- Then, (31) can receive the following analysis:

(48)



6 Loose end: animacy under group formation

- Recall in §4 we showed how verbs, demonstratives, etc. which Agree with a groupified nominal expone inanimate features
- Two possible ways to capture the facts:
  - In the syntax, **G** comes with a feature [−animate] (assuming our feature inventory is [±animate])

– Animacy is a privative feature; inanimate agreement under groupification is due to **G** blocking heads which would otherwise find a feature [+animate] (i.e., **G** is a phase head)

- These hypotheses are contingent on the feature inventory of the language (binary or privative AN?)
- Some work already suggests animacy is privative in Algonquian—Dahlstrom (1995) observes that when referring to a plurality of mixed animacy, IN emerges

(49) mi·či-kwe·na
eat.TI-3:IN/INTERR.PART/3
'Whoever ate them$_{IN}$' (where *them* is strawberries$_{IN}$, a kind of fish$_{AN}$)[8] [Meskwaki (Fox)]

- Preliminary fieldwork in Passamaquoddy has shown that in cases of epistemic uncertainty, IN is used over AN
- E.g., despite *keq* being inanimate, (50) can be felicitously followed up with (51)

(50) keq kis-oto-k Piyel
what.IN PRF-eat.TI-3.CJ Peter
'What did Peter eat?' [Wolastoqey]

(51) kis-om-a-l payis-ol
PRF-eat.TA-3OBJ-OBV.SG pie-OBV.SG
'He ate pie' [Wolastoqey]

- Given this, the inanimate agreement we see could really be a sort of failed agreement
- **G** being phasal makes predictions regarding obviation; See below (adapted from Grishin et al. 2024)

(52) **Obviation rule**
An obviation competitor O is assigned obviative iff it is c-commanded by another obviation competitor P within the same obviation domain, and there is no (hard) phase boundary separating O and P. Else, O is assigned proximate.
a. **Obviation competitor:** A nominal is an obviation competitor iff it is third-person animate.
b. **Obviation domain** A constituent is an obviation domain iff it is a phase.
c. **(Hard) phase heads** are at least D, P, and C.

- If **G** is a phase, a nominal which would otherwise be obviative (e.g., it is a 3AN sharing space with another 3AN and there no D, P, or C separating them), said nominal can be proximate under group interpretations
- Early data shows this prediction is substantiated (but further fieldwork is necessary to say for certain)

(53) epeskoma-c-ik 't-iyw-a-w-a epeskomakon-∅
play.ball-3.CJ-PROX.PL 3-have.TA-3OBJ-W-PL ball-PROX.SG
'The team has a ball' [Passamaquoddy]

(54) a. Dan [$_{NP}$ Nan [$_{CP}$ Can … DPan …]]
b. Dinan [$_{Ginan}$ [$_{NP}$ Nan [$_{CP}$ Can … DPan …]]]

7 Extension to non-atomic distributivity and its problems

- We have seen distribution to subpluralities in examples (7)-(9)
- Usually, such behavior is captured via covers, through the Part distributive operator (Schwarzschild, 1996).
- Our **G** already utilizes covers.

[8] Dahlstrom 1995, 64, citing Kiyana (1913)

- One is led to the idea that the role of Part could be decomposed into a plain universal quantifier and **G**.

(55) a. $\mathbf{Q}_\forall \coloneqq \lambda P.\, \lambda Q.\, \forall x \in P.\, Q(x)$
b. $\mathbf{Q}_\forall \circ [\![\mathbf{G}_{\text{Cov}}]\!] = \lambda Q.\, \forall x \in \text{Cov}.\, Q(\uparrow x)$

- The only difference between Part and (55-b) aside from the fact that Part distributes over an individual while (55-b) quantifies over a set, is that (55-b) converts the members of the cover into group atoms before predicating the scope Q onto them.
- However, there are reasons to think that non-atomic distribution in PW is not derived from the composition of $\mathbf{Q}_\forall$ and **G**.
- Unlike group formation in counting and predication, which allows for a change in animacy, non-atomic distributivity, even if to salient groups, like flocks or teams, never allows inanimate morphology as long as the group members are animate.

8 Conclusion

- In short:
  - PW lacks singular group nouns, raising questions about how certain kinds of group reference is achieved (group predication, counting, distributivity, etc.)
  - Empirically, all speakers of the language can interpret UQs as distributing to groups rather than atoms if the context calls for it
  - Only Passamaquoddy speakers can refer to groups in non-distributive contexts; group inferences typically come with a change in morphology
  - We posit a group formation operator **G**, which takes a set of individuals and returns a set of one or more groups
  - We speculate that the inanimate agreement observed in group inferences is the result of **G** being a phase head, supported by preliminary evidence from obviation
  - Distributivity to groups is achieved with the same formal machinery, but now **G** comes as part of the universal quantifier (does not feed inanimate agreement)
- While our analysis captures the facts for Passamaquoddy-Wolastoqey, there are a number of open questions—especially pertaining to typology, language change
- The two dialects differ in having the general group formation operator **G**, but both exhibit subplural distributivity; does the former necessitate the latter? If so, does this imply diachronic source?
- Beyond PW, are there other languages without singular group nouns? If so, how do they express group predication, etc.? Are these strategies also resolvable to **G**?
- If you work on a language with these properties, please let us know!

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