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

Upshot Passamaquoddy lacks group nouns. Instead, group interpretations are derived from plural nouns and free relatives, while group member reading is also available but requires plural agreement with the predicate and the preceding demonstrative. Further, when plural nouns are preceded by the universal quantifier *i-pesq*, both individual-distributive and group-distributive readings are available. We propose a covert group formation operator **G** to account for the above observations in Passamaquoddy.

Lack of group nouns Passamaquoddy(-Wolastoqey) is an endangered Eastern Algonquian language spoken on the Maritime Peninsula by about 500 people (Lewis et al., 2016). Nominals in this language obligatorily inflect for number (singular ~ plural) as well as animacy and obviation. A particular quirk of this language's nominal inventory, though, is its apparent lack of singular group nouns. That is, the language does not overtly realize any noun which can be morphologically singular and denote multiple atomic individuals (cf. English *team*, *family*). To express a group of individuals, which may be denoted by a singular DP in more-familiar languages, Passamaquoddy speakers may instead use a plural noun as in (1) or a relative clause which expones plural agreement as in (2).[1]

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

(2) Elomelu-htit neqtakutomu-htic-ik 't-ankuwihtu-ni-ya-∅ qanotuwan
IC.increase.AI-3PL:CJ be.family.AI-**PL-PROX.PL** 3-extend.TI-N-PL-IN.SG longhouse
'As the family grows (*lit.* as related ones grow in number), they extend the longhouse'

However, this strategy for group reference alone lacks some of the expressive power which is possible with group nouns. For example, it is possible for a predicate to be true of a group without being true of its members—*the committee is old* does not necessitate that the members of said committee be old. Groups can be counted and measured as well, and these values need not also be true of the members (*two baseball teams* ≠ *two baseball players*). There is also distributivity to consider (*the teams each have a goalie* cannot mean that every player of every team has a goalie). How, then, does Passamaquoddy express that which necessarily requires reference to (potentially multiple) sums of individuals and not those individuals themselves?

Group member and group interpretations Data from original fieldwork indicates that this kind of group reference is possible, despite the aforementioned lexical gap. Consider for example (3), which can describe a long-standing committee with young members, or (4), which can describe a new baseball team comprised entirely of elders. Notice that in this case the predicate and demonstrative are morphologically singular, not agreeing with the plural agents of the relative clauses. Crucially, when the predicate is morphologically plural as in (5), the group member reading is available.

(3) yaliqsenomuc-ik 'kan-ey-∅
oversee.TA-**PROX.PL** old-ADJZ-**SG**
'The steering committee is an old one.' ⇏ 'The steering committee members are old.'

(4) Pil-ey-∅ yut nuci= epeskom-hoti-htit
new-ADJZ-**SG** this.**IN.SG** regularly= play.ball.AI-PL-3**PL**:CJ
'This team is new' ⇏ 'These players are new.'

(5) 'kan-ey-ak nuci=epeskomhoti-htit / epeskomhotic-ik
old-ADJZ-PROX.**PL** regularly=play.ball.AI-3**PL**:CJ / play.ball.AI-prox.**PL**
'The baseball players are old.' ⇏ 'This team is old.'

It is also possible to count individuals by group. In (6), the verb *nisonul* 'be two' is true of the teams, but obviously not of the total set of baseball players (since one player alone cannot be a

[1] Adapted from Francis et al. (2024).

team). Numbers of groups can also be compared without overt reference to a group as in (7), the truthfulness of which is contingent on the number of teams (not the number of baseball players).

(6) 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.'

(7) 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.'

Individual-distributive and group-distributive interpretations Overt distributive quantifiers are canonically understood to make a predicate true of its atoms (Choe, 1987) (apart from event-distributive inferences, cf. Champollion 2016), which may lead one to believe that distributivity to groups is impossible in a language without group nouns. However, both atomic and subplural distributivity is possible in Passamaquoddy. This can be seen with the ambiguity in (8) with the distributive quantifier *i-pesq*. In fact, on a group-distributive reading, *i-pesq* can be used with collective predicates like *maqahahtuwok* 'gather' as in (9).

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

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

Group operator G To account for these facts, we posit a covert group-formation operator **G** as defined in (10), which can, upon applying to an $\langle e, t\rangle$ predicate closed under the star operator $*$ (Link, 1983), return a set of group atoms mapped from elements in a contextually-supplied cover. To account for both group predication facts as in (3), (4) and counting/measuring/subplural distributivity facts, it is necessary that this group-formation operator can form one or more groups from the input set.[2]

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

To illustrate, suppose that the set of council members is $\{a, b, c, d\}$, and there are two committees, consisting of a, b and c, d, respectively. Also suppose that the set of regular ball-players are $\{e, f, g, h\}$, and all four of them form a single team. We can let **G** produce sets containing just the mentioned groups, as long as the right cover is chosen, as in (11).

(11) a. $\mathbf{G}_{\{a\oplus b, c\oplus d\}}(*\{\texttt{x | x is a council member}\}) = \{\uparrow(a \oplus b), \uparrow(c \oplus d)\}$
b. $\mathbf{G}_{\{e\oplus f\oplus g\oplus h\}}(*\{\texttt{x | x regularly plays ball}\}) = \{\uparrow(e \oplus f \oplus g \oplus h)\}$

Conclusion In sum, we propose a covert functional item for Passamaquoddy which generates the expressive possibilities of the language language despite its lack of group nouns. This finding is a surprising one from the perspective of more familiar languages, and we are aware of no other language whose lexicon behaves this way. Should others exist, it is fair to wonder whether that language would employ a similar strategy of group formation in the relevant environments. Whether this strategy is universal for group-less languages, or whether there exist other strategies for talking about groups, is to our knowledge an open question. For now, we will save a cross-linguistic survey for future work.

[2] Agreement facts, as can be seen in (6), (7), etc. might suggest that the output of the group formation operator, or perhaps the operator itself, is inanimate (IN) for some speakers.

References

Champollion, L. (2016). Overt distributivity in algebraic event semantics. *Semantics and Pragmatics*, 9:16–1.

Choe, J.-W. (1987). *Anti-quantifiers and a theory of distributivity*. University of Massachusetts Amherst.

Francis, D. A., Leavitt, R. M., and Apt, M. (2024). Passamaquoddy-maliseet language portal; language keepers and passamaquoddy-maliseet dictionary project. http://www.pmportal.org.

Lewis, M. P., Simons, G. F., and Fennig, C. D. (2016). *Ethnologue: Languages of the World*. SIL International.

Link, G. (1983). The logical analysis of plurals and mass terms: A lattice-theoretical approach. *Formal semantics: The essential readings*, 127:147.