## Towards a semantic typology of specificity markers

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Intro. In his seminal 1991 paper, M. Enç proposed to capture the semantics of Turkish differential object markers using the notion of specificity defined as membership in a contextually given group entity. I repeat the original formulation in (1) where i and j are indices pointing to the referent of the NP in question and some other referent to which the former stands in a subset relation respectively.

- (1) Every  $[NP \ \alpha]_{\langle ij \rangle}$  is interpreted as  $\alpha(x_i)$  and
  - a.  $x_i \subseteq x_j$  if  $NP_{\langle ij \rangle}$  is plural,
  - b.  $\{x_i\}\subseteq x_j$  if  $NP_{\langle ij\rangle}$  is singular.

Enc (1991, 7)

Without assuming Enç's exact implementation, this paper proposes, first, that the group membership-based notion of specificity captures the core properties of several series of nominal markers in Finno-Ugric and Mongolian languages; second, it proposes refinements of the notion based on a three-way comparison between Buryat (Mongolian), Meadow Mari, and Moksha Mordvin (both Finno-Ugric).

Patterns of specificity marking. Buryat (Barguzin dialect), Meadow Mari, and Moksha Mordvin (all data come from original fieldwork) have series of suffixes traditionally called possessive but whose distribution, as will be shown below, overlaps only partially with Indo-European possessive markers. (2)–(2) illustrate the overlapping uses for Mari and Mordvin (the same applies to Buryat).

(2) üdər-**žö** tud-əm sərəkt-ən.

 ${\rm daughter}\textbf{-3sg} \ {\rm he\text{-}acc} \quad {\rm make.angry\text{-}prt}$ 

'His daughter made him angry' MARI

(3) Maša n'ej-əz'ə

son' c'or-ənc.

Masha meet-pst.3sgO.3sgS his son-**3sg.gen** 

Masha met his son.'MORD

Consider now the following examples from Mari and Buryat where European possessive morphemes would clearly have been out but which fall squarely under Enc's definition of specificity:

- (4) məj tengeče **kum kniga-m** nal-ən-am. ik kniga-**ž**-əm Kost'a-lan pölekl-em.
  - I yesterday **three book-acc** buy-prt-1sg. one book-**3sg**-acc Kost'a-dat give-prs.1sg
  - 'Yesterday I bought three books. I will give one of them to Kost'a.' MARI
- (5) bi **gurban ajaga** aba-a-b. nege ajagy**-en'** egeš-ede belegle-xe-b
  - I three cup buy-prt-1sg one cup-3sg sister-dat give-pot-1sg
  - "I bought three cups. One cup I will give to my sister." Bur
- In contrast, in Mordvin in such contexts a suffix from another paradigm appears, traditionally labelled "definite" declension, (6), which does not mark person features. Neither Mari nor Buryat have parallel series of markers. As (6) already illustrates, however, the term "definite" is a misnomer if we reserve it for the cases of iota- or maximal quantification (relativized to a domain), as in the Fregean/Russelian tradition: in (6) fke kniga-t' cannot be sensibly construed as denoting a unique or maximal individual with the property of being a book. Instead, I argue, this is another case of specificity marking.
- (6) Ole rama-s' **kolmə kniga-t**. fke kniga**-t'** son kaz-əz'ə Kost'-ən'd'i. Ol'a buy-pst.3sg **three book-pl** one book**-def.sg.gen** she give-pst.3sgO.3sgS Kost'a-dat 'Ol'a bought three books. She gave one book to Kost'a.' MORD
- Another empirical contrast concerns cases where the referent of the NP in question is identical with the referent of a previously introduced expression, i.e. typical cases of demonstrative and anaphoric definite uses in European languages. This time Buryat and Mordvin pattern together in using possessive and "definite" suffixes respectively, whereas Mari requires a demonstrative to be used (I skip illustrations in the interest of space). A third contrast has to do with the behaviour of possessive/"definite" suffixes in existential contexts and under negation. While Mari and Mordvin possessive suffixes can take narrow scope with respect to negation, (7)–(9), Mordvin "definite" suffixes ((9) vs. (10)) and Buryat possessive suffixes cannot (cf. (11) vs. (12)).
- (7) myj-yn aka-m uke. I-gen sister-1sg be.neg "I don't have a sister." MARI

(8) mon' aš sazər-əz' ə
I neg sister-1sg
"I don't have a sister." Mord

(9) men' vele-sɛ-nɛk aš sel'skəi we.gen village-iness-1pl neg local predsedat'el'.

head Mord

"There is no local head in our village."

(11) minii exe noxoj ugy.

I.gen big dog neg
"I don't have a big dog." Bur

- (10) men' vele-sε-nɛk aš sel'skəi predsedat'el'-s. we.gen village-iness-1pl neg local head-def "The local head is not in our village." MORD
- (12) minii exe noxoj-mni ugy. I.gen big dog-1sg neg "My big dog is not here." Bur

The three empirical cuts are summarized in Table 1 using Enç's notation from (1) as a descriptive tool.

Pattern		MMari	MMordvin	MMordvin "definite"	BBuryat
A.	$x_i$ is owned by $x_i$	✓	✓	×	1
B-i.	$\mathbf{x}_i \subseteq \mathbf{x}_i$ if $\mathbf{x}_i$ is plural	✓	X	✓	✓
B-ii.	$\{x_i\} \subseteq x_i$ if $x_i$ is singular	✓	X	✓	✓
C.	$\mathbf{x}_i = \mathbf{x}_i$	X	X	✓	✓
D.	can scope below negation	✓	✓	×	X

Table 1: Uses of possessive and "definite" suffixes

Accounting for the variation. I propose that the meaning component common to all these makers is a relation between an antecedent and elements from the denotation of the head noun. I implement this as a relational variable R in the denotations of the suffixes. Now the difference comes from the range of this variable. I propose that in the case of Mordvin "definite" suffixes R ranges over relations of inclusion and identity; in the case of Mordvin and Mari possessive suffixes it ranges over possession and inclusion; and in the case of Buryat possessives suffixes it ranges over all three relations. • Denotations in (13)–(14) capture pattern C in Table 1 (but not B & D).

- (13)  $\llbracket "def" \rrbracket = \lambda P_{\langle e,t \rangle} . \lambda y_e . \lambda x_e. P(x) \& R(x)(y)$ where  $R \in \{\text{inclusion, identity}\}$  MORD
- (14)  $\llbracket poss \rrbracket = \lambda P_{\langle e,t \rangle} . \lambda y_e . \lambda x_e$ . P(x) & R(x)(y) where  $R \in \{possession, inclusion\} MAR, MORD$  where  $R \in \{possession, inclusion, identity\}$  Bur
- (15) illustrates how the meaning of a Mari expression *pij-že*, naturally ambiguous between "his dog" and "one of those dogs" is derived, assuming that the first (relatum) argument is filled by a silent pronoun (with an index i) present in the structure of these morphemes. I assume that if no quantifier is present, existential closure applies.
- (15)  $[3sg]^{g,c}([dog]^{g,c})([i]^{g,c}) = \lambda x$ . x is a dog and x is related to g(i) by R (possession or inclusion)

I propose that in the case of Mordvin "definite" and Buryat possessive suffixes, where R can take on an identity relation value, this is accompanied by a restriction on the domain of the second argument that there be an element with the nominal property in relation R to the antecedent (cf. Elbourne (2008)'s treatment of demonstratives). One can check that in contexts where there is an antecedent, for the identity relation case this is formally equivalent to the requirement that the antecedent have the nominal property (i.e. P(y)). I argue that this presupposition naturally accompanies identity relations since otherwise the resulting expression would have been wrongly predicted to hold of individuals which have antecedents without the relevant nominal property (e.g. with English demonstratives #a pig ... That dog ...).

- (16)  $\llbracket ''def''/poss \rrbracket = \lambda P_{\langle e,t \rangle}.\lambda y_e.\lambda x_e: \exists x [P(x) \& R(x)(y)]. P(x) \& R(x)(y)$  Amended Mord/Bur
- I argue that this presupposition pragmatically blocks the use of Mordvin possessive suffixes for the inclusion relation cases since the existence of an antecedent entails the existence of its subparts, which, assuming the Maximize Presupposition principle (Heim 1991, Chemla 2008, Singh 2009), gives rise to a grammatical pressure to use a presupposition carrier. This accounts for pattern B. The same presupposition is responsible for Mordvin definite and Buryat possessive suffixes necessarily scoping above negation (pattern D): a context which satisfies this presupposition is logically incompatible with negating the existence of individuals with the nominal property standing in relation R to the antecedent. Thus the availability of the identity relation as a value for R comes out as a major parameter in the typology of specificity marking.

  References: Chemla, E. 2008. An epistemic step for anti-presuppositions. JofS 25: Elbourne, P. 2008. Demonstratives as individual

References: Chemla, E. 2008. An epistemic step for anti-presuppositions. JofS 25; Elbourne, P. 2008. Demonstratives as individual concepts. L&Ph 31; Eng, M. 1991. The semantics of specificity. LI 22; Heim, I. 1991. Articles and definiteness; Singh, R. 2009. Maximize Presupposition! and Informationally encapsulated implicatures. Proc. of SuB.