

# Summary of Matthewson (2001)

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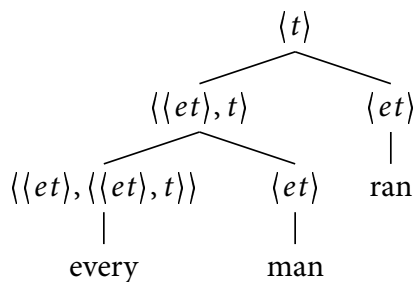
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Quantifiers like *every*, *most*, *some*, *no*, and many others are standardly treated as relations between sets. If one says *every man ran*, one is saying that every member of the set of men is also a member of the set of runners. Formally, we can define quantifiers as elements of type  $\langle\langle et \rangle, \langle\langle et \rangle, t \rangle\rangle$ , i.e., functions that take a set (an NP) and combine it with another set (a verbal predicate) to produce a truth value (a complete sentence). This seems correct for familiar Indo-European languages, but Matthewson has argued that it is not so for languages of the Salish family, and especially St’át’imcets. The defining property of these languages is that the first argument of a quantifier is not a bare NP, as in English, but a full definite DP. Crucially, an English-like configuration where the quantifier takes a bare NP is invariably ungrammatical.

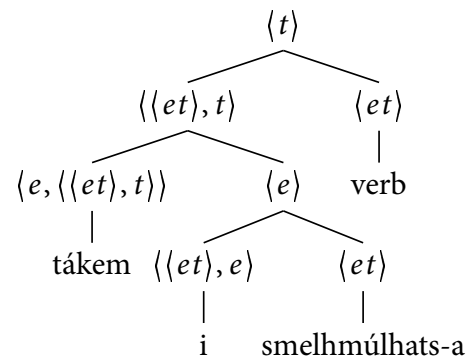
- (1) a.  $tákem$  [<sub>DP</sub> *i*  $smelhmúlhats$ -a]    b. \*  $tákem$  [<sub>NP</sub>  $smelhmúlhats$ ]  
 all            DET.PL women.(PL)-DET            all            women.(PL)

The difference between English and St’át’imcets can be analyzed in different ways. One could, for example, say that the English structures reflect the actual nature of quantifiers, and that their St’át’imcets counterparts are not as different as they might seem on the surface. This would entail arguing that *i* and similar items in St’át’imcets are not really determiners, and so *i smelhmúlhats-a* and similar phrases are actually bare NPs, contrary to superficial appearances. Matthewson’s discussion in §2 (which is a very condensed summary of the discussion in her 1998 book *Determiner systems and quantificational strategies*) strongly suggests that this is not correct. Instead, she argues that St’át’imcets builds quantifiers differently from what has been considered the standard way. Specifically, she argues in favor of a two-step strategy, where a bare NP combines with a definite determiner to form a type  $\langle e \rangle$  constituent, which then can act as the first argument of the quantifier. Under this analysis, quantifiers need to be reanalyzed as elements of type  $\langle e, \langle\langle et \rangle, t \rangle\rangle$ , that is, functions that combine an individual with a verbal predicate to form a truth value.

(2) *English*



(3) *St’át’imcets*



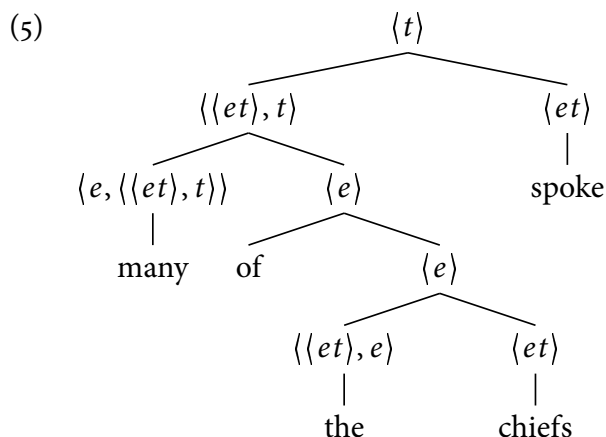
Note that, in both cases, combination of the quantifier with its first argument forms a constituent of type  $\langle \langle et \rangle, t \rangle$ , which can then successfully combine with a type  $\langle et \rangle$  predicate to yield a truth value. The difference lies on whether the first argument of the quantifier is of type  $\langle et \rangle$  (a bare NP) or type  $\langle e \rangle$  (a definite DP). At this point, one could simply say that English and St'át'imcets simply behave differently. In §3, however, Matthewson argues in favor of a stronger hypothesis, namely, that English and St'át'imcets have the same grammar for quantifiers, and that any superficial differences are just that, superficial. Moreover, rather than trying to make St'át'imcets conform to the English pattern (which, as she discusses in §2, is not really a workable idea), she proposes the reverse —i.e., English quantifiers take a definite DP as their first argument in the same way as St'át'imcets determiners.

“Let us use the St'át'imcets facts as an invitation to reexamine English. Let us explore the possibility that the standard analysis is wrong, and that English is more like St'át'imcets than it at first appears.” [p. 157]

In order to make this idea work, Matthewson needs to assume that English has a null determiner D intervening between the quantifier and the noun, whose function is to “narrow down the domain of the quantifier from the original set provided by the NP to an individual corresponding to a subset thereof” (p. 158). This is similar to what other people had called a *domain restrictor*, although Matthewson is the first one to explicitly propose that the domain restrictor is a determiner that takes type  $\langle et \rangle$  NPs to type  $\langle e \rangle$  definite DPs (von Stechow, for example, argues that domain restrictors don't affect the type of the NP at all). To support this idea, Matthewson focuses on the partitive construction (§4), in examples like the following.

- (4) a. {Most/many/some/three/few/all/both/none} **of the** chiefs spoke.

The partitive construction is problematic for the standard analysis of English quantification because it is not clear that *of the NP* phrases are of the required type  $\langle et \rangle$ . Ladusaw (1981) proposes a solution that essentially amounts to letting *of* undo the effect of *the*. More specifically, *the* takes the type  $\langle et \rangle$  set of the NP and turns it into a type  $\langle e \rangle$  definite DP; then *of* turns this definite DP back into type  $\langle et \rangle$  set. Note that, even though we end up with a type  $\langle et \rangle$  object, the semantics still change somewhat: as Matthewson notes (p. 161), under this analysis, “*of the women* is the same type of object as the NP *women*, but instead of denoting the set of all women, it denotes the set of contextually relevant women”. This is very close to Matthewson's analysis, in the sense that there is an element, different from the quantifier itself, explicitly contributing a domain restriction. The difference is that, for Ladusaw and others, this element is *of*, not the determiner. Against this background, Matthewson proposes that it is the determiner that provides the contextual restriction; *of* is semantically vacuous element that doesn't affect the computation (she speculates, following Chomsky 1986, that it is inserted to provide Case to the DP).



One of the pieces of evidence that Matthewson adduces in favor of this analysis is the Partitive Constraint (§4.1), the requirement that the DP of a partitive phrase be definite. This amounts to being headed by either a definite article or a possessive pronoun, which has been independently argued to be a definite article in disguise. This is expected under her analysis, on the assumption that only definite determiners can act as domain restrictors. In the ungrammatical examples, the indefinite determiner simply fails to turn NP into a type that the quantifier can combine with.

- (6) a. Many of {✓the/✓his/\*some/\*few} women.  
 b. All of {\*many/✓the many} men.  
 c. One of {✓the/\*both} books.

But not everything is so rosy. Matthewson notices that this analysis runs into an immediate problem with a class of determiners and quantifiers that don't allow partitive complements, e.g.,

- (7) {The/those/these/every} (\*of the) chief(s) spoke.

The solution she provides within the assigned pages is only partial. Discussion of *every* is relegated to §6 of the paper. For *the*, *these*, *those*, and similar determiners/demonstratives, she argues (p. 165) that they do actually take type  $\langle et \rangle$  complements (unlike quantifiers under her analysis); given that *of the NP* phrases are of type  $\langle e \rangle$ , it is expected that the examples in (7) are unacceptable (this difference between quantifiers and determiners, however, doesn't receive any independent support within the confines of this paper). This being said, Matthewson concludes §4 with the following assessment.

“Summarizing the results up to now: I have argued that in the interest of a crosslinguistically valid and appealing theory, we should investigate the idea that English quantification parallels St'át'incets quantification. This means rejecting the assumption that the [Q NP] structure is “basic” and that partitives need to be “explained away”. I have shown that the simple assumption that *of* is semantically vacuous allows us to analyze the English partitive as directly paralleling the St'át'incets quantification structure”

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