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ADVERBIAL QUANTIFICATION
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ADVERBIAL QUANTIFICATION
IN BRITISH ROMANI, DUTCH, AND TURKISH

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0. Introduction

This paper gives some tentative results of a typological comparison of three European languages with respect to their systems of adverbial quantification. The data for this paper were collected using a questionnaire prepared by Moreno (this vol.). The Turkish data are taken from the grammars of Ersen-Rasch (1980) and Lewis (1967) and the twelfth edition of the *Redhouse dictionary* (Avery et al. eds. 1985). The data for British Romany are from Sampson's (1926) grammar and dictionary. The Dutch data are mine.

1. Multiplicative and iterative adverbial quantification

Moreno (1991: 53), following Xrakovskij (1989), notes that adverbial quantifiers are of two different types: *iterative adverbial quantifiers* quantify over time intervals, *multiplicative adverbial quantifiers* quantify over events. The difference can be illustrated by means of the following sentence:

(1) John did it twice

This sentence has two different interpretations, given in (2) and (3):

- (2) On two (different) occasions John did it one time
 (3) On one occasion John did it two times (in a row)

In the first reading of (1) *twice* is interpreted as an iterative adverbial quantifier, in the second as a multiplicative one. As the paraphrases show, under the multiplicative reading the quantifier specifies the cardinality of an event, i.e. is concerned with its *internal constituency*, whereas under the iterative reading it specifies the number of instantiations of an event, i.e. is concerned with what might be called its *external constituency*.

Under the iterative reading the quantifier has scope over the event description, whereas under the multiplicative reading the quantifier is part of the event description. Given this basic difference between iterative and multiplicative quantification, the latter may be said to be within the scope of the former (Moreno 1991: 55). This can be illustrated by means of the following sentences and their paraphrases:

- (4) Once John hit me twice
 "The event of John's hitting me twice was instantiated on one occasion"
 (5) Twice John hit me once
 "The event of John's hitting me once was instantiated on two occasions"

In each paraphrase the multiplicative adverbial quantifier is made part of the event description, whereas the iterative quantifier multiplies over the event description as a whole.

The validity of the multiplicative/iterative distinction is demonstrated by the fact that in different formal means may be used for the expression of these two types of quantification. This is, for instance, the case in Dutch, witness the following examples (see also 3.2 below):

- (6) Eens sloeg Jan me één keer
 once hit.PAST.3.SG Jan 1.SG.ACC one time
 'Once John hit me once'
- (7) *Eens sloeg Jan me eens
 once hit.PAST.3.SG Jan 1.SG.ACC once
 'Once John hit me once'

The adverbial quantifier *eens* in Dutch has an iterative reading only. In (7) it is used as a multiplicative quantifier, hence the ungrammaticality of this sentence.

If one compares IAQ and MAQ with Tense and Aspect respectively, as Moreno (1991: 55) does, an interesting parallel between features of Tense-Aspect systems and systems of adverbial quantification crops up. Bybee (1985) notes that Aspect, unlike Tense, may be expressed as part of the meaning of a lexical verb. Thus, there are languages with verbs inherently coded for telicity or perfectivity and others inherently coded for non-telicity or imperfectivity. A similar observation may be made for MAQ-distinctions: there are languages with verbs inherently coded for semelfactivity, and others that are inherently repetitive. Similar examples are not found in the expression of either tense or IAQ.

2. A hypothesis

The data of the three languages studied suggest the existence of an interesting general feature of systems of adverbial quantification, given in the form of a hypothesis in (8):

- (8) HYPOTHESIS 1: Iterative Adverbial Quantification (IAQ) is a more basic type of adverbial quantification than Multiplicative Adverbial Quantification (MAQ).

The somewhat vague notion of 'basicness' referred to in this hypothesis can be made more concrete by looking at the features of the languages studied that follow from this

hypothesis:

(9) FEATURE 1: IAQ-expressions are more likely to be basic, i.e. non-derived, lexical expressions than MAQ-expressions, which are more likely to be derivational in nature.

FEATURE 2: MAQ-expressions can be used as IAQ-expressions, but IAQ-expressions cannot always be used as MAQ-expressions.

FEATURE 3: Newly created, non-derivational, expressions of adverbial quantification are of an iterative nature.

Feature 1 brings to light a further correspondence between Aspect and MAQ: Bybee (1985) states that aspectual distinctions are more likely to be encoded by derivational means than temporal ones. The same seems to hold for MAQ-expressions. In both cases the category with lower scope, or, in Bybee's terms, with the higher degree of semantic relevance to the predicate, is more likely to be expressed derivationally. Features 2 and 3 suggest that MAQ-expressions are 'parasitic' upon IAQ-expressions, the latter being a source for the former.

The features listed here will be further illustrated in the following sections, in which the data for the three languages studied will be presented and commented upon in the light of the preceding remarks.

3. Dutch

A noticeable fact about Dutch is that basically multiplicative expressions are productively formed in a construction with a completion meaning, whereas basically iterative expressions are either basic lexical items, i.e. adverbs, or non-derivational complex adverbial expressions. Compare the multiplicative expressions in (9)-(11) with the iterative expressions in (12)-(14):

MULTIPLICATIVE

- (9) één keer/een-maal
one time/one-time
'once'
- (10) twee keer/twee-maal
two time/two-time
'twice'
- (11) een paar keer/een paar maal
a few time/a few time
'a few times'

ITERATIVE

- (12) eens
'once'
- (13) af en toe
off and on
'now and then'
- (14) vaak
'often'

A second noticeable fact about Dutch is that basically iterative expressions are generally not used as multiplicative expressions, whereas multiplicative expressions can almost always receive an iterative interpretation. Compare the following:

MULTIPLICATIVE

- (15) Bij die gelegenheid deed Jan het één keer
On that occasion did John it one time
'On that occasion John did it once'

ITERATIVE

- (16) Jan deed het één keer in zijn leven
Jan did it one time in his life
'John did it once in his life'

ITERATIVE

- (17) Jan deed het eens in zijn leven
 Jan did it once in his life
 'John did it once in his life'

MULTIPLICATIVE

- (18) *Bij die gelegenheid deed Jan het eens
 On that occasion did John it once
 'On that occasion John did it once'

As stated in 1, the quantifier *eens* 'once' cannot be used in a multiplicative sense. The other way round, the basically multiplicative quantifier *één keer* 'one time' can be used in an iterative sense as well.

4. Turkish

The data from Turkish generally confirm the points made above. Feature 1 is reflected in the following examples:

MULTIPLICATIVE

- (19) bir kere/defa/kez/sefer
 one time
 'once'
- (20) üç kere/defa/kez/sefer
 three time
 'thrice'

ITERATIVE

- (21) bazen
 'sometimes'
- (22) sık sık
 'frequently'
- (23) hiç
 'never'

The examples furthermore suggest that multiplicative expressions may be used to express iterative meaning as well.

In addition to these facts, Turkish shows another aspect of the basicness of IAQ-expressions. There is a large number of quantifying expressions based on a word that is *synchronically* used to mean 'time' (*zaman* 'time', *vakit* '(right) time, *sıra* 'moment') that are used as IAQ expressions only. Thus:

- (24) her zaman/vakit
all time/time
'always'
- (25) vakit vakit
time time
'from time to time'
- (26) zaman zaman
time time
'from time to time'
- (27) ara sıra
interval moment
'from time to time'
- (28) hiç bir zaman
never one time
'never'

These examples suggest that newly formed quantifying expressions are of a basically iterative nature.¹

¹. The fact that the derivational morphemes used in the formation of multiplicative expressions sometimes go back to a time-word, furthermore suggests that feature 2 and 3 in (9) above are related, in the sense that complex expressions containing a true time-word, such as those in (24)-(28), may be reinterpreted as expressions in which the time-word is a derivational morpheme of a quantifying nature, the use of which is extended to multiplicative contexts. It is probable that words with a completion meaning develop somewhat differently.

5. Romani

British Romani seems to confirm the last claim made with respect to the Turkish data. A word that is synchronically used to mean 'time' is found in expressions like the following:

- (29) dui trin čeros
two three time
'two or three times'
- (30) sakon čeros
every time
'always'

The construction occurs side by side with the following:

- (31) du-vari
two-time/turn
'twice'

It is likely that (29)-(30) are iterative expressions given the occurrence of (32):

- (32) akáva/odóva čeros
this/that time
'on this/that occasion'

Romani thus seems to tie in neatly with what has been said above. The following example, however, is problematic:

- (33) sau čeros
all time
'continually'

The word synchronically meaning 'time' is used here in a MAQ-expression. An explanation for this fact will be offered in the next section.

6. Universal quantification

Example (33) is not the only problematic case that involves universal (U) quantification. In Dutch several UMAQ-expressions take the form of basic adverbs, unlike what was predicted in 2. Consider the following:

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- (34)a voortdurend
 'continuously'
 b constant
 'constantly'

The explanation for this fact might be that the distinction between multiplicative and iterative quantification has little value in this area. Whether one quantifies universally across subparts of one event-instantiation (multiplicative) or across different event-instantiations (iterative), the result is always a continuous string of activity or the absence thereof. The following auxiliary hypothesis may therefore be posited to deal with the counterexamples to the central hypothesis presented in 2:

- (35) HYPOTHESIS 2: The I/M distinction may be neutralized in UAQ-expressions.

It may be, given this neutralizing nature of UAQ-expressions, that they constitute the 'bridge' between IAQ and MAQ as far as the diachronic developments of AQ-expressions is concerned.

7. Conclusion

Data from three different languages have been adduced here to substantiate the claim that iterative adverbial quantification

is a more basic category than multiplicative adverbial quantification. Further investigation of this claim necessarily has two different sides. Firstly, the notion of 'basicness' as it is used in the hypothesis needs a further theoretical underpinning in order for it to be a useful concept. Secondly, data from many more languages will have to be studied in order to find out whether the claim really has typological validity.

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