HABITUALS AND Q-ADVERBS

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1. Two hypotheses regarding the properties of Q-Adverbs

The logical structure of habitual sentences contains a generic operator GEN, taken as a kind of Q-adverb, which relates a restriction and a scope (Krifka et al 1995, references therein). In the past twenty years or so, much of the research on Q-adverbs has converged on the idea that Q-adverbs are selective quantifiers, and quantify *solely* over eventualities (**HYPOTHESIS I**). Cases in which Q-adverbs appear to directly bind individual variables (quantificational variability effects, or QVEs, see Berman 1987, 1991) arise as by-products of quantification over eventualities, or over minimal situations in some elaborations (Rooth 1985, 1995; Schubert & Pelletier 1987, 1988; de Swart 1991, 1996; von Fintel 1994; Krifka at al. 1995; Herburger 2000; Hinterwimmer 2008, and many others). On a competing proposal, Q-adverbs are selective quantifiers, and can directly bind individual variables, apart from eventuality variables (**HYPOTHESIS II**). The second proposal is considered at least plausible by some (e.g., Chierchia 1995), Filip (1994) makes this argument based on the habitual suffix in Czech (West Slavic language) and Dobrovie-Sorin (2004) adduces evidence from the generic readings of plural indefinites headed by *des* in French.

This talk will provide further arguments in support of HYPOTHESIS II. The main data will come from the Czech habitual suffix, since it is a clear overt exponent of GEN, and as such provides an excellent diagnostic for the properties of Q-adverbs. Its interactions with various classes of predicates that give rise to habitual interpretations also uncover some perhaps surprising insights into the exception-tolerating semantics of habituals.

2. HYPOTHESIS II: Previous proposal

The Czech habitual suffix may be realized as *-va-* in surface verbs (2a), but also in a variety of other less clearly identifiable allomorphs. Henceforth, it will be referred to as VA. It is attached only to imperfective verbs, and predictably derives imperfective verbs that only have a generic/habitual interpretation, as in (1a) and (2a).

(1) a. V sobotu Honza sedá**<u>vá</u>**$^{\textbf{GEN}.\text{IPF}}$ v hospodě.
'On Saturday John usually sits in the pub.'
b. V sobotu Honza sedí$^{\text{IPF}}$ v hospodě.
'On Saturday John sits/is sitting in the pub.'
c. GEN[s,x;](x = John ∧ Saturday(s) ∧ x in s; x sits in pub in s)

(2) a. Politici bý**<u>va</u>**jí$^{\textbf{GEN}.\text{IPF}}$ inteligentní (NOM).
'Politicians are usually intelligent.'
b. Politici jsou$^{\text{IPF}}$ inteligentní (NOM).
'Politicians are intelligent.'
c. GEN[x;](politicians(x); DIST(intelligent)(x))

Non-habitual imperfectives, as in (1b) and (2b), have a habitual or a particular interpretation, depending on the context. (1c) and (2c) are the logical representations assigned to the habitual sentences (1a) and (2a), respectively, where VA is the overt morphological exponent of GEN, and also to the non-habitual sentences (1b) and (2b) on their habitual interpretation. According to Filip (1994), the restriction of Q-adverbs, including VA, is determined by the lexical class of base predicates to which it is applied: namely, (i) when the habitual suffix is attached to a SLP, its restriction is provided by the material from *if/when*-clauses (Lewis 1975), which are explicit or implicit (pragmatically derived); (ii) when the habitual suffix is attached to an ILP, its restriction is supplied by its subject (also in compliance with Diesing's (1992) Mapping Hypothesis). The constraints on the restriction of Q-adverbs are also subject to a prohibition against vacuous quantification (Kratzer 1988/95) and to a plurality condition (de Hoop&de Swart 1989).

3. Additional empirical evidence

Filip's (1994) proposal does not force HYPOTHESIS II on us, and the same data also receive a compelling account assuming HYPOTHESIS I. The two hypotheses diverge in their predictions when it comes to the difference between examples like (2a,b) and (3a,b).

(3) a. Politici bývají$^{\textbf{GEN}.\text{IPF}}$ / jsou$^{\text{IPF}}$ inteligentními (INST).
politicians are / are intelligent
'Politicians tend to be/are intelligent.' [i.e., manifest intelligent behavior]

b. V té věci, politici hrozně neradi bývají$^{\textbf{GEN}.\text{IPF}}$ / jsou$^{\text{IPF}}$ inteligentními (INST)
in that matter politicians terribly not.in.favor are / are intelligent
'Regarding this issue, politicians really do not like to behave in an intelligent manner.'

While (2a,b), with the dispositional ILP 'intelligent' realized in the NOM(inative) case most naturally express a generalization over politicians, (3a,b), with the same ILP 'intelligent' in the INST(rumental) case, most naturally express a generalization over situations in which politicians exhibit intelligent behavior; in fact, it is the only interpretation available for the combination of *být*$^{\textbf{GEN}.\text{IPF}}$+*intelligent* (INST). (Note: since (3a) is artificial in isolation, (3b) is also used to show that it is perfectly natural in the appropriate context.) In order to account for such data, a case must be made that Q-adverbs not only can be reasonably analyzed as directly quantifying over individuals, but in fact must be, hence supporting HYPOTHESIS II. On HYPOTHESIS I, however, both (2a,b) and (3a,b) are assigned an interpretation that makes them effectively truth-conditionally equivalent, contrary to our intuitions. That is, on HYPOTHESIS I, the bare plural 'politicians' is here analyzed uniformly as an existentially quantified DP that is interpreted in the restriction and scope of GEN, and the value assigned to the variable bound by the existential quantifier co-varies with the value assigned to the situation variable bound by GEN.

4. Analysis

4.1 In a nutshell: In examples like (2a,b) and (3a,b), the NOM-INST case alternation serves as a morphological flag for the domain to be quantified over by VA. NOM signals quantification over individuals (2a,b), and INST over situations (3a,b), with the latter also triggering the familiar QVEs. The NOM and INST case forms of ILPs are variants of a single relevant syntactic category which corresponds to a single semantic type of an ILP. All ILPs are uniformly treated as inherent generics, with their situation variable locally bound by GEN (Chierchia 1995). ILP-NOM is the base form and enters into the logical representation of generic sentences like (2a,b) in the way in which it comes from the lexicon: namely, with its situation variable bound by GEN, which only leaves its individual variable available for binding by VA (2c). The presence of INST on the predicative ILP (3a,b) is interpreted by a rule of the 'generic disclosure': it removes GEN, and hence makes its situation variable available to binding by VA.

4.2 How do we motivate the widespread use of habitual imperfective verbs in Czech to express characterizing statements, when such statements can also be expressed by competing non-habitual imperfective verbs? The answer to this question is provided in terms of the modal notions of necessity and possibility: In contrast to non-habitual imperfectives, which merely *allow* for exceptions and are compatible with universal quantification over the relevant cases, habitual imperfectives strongly suggest, and in some cases even *require*, the existence of exceptions to the rule, and consequently also the existence of cases from which the generalization expressed by them is induced. For instance, (4a) with the non-habitual imperfective verb may describe how the machine *might* behave, but the overt habitual suffix in (4b) enforces the habitual reading, and describes how the machine *actually does behave*: (4b) requires that the machine already crushed oranges on particular occasions. This means that VA provides a morphological evidence for the split between a dispositional (intensional) and a habitual reading of habitual sentences (Lawler 1973; Dahl 1975; also Green 2000; Collins 2006 on habitual *be* in AAVE). What is more intriguing is the observation that (4b) is false, if there are no counterinstances of any kind to what it describes, or the *impossibility* of exceptions is known.

(4) a. Tento stroj drtí$^{\text{IPF}}$ pomeranče. HAB/DISP
'This machine crushes oranges.'

b. Tento stroj drtívá$^{\textbf{GEN}.\text{IPF}}$ pomeranče. HAB
'This machine crushes oranges.'

If habitual sentences marked with VA like (4b) require the existence of exceptions, the next question arises what is the nature of these exceptions. In this respect, VA provides some intriguing evidence for the proposal that habitual interpretations and their availability are sensitive to whether counterinstances are positive rather than negative, based on some independently made observations by Leslie (2008). Finally, the exploration of the interaction of VA with different lexical classes of predicates leads to finer grained distinctions among classes of verbs that cut across the lexical ILP/SLP distinction, which necessitates a revision of the restriction of Q-adverbs proposed by Filip (1994).

REFERENCES: Dobrovie-Sorin, C., 2004, "Generic plural indefinites and (in)direct binding." In F. Corblin and H. de Swart (eds.) *Handbook of French semantics*, Stanford, CSLI, 55-70. • Filip, H. 1994. "Quantificational Morphology." *Formal Approaches to Slavic Linguistics (FASL) II. The MIT Meeting 1993*, edited by Sergey Avrutin, Steven Franks and Ljiljana Progovac. Ann Arbor Michigan Slavic Publications. Pp.144-177. • Leslie, S.-J. 2008. "Generics: Cognition and Acquisition." *Philosophical Review*, 117 (1), 1-47.