Topic Interpretation in Determiner and Adverbial Quantification

It is widely assumed that syntax determines the arguments of determiner quantifiers (D-quantifiers), whereas information structure (IS) is the decisive factor in the definition of restrictor and nucleus in constructions with adverbial quantifiers (A-quantifiers) (cf. Rooth, 1985 among many others). Despite many differences, the theories that explain the different interpretations occuring with A-quantifiers as an information structural effect agree that topical/non-focal material is mapped onto the restrictor and focal/non-topical material is mapped onto the nuclear scope (cf. (1a) and (2a) from Krifka, 2001 and their interpretations and intuitive meanings in (1b,c) and (2b,c), respectively). We can hence formulate the following observation:

Observation 1: Topical material tends to be interpreted in the restrictor of an adverbial quantifier.

Concerning D-quantification, it has been observed that the topical status of a quantificational DP also affects its interpretation. Whereas restrictor and nucleus of a D-quantifier are determined widely independent of information structure (but see Herburger, 2000 and Krifka, 1990 for possible exceptions to this general scheme as well as the debates about presupposition accommodation (see Beaver and Clark, 2003 for references)), the topical status of a quantificational DP still contributes to the truth conditions of the sentence. A topical DP can only receive a strong interpretation and can either be interpreted generically or specifically (see e.g. Jäger, 1996 for this generalization). The generic interpretation is shown in (3a), whereas the contrast in (4a) vs. (4b) illustrates the specific interpretation. Both strong interpretations are induced by German left dislocation, which marks the left dislocated element unambiguously as topic (see Frey, 2004). Here, specificity is equated with taking wide scope over the remaining part of the sentence (cf. Cresti, 1995; Ebert and Endriss, 2004 among others). The topical DP's tendency to be interpreted specifically can be stated as the following observation:

Observation 2: Topical material tends to take wide scope.

The interpretation of a topical DP as generic can easily be explained as an instance of *Observation 1*. If it is assumed that a covert Q-adverb with generic force is inserted in sentences such as (3a), the result will be an interpretation as is given in (3b). However, it is not at all obvious how the two observations relate to each other.

In our talk, we want to provide an answer to this question. We will argue that both observations result from one and the same principle.

Topic Occurrence Principle: Topical material cannot be interpreted in the nuclear scope of a quantifier.

The *Topic Occurrence Principle* suggests itself if quantification is understood as a higher order predication process where the nucleus naturally corresponds to the predication of the sentence whereas the restrictor is naturally understood as the object of predication, i.e. the topical part. The actual underlying principle could be: '*Topical material resists predicative environment*'.

Observation 1 directly follows from this principle. In adverbial quantification, one option for topical material to escape the nuclear scope of the respective A-quantifier is of course to be interpreted in the restrictor, as in (1) and (2). However, there also is another – less acknowledged – possibility, namely that the topical material is interpreted outside of the scope of the Q-adverb, thus receiving a specific interpretation (cf. (5)).

With D-quantifiers, matters are different, as those quantifiers choose their arguments syntactically. This means that topical material that does not belong to the syntactic restrictor of a D-quantifier cannot end up in its (semantic) restrictor. It also cannot be interpreted in the nuclear scope due to the *Topic Occurrence Principle*. So it has to be interpreted outside of the scope of the D-quantifier.

Hence, the only option for a topical DP is to take wide scope. The other D-quantifier accordingly has to be interpreted in the nuclear scope of the topical one. This is shown in (6a,b). As opposed to (6a), (6b), where the topic accent on *einen Fehler* (*a fault*) marks this DP as topical, only derives a wide scope interpretation for the respective DP. Generally speaking, the configuration in (7a) allows for four different imaginable interpretations, which are given in (7b). (Here, DP_1 and DP_2 are meant to denote different DPs and the parantheses mark the syntactic restrictor and nucleus, whereas Q_1 and Q_2 are the semantic equivalents of these DPs, and the brackets mark the semantic restrictor and nucleus.) The *Topic Occurrence Principle* in combination with the fact that D-quantifiers are IS-insensitive now explains that only the reading in 3. is a viable option.

Examples

(1a) A freshman usually wears a BASEball cap.
(1b) MOST e. [∃x. freshman(x) ∧ Arg(e, x)] [wears_bc(e)] (see Herburger (2000))
(1c) 'Most freshmen are such that they wear a baseball cap.'

(2a) A FRESHman usually wears a baseball cap.
(2b) MOST e. [wears_bc(e)] [∃x. freshman(x) ∧ Arg(e, x)]
(2c) 'Most baseball cap wearers are freshmen.'

(3a) Ein Löwe, der hat eine lange Mähne.
A lion it has a long mane
'Lions have long manes.'

(3b) GEN e. [∃x. lion(x) ∧ Arg(e, x)] [has_long_mane(e)]

(4a) Einen Löwen, den hat jeder gesehen. [only wide scope for *einen Löwen*]
A lion it has everybody seen.
'One lion that has been seen by everyone.'

(4b) Einen Löwen hat jeder gesehen. [wide or narrow scope for *einen Löwen*]
A lion has everybody seen.
'One lion has been seen by everyone.'

(5a) Ein Löwe, der ist meistens schlecht gelaunt.
A lion it is usually bad tempered
'One lion that is usually bad-tempered.'

(5b) ∃x. lion(x) ∧ most e [Arg(e, x)] [bad-tempered(e)]

(6a) Jeder Richter hat einen Fehler übersehen. [wide or narrow scope for *einen Fehler*]
Every judge has a fault overlooked
'Every judge has overlooked one fault.'

(6b) Jeder Richter hat ÉInen Fehler übersehen. [only wide scope for *einen Fehler*]
Every judge has a fault overlooked
'Every judge has overlooked one fault.'

(7a) Surface Structure: ... DP_1 (…) (… $(DP_2)_{Top}$ ...)

(7b) Imaginable Interpretations:

1. Q_1 [...]$_{Restr}$ [... Q_2 ...]$_{Nucl}$
2. Q_1 [... Q_2 ...]$_{Restr}$ [...]$_{Nucl}$
3. **Q_2 [...]$_{Restr}$ […Q_1…]$_{Nucl}$**
4. Q_1 [... Q_2 ...]$_{Restr}$ [...]$_{Nucl}$

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