# Topic Interpretation and Wide Scope Indefinites

Contrary to strong quantifiers, weak quantifiers seem to be able to take scope out of syntactic islands (see (1), Reinhart [1997]). Furthermore specific readings are possible, but the distributive properties stay local (see (2), Ruys [1999]). By far, not all weak quantifiers show this exceptional scope taking behaviour (see (3), Reinhart [1997]).
The class of quantifiers that can take wide scope out of islands seems furthermore to correspond to the class of quantifiers which can be interpreted as topics. A test for topicality in German is provided by the position for left dislocation which can host topical constituents only (see (4), Jacobs [2001]).
For this reason, it seems to be desirable to correlate topicality with specificity (see e.g. Erteshik-Shir [1997]), i.e. wide scope of the indefinite under consideration.
Building on results from Endriss [2002], we propose that the wide scope interpretation of certain indefinites *and* their interpretation as topic is reduced to the application of one single operation to the respective topic-marked constituents. To keep track of these constituents we make use of structured meanings $\langle \alpha_T, \alpha_C \rangle$ in the sense of Krifka [1992] such that every expression is structured into topic $\alpha_T$ and comment $\alpha_C$. Eventually, the specific interpretation of certain indefinites is the result of applying an illocutionary operator TopAssert (*Topic Assert*) to the compositionally derived structured meaning of a sentence and a common ground $c$, to update $c$ with the information of the sentence.
The application of TopAssert is only defined if the topic-marked constituent is either familiar (i.e. there is an accessible discourse referent (DR) in the common ground) or fulfills the *Topic Condition* (TC). A Generalized Quantifier (GQ) is unfamiliar by definition as the common ground cannot contain an already established DR for it. Depending on its lexical semantics it may still pass the TC and thus function as an (unfamiliar) *Aboutness*-topic, where one of its minimal witness sets serves as the sentence topic in place of the GQ itself. The corresponding DR is then accomodated.
The Topic Condition intuitively demands this minimal witness set to be a sensible possible topic with respect to $\alpha_T$: A topic $\alpha_T$ fulfills the TC if (for certain general standard cases) (1.) the accomodation of the DR has no truth conditional effect w.r.t. a standard context update. (2.), dynamically speaking, the accomodation may only add a new possible topic that can be referred to in subsequent discourse and is supposed not to destroy already existing DRs.
If the topic-marked constituent passes the TC the application of TopAssert will either lead to a representation of the wide scope reading/topic interpretation (see (5)) or – in case of the universal quantifier – to one, which is equivalent to the narrow scope reading (see (6)). This wide scope reading/topic interpretation comes with a collective interpretation of the constituent under consideration and thus accounts for the data in (2). All other quantifiers (e.g. *at least three*, *at most three*. and *exactly three*) do not pass the TC and hence fail to receive a wide scope reading and to be interpreted as topics.
Thus we are able to account for the wide scope and topic phenomena given in the example section. Furthermore the Topic Condition singles out the correct class of wide scope taking indefinites by a criterion based only on the lexical semantics of the quantifiers in question. Recent approaches which aim at explaining the exceptional wide scope of certain indefinites illustrated in (1) and (2) fail to provide such a criterion for distinguishing these quantifers, but have to purely stipulate in advance the class to which the wide scope mechanism applies.
In our system, the ability to be a topic and to be interpreted specifically is reduced to the application of the same operation to the respective constituents. For this reason, it is to be expected that only those quantifiers that can take wide scope out of syntactic islands can be topics. We are able to 1. simultaneously account for the exceptional wide scope behaviour and topicality of certain indefinites (without assuming neither in-situ-interpretation as e.g. the Choice Function approaches nor a wide dislocation mechanism for the respective indefinites), 2. give a purely semantic criterion (the Topic Condition) to single out this class of indefinites, and 3. provide a formal definition of the notion of *Aboutness*-topic.

## Examples

(1) *Some girl will be happy if every movie is shown.* $[\exists > \forall]$ $^{*}[\forall > \exists]$
*Every girl will be happy if some movie is shown.* $[\forall > \exists]$ $[\exists > \forall]$

(2) *If three relatives of mine die I will inherit a fortune.* $[\mathit{If} > 3]$ $[3 \mathit{collective} > \mathit{If}]$

(3)
1. *Every girl will be happy if a/some movie is shown.*
   $[\forall > \exists]$ $[\exists > \forall]$
2. *Every girl will be happy if three movies are shown.*
   $[\forall > 3]$ $[3 > \forall]$
3. *Every girl will be happy if at least three movies are shown.*
   $[\forall > at\ least\ 3]$ ??$[at\ least\ 3 > \forall]$
4. *Every girl will be happy if exactly three movies are shown.*
   $[\forall > exactly\ 3]$ ??$[exactly\ 3 > \forall]$
5. *Every girl will be happy if at most three movies are shown.*
   $[\forall > at\ most\ 3]$ *$[at\ most\ 3 > \forall]$

(4)
1. $^{*}$*Jeder* / $^{*}$ *Kein* / $^{??}$*Irgendein / Ein Freund von Peter, der wird kommen.*
   *(*$^{*}$*Every* / $^{*}$ *No* / $^{??}$*Some (or other) / Some friend of Peter's, he will come.)*
2. $^{*}$*Die meisten* / $^{*}$ *Hchstens drei* / $^{*}$ *Mindestens drei* / $^{*}$*Wenige* / $^{??}$*Alle / Drei Freunde von Peter, die werden kommen.*
   *(*$^{*}$*Most* / $^{*}$ *At most three* / $^{*}$ *At least three* / $^{*}$*Few* / $^{??}$*All / Three friends of Peter's, they will come.)*

(5) *If* $[$ *three relatives of mine* $]_T$ *die then I will inherit a fortune.*

$$\mathsf{TopAssert}(\langle \mathsf{3rel}, \lambda\mathcal{R}.(\mathcal{R}(\mathsf{die}) \rightarrow \mathsf{die})\rangle)(c)$$
$$= c + \exists P.\mathsf{3rel}(P) \wedge \mathsf{min}(P, \mathsf{3rel}) \wedge (P \subseteq \mathsf{die} \rightarrow \mathsf{Iwif})$$

(6) *If* $[$ *every relative of mine* $]_T$ *dies then I will inherit a fortune.*

$$\mathsf{TopAssert}(\langle \mathsf{all\_rel}, \lambda\mathcal{R}.(\mathcal{R}(\mathsf{die}) \rightarrow \mathsf{die})\rangle)(c)$$
$$= c + \exists P.\mathsf{all\_rel}(P) \wedge \mathsf{min}(P, \mathsf{all\_rel}) \wedge (P \subseteq \mathsf{die} \rightarrow \mathsf{Iwif})$$
$$= c + (P = \mathsf{relatives}) \wedge (P \subseteq \mathsf{die} \rightarrow \mathsf{Iwif})$$

## References


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