

## The Syntax of Sentential Adverbs and Information Structure

This talk aims to provide an innovative syntactical account of sentential adverbs (S-adverbs) such as *evidently*, *unfortunately*, and *certainly*, as well as their counterparts in different languages. The motivation for a new account comes from some puzzles of adverbial syntax that needs to be accounted for in any theoretical approach: S-adverbs tend to occur in a post-subject position when no emphatic stress is placed on the subject.

- (1) a. Certainly John saw Mary.  
b. John certainly saw Mary.
- (2) a. \*Who did possibly John see?  
b. Who did John possibly see?
- (3) a. \*yiding zhangsan kandao-le lisi (Chinese)  
certainly Zhangsansee-Asp Lisi  
b. zhangsan yiding kandao-le lisi  
Zhangsan certainly see-Asp Lisi  
'Zhangsan certainly saw Lisi.'
- (4) a. ?? Núna hafa líklega bófarnir stolið smjörinu (Icelandic)  
now have probably the.gangsters stolen the.butter  
b. Núna hafa bófarnir líklega stolið smjörinu  
now have the.gangsters probably stolen the.butter  
'Now probably the gangsters have stolen the butter.' (Svenonius 2002)

The well known English examples (1a,b) have been either treated as a result of optional subject movement (Cinque 1999: 109) or relatively free adjunction of S-adverbs to different syntactic categories (Travis 1988, Ernst 2002). The 'post-subject tendency' illustrated in (2-4), however, have not received any treatment at all other than Svenonius' (2002:234) descriptive generalization: 'An adverb may not attach to IP with a checked [+topic] feature.' Armed with new empirical facts and an under-appreciated treatment of S-adverbs as one of the focus-sensitive semantic operators (Rooth 1996, Krifka 2007), this talk aims to account for their distribution in (1-4) in an integrated way that follows naturally from independently motivated syntactic and semantic principles that involves adverbs and information structure. More specifically, I make the following proposals:

- (5) a. S-adverbs are phrasal adjuncts, adjoined to a verbal functional category that contains (information or identification) focus.  
b. S-adverbs are focus-sensitive propositional operators, therefore subject to syntactic and semantic principles that are typically associated with these operators, such as the Principle of Lexical Association (Tancredi 1990).

According to (5a), the ungrammatical examples in (2-4) fail because they do not meet the licensing condition. In (2a), (3a), and (4a), because neither the subject nor the whole sentence is focused, and the S-adverbs cannot undergo topicalization for independent reasons, S-adverbs cannot adjoin to TP. On the other hand, if we put focus on either the subject or the whole sentence, S-adverbs can occur in the pre-subject position:

- (6) Who did possibly JOHN see? (cf. 2a)  
 (7) yiding shi ZHANGSAN kandao-le lisi (cf. 3a)  
       certainly Foc Zhangsan see-Asp Lisi  
 (8) Núna hafa líklega BÓFARNIR stolið smjörinu (cf. 4a) (Svenonius *ibid.*)  
       now have probably THE.GANGSTERS stolen the.butter

The same licensing condition can also account for the post-subject cases of S-adverbs. Since S-adverbs are semantically regarded as propositional operators, it has always been puzzling for syntacticians why they seem to occur TP-internally. Our proposal not only does not need an unmotivated subject/auxiliary movement analysis, we also make an additional prediction that is absent in Svenonius' generalization: an S-adverb cannot adjoin to a non-focused verbal category even if the former is in a post-subject position. This prediction is borne out:

#### Focus marking on the whole sentence

- (9) a. yiding shi zhangsan kandao lisi, bushi lisi kandao zhangsan (Chinese)  
       certainlyFoc Zhangsan see Lisi Neg Lisi see Zhangsan  
       'Certainly it is the case the Zhangsan saw Lisi, not the other way around.'  
       b. \*shizhangsan yiding kandao lisi, bushi lisi kandao zhangsan

#### Focus marking on the subject

- (10) a. yiding shi zhangsan kandao-de lisi  
       certainlyFoc Zhangsan see-DE Lisi  
       'It is Zhangsan who saw Lisi.'  
       b. \*shi zhangsan yiding kandao-de lisi

Identifying S-adverbs as a subclass of focus adverbs (5b) provides us with a theoretical foundation for our proposal. As is noted in the semantics/pragmatics literature, the interpretation of S-adverbs, as well as of other quantification, aspectual, and sentential operators, are dependent on the focus of the sentence. That this is so is shown in the following example (Krifka 2007):

- (11) Fortunately, Bill spilled [WHITE]<sub>F</sub> wine on the carpet.

According to Krifka, (11) says that among the two alternatives, *John spilled red wine* and *John spilled white wine*, the latter one was more fortunate. I assume all S-adverbs have this property. Based on (5b), we can derive the effects of (5a) from general syntactic and semantic principles. The ungrammaticality of (2a), (3a), and (4a), follows from the basic semantic principle: the meaning of a complex constituent is a function of its immediate syntactic sub-constituents. If a non-focus element intervenes between the operator and the focus, semantic composition cannot proceed. The ungrammaticality of (9b) and (10b) can be accounted under the well-known Principle of Lexical Association: An operator like *only* must be associated with a lexical constituent in its c-command domain.

Krifka, Manfred (2007). 'Basic Notions of Information Structure'. In Féry, C., Fanselow, G. and Krifka, M. (eds), *Working Papers of the SFB632, Interdisciplinary Studies on Information Structure* (ISIS) 6 (pp. 13-56). •Rooth, Mats (1996). 'Focus'. In Lappin, Shalom (ed.), *The Handbook of Contemporary Semantic Theory* (pp. 271-297). •Svenonius, Peter (2002). 'Subject Position and the Placement of Adverbials.' In Svenonius, P. (ed.), *Subjects, Expletives, and the EPP* (pp. 201-242). New York: Oxford University Press.