Toward a Uniform Analysis of Short Answers and Gapping

As Steedman (1990, 248) and others have observed, there is an obvious pragmatic relationship between *wh*-questions and gapping: "[. . .] even the most basic gapped sentences like *Fred ate bread, and Harry, bananas* is only really felicitous in contexts which support (or accomodate) the presupposition that the topic under discussion is *Who ate what?*." In addition we know from work done in the seventies (i.a. Neijt 1979) that this close relationship is not restricted to pragmatics, but extends to the most central formal properties of gapping and short answers, which are frequently described by notions like 'island-sensitivity', 'locality', 'finite first constraint' or the 'major constituent condition'. Taking for granted that this cannot be conincidental, this talk develops a uniform —topical— analysis of short answers and gapping within alternative semantics. The basic idea is to derive central properties of gapping from properties of *wh*-questions and, thus, short answers: As Steedman's quote suggests, the first conjunct in a gapping construction is claimed to evoke a (set of possible) salient topic(s), construed as a question under discussion (cf. e.g. Roberts 1996; Büring 2003); the second conjunct is assumed to relate to this topic essentially in the same way an answer relates to an explicitly given question in a Q/A-sequence. As a consequence, both phenomena are in principle subject to the same formal constraints.

This talk consists of three parts. In a first step, I will present novel evidence from German infinitival constructions, subordinate clauses, and focus constructions showing that the currently most prominent analysis of gapping, the ATB-movement approach of Johnson (1996/2003) —which is incompatible with a uniform analysis of short answers and gapping—, is probably on the wrong track. I then present a uniform —topical— analysis of short answers and gapping within alternative semantics. Following Rooth (1992a), I assume that the focus condition for (sentential) answers is a subset relation holding between the denotation of the question and the alternative set of the answer, cf. (1-a).

(1)   a.   [Who ate what?]$_i$ [[John$_F$ ~~ate~~ bread$_F$] $\sim \Gamma_i$], . . .
      b.   John$_F$ ate bread$_F$, and [[Harry$_F$ ~~ate~~ bananas$_F$] $\sim \Gamma$].

(2)   [John gave me a book]$_F$, and Bill$_F$ ~~gave me~~ [a baseball]$_F$.

In case of gapping, cf. (1-b), this boils down to say that the first (minimally focused) conjunct evokes a question under discussion (QUD, cf. e.g. Büring 2003) —*Who ate what?*— , which is taken up anaphorically by the second argument Γ of the squiggle operator. In case of wide focus, cf. (2), the first conjunct evokes a whole set of possible QUDs —*What did John do?*, *Who gave you what?* etc.— from which the speaker chooses exactly one as the most salient topic. This correctly predicts the availability of different possible continuations in case of wide focus. The proposed semantic analysis incorporates all the relevant features of e-Givenness (Merchant, 2001), and is thus sufficient to license ellipsis at PF; but contrary to e-Givenness this analysis is essentially asymmetric, thus predicting the asymmetry of Q/A-sequences and gapping. Moreover, it enables us to straightforwardly capture the fact that strict/sloppy-ambiguities in gapping (and VP-ellipsis, cf. Rooth 1992b) are disambiguated in the context of an explicitly given topic, cf. (3): the *wh*-question's denotation explicitly determines whether the pronoun is to be interpreted as bound or unbound.

(3) a. John gave his girl friend a book, and Bill a pearl necklace.   (strict/sloppy)
     b. Who gave what to his girlfriend? (3-a).   (only sloppy)
     c. Who gave what to John's girlfriend? (3-a).   (only strict)

Being a uniform approach, this analysis naturally predicts that short answers and gapping remnants are subject to the same formal constraints. In the last part of the paper, I argue that this approach, as it stands, suffers from underfocusation (Krifka 2001): Relative to the context (4-a) the German question (4-b) denotes the set of propositions in (4-c) which is, at the same time, the denotation of *What did YOU steal?* in the context of (4-a). Consequently, (5-b) is wrongly predicted to be a well-formed answer to (4-b).

(4) a. O.K., we already know that both of you stole something. One stole a hand bag, the other one stole a DVD player. Now,
     b. Was davon hast DU getan/angestellt? ('What did YOU do?')
     c. {*that you stole a hand bag, that you stole a DVD player*}

(5) a. ~~Ich habe~~ [Die HANDtasche]$_F$ geklaut. (~~I have~~ [the hand bag]$_F$ stolen)
     b. *~~Ich habe~~ [Die HANDtasche]$_F$ ~~geklaut~~. (~~I have~~ [the hand bag]$_F$ ~~stolen~~)

Essentially following Reich (2003), I conclude from this fact that (i) *wh*-questions denote sets of structured propositions (due to the functional semantics of *wh*-phrases) and that (ii) focus (movement) introduces structured alternatives, modelled as sets of structured propositions within alternative semantics. Compared to other approaches, this analysis encodes more syntax than an account solely based on e-Givenness, but much less syntactic structure than an LF-identity approach to ellipsis like, e.g., the one proposed in Sag (1976). Given such phenomena like 'vehicle change' (cf. Fiengo & May 1994), this seems to be exactly what is required for an adequate treatment of short answers and gapping.

References

Büring, D.: 2003, 'On D-Trees, Beans, and B-Accents.' *L&P* **26**, 511–545.

Fiengo, R. & R.C. May: 1994, *Indices and Identity*. Cambridge (Mass.): MIT Press.

Johnson, K.: 1996/2003, 'In Search of the English Middle Field.' Ms., UMass, Amherst.

Krifka, M.: 2001, 'For a Structured Account of Questions and Answers'. In: Féry, C & W. Sternefeld, Hgg. *Audiatur Vox Sapientiae. A Festschrift for Arnim von Stechow*. Berlin: Akademie Verlag, pp. 287–319.

Merchant, J.: 2001, *Sluicing, Islands, and the Theory of Ellipsis*. Oxford: OUP.

Neijt, A.: 1979, *GAPPING. A Contribution to Sentence Grammar*. Dordrecht: Foris.

Reich, I.: 2003, *Frage, Antwort und Fokus*. Berlin: Akademie Verlag.

Rooth, M.: 1992, 'A Theory of Focus Interpretation'. *NALS* **1**, 75–116.

Rooth, M.: 1992b, 'Ellipsis Redundancy and Reduction Redundancy.' In: Berman, S. & A. Hestvik (eds.), *Proceedings of the Stuttgart Ellipsis Workshop.* Arbeitspapiere des Sonderforschungsbereichs 340 Stuttgart/Tübingen, Nr. 29.

Sag, I. A.: 1976, 'Deletion and Logical Form'. Ph.D. thesis, MIT, Cambridge, Mass.

Steedman, M.: 1990, 'Gapping as Constituent Coordination'. *L&P* **13**, 207–263.