

and the other on Ginzburg and Sag's (2000) analysis of NUs (Abeillé et al. 2014, Park et al. 2018). The latter analyses align gapping with analyses of NUs, as discussed in section 4, more than with analyses of nonconstituent coordination, and therefore gapping could be classified together with other NUs. We use the analysis due to Abeillé et al. (2014) for illustration below.

Abeillé et al. (2014) assume an identity condition on gapping requiring that gapping remnants match major constituents in the antecedent clause, which they term source clause. In other words, gapping remnants are constrained by elements of the argument structure of the verbal head present in the antecedent and absent from the rightmost conjunct, as originally proposed by Hankamer (1971). This identity condition correctly predicts that gapping remnants needn't appear in the same order as their counterparts in the antecedent (67) (see Sag et al. 1985: 156–158), nor are they required to be the same syntactic category as their counterparts (68). However, note that despite the syntactic category mismatch, the NP *an incredible bore* belongs to the subcategorization frame of the predicate *become*.

(67) A policeman walked in at 11, and at 12, a fireman.

(68) Pat has become [crazy]<sub>AP</sub> and Chris [an incredible bore]<sub>NP</sub>.

Abeillé et al. (2014) offer additional evidence from Romance (e.g., case mismatch between gapping remnants and their counterparts and even more possibilities of ordering remnants than is the case in English) to strengthen their point that syntactic identity is relaxed under gapping.

The key assumption in Abeillé et al.'s (2014) analysis is that (two or more) gapping remnants form a cluster whose mother has an underspecified syntactic category, that is, is a non-headed phrase. This phrase then serves as the head daughter of a head-fragment phrase, whose syntactic category is also underspecified. This means that there is no unpronounced verbal head in the phrase to which gapping remnants belong. Furthermore, the contextual attribute SAL-UTT introduced for NUs serves to ensure syntactic identity between gapping remnants and their counterparts such that the latter are SAL-UTTs bearing the specification [Major +] as part of their Head feature and being coindexed with the remnants.

With these ingredients of the analysis in place, we reproduce the gapping construction in (69). The construction represents asymmetric coordination in the sense that the daughters include both nonelliptical verbal conjuncts and head-fragment phrases with an underspecified syntactic category. The mother only shares its syntactic category with the nonelliptical conjuncts so that its own category is specified to be verbal.

## (69) Gapping construction

*gapping-ph*  $\rightarrow$  *coord-ph* &

$$\left[ \begin{array}{l} \text{HEAD } \boxed{H} \text{ } \textit{verbal} \\ \text{CONXT} \mid \text{BACKGROUND } \{ \dots, \text{SYM-DISCOURSE-REL}(\boxed{M_1}, \dots, \boxed{M_j}, \boxed{M_{j+1}}, \dots, \boxed{M_n}), \dots \} \\ \text{DTRS } \langle \left[ \begin{array}{l} \text{HEAD } \boxed{H} \left[ \begin{array}{l} \text{VERBAL} \\ \text{CLUSTER ELIST} \end{array} \right] \\ \text{CONTENT } \boxed{M_1} \end{array} \right], \dots, \left[ \begin{array}{l} \text{HEAD } \boxed{H} \left[ \begin{array}{l} \text{VERBAL} \\ \text{CLUSTER ELIST} \end{array} \right] \\ \text{CONTENT } \boxed{M_j} \end{array} \right] \\ \left[ \begin{array}{l} \text{HEAD } \left[ \text{CLUSTER } \langle \boxed{1}, \dots, \boxed{N} \rangle \right] \\ \text{SOURCE } \boxed{M_j} \\ \text{CONTENT } \boxed{M_{j+1}} \end{array} \right], \dots, \left[ \begin{array}{l} \text{HEAD } \left[ \text{CLUSTER } \langle \boxed{1'}, \dots, \boxed{N'} \rangle \right] \\ \text{SOURCE } \boxed{M_j} \\ \text{CONTENT } \boxed{M_n} \end{array} \right] \rangle \end{array} \right] \oplus$$

## 7 Summary

This chapter has reviewed three types of ellipsis, nonsentential utterances, predicate ellipsis, and nonconstituent coordination, corresponding to three kinds of analysis within HPSG. The pattern that emerges from this overview is that HPSG favors the ‘what you see is what get’ approach to ellipsis and limits a deletion-based approach, common in the minimalist literature on ellipsis, to a subset of nonconstituent coordination phenomena.

## Abbreviations

NUs Nonsentential utterances

BAE Bare Argument Ellipsis

VPE Verb Phrase Ellipsis

NCA Null Complement Anaphora

SAL-UTT Salient Utterance

MAX-QUd Maximal-Question-under-Discussion

DGB Dialog Game Board

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## **8 Handmade list of references: Fix!**

- Abeillé, Anne, Gabriela Bilbiie, and François Mouret. 2014. A Romance perspective on gapping constructions. In Hans Boas and F. González García, (eds.), *Romance Perspectives on Construction Grammar*, 227–267. Amsterdam: Benjamins.
- Abeillé, Anne, Berthold Crysmann, and Aoi Shiraishi. 2016. Syntactic mismatch in French peripheral ellipsis. In Christopher Piñ (ed.), *Empirical Issues in Syntax and Semantics 11*, 1–30. Paris: CSSP.
- Abeillé, Anne and Shrita Hassamal. 2017. Sluicing in Mauritian: a fragment analysis. Ms.
- Abels, Klaus. 2017. On the interaction of P-stranding and sluicing in Bulgarian. In Olav Mueller-Reichau and Marcel Guhl (eds.), *Aspects of Slavic linguistics: Formal grammar, lexicon and communication*, volume 16 of *Language, Context and Cognition*. Berlin: De Gruyter Mouton.
- Aelbrecht, Lobke and William Harwood. 2015. To be or not to be elided: VP ellipsis revisited. *Lingua* 153:66–97.
- Arregui, Ana, Charles Clifton, Jr., Lyn Frazier, and Keir Moulton. 2006. Processing elided verb phrases with flawed antecedents: The recycling hypothesis. *Journal of Memory and Language* 55:232–246.
- Barton, Ellen. 1998. The grammar of telegraphic structures: Sentential and non-sentential derivation. *Journal of English Linguistics* 26:37–67.
- Beavers, John and Ivan A. Sag. 2004. Coordinate ellipsis and apparent non-constituent coordination. In Stefan Müller, (ed.), *Proceedings of the 11th International Conference on Head-Driven Phrase Structure Grammar, HPSG Online Proceedings*, 48–69. Stanford: CSLI Publications.
- Beecher, Henry. 2008. Pragmatic inference in the interpretation of sluiced prepositional phrases. *San Diego Linguistics Papers* 3. <http://escholarship.org/uc/item/2>
- Bresnan, Joan (ed.). 1982. *The Mental Representation of Grammatical Relations*. Cambridge, Massachusetts: MIT Press.
- Chaves, Rui P. 2008. Linearization-based word-part ellipsis. *Linguistics and Philosophy* 3(31):261–307.

- Chaves, Rui P. 2009. A linearization-based approach to gapping. In James Rogers, (ed.), *Proceedings of FG-MoL 2005*, 205–218. Stanford, CA: CSLI Publications.
- Chaves, Rui P. 2014. On the disunity of right-node raising phenomena. *Language* 90:834–886.
- Chung, Sandra, William A. Ladusaw and James McCloskey. 1995. Sluicing and logical form. *Natural Language and Linguistic Theory* 3:239–282.
- Crysmann, Berthold. 2008. An asymmetric theory of peripheral sharing in HPSG: Conjunction reduction and coordination of unlikes. In Gerald Penn, (ed.), *Proceedings of FGVienna: The 8th Conference on Formal Grammar*, 45–64. Stanford, CA: CSLI Publications.
- Culicover, Peter W. and Ray S. Jackendoff. 2005. *Simpler Syntax*. Oxford: Oxford University Press.
- Fernández, Raquel. 2006. *Non-Sentential Utterances in Dialogue: Classification, Resolution and Use*. Ph.D. thesis, King’s College, London.
- Fernández, Raquel and Jonathan Ginzburg. 2002. Non-sentential utterances: A corpus study. *Traitement automatique des langues Dialogue* 43(2):13–42.
- Fernández, Raquel, Jonathan Ginzburg, and Shalom Lappin. 2007. Classifying ellipsis in dialogue: A machine learning approach. *Computational Linguistics* 33(3):397–427.
- Fortin, Catherine. 2007. *Indonesian sluicing and verb phrase ellipsis: Description and explanation in a minimalist framework*. Doctoral dissertation, University of Michigan, Ann Arbor.
- Ginzburg, Jonathan. 1994. An update semantics for dialogue. In H. Bunt, (ed.), *Proceedings of the 1st International Workshop on Computational Semantics*. Tilburg: ITK, Tilburg University.
- Ginzburg, Jonathan. 2012. *The Interactive Stance: Meaning for Conversation*. Oxford: Oxford University Press.
- Ginzburg, Jonathan. 2013. *Rethinking deep and surface: towards a comprehensive model of anaphoric processes in dialogue*.