p.219   Stillings (1975)

Stillings's solution to the problems raised by Hankamer is to restrict the deletion target of the rule of Gapping. The "no-ambiguity" violations, taken together with other examples where deletion of a sequence [V - NP] results in ungrammatical sentences, she argues, leads "very clearly" to the conclusion that "direct object nouns are never permitted to gap along with the verbs that precede them" (p. 260). The following formulation of the rule is offered to account for this "fact".

(3.2.41) Gapping (Stillings)

$$\text{NP} \quad \text{V*} \quad \text{C} \left\{ {\text{and} \atop \text{or}} \right\} \quad \text{NP} \quad \text{V*} \quad \text{C}$$

$$\Downarrow$$

$$\emptyset$$

"V* in Stillings's rule is a string variable which can be expanded as any string of elements dominated by V."

C is taken to be a "constituent variable", i.e. a variable which ranges solely over single constituents. One of Stillings's major conclusions, in fact, is that a proper formulation of Gapping (hers) requires that lingui- stic theory countenance such constituent variables. The C variables in (3.2.41) are necessary, Stillings argues, to account for the "fact" that "it is not possible to gap a verb unless what remains to the right of the gap is a single constituent" (p. 249).

According to Stillings, no more than one constituent can ever follow the gap.

But some of the examples we considered earlier are precisely of the form Stillings's analysis does not permit. The following ones, for instance:

(3.2.44)(a) Peter talked to his boss on Tuesday, and Betsy, ∅ [to her supervisor], [on Wednesday].

(b) John talked to his supervisor about his thesis, and Erich,

              ∅ [to the dean], [about departmental policies].

"the fact that three-remnant gapped clauses are almost always fully acceptable when the last two remnants are both prepositional phrases argues against a formulation of Gapping like Stillings's."

3.2.5 Kuno (1976)
Kuno presents many counter-examples to the NAC (and to an alternative proposed by Langendoen.

p.224 (3.2.51)(a) Some people live in this city because they like living here,
                    and others ∅ because they don't have means to move to the
                    suburbs. [∅ = live in this city]

             (b) One of the muggers hit Mary with a baseball bat, and another
                    ∅ with a bicycle chain. [∅ = hit Mary]

             (c) Some people go to Europe every year, and others ∅ every
                    other year. [∅ = go to Europe]

             (d) 50% of his constituents asked the Senator to vote for the
                    bill, and 25% ∅ to vote against it. [∅ = asked the Senator]

             (e) Two days ago John took Mary out to dinner, and this after-
                    noon ∅ to the movies. [∅ = John took Mary out]

In all of these sentences, the remnants in the gapped clauses are something other than proper names. One reason why previous investigators were led to their (incorrect) conclusions about Gapping, Kuno argues, is that they considered only examples involving proper names, which have a strong tendency to be interpreted as "old information". Kuno argues that elements left in a gapped clause must represent "new information".[6] Therefore, sentences involving proper names, when considered in isolation, are sometimes difficult to assign the required interpretations.

-2-

Kuno then offers the following discourses, where the preceding wh-questions make clear that the proper names represent "new information".

```
(3.2.52)(a)  Q:  Who persuaded who to examine Mary?

        (b)  A:  John persuaded Dr. Thomas to examine Mary, and Bill

                 ∅₁ Dr. Jones ∅₂.

                 [∅₁ = persuaded; ∅₂ = to examine Mary]

(3.2.53)(a)  Q:  With what did John and Bill hit Mary?

        (b)  A:  John hit Mary with a stick, and Bill ∅ with a belt.

                 [∅ = hit Mary]
```

We will see how Sag builds an analysis based on this insight. First, a brief mention of how Kuno accounts for Hankamer's NAC facts.

To account for the tendency of many speakers to interpret certain gapped sentences in a way that is in accordance with Hankamer's NAC, Kuno posits a couple of perceptual principles [i.e., parsing principles]

```
(3.2.54)  The Minimal Distance Principle (MDP)

          The two constituents left behind by Gapping can be most

          readily coupled with the constituents (of the same structures)

          in the first conjunct that were processed last of all.


(3.2.55)  The Tendency for Subject-Predicate Interpretation (TSPI)

          When Gapping leaves an NP and a VP behind, the two constituents

          are readily interpreted as constituting a sentential pattern,

          with the NP representing the subject of the VP.
```

The following sentence of Hankamer's is deviant because it violates TSPI ... The two Gapping remnants [NP Sue], [VP to shave himself] are not in a subject-predicate relationship.

```
(3.2.56) *Jack asked Mike to wash himself, and Sue ∅ to shave himself.

                 [∅ = asked Mike]
```

More evidence for TSPI:

> (3.2.57) Bill was persuaded by John to donate $200, and Tom ø to donate
>
> $400. [ø = was persuaded by John]
>
> (3.2.58) *John persuaded Bill to donate $200, and Tom ø to donate $400.
>
> [ø = persuaded Bill]

Only in (3.2.58) is TSPI violated. And then claims that, just in accord with TSPI, there is a difference between object control, as in (3.2.58) and subject control, as in (3.2.59):

> (3.2.59) John promised Bill to donate $200, and Tom ø to donate $400.
>
> [ø = promised Bill]

<Note that in both (3.2.57) and (3.2.59), the notion "subject-predicate relationship" is somewhat extended, since the actual subject of the remnant infinitive is not actually the surface subject of the whole sentence but rather a PRO controlled by that NP.>

Kuno, as reported by Sag, then shows how his analysis can account for degrees of acceptability in this realm. p.227

> "The overall acceptability of a gapped sentence then is argued to be a complex function involving various perceptually-based factors. (3.2.56) and (3.2.58) violate both MDP and TSPI, and are therefore consistently judged by speakers to be the least acceptable. (3.2.57) and (3.2.59) violate MDP but not TSPI, and hence are judged to be acceptable by most speakers. Moreover, the following interpretations of (3.2.58) and (3.2.59), which do not violate MDP, are judged completely acceptable by all speakers."
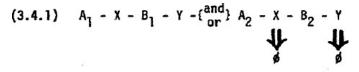
> (3.2.60) John persuaded Bill to donate $200, and ø Tom to donate $400.
>
> [ø = John persuaded]
>
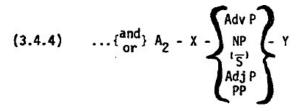> (3.2.61) John promised Bill to donate $200, and ø Tom to donate $400.
>
> [ø = John promised]

-Brief outline of Sag's Gapping analysis now. (No time for all the interesting details.)
p.261 1st approximation:

$$(3.4.1) \quad A_1 - X - B_1 - Y - \{^{and}_{or}\} A_2 - X - B_2 - Y$$

> "Now unlike previous discussions, which have been concerned with imposing restrictions on the deletion target(s), we will be concerned here with a further specification of the context terms, i.e. the Gapping remnants. Recall that in Section 3.1 we observed that the remnant to the right of (the first) gap (i.e. B2 in (3.4.1)) must be either an NP, an Adjective Phrase, an Adverb Phrase, a That-clause, a for-to clause, or a Prepositional Phrase."

Recall Ross's observation that Aux by itself an't be deleted. In Sag's terms, VP is not a good remnant, i.e., B_2 cannot be VP. Sag then argues that we don't want just a list of XPs excluding VP in the rule:

$$(3.4.4) \quad \ldots\{^{and}_{or}\} A_2 - X - \begin{Bmatrix} Adv\ P \\ NP \\ (\bar{S}) \\ Adj\ P \\ PP \end{Bmatrix} - Y$$

To avoid this, he proposes that Aux is actually part of VP and standard VP is thus not a maximal projection. B_2 must be a maximal projection.

$$(3.4.9) \quad \begin{aligned} V^2 &\rightarrow AUX - V^1 \\ V^1 &\rightarrow AUX - V^1 \end{aligned} \quad \text{or} \quad \Big\} \quad V^{1,2} \rightarrow AUX - V^1$$
$$V^1 \rightarrow V - (NP) - (PP) \ldots$$

Sag notes that given (3.4.1), we can account for both of the following, since in the bad ones A_2 is not adjacent to the coordinating conjunction:

> (3.4.41) *Did Bill eat the peaches, or did Harry ∅ the grapes?   <Jackendoff>
> (3.4.45) *Betsy said that Alan went to the ballgame, and that Betsy ∅ to the movies. [∅ = went]   <Fiengo>

<<A more interesting thing he could have said: $\bar{S}$ is a maximal projection but S is not. Alas, under more modern phrase structure assumptions, **we** can't say that.>>

-As for good cases with more than 2 remnants, Sag points out that ones where two PP's occur to the right of the gap, are by far the best of the multiple-remnant possibilities.

(3.4.46)(a) Peter talked to his boss on Tuesday, and Betsy ∅ to her

supervisor on Wednesday.

(b) John talked to his supervisor about his thesis, and Erich

∅ to the dean about departmental policies.

Following Jackendoff, he then notes that some with NP-PP to the right of the gap are pretty good, while others are bad, tying the difference to subcategorization.

(3.4.47) Charlie entered the bedroom at 5:30, and Vera ∅ the kitchen

at 6:00.

(3.4.48) ?*Willy put the flowers in a vase, and Charlie ∅ the book on

the table.

The acceptability of such sentences seems to depend on whether or not the third remnant is dominated by the VP. It seems reasonable to assume that PP's like the ones in (3.4.47) and (3.4.46a) are at least sometimes generated as daughters of S. The PP's in (3.4.48) on the other hand, are strictly sub-categorized by the verb, and, moreover, obligatory. It is therefore usually assumed that they are always dominated by VP (V^1).

Notice that this difference correlates with the possibility of leaving the PP behind after VPD:

(3.4.49)(a) Charlie didn't enter the bedroom at 5:30, but he did ∅

at 6:00.

(b) ?*Willy didn't put the flowers in a vase, but he did ∅ on

the table.

A reasonable way to account for such facts, it seems to me, is to allow our Gapping rule to generate any number of right remnants, and to rule out the unacceptable outputs independently, say, via surface constraint. This is further supported by examples like the following, where even more than two remnants to the right of the gap are possible.

(3.4.51) Betsy dances with a parasol in the living room on Fridays,

and Peter ∅ with a meat cleaver in the bar on Saturday nights.

Let us therefore modify our Gapping rule as follows, where $[X^2]*$ can be expanded as any number of X^2's. [16]

(3.4.52) Gapping (final formulation) [17]

$$W_3 - [_S \; X^2 - W_1 - [X^2]* - W_2] - \{^{and}_{or}\} - [_S \; X^2 - W_1 - [X^2]* - W_2] - W_4$$

1	2	3	4	5	6	7	8	9	10	11
⟹ 1	2	3	4	5	6	7	∅	9	∅	11

-Gapping and Logical Form
Based on the fact, noted by Kuno, that contrast is necessary in the remnants, Sag claims that "sentences which can undergo Gapping, i.e. which are appropriately accented, are such that the material to be Gapped "corresponds" in a very intuitive sense to an entity at the level of logical form. Gapping remnants, by this same token, also "correspond" to identifiable entities." p.288

(3.5.31), for example, is a possible input to Gapping.

(3.5.31) Jím likes Júdy and Péter likes Bétsy.

The logical form of this sentence is shown in (3.5.32).

(3.5.32) {Jim, Judy} ⊂ $\hat{x} \; \hat{y}[x, \lambda z(z \; like \; y)]$ &

{Peter, Betsy} ⊆ $\hat{r} \; \hat{s}[r, \lambda w(w \; like \; s)]$

This assumes, among other things, an LF Focus Movement rule of the sort proposed by Chomsky 1976.