

Gapping: In Defense of Deletion

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1 Introduction

“Gapping” refers to the type of construction in (1).

(1) John likes caviar, and Mary beans.

Typically, Gapping constructions involve two conjoined clauses, where the second clause contains no pronounced verb. This missing verb is normally called the *Gap*. I will call the first clause the *antecedent clause* and the second the *gapped clause*. The pronounced elements of the gapped clause, I will call *remnants*.

To make an analysis of Gapping we have the following issues to address:

1. *licensing*: Giving a principled derivation, capturing the correct empirical distribution.
2. *identification*: “The recovery of the information that would have otherwise been expressed if the structures had been overt” (Merchant to appear)

And, assuming that the Gap is present somehow in the syntax, we have three types of possible solutions, depending on the nature of the Gap. We could interpret it as

1. null pro-form,
2. deleted element, or
3. trace of movement.

Let us immediately rule out the first possibility, following Hankamer and Sag (1976). They argue that Gaps are “Surface Anaphors” as opposed to “Deep Anaphors” (i.e. null pro-forms), based on Gapping’s sensitivity to Rossian Islands, and the fact that it requires a linguistic antecedent.

The second idea, that the Gap is a deleted element, is as old as the term *Gapping*. The first detailed investigation of it was in Ross’s 1967 dissertation, where he coined the term, and gave a deletion analysis. In 1976, Sag suggested that the remnants A'-move out of the gapped clause pre-deletion. My proposal is essentially Sag’s, differing significantly only in the assumption that remnants adjoin to VP, rather than at the sentence level, as in (3).

(3) John likes caviar, and [_{VP} Mary₁ [_{VP} beans₂ [_{VP} ~~t₁~~ likes ~~t₂~~]]]].

My proposal also takes advantage of a recently proposed licensing condition on ellipsis, namely the e-GIVENness Condition (Merchant to appear).

2 ATB

The deletion hypothesis for Gapping remained uncontested until Kyle Johnson (1996) proposed the third possibility: Gaps as traces of movement. Johnson argues that the verb is moving Across the Board (ATB) from both conjuncts (into I^o, thereabouts), as in (2), roughly.

(2) John_{subj} likes_I [VP [VP t_{subj} [t_I caviar] and [VP Mary t_I beans]]].

He argues against a deletion analysis for Gapping, based on (i) the fact that Gapping and VP Ellipsis differ empirically, and (ii) a fear that a deletion analysis would falsely give a distributive interpretation of sentence-level negation.

2.1 VPE vs. Gapping: An Incomplete View

Since VP Ellipsis is deletion, one might expect similar behavior if Gapping is, too. Johnson points to the following empirical differences between VP Ellipsis and Gapping, for evidence against a deletion analysis:

1. *Allowing non-linguistic antecedents*: Johnson notes that “[u]nder certain circumstances VP Ellipsis may even find antecedents from unspoken context, but not so with Gapping” (Johnson 1996, p. 16), relaying examples (3a) and (3b). This is also impossible for Pseudogapping and Sluicing, as shown in (c) and (d).

- (3) a. [Hankamer brandishes cleaver, advances on Sag]
Sag: Dont! My god, dont! (Hankamer & Sag 1976, note 19:409)
b. [Hankamer produces an orange, proceeds to peel it, and just as Sag produces an apple, says:]
#And Ivan, an apple. (ibid. p. 410)
c. [same context]
#And Ivan is, an apple.
d. [Hankamer produces a gun, points it offstage and fires, whereupon a scream is heard]
Sag: #Jesus, I wonder who. (ibid. p. 408)

2. *Active/Passive Mismatches*: VP Ellipsis tolerates a mismatch between antecedent and ellided phrases (a), while Gapping does not (b). It is also impossible for Sluicing, though (d), and marginal for Pseudogapping (c).

- (4) a. That can all be explained, and the professor will. (Sag 1976)
b. *That should be explained to individual students by the TA, but the professor to the class in general.
c. ?That should be explained to individual students by the TA, but the

professor will to the class in general.

- d. *Someone sent this letter to me, but I don't know by who(m).

3. *Backwards Anaphora*: There is backwards VP Ellipsis (a), but no backwards Gapping (b).¹ There is also no backwards Pseudogapping (c), although there is backwards Sluicing (d).

- (5) a. Sue didn't, but John ate meat. (Lobeck 1995)
- b. *Sue the lamb, but John will have the salmon.
- c. *Sue will, the lamb, and John will have the salmon.
- d. I don't know what, but John will have something.

4. *Subordinate Clauses*: While the antecedent and elided clauses of a VP Ellipsis construction can be conjoined with a subordinating conjunction (a), those of a Gapping construction cannot (b). Those of both Pseudogapping (c) and Sluicing (d) can.

- (6) a. John will have caviar, although others won't.
- b. *John will have caviar, although others beans.
- c. John will have caviar, although others will beans.
- d. John will have something, although I don't know what.

His point is summarized in first two columns:

	VP Ellipsis	Gapping	Pseudogapping	Sluicing
1. Non-linguistic antecedents	+	-	-	-
2. Active/Passive mismatches	+	-	+	-
3. Backwards Anaphora	+	-	-	+
4. Subordinate Clauses	+	-	+	+

The first three differences between VP Ellipsis and Gapping that he points out also hold between VP Ellipsis and Sluicing or Pseudogapping, which are both standardly accepted to be deletion phenomena. Sluicing and Pseudogapping are, moreover, more widespread cross-linguistically than VP Ellipsis “as attested in English,” to quote Merchant (to appear). Therefore, an argument against Gapping as deletion based on these differences will not hold.

The inability to appear in a subordinate clause, however, uniquely distinguishes Gapping among ellipsis phenomena. One of the main attractions of the ATB hypothesis is that it accounts for this fact; ATB extraction can only take place out of coordinate structures. But a deletion analysis can also account for it, if the gapped clause is a VP rather than a sentence, as according to my proposal.

2.2 Negation in the antecedent clause

Johnson's second argument against Gapping as deletion is based on (7).

(7) We can't eat caviar and him beans!

He argues that a deletion analysis of (7) would allow the reading in (8b) which should be ruled out.

- (8) a. $\neg\Diamond$ [(We eat caviar) & (him eat beans)]
b. * $[\neg\Diamond$ (We eat caviar)] & $[\neg\Diamond$ (him eat beans)]

He assumes that the Gap consists of *can't*, so the deletion analysis looks something like (9), which has the bad reading available.

- (9) *Johnson's deletion analysis (implicit):*
We can't eat caviar and him beans [~~can't~~ [~~eat~~]].

His analysis is in (10), where *can't* and *eat* have ATB-moved from a pair of coordinated VPs. According to Johnson, ATB movement doesn't reconstruct, so the negation does not go back into either clause, so the bad reading is ruled out.

- (10) *Johnson's ATB analysis:*
We can't_{t1} eat₂ t₁ t₂ caviar and him t₁ t₂ beans.

But according to my proposal, the gapped clause is a VP, as shown in (11). If this is the case, then the Gap does not consist of *can't*, but the negation would scope over both conjuncts, giving only the good interpretation in (8a).

- (11) *Under my deletion proposal:*
We can't eat caviar and him beans [~~VP eat~~].

2.3 The gapped clause is a VP

The response to both of Johnson's concerns, then, is that the gapped clause is a VP. As he points out, there are additional reasons to believe this.

He notes the contrast in (12), where an overt verb in the second conjunct significantly worsens the sentence.

- (12) [Not every girl]₁ ate a green banana and her₁ mother ?(*ate) a ripe one.
(Johnson 1996)

The ability of the quantifier (*Not every girl*) in the antecedent clause to bind a variable in the gapped clause (*her*) indicates that the quantifier c-commands it.

Additional support for the idea of VP adjunction comes from data involving Antecedent Contained Deletion (ACD) and Negative Polarity Items (NPIs), which, according to Merchant (2000), must involve adjunction to VP.

The syntax of ACD in examples like (13) uncontroversially involves QR of the bracketed constituent, *a damn thing I ask him to*.

(13) That boy won't do [a damn thing I ask him to]. (Merchant 2000)

This constituent contains an NPI, which must be in the scope of its licenser, by the (also uncontroversial) assumption:

(14) A negative polarity item must be in the scope of its licenser.

If the bracketed phrase QRs to IP, it would be outside the scope of its licenser, so Merchant concludes that such NPs must adjoin to VP instead.

In sum, the hypothesis that the gapped clause is a VP solves the concerns presented by Johnson, and we have good reason to believe that it is. (It is my belief that adjunction of remnants to VP derives from *Shortest Move* (Chomsky 1995), and that movement beyond VP would be ruled out for lack of the necessary motivation, but I leave this hypothesis unexplored.)

3 In favor of Deletion

Now I will present three arguments in favor of a deletion analysis over ATB. First, I will demonstrate that Gapping is capable of disambiguating both scope and anaphora, in ways that follow from general results on ellipsis research (Section 3.1). Then I will discuss the explanatory and descriptive advantages of a recently proposed constraint on ellipsis in general, called the e-GIVENNESS condition (Section 3.2). Finally, I will show that Gapping is selectively sensitive to Ross's Island Constraints, just in the way we would predict if Gapping were deletion (Section 3.3).

3.1 The "eliminative" power of Gapping

The fact that Gapping is capable of disambiguating scope is illustrated in the contrast between (15) and (16). In (15), we have ambiguity; both surface and inverse scope are available. But this ambiguity disappears in (16), with Gapping.

(15) a. A student accompanied every visitor. ($\forall > \exists$), ($\exists > \forall$)
b. An American runner seems to have won the gold medal. (seems $> \exists$), ($\exists > \text{seems}$)

(16) a. A student accompanied every visitor yesterday, and Mr. Johnson, today. $*(\forall > \exists)$, ($\exists > \forall$)
b. An American runner seems to have won the gold medal, and Sergei, the silver. $*(\text{seems} > ?)$, ($? > \text{seems}$)

These facts follow naturally from the Fox's Ellipsis Scope Generalization:

The Ellipsis Scope Generalization *In constructions that involve phonological reduction or deletion, inverse scope is possible only if it is semantically distinct from surface scope both in the sentence that includes the phonologically reduced/elided VP and in the sentence that includes the antecedent VP.* (Fox 2000)

In (16), inverse scope is not possible in the gapped clause, because it is indistinct from surface scope. So according to Scope Parallelism, it's not possible across the board.

The fact that Gapping is capable of disambiguating anaphora is shown in the contrast between (17a) and its overt counterpart in (17b). (17a) does not allow the sloppy/strict reading (wherein Oscar said that Max saw Oscar's mother) but (17b) does.

(17) a. Max said he gave his mother a bracelet, and Oscar a watch.
(strict/strict, sloppy/sloppy, strict/sloppy, *sloppy/strict)

b. Max said he gave his mother a bracelet, and Oscar said he gave his mother a watch. (strict/strict, sloppy/sloppy, strict/sloppy, sloppy/strict)

This behavior, named "The Many-Pronouns Puzzle" in Fiengo and May (1994), is typical of ellipsis operations, thus follows naturally from a deletion analysis. Under ATB, it would have to be independently accounted for.

3.2 The e-GIVENNESS Condition

It is uncontested that ellipsis is subject to some kind of recoverability constraint, as expressed informally: "[A] given element (...the deletion target) can be deleted only in the context of another element which it is identical to (...the deletion trigger)." (Sag 1980) The question is and has been what constitutes identity. Merchant (to appear) offers a semantically-based solution in the form of the e-GIVENNESS condition, and he shows that it makes accurate predictions for both Sluicing and VP Ellipsis.²

e-GIVENNESS Condition A VP or IP α can be deleted only if α is e-GIVEN (Merchant to appear).

e-GIVENNESS An expression E counts as e-GIVEN iff E has a salient antecedent A and, modulo \exists -type shifting,

- a. A entails $F\text{-clo}(E)$, and
- b. E entails $F\text{-clo}(A)$

F-closure The F-closure of α , written as $F\text{-clo}(\alpha)$, is the result of replacing F-marked parts of α with \exists -bound variables of the appropriate type (modulo \exists -type shifting).

Consider (18) for example:

(18) [α John_F likes caviar_F] and [γ Mary_F beans_F].

The F-marked (focused) elements of the antecedent clause α are *John* and *caviar*. Replacing these with existentially bound variables, we have (19a). Similarly, the F-marked (focused) elements of the gapped clause γ are *Mary* and *beans*; replacing those with existentially bound variables, we have the second line of (19b).

- (19) a. F-clo (α) = $\exists x \exists y [x \text{ likes } y]$
b. F-clo (γ) = $\exists x \exists y [x \text{ likes } y]$

Since the focus closure of the gapped clause and that of the antecedent clause are identical, they entail one another. Hence, the gapped clause is e-GIVEN, so e-GIVENNESS condition is satisfied; deletion is licensed.

An empirical advantage of the e-GIVENNESS condition is that it captures the “far from incidental” effect of prosody (Sag 1980), as illustrated in the contrast in meaning between (20a) and (20b).

- (20) a. John_F said he wants caviar_F for dinner, and Mary_F beans_F .
b. John said he_F wants caviar_F for dinner, and Mary_F beans_F .

Johnson, following Nijt (1979), rules out long-distance gaps entirely, ruling out the correct interpretation of (20a). The e-GIVENNESS Condition also rules out the (a) reading of (21), assuming that lexical subjects like *Mary* must be focused.

- (21) John said Mary wants caviar for dinner, and Sue beans.
a. *...Sue said Mary wants caviar for dinner.
b. ...Sue wants beans for dinner.

Finally, it is capable of explaining examples like (22), which do not mean that Massachusetts elected Pennsylvania Schweicker!

(22) Massachusetts_F elected McCormack_F Congressman, and Pennsylvania_F Schweicker_F. (Hankamer 1973)

There is no mention of focus in Johnson’s ATB account, so (22) could only rest ambiguous.

Another empirical advantage of the e-GIVENNESS condition is that allows for a lack of structural isomorphism between the antecedent clause and the gapped clause. This is needed to explain split antecedent phenomena (and apparent Left

Branch Condition violations). Counter to Sag 1974, the examples in (23) show that Gapping *can* have a so-called “split antecedent.”

- (23) a. Bob wants to ski in the Alps because he loves the outdoors, and Nancy wants to climb Kilimanjaro in order to prove to herself that she can, but neither in order to show off for anyone.
 b. Fred bought Suzy flowers in order to thank her, and Bob took her out to eat because they both like sushi, but neither because they want to date her.
 c. Liz goes running 6 times a week, and Alex lifts weights 3 times a week, but neither every day.
 d. John calls home on Sundays, and Jill balances her checkbook every other week, but neither very consistently.

The ATB analysis could not account for these sentences, because there is no single destination for any ATB-moved verb, and the Gap is not isomorphic to either of its antecedents.

A deletion analysis, by contrast, can explain these with the e-GIVENNESS Condition. I’ve rewritten (23a) as (24), and marked the first antecedent α , the second antecedent β , and the gapped clause γ .

- (24) [α Bob wants to ski in the Alps because he loves the outdoors], and [β Nancy wants to climb Kilimanjaro in order to prove to herself that she can], but [γ neither in order to show off for anyone].

I assume that the LF of the gapped clause contains an anaphoric element like *do it*, as suggested to me by Chris Kennedy:

- (25) LF(γ):
 neither ~~Bob nor Nancy~~ [in order to impress anyone]₁ [~~want to do it~~ t_1]

Assuming further that *Bob nor Nancy* is deleted after *neither* (a reasonable assumption; *neither* often licenses such deletion), we have a coordinate structure. Doing a multidimensional analysis of this coordination, we gain two constituent structures, which I label γ_1 and γ_2 . Note that *Bob* and *Nancy* are not F-marked; they are not even pronounced.

- (26) Constituent structures of γ :
 γ_1 : Bob wants to do it in order to impress anyone.
 γ_2 : Nancy wants to do it in order to impress anyone.

We have the following focus closures for γ_1 , γ_2 , α , and β :

- (27) a. F-clo(γ_1) = $\exists r$ [Bob wants to do it₁ r]

- b. $F\text{-clo}(\gamma_2) = \exists r$ [Nancy wants to do it₂ r]
- c. $F\text{-clo}(\alpha) = \exists r$ [Bob wants to [ski in the Alps]₁ r]
- d. $F\text{-clo}(\beta) = \exists r$ [Nancy wants to [climb Kilimanjaro]₂ r]

When the anaphors in (27a) and (27b) are given the indicated interpretation, both γ_1 and γ_2 are e-GIVEN, by the presence of (27c) and (27d). With the further assumption:

(28) A VP or IP α is e-GIVEN if all of the constituent structures of α are e-GIVEN.

examples (23) are shown to follow from the e-GIVENness condition. Accounting for these cases of non-isomorphism between antecedent and gapped clause is made possible, then, by the semantic nature of the licensing constraint.

5.3 Island Constraints

The final empirical phenomenon in favor of PF-deletion is that Gapping is capable of violating the Left Branch Constraint.

In Merchant's investigation of Sluicing, he noticed that the sluiced *wh*-phrase is able to violate a select subset of Ross's Island Constraints. This led him to the following ontology:

(29) The "Pluralistic View of Islandhood" (Merchant to appear)

"PF" Islands

- A. left-branches (LBC)
- B. derived positions (subjects, topicalizations)
- C. COMP-trace effects
- D. coordinate structures
 - i. extraction of conjuncts

"Propositional" Islands

- D. ii. extraction out of conjuncts
- E. complex noun phrases (CNPC)
 - i. relative clauses (indicative, subjunctive)
 - ii. sentential complements to head nouns
- F. sentential subjects (SSC)
- G. adjuncts (Adjunct Condition)
- H. *wh*-islands

The PF islands do not appear to prevent extraction in Sluicing; the Propositional Islands do. Like sluicing, Gapping observes all of the Propositional Islands, which indicates that the remnants really are A'-moving. Also like Sluicing,

Gapping appears exempt from certain PF islands, such as the Left Branch Constraint (LBC).

A. The Left Branch Constraint

The traditional formulation of the LBC is:

Left Branch Constraint: No NP that is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule. (Ross 1967)

The traditional example of an LBC violation is:

(30) *[How tall]₁ did the Lakers hire a [_{NP} *t*₁ forward]?

Examples (31) and (32) show, respectively, that Sluicing and Attributive Comparative Deletion can, too.

(31) The Lakers hired a tall forward, but I don't know [how tall]₁ ~~the Lakers hired a [_{NP} *t*₁ forward]~~.

(32) The Bulls hired a taller forward than *Op*₁ the Lakers did ~~hire a [_{NP} *t*₁ forward]~~. (Kennedy and Merchant 2000)

Sluicing and Attributive Comparative Deletion are both deletion environments; this leads to the idea that the LBC is a *PF-crash phenomenon*. Kennedy and Merchant (2000) propose that the syntax of these DegPs is as in (33), where a [+wh] DegP has moved through specifier positions to SpecFP, where it passes its [+wh] feature to F° via Spec-Head Agreement.

(33) [_{FP} [_{DegP}[+wh] how tall]₁ [_{F'} [_{F°}[+wh] (of)] [_{DP} *t*₁ a [_{NP} *t*₁ forward]]]]

By their hypothesis, no F° [+wh] exists in English, so when we try to pronounce this structure, we experience a PF-crash phenomenon. This crash is avoided when the offending feature is deleted from PF, hence the grammaticality of (31) and (32).

If Gapping is deletion, we would predict similar effects, and indeed we have them. Extraction of a degree phrase remnant does not create an LBC effect, as shown in (34). (The impossibility of the overt verb in (34) shows that these cannot be analyzed in terms of NP-internal ellipsis; that is, we cannot assume that the remnant really is an NP, partially deleted. If this were possible, it should be with the overt verb as well.)

- (34) a. I make too strong an espresso, and Fred (*makes) too weak.
b. Mary wrote too long a paper, and Suzy (*wrote) too short.

c. The professor gave too hard an assignment, and the TA (*gave) too easy.

- (35) a. ... [Fred] [DegP too weak] [~~VP t_i makes~~ [~~FP t_i~~ [~~DP an~~ [~~NP t_i~~ espresso]]]]]
 b. ... [Sue] [DegP too short] [~~VP t_i wrote~~ [~~FP t_i~~ [~~DP a~~ [~~NP t_i~~ paper]]]]]
 c. ... [Fred] [DegP too easy] [~~VP t_i gave~~ [~~FP t_i~~ [~~DP an~~ [~~NP t_i~~ assignment]]]]]

Note that “plain,” if you will, attributive remnants do generate LBC effects, as shown in (36).

- (36) a. *Sheila drives a white car, and Bob, red.
 b. *Sheila wants to elect the Alaskan candidate, and Bob, Texan.
 c. *Sheila likes to study in the quiet room, and Bob, loud.

This is because they do not move into SpecFP before ultimately adjoining to VP. As shown in (37), non-DegPs as in (36) cannot undergo this movement overtly, while those in (34) can, as shown in (38).

- (37) a. *Bob drives [_{FP} red (of) a car].
 b. *Bob wants to elect [_{FP} Texan (of) the candidate].
 c. *Bob likes to study in [_{FP} loud (of) the room].
- (38) a. Fred makes [_{FP} too weak (of) an espresso].
 b. Sue wrote [_{FP} too short (of) a paper].
 c. The TA gave [_{FP} too easy (of) an assignment].

To summarize, the hypothesis that LBC effects arise from a PF-crash predicts that Gapping should be exempt from it, if Gapping is deletion, and this prediction is borne out.

B. Topicalizations

As shown in (39), Sluicing can apparently violate the condition against extracting from within a topicalized phrase, so Merchant considers it a PF Island too.

- (39) A biography of someone, Mary refused to read, but I don't know who.

The following example would *seem* to suggest that Gapping cannot violate this constraint:

- (40) *_{[α} A biography of Harpo, Mary refused to read], and _{[β} Groucho, Sue].

But (40) is in fact independently ruled out on the basis of an e-GIVENNESS condition violation:

- (41) F-clo(α) = $\exists x\exists y$ [x refused to read y]
 F-clo(β) = $\exists x\exists y$ [x refused to read a biography of y]

F-clo(α) does not entail F-clo(β) so α is not e-GIVEN. Any such extraction from a topicalized phrase would cause this, thus it is impossible to find an apparent exemption from this island for Gapping.

C. Comp-Trace Effects

It is similarly impossible for Comp-Trace effects. Any complementizer in the elliptical clause is unpronounced under any circumstance, it is impossible to test for effects varying with the presence or lack thereof of a lexical C° . However, for what it's worth, the presence of a C° in the antecedent clause does not create an adverse effect:

- (42) a. Mary wants for Joe to win, and Sue, Chris.
 b. Mary said that Joe would win, and Sue, Chris.

D.i. Extraction of Conjuncts

Sluicing and Gapping apparently differ as to the ability to extract a conjunct; Gapping cannot, as evidenced by the contrast between in (43). However, there is an alternative to conjunct extraction to account for these Sluicing cases that follows from the e-GIVENNESS condition. I believe that in fact extraction of conjunct is in fact prohibited even in deletion environments; it is in fact a Propositional Island (but I leave this uninvestigated).

- (43) a. Max read War and Peace and some German short story, but I can't remember what.
 b. Max read War and Peace and some German short story, and Sheila some Dostoevsky novel.

Propositional Islands

Gapping obeys each of Merchant's Propositional Islands.

D.ii. Extraction out of conjuncts

- (44) *John read a biography of Groucho and a romance novel, and Sue, (of) Chico.
 (45) *Jill wants to become an astronaut or the CEO of Xerox, and Bob, IBM.

E.i. CNPC: Relative Clauses

- (46) *Suzy doesn't like men who play instruments, and Mary, sports.
 (47) *The man that gave the lecture plays the cello, and the concert, the violin.

E.ii. (Sentential) complements to head nouns

- (48) *I read out the order to fix tortillas, and Mary, beans.
 (49) *I reviewed the decision to fire the line-workers, and Mary, the inspectors.
 (50) *Stories about Frankenstein terrified John, and about Dracula, Peter.
 (51) *Books about linguistics were reviewed by Bill, and about psychology, by Peter.

F. Sentential Subjects

- (52) *That John hangs out with Mary is bothersome to Suzy, and Suzy, to Laura.
 (53) *That Abigail is lying is Danforth's opinion, and Proctor, the jury's opinion.

G. Adjunct condition

- (54) *John must be a fool to have married Jane, and Bill, Martha.
 (55) *Tom went to Florida to learn to play tennis, and Bill, squash.

H. Wh-island constraint

- (56) *John wondered what to cook today, and Peter, tomorrow.
 (57) *John asked which candidates to interview this morning, and Peter, this afternoon.
 (58) *You have brought up the matter of the Hindenburg, which is an important question, and the question of the lost continent a stupid question. (Sag 1980)

4 Conclusion

The deletion analysis of Gapping is descriptively and explanatorily superior to the ATB analysis, particularly in light of recent ellipsis research. Johnson's arguments against deletion can be refuted by appealing to a wider range of ellipsis data and by considering the gapped clause a VP. The deletion proposal succeeds in the following empirical domains, where ATB does not:

1. Disambiguation of scope and anaphora, which follow from general results on ellipsis.
2. Split Antecedent phenomena, which follow from a newly proposed constraint on ellipsis called the e-GIVENNESS condition.
3. Selective sensitivity to Island Constraints, just in the way we would predict if Gapping is deletion.

A deletion account under the e-GIVENNESS condition also carries two major explanatory advantages. First, it provides a unified mechanism for licensing and identification: to retrieve the meaning of the unexpressed elements, simply bind the existentially-bound variables in the focus closure of the antecedent clause with the remnants. Second, the e-GIVENNESS condition is just the constraint on Sluicing and VP Ellipsis as well (Merchant to appear), so we gain a unified account for Sluicing, VP Ellipsis, and Gapping.

Notes

1. More precisely, there is no backwards Gapping in *English*. Backwards Gapping is apparently possible in head-final languages.
2. VP Ellipsis is not possible in all languages where Sluicing and Gapping are possible, but this must be due to an additional syntactic restriction. Two of the languages in which it is not possible are Greek and French, which leads to the idea that the impossibility of VP Ellipsis is associated with V-to-I raising. But apparently both Hebrew and Irish are also V-to-I languages and have VP Ellipsis as well, as attested by McCloskey (1991) and Doron (1999). These facts are puzzling.

References

- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass., MIT Press.
- Doron, Edit. 1999. In *Fragments: studies in ellipsis and gapping*, Ed. Shalom Lappin, Elabbas Benmamoun.
- Fiengo, Robert, and Robert May. 1994. *Indices and identity*. Cambridge, Mass., MIT Press.
- Fox, Danny. 2000. *Economy and Semantic Interpretation*. Cambridge, Mass., MIT Press.
- Hankamer, Jorge. 1973a. *Unacceptable Ambiguity*. *Linguistic Inquiry* 4.1: 17-68.
- Hankamer, Jorge, and Ivan Sag. 1976. Deep and Surface Anaphora. *Linguistic Inquiry* 7.3: 391-428.
- Johnson, Kyle. 1996. In Search of the English Middle Field. Unpublished manuscript.
- Lobeck, Anne. 1995. *Ellipsis: functional heads, licensing, and identification*. New York: Oxford University Press.
- Kennedy, Chris, and Jason Merchant. 2000. Attributive Comparative Deletion. *Natural Language and Linguistic Theory* 18.1: 89-146.
- McCloskey, James. 1991. Clause Structure, Ellipsis and Proper Government in Irish. *Lingua* 85:259-302.
- Merchant, Jason. To appear. *The syntax of silence: Sluicing, islands, and identity in ellipsis*. Oxford University Press.
- Merchant, J. 2000. Antecedent-contained deletion in negative polarity items. *Syntax* 3.2: 144-150.
- Neijt, A. 1979. *Gapping : a contribution to sentence grammar*. Dordrecht, Foris Publications.
- Ross, J. R. 1967. *Constraints on Variables in Syntax*. Doctoral dissertation, Massachusetts Institute of Technology.
- Sag, Ivan A. 1976. *Deletion and Logical Form*. Doctoral dissertation, Massachusetts Institute of Technology. (Published 1980 by Garland Publishing, New York).