

1 Identity in ellipsis: Focus and isomorphism

Despite the stated primary goal of this dissertation to investigate sluicing, any discussion of the general conditions on ellipsis must begin with the best investigated case, VP-ellipsis in English. I therefore start with these cases, describing the general results in this area, and then move on to see how these results apply to sluicing, returning only briefly to VP-ellipsis.

Since Tancredi 1992 and Rooth 1992a, it has been known that the problem of defining the conditions under which VPs can be elided in English is related to (these authors claim that it forms a subpart of) the problem of defining the conditions under which English VPs can be deaccented, or phonologically reduced. Both problems seem intimately related to general conditions governing the distribution of focus, and several authors have sought to define the appropriate focus conditions for regulating both deaccenting and ellipsis phenomena. While this unification is not completely uncontroversial (see Winkler 1997), the intuitions upon which it is founded are quite robust, and it seems like a promising strategy to explore the connections between the two. Nonetheless, as we will see, identifying the conditions under which a VP can be deaccented (treated as given, in the technical sense defined below) does not answer all the questions about the conditions under which a VP can be omitted — ellipsis of a VP has always been taken to be subject to an additional, usually structural constraint as well.

In this chapter, I review the general conditions on deaccenting as well as the evidence for an additional structural constraint. I show that this additional constraint raises numerous problems in a variety of domains, both under VP-ellipsis and, especially, under sluicing. (Perhaps the most widely known of these problems has been dubbed ‘vehicle change’ in Fiengo and May 1994, and concerns the conditions under which pronouns can be deleted under identity with R-expressions.) I then propose a revised focus condition that can handle the cases that were problematic for the more general

focus conditions, while allowing us to abandon the structural isomorphism constraint that was so problematic (and eliminating the necessity for a separate theory of ‘vehicle change’). Finally, I illustrate how this revised focus condition applies to a core set of data from sluicing, setting the stage for the investigation that follows, and in particular laying the groundwork for the analysis to be developed in chapter five.

In what follows, I anticipate several of the results of the following chapters, and refer to the constituent dominating the remnant wh-phrase as CP, to the missing material as IP, and to the process that derives the ellipsis as deletion. These terminological choices will be justified extensively later, but serve here only to facilitate discussion.

1.1 Semantic background

In this section, I very briefly lay out some of the relevant background notions that will be assumed in what follows. The assumptions here are entirely standard, and readers familiar with semantics can proceed directly to the following section.

I will be assuming a type-driven translation of LFs, which are expected to encode all the relevant properties (up to context) for determining meanings of syntactic structures. LF expressions are assigned translations into a logical language L (we’ll use the standard predicate calculus for L), and these expressions of L are evaluated by an interpretation function $[[\cdot]]$ relative to a model M and an assignment function g (ignoring intensionality for the moment), written $[[\cdot]]^{M,g}$.

The relevant definition is given in (1).

- (1) Let $M = \langle E, I \rangle$, where E is the domain of individuals, and I is an interpretation function which assigns to each constant (individual or predicate) in L an extension in E.

If c is an individual constant, then $I(c) \in E$. If P is a n-ary predicate, then I maps P onto an ordered n-tuple of elements of E: $I(P) \in E^n$. For example, for a one-place

predicate P of type $\langle e, t \rangle$ and a constant c of type $\langle e \rangle$, $P(c)$ is true in M if and only if $I(c) \in I(P)$. This is illustrated in the example in (2).

- (2) Let $M_1 = \langle E, I \rangle$, where
- $$E = \{ \text{abby, ben} \}$$
- $$I = \begin{array}{ll} \mathbf{a} & \text{abby} \\ \mathbf{b} & \text{ben} \\ \mathbf{sing} & \{ \text{abby} \} \end{array}$$

Now, $[[\mathbf{sing}(\mathbf{a})]]^{M_1, g} = 1$ iff $[[\mathbf{a}]]^{M_1, g} \in [[\mathbf{sing}]]^{M_1, g}$, that is, iff $\text{abby} \in \{ \text{abby} \}$, which is the case in the model in (2).

While this works fine for formulas that contain only constants and predicates (and various logical connectives, whose definitions I will not go over here), something more is needed to interpret variables, which are used as translations of traces of movement and pronouns. Formulas with free variables are evaluated wrt assignment functions. For present purposes, where variables will only be of type $\langle e \rangle$, an assignment function g is a function from variables to individuals in the domain E . As an example, consider the function g_1 in (3).

- (3) $g_1 = \begin{array}{ll} x & \text{abby} \\ y & \text{ben} \\ z & \text{charlene} \end{array}$

Using this assignment function, we can evaluate a formula such as $\mathbf{sing}(y)$. This formula will be true wrt M and g if and only if the value that g returns for y is an element of the set given by $I(\mathbf{sing})$. Using M_1 and g_1 as examples, we have $[[\mathbf{sing}(y)]]^{M_1, g_1} = 1$ iff $[[y]]^{M_1, g_1} \in [[\mathbf{sing}]]^{M_1, g_1}$; since $g_1(y) = \text{ben}$, and since $\text{ben} \notin \{ \text{abby} \}$, the formula $\mathbf{sing}(y)$ is false under M_1 and g_1 .

Note that there is no difference between $[[\mathbf{sing}(y)]]^{M_1, g_1}$ and $[[\mathbf{sing}(\mathbf{b})]]^{M_1, g_1}$. This simple fact will be the key to eliminating Fiengo and May's 1994 'vehicle change', as we will see below.

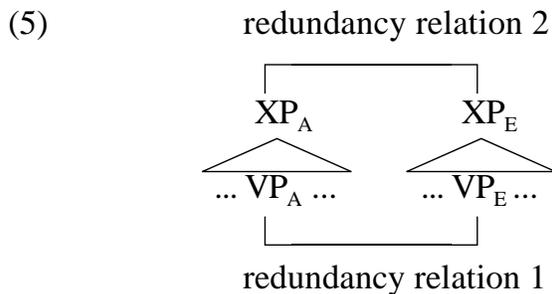
In general, the recursive definition for the semantics of $[[\cdot]]$ relative to a model M and an assignment function g is given in (4).

- (4) If x is an individual constant or predicate, then $[[x]]$ ^{M,g} = $I(x)$.
 If x is a variable, then $[[x]]$ ^{M,g} = $g(x)$.

This brief overview will suffice for our purposes.

1.2 The focus and isomorphism conditions

Rooth 1992a, following an early version of Fiengo and May 1994, distinguishes two different relations between an elided VP (call it VP_e) and its antecedent (VP_a), indicated schematically in (5), order irrelevant.



These authors claim that redundancy relation 1 is syntactic: in particular, to be identified with the notion of “reconstruction” that Fiengo and May outline, which we return to directly. While Rooth accepts this premise, he is more concerned with redundancy relation 2, which Fiengo and May 1994 claim falls under their Dependency Theory (essentially imposing syntactic isomorphism on the parallel structures, modulo indices). Rooth argues that redundancy relation 2 is in fact a semantic relation, which he identifies with his \sim operator (see Rooth 1985, 1992b, 1996). The \sim operator attaches to an LF constituent α and requires that there be a set of alternatives of the same type as α ;

I will not go into the details here — the reader is referred to Büring 1995a for an especially lucid exposition of Rooth’s theory of focus.

Rooth’s hypothesis is as follows:

“ellipsis should be possible exactly in configurations where

1. a verb phrase can be syntactically reconstructed, and
2. some phrase identical with or dominating the reconstructed phrase can be related by the \sim relation to some phrase identical with or dominating the reconstruction antecedent” Rooth 1992a:18

The condition in 2., applied to the schema in (5), requires that $XP_A \sim XP_E$, in Rooth’s terms. Spelling this out, we can restate this condition as in (6) (as is usually done: see Johnson 1997 and Romero 1997a).

(6) **R-Focus condition on VP ellipsis** (Roothian version)

A VP in XP_E can be deleted only if there is an XP_A , where $[[XP_A]]^o$ either is or implies an element of $[[XP_E]]^f$.¹

Rooth’s insight can also be applied using Schwarzschild’s (to appear) theory of focus, based on his definition of GIVEN.

(7) **GIVENness** (Schwarzschild to appear)

1. If a constituent is not F-marked, must be GIVEN.
2. An expression² E counts as GIVEN iff E has a salient antecedent A and, modulo λ -type shifting³, A entails the F-closure of E.

¹ Simplifying somewhat, $[[\]]^o$ is the ordinary value returned by $[[\]]$ for ; $[[\]]^f$ is the focus value of , the set of alternatives to , derived from by replacing all F-marked constituents in by variables of the appropriate type.

² I use the term ‘expression’ in place of Schwarzschild’s ‘utterance’ to abstract away from certain complications that he discusses, irrelevant here; see Schwarzschild to appear.

³ λ -type shifting is a type shifting operation that raises expressions to type $\langle t \rangle$ and existentially binds unfilled arguments.

(8) **F-closure**

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

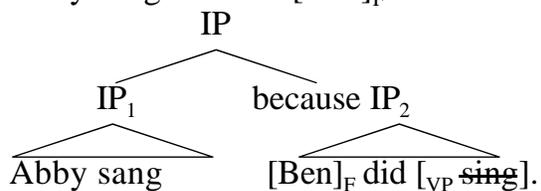
I will refrain from taking the reader through Schwarzschild's theory here; how it works will become evident as we examine various examples.

(9) **S-Focus condition on VP ellipsis** (Schwarzschildian version)

An VP can be deleted only if it is or is contained in a constituent that is GIVEN.

Let us illustrate this with an example.

- (10) a. Abby sang because $[\text{Ben}]_F$ did.
b.



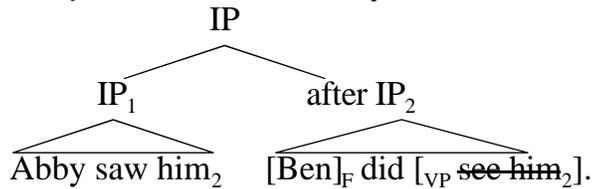
(10a) has the LF in (10b), where struck-through text is the diacritic for material that is not pronounced at PF (I will assume that the feature that triggers this deletion at PF is present at LF; see chapter two, §2.2.1 for implementation).

The R-Focus condition requires that $[[IP_1]]^o \ll [[IP_2]]^f$, that is, that $w.\text{sing}_w(\mathbf{a}) \in \{w.\text{sing}_w(x) : x \in D_e\}$. This latter set is equivalent to $\{w.\text{sing}_w(\mathbf{a}), w.\text{sing}_w(\mathbf{b})\}$ in M_1 . (I ignore tense and aspect here and throughout.)

The S-Focus condition is also satisfied: the deleted VP is given since the antecedent *Abby sang* entails the λ -type shifted deleted VP: $x.\text{sing}(x)$. Equivalently, we could compare the containing IPs — again, *Abby sang* entails the result of replacing the F-marked $[\text{Ben}]_F$ in IP_2 by an λ -bound variable: $x.\text{sing}(x)$.

Consider now the example in (11a), which contains a pronoun him_2 , which we translate with the variable x_2 .

- (11) a. Abby saw him after [Ben]_F did.
 b.



The LF in (11b) will meet the R-Focus condition iff $[[\text{Abby saw } x_2]]$ ^o $[[[\text{Ben}]_F \text{ saw } x_2]]$, that is, if $w.\text{see}_w(\mathbf{a}, g(x_2)) \{ w.\text{see}_w(y, g(x_2)) \mid y \in D_e \}$. It meets the S-Focus condition iff IP_1 entails $x.\text{see}(x, g(x_2))$; this will only hold if $\text{see}(\mathbf{abby}, g(x_2))$ is true.

It is well known that certain kinds of VPs can be deaccented by satisfying a focus condition but not elided under the same conditions. The VPs in (12) and (13), for example, can be deaccented because the preceding clause provides an appropriate antecedent. Here, capital letters represent focal stress, and italics indicate deaccenting (a low F₀ contour: see Hirschberg and Ward 1991 and Winkler 1997 for more detailed examination of this phenomenon and some caveats). The cases in (13) are somewhat more extreme examples of the same phenomenon, dubbed ‘implicational bridging’ cases by Rooth.

- (12) a. Abby was reading the book while BEN *was reading*.
 b. Abby ate a sandwich after BEN *ate*.
 c. Abby left the party because BEN *left*.
 d. Abby sang her hymn louder than BEN *sang*.
- (13) a. Abby called Chuck an idiot after BEN *insulted him*.
 b. Abby ate a sandwich after BEN *had lunch*.
 c. Abby left the party because BEN *took off*.

In each case, the antecedent implies a proposition which is in the focus value of the deaccented VP, satisfying the R-Focus condition⁴. This is shown in (14) for (12a):

⁴ Similar remarks hold for the passive-active alternation under ellipsis, which raise numerous difficult questions that I will sidestep here. These have been extensively discussed in the literature (see Hardt 1993, Kehler 1993, Fiengo and May 1994 for discussion and references). Compare:
 (i) a. First, Abby picked Ben, and then CHARLIE *was picked*.

- (14) [[Abby was reading the book]]^o [[Abby was reading]]^o and
 [[Abby was reading]]^o [[BEN_F was reading]]^f

Similarly, since entailment⁵ is built into the definition of Schwarzschild's GIVEN, the computation is direct:

- (15) *Abby was reading the book* entails *x.x was reading*

These should be compared with examples in which the antecedent does not imply a proposition in the focus value of the deaccented VP, or, in Schwarzschild's terms, does not entail the F-closure of the IP containing the deaccented VP (these following examples are felicitous only to the extent that in the context of evaluation, the matrix predicate entails or implies the subordinate, e.g. in a model where if *x* reads the book, *x* coughs):

- (16) a. * Abby was reading the book while BEN *was coughing*.
 b. * Abby ate a sandwich after BEN *coughed*.
 c. * Abby left the party because BEN *coughed*.
 d. * Abby sang her hymn louder than BEN *coughed*.
- (17) a. * Abby called Chuck an idiot after BEN *coughed*.
 b. * Abby ate a sandwich after BEN *coughed*.
 c. * Abby left the party because BEN *coughed*.

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- b. * First, Abby picked Ben, and then CHARLIE *was fired*.
 c. * First, Abby picked Ben, and then CHARLIE *was*.

⁵ What is intended by 'entailment' here is "some kind of contextual entailment, where certain backgrounded information is assumed" (Schwarzschild to appear:11), with an obvious connection to standard notions of presupposition. I assume that this somewhat laxer notion of entailment will allow the necessary equivalences, as Schwarzschild assumes, for the reductions seen in the examples in the text. For example, (13b) is felicitous only if the context supports an 'entailment' (or [perhaps accommodated] presupposition) that Abby ate the sandwich for lunch. The other cases in (13) require less contextual support, since *leave* will always entail *take off* in the relevant sense, and if you

However, the reasoning applied to the cases of phonological deaccenting in (12) and (13) cannot be applied to VP-ellipsis. With VP-ellipsis, implications alone are not enough; rather, we need identity of meaning, as a number of authors have proposed in varying forms (see Hardt 1992, 1993 for a recent approach and references). Take for example the VP-ellipsis in the sentences in (18) and (19); the elided VPs do not permit readings under which they would be equivalent to those in (12) and (13) above.

- (18) a. Abby was reading the book while BEN was.
b. Abby ate a sandwich after BEN did.
c. Abby left the party because BEN did.
d. Abby sang her hymn louder than BEN did.
- (19) a. Abby called Chuck an idiot after BEN did.
b. Abby ate a sandwich after BEN did.
c. Abby left the party because BEN did.

Instead, in each of these cases, the elided VP must be identical in meaning to the antecedent. So (18a) is true only if Ben was reading the book, not simply if Ben was reading something.⁶ Thus while the Focus conditions as stated apply to both VP-deaccenting and VP-ellipsis (and are responsible for the general parallelism of scope, etc; see especially Tomioka 1995, Asher et al. 1997, and Fox 1998), the elliptical structure seems to be subject to an additional, stronger requirement.

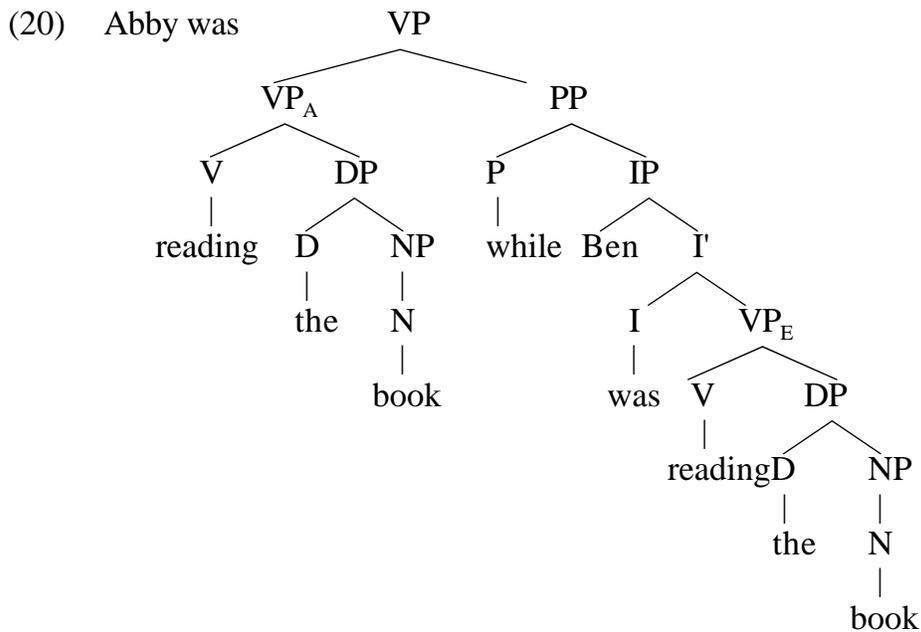
This stronger requirement is often assumed to be some kind of structural isomorphism. The idea is to impose a further condition that requires a syntactically identical twin, an antecedent — an antecedent that doesn't just 'mean' the same as the deletion target, but has exactly the same structure as well (meaning actually plays no direct role in this approach, though a convenient byproduct of identity of structure will be identity of meaning in most circumstances, presumably). If no structurally identical

call someone an idiot, you can virtually always be sure that you have insulted him (perhaps unless he *really* is an idiot).

⁶ These facts are why the conditions are stated above as necessary but not sufficient conditions on deletion; they could be strengthened to biconditionals if we took them to apply only to deaccenting, not deletion.

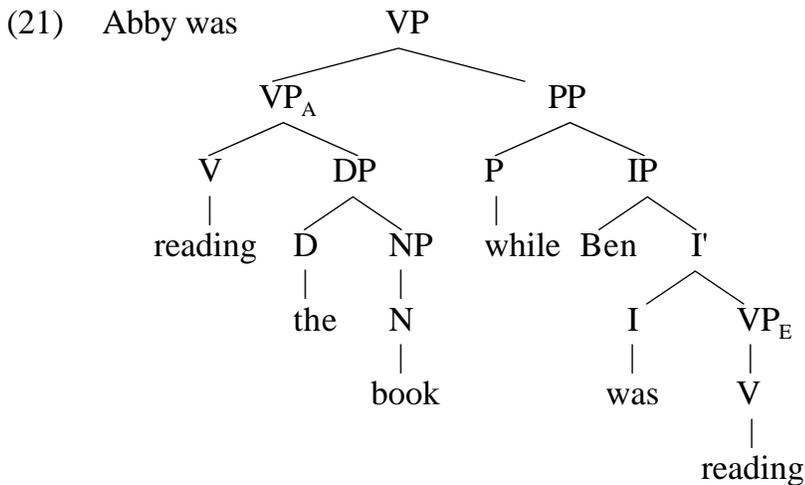
antecedent is available, deletion will not be possible. This claim is made precise in Fiengo and May's 1994 notion of 'reconstruction', which they define as a "set of token structures ... [which are] occurrences in a discourse of a given (sub-)phrase marker over a terminal vocabulary" (p. 191); a deleted phrase must be a member of a reconstruction. The structural component of the theory of ellipsis consists, then, of the claim that an elided phrase must have a structural isomorphic twin available. I will call this general claim the isomorphism condition on ellipsis.

Let us see how the isomorphism requirement applies to the cases at hand. For example, (18a), has the structure in (20).



In this structure, VP_A has the same structure as VP_E . By the isomorphism condition, then, VP_E can be deleted.

The isomorphism requirement will prevent deletion of the embedded VP in a structure like (12a), as desired. That example has the structure in (21) (assuming that the implicit indefinite object of the intransitive *read* is not syntactically present):



Since $VP_A \neq VP_E$, deletion is not allowed.

An isomorphism condition on deletion is thus successful in accounting for the basic facts presented above. Note that general considerations of inferrability seem not to play a role here; even though *Abby was reading* is inferrable from *Abby was reading the book*, this inference is not enough to make the structure available that is required to license deletion.

This condition also applies correctly to more complex examples, such as (22).

(22) Abby [VP_1 [VP_2 left] after Ben did [VP_3 ~~leave~~]], and Carla did [VP_4 ~~leave after Ben did~~] too.

In this example, VP_3 is isomorphic to VP_2 , while VP_4 is isomorphic to VP_1 . This example shows that any segment of a VP can be used to satisfy isomorphism (see Merchant 1998c for an independent argument supporting this conclusion; see also Sag 1977).

Of course, the example in (22) can't be taken to show that adjuncts in general can be ignored for purposes of satisfying the isomorphism condition. Adjuncts internal to the minimal VP cannot be ignored, as (23) shows. (23) only has the reading given in (a), with the nominal adjunct in the ellipsis site, not that in (b), which ignores the adjunct.

(23) Abby [VP met [DP [DP someone] from Kentucky]], and then Ben did.

- a. = <meet someone from Kentucky>
- b. <meet someone>

It seems that this fact must be a result of the isomorphism condition, because either focus condition would be satisfied by (23b), since [[Abby met someone from Kentucky]] [[Abby met someone]]. And indeed the isomorphism condition will rule out deletion of a VP like (23b), since it is not isomorphic to the antecedent VP [*meet someone from Kentucky*].

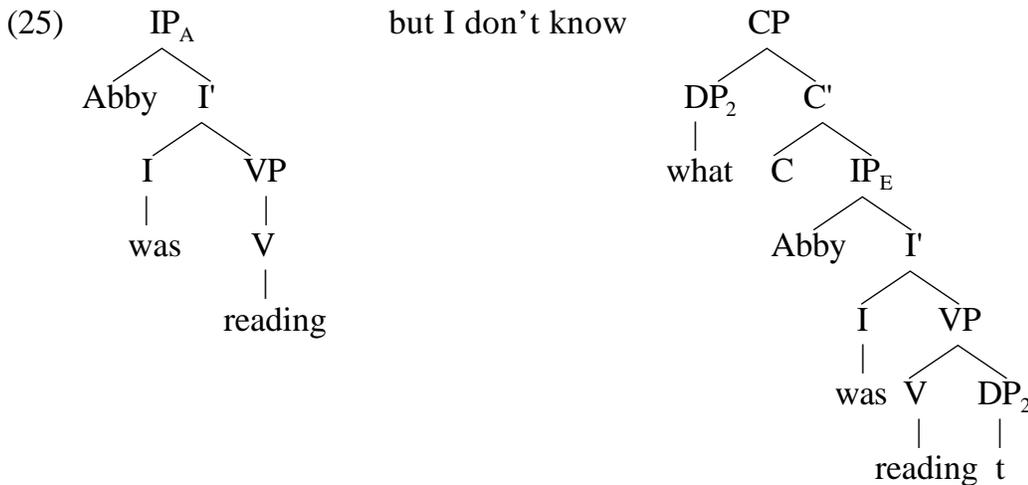
1.3 Problems for isomorphism

As successful as this is, it immediately runs into some problems. This section lays out a few of these problems, some potentially more serious than others, setting the stage for the semantic approach below.

One of the most evident problems comes from even simple cases of sluicing with implicit correlates, as in (24).

- (24) a. Abby was reading, but I don't know what.
- b. Ben called — guess when!

The relevant parts of the antecedent IP and CP of (24a) are given in (25).



We have just seen that the intransitive use of *read* does not satisfy the isomorphism condition for VP-ellipsis with the transitive use, which necessarily includes a direct object. The same holds for IP-ellipsis, obviously; here, $IP_A \neq IP_E$. The same kind of problem emerges for (24b), assuming that adjunct *wh*-phrases are generated internal to the IP (see Johnston 1994 for convincing arguments that this is the case).

Faced with this data, we might claim that traces of moved *wh*-phrases aren't structurally present at LF, where the condition applies. This suggestion is reminiscent of various trace-pruning algorithms proposed to eliminate intermediate traces at LF (as in Lasnik and Saito 1984). But eliminating the traces structurally at LF goes directly against the grain of having an LF in the first place: if the trace is no longer structurally present, how do we know where the variable required by the *wh*-phrase should go? And how will the composition requirements of transitive *read* in (24a), for example, be satisfied? We would also have to develop an alternative account of the substantial data that suggests that traces maintain structure at LF, especially from work on reconstruction effects (Romero 1997b, Fox to appear; also Sauerland 1998, Merchant to appear). In general, such a suggestion makes a hash of transparent LF, and reduces the isomorphism condition to vacuity.

Even in sluicing, however, there is good evidence that the traces of moved elements should count for the purposes of ellipsis. A case in point is Dutch. Dutch is a V2 language, fronting the highest verb into C and some XP into SpecCP. Since in V2

structures these elements have vacated IP, if their traces could be eliminated or ignored, we would expect the deleted IPs in sluicing not to be required to have corresponding elements. This expectation is not borne out. In these examples, not only does the only sensible interpretation come from having the equivalents to the moved elements in the antecedent IP internal to the deleted IP, these are indeed the only grammatical possibilities:

- (26) a. [CP Nu gaat [IP zij t_{nu} t_{gaat}]], maar ik weet niet waarom.
now goes she but I know not why
 ‘She’s going now, but I don’t know why.’
 b. * ... waarom [IP ~~zij~~]
 c. = ... waarom [IP ~~zij nu gaat~~]
- (27) a. [CP Gisteren heeft [IP hij $t_{gisteren}$ met iemand gesproken t_{heeft}],
yesterday has he with someone spoken
 maar ik weet niet met wie.
but I know not with who
 ‘He spoke to someone yesterday, but I don’t know who.’
 b. * ... met wie [IP ~~hij met iemand gesproken~~]
 c. = ... met wie [IP ~~hij gisteren heeft gesproken~~]

(Of course, this objection is mostly mitigated if one adopts a copy theory of movement; in that case, the question becomes, under what circumstances can moved material be ignored, and when must it —as above— be part of the resolution of the ellipsis?)

A second problem for isomorphism in sluicing comes from Romanian. As Dobrovie-Sorin 1993 and Grosu 1994:224 discuss, clitic-doubling (here, with the clitic *l-* ‘him’) is obligatory in questions with certain (D-linked) wh-phrases, like *care* ‘which’:

(33) and (34) illustrate related problems. In (33), the gerund *meeting him* must license the deletion of a finite clause *I met him*. Likewise in (34), taken from Klein 1993, where the subjunctive form *hätte* ‘have’ seems to be equivalent to the modal *sollte* ‘should’, since German doesn’t have wh-infinitival questions, and the modal particles *ja* *gern* must not be present in the missing IP (the sluice does not have the reading given in (34d), only that in (34d)).

(33) I remember meeting him, but I don’t remember when. [=I met him]

(34) Ich hätte ja gern jemandem geholfen, wußte aber nicht, wem.

I have.SUBJ PRT PRT someone helped knew but not who
 ‘I would’ve gladly helped someone, but I didn’t know who.’

a. ... wem ich ja gern jemandem geholfen hätte.

who I PRT PRT someone helped have.SUBJ

b. ... * wem [zu helfen]

who to help

c. ... wem [ich ja gern helfen sollte]

who I PRT PRT help should

d. = ... wem [ich helfen sollte]

who I help should

Given these difficulties for the isomorphism condition, one might be tempted to claim that it simply doesn’t apply in sluicing, holding perhaps only for VP-ellipsis, for the reasons discussed.⁷ But the kinds of facts that motivated imposing the isomorphism condition on VP-ellipsis hold for sluicing as well. In particular, IP-deaccenting exhibits the same kinds of possibilities and restrictions we saw above for deaccented VPs. Thus while (35a) and (35b) are possible, since they are entailed in the relevant sense by the first IP, (36) is impossible, as in the VP cases in (16) and (17).

- (35) a. Abby called Ben an idiot, but I don't know who else *she called an idiot*.
 b. Abby called Ben an idiot, but I don't know who else *she insulted*.
- (36) * Abby called Ben an idiot, but I don't know who else *she dated*.

By the same token, the sluice in (37) cannot have the structure in (37a) — rather, it must be related to (37b).

- (37) Abby called Ben an idiot, but I don't know who else.
 a. * Abby called Ben an idiot, but I don't know who else ~~*she insulted*~~.
 b. Abby called Ben an idiot, but I don't know who else ~~*she called an idiot*~~.

Thus it seems that the same difficulties that beset the VP-ellipsis cases that were solved by the isomorphism condition emerge for sluicing as well.

The final, and perhaps the most important, problem for isomorphism comes from the equivalence between (potentially complex) R-expressions and pronouns under ellipsis, both in sluicing (see chapter 5, § 5.3) and in VP-ellipsis, as in (38). Since this problem has only been discussed with respect to the latter, I will concentrate on these cases for the moment.

- (38) a. They arrested Alex₃, though he₃ thought they wouldn't.
 b. They arrested [the guy who lives over the garage]₃, though he₃ thought they wouldn't.

As Fiengo and May 1994 point out, a perfect equivalence between the deleted VP and the antecedent VP would incorrectly predict (38) to have the same status as (39).

⁷ But see especially Hardt 1993, who documents a wide range of apparent structural differences between antecedent and elided VPs, in the spirit of the problems noted for IP ellipsis here.

- (39) a. * He₃ thought they wouldn't arrest Alex₃.
 b. * He₃ thought they wouldn't arrest [the guy who lives over the garage]₃.

In the examples in (39), the DPs *Alex*₃ and [*the guy who lives over the garage*]₃ are c-commanded in their respective clauses by the co-indexed pronoun *he*₃, in violation of Principle C of the binding theory (BT(C)), which we can take to be that in (40).

(40) **Principle C**

An R-expression with index *i* must not be c-commanded by any expression with index *i*.

But the sentences in (38) are grammatical, apparently not violating BT(C). Fiengo and May 1994 propose an operation of 'vehicle change' which allows the value of the pronominal feature associated with nominals to vary within a 'reconstruction'. Although not all the details of their proposal are clear (see their pp. 218ff especially), they will not be crucial here (see Kennedy 1997, Giannakidou and Merchant 1998, Safir 1998, Potts 1999, and chapter 5, §5.3 for some discussion). In my terms, what they have discovered is that R-expressions in antecedents can license the deletion of pronouns in ellipsis sites. With reference to the example at hand, this means that the deleted VPs are not those in (41a,b), but rather that in (41c).

- (41) a. * [_{VP} ~~arrest Alex~~₃]
 b. * [_{VP} ~~arrest [the guy who lives over the garage]~~₃]
 c. [_{VP} ~~arrest [him]~~₃]

But such a deletion also would violate the isomorphism condition, since the terminal vocabularies of the deleted and the antecedent VPs differ. (For the case of the definite description, one could perhaps take this as indirect evidence that pronouns do have complex internal structures of exactly the kind required, varying their structure appropriately with context, but I regard this as a *reductio* in the absence of independent

evidence for such internal structure, and wouldn't extend to the case of names in any case.⁸ See McCawley 1998: ch. 11 for relevant discussion and references.)

So how is the non-equivalence between pronouns and such R-expressions to be reconciled with the apparent need for a structural isomorphism requirement we saw above? Fiengo and May, who are the only authors to have dealt seriously with this question, retain structural isomorphism and propose that values of features like [pronominal] can be treated as 'equivalence classes' for the purposes of structural comparison, i.e., that while the ellipsis site does indeed contain a structurally and lexically identical R-expression, this R-expression does not trigger a BT(C) violation because it is, exceptionally (that is, only in an ellipsis site) allowed to be [+pronominal], unlike its overt counterparts which must always be [-pronominal]. This featural mismatch, the heart of 'vehicle change', can be overlooked for purposes of deletion, by hypothesis. Although this is a workable analysis, and it is to Fiengo and May's credit to have highlighted this problem and addressed it seriously at all, it does not advance our understanding of the phenomenon very much, nor illuminate why this should hold only under deletion (and not deaccenting, which otherwise would seem to pattern with deletion).

1.4 The revised Focus condition and e-GIVENness

The other possible approach, and the one I will pursue here, is to revise or reject structural isomorphism as a condition on ellipsis. The strongest, and hence most interesting and most difficult, position to take is that there is no structural isomorphism condition on ellipsis at all. Because of the numerous problems that isomorphism encounters, I think it will be fruitful to abandon it entirely, and attempt to account for the data that it was introduced to handle in another way, one that does not at the same time force us to revise our notions of featural constancy or do violence to the syntax of

⁸ The same issue arises with respect to simple interrogatives in sluicing with complex antecedents:
(i) He talked to somebody from the Finance Department, but I don't know who.
Here [who] would have to be structural isomorphic to [somebody from the Finance Department].

wh-movement. The proposal to be developed below, in relying solely on a semantic, not structural, condition on ellipsis, shares the goal of a number of researchers who have also pursued purely semantic approaches, such as Dalrymple et al. 1991, Hardt 1993, Asher et al. 1997, Prüst 1993, Prüst et al. 1995, Hendriks and de Hoop 1998, and others; the proposal here, however, is original and differs from the majority of these in explicitly assuming syntactic structure in the ellipsis site.

1.4.1 e-GIVENness in VP-ellipsis

Although it is not my intention to develop an entire theory of VP-ellipsis here, I will present a revised Focus condition that will capture the data given so far. My primary aim, however, will be to use a version of this new Focus condition as a condition on IP-ellipsis below. This condition is based on the definition of e-GIVEN in (42), and is stated in (43).

(42) **e-GIVENness**

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

- i. A entails $F\text{-clo}(E)$ ⁹, and
- ii. E entails $F\text{-clo}(A)$

(43) **Focus condition on VP ellipsis**

An VP can be deleted only if is e-GIVEN.

Several simplifications could be made here, which I omit for exposition. It should be clear that the only novel part of the definition is in (42ii); one could thus easily

⁹ In general, of course, and perhaps on principled grounds (see chapter 5, §5.2.1 for some discussion), a deleted constituent will not contain any F-marked material; material extracted from the ellipsis site, on the other hand, will often —though not always—, be F-marked. I will assume, as above, that traces of constituents moved out of the ellipsis site will be -bound for purposes of satisfaction of the various Focus conditions.

divorce this condition applying strictly to deleted structures from the more general conditions discussed above. Such a theory would be equivalent to the one that forms the basis of my discussion here, and more parsimonious in certain respects, since the more general Focus conditions of section 2 will certainly apply to structures that contain ellipsis as well. For purposes of exposition, however, I will collapse the two requirements on elliptical structures (the more general focus conditions plus clause (ii) of (42)) into one definition — this will allow us to refer to a structure as simply satisfying the e-GIVENness requirement, though the careful reader may want to keep this conflation in mind.

First let us see how (43) handles the examples in (18) and (19), repeated here, which motivated the isomorphism condition.

- (44) a. Abby was reading the book while BEN was.
 b. Abby ate a sandwich after BEN did.
 c. Abby left the party because BEN did.
 d. Abby sang her hymn louder than BEN did.
- (45) a. Abby called Chuck an idiot after BEN did.
 b. Abby ate a sandwich after BEN did.
 c. Abby left the party because BEN did.

To take one example, what is at issue here is making sure that the elided VP in (45a) has the source in (46a), not that in (46b), in accordance with our intuitions about the possible meanings of (45a).

- (46) a. = ... after BEN did ~~call Chuck an idiot~~.
 b. ... after BEN did ~~insult Chuck~~.

The first task is to see how the deleted VP in (46a) is e-GIVEN. The antecedent here is the VP in the first clause, [_{VP} call Chuck an idiot]. This VP has an open variable

corresponding to the subject, so λ -type shifting must apply, yielding (47) (where λ stands for the result of applying λ -type shifting to λ).

(47) $VP_A = \lambda x.x$ called Chuck an idiot

The first question now is whether VP_A entails the result of replacing F-marked parts of the deleted VP by λ -bound variables. Let us assume that the VP-internal trace of the subject BEN is also F-marked, though at this point I see nothing crucial riding upon this. Replacing this trace by an λ -bound variable yields (48):

(48) $F\text{-clo}(VP_E) = \lambda x.x$ called Chuck an idiot

Clearly, then, VP_A entails $F\text{-clo}(VP_E)$. The second question is whether VP_E entails the F-closure of VP_A , given in (49). Since the two are identical, the answer is yes.

(49) $F\text{-clo}(VP_A) = \lambda x.x$ called Chuck an idiot

Consider now (46b). $F\text{-clo}(VP_A)$ remains the same, but the deleted VP itself is different — λ -binding the subject trace yields (50):

(50) $VP_E = \lambda x.x$ insulted Chuck

Now the answer to the second question changes: VP_E does not entail $F\text{-clo}(VP_A)$, since you can insult someone without necessarily calling him or her an idiot. Therefore the VP in (46b) is not e-GIVEN, by (42ii). As a result, this VP does not satisfy the revised Focus condition in (43), and cannot be deleted, as desired. The same reasoning applies to the examples in (44).

Eliminating the isomorphism condition also lets us claim that the deleted VP in the problematic cases of (38) (repeated here), which motivated having ‘vehicle change’ in the first place, simply contains a regular pronoun, as desired:

- (51) a. They arrested Alex₃, though he₃ thought they wouldn't ~~arrest him~~₃.
 b. They arrested [the guy who lives over the garage]₃, though he₃ thought they wouldn't ~~arrest him~~₃.

Consider the case in (51a). Does this deleted VP satisfy the Focus condition? It does, just in case *him* = *Alex*. This is because the result of λ -type shifting the antecedent VP, given in (52a), entails the F-clo(VP) of the deleted VP in (52b) just in case the value returned by the assignment function for the translation of *him* (x_3) picks out the same individual that is returned by the assignment function for the name *Alex*. (Schwarzschild to appear [1998:13] notes this result as well, for his definitions: “a pronoun will count as GIVEN if it has an antecedent with the same index ... [since] ... [[John_i]]^g = [[he_i]]^g, for any *g*”, thus correctly allowing deaccenting equivalencies between names and pronouns.) This, of course, is the desired result.

- (52) a. $VP_A = \lambda x.x$ arrested Alex
 b. $F\text{-clo}(VP_E) = \lambda x.x$ arrested him

The second condition, that the VP of the deleted VP entail the F-clo(VP) of the antecedent VP, is satisfied as well. (Some complications, resolvable under natural assumptions about epistemic compatibility and presuppositions, arise in the case of descriptions as in (51b), but I will not go into these here; I also pass over the issues involved with voice changes mentioned in footnote 4.)

The Focus condition in (43), then, handles the data that motivated vehicle change¹⁰, while ruling out illicit cases of ‘implicational bridging’ in the missing VP¹¹.

¹⁰ At least for the best investigated case of what goes under the rubric ‘vehicle change’ in Fiengo and May 1994 (equivalences between R-expressions and pronouns). The term ‘vehicle change’ is, however, widely applied in that work, being pressed into service in 12 different ways between pp. 201-230 to account for varieties of non-distinctness under ellipsis. Whether all these varieties can or should be accounted for in the same way will have to be taken up in later work. Note that the present approach also captures the equivalence of negative polarity items and indefinites under VP-ellipsis noted in Baker and Brame 1972:62 and Sag 1976, which Fiengo and May 1994 also label an instance of vehicle change.

Our next question is whether this Focus condition can be applied with equal success to sluicing.

1.4.2 e-GIVENness in sluicing

Answering this question requires a bit more background. In particular, it requires that we make some specific assumptions about what the alternatives to questions are, in order to determine what should count as GIVEN. Here I will use the results of Romero forthcoming, who shows that versions of the more general focus conditions in (6) and (9) can fruitfully be applied to IP-deaccenting and sluicing, accounting for a wide range of data, especially concerning the nature of the antecedents and scopal parallelisms (issues that will not concern us to a great extent here, though see chapter 5, §5.5 for a brief return to some of them). For our purposes, the basics of her analysis will suffice. The basic idea is that the questions in (53) should all count as alternatives to one another.

- (53) a. (know¹²) which P are Q
 b. (know) how many P are Q
 c. (know) whether any P are Q

¹¹ It will also ensure that the correspondent to the remnant XP in cases like (i) and (ii) (the latter a case of pseudogapping, which I assume involves VP-deletion, following many researchers — see Kennedy and Merchant to appear for references) must bear focus:

- (i) I saw [Abby]_F, but [Bart]_F, I didn't.
 (ii) I want to see [the Simpsons]_F more than I do [the X-Files]_F.

In (i), for example, $VP_E = x y[x \text{ saw } y]$, and $F\text{-clo}(VP_A) = x y[x \text{ saw } y]$. Note that here, VP_E does not entail VP_A , which is $x[x \text{ saw } Abby]$. If no F-marking were present on *Abby* in VP_A , $F\text{-clo}(VP_A)$ would not be entailed by VP_E and VP_E could not be deleted. It seems to be necessary as well that some overt material in the clause containing the deleted VP be present to indicate the possibility of F-closure in the antecedent; see Fox 1998 for related discussion.

¹² Here and below I use *know* as the embedding predicate, assuming that the conclusions reached for this case generalize (i.e., that semantically, *wonder*-type predicates will have some component equivalent to *know* — ‘want to know’ or the like); see Romero’s discussion. Using something like *I know...* as a leader to both the antecedent and CP containing the sluice allows us to avoid the multiple applications -type shift that would be necessary to evaluate GIVENness; while these applications are routine, they clutter up the formulae considerably.

She further adopts Schwarzschild's GIVENness condition, applying it to constituents that contain IP ellipsis (she shows that the same results hold for Rooth's version as well, which I omit here). Modifying (9) above by replacing 'VP' by 'IP', we get the condition in (55) (the definition of GIVENness is repeated for convenience).

(54) **GIVENness** (Schwarzschild to appear)

An expression E counts as GIVEN iff E has a salient antecedent A and, modulo α -type shifting, A entails F-clo(E).

(55) **S-Focus condition on IP ellipsis** (Schwarzschildian version)

An IP can be deleted only if it is or is contained in a constituent that is GIVEN.

Concretely, supposing this will allow the null IP in (56):

(56) I know how MANY politicians she called an idiot, but I don't know WHICH (politicians¹³).

In this case, the alternative questions are those in (57).

- (57) a. (know) which politicians she called an idiot
 b. (know) how many politicians she called an idiot
 c. (know) whether she called any politicians an idiot.

The result of replacing F-marked parts of the CP that contains the missing IP by α -bound variables of the same type yields (58); here I use Q to represent the variable over wh-determiners (see Romero forthcoming [1998:18-22]).¹⁴

¹³ I ignore for the most part the independent question of how the NP-ellipsis after *which*, etc., is resolved.

¹⁴ The same result holds if we apply Rooth's condition, assuming that $E^f = [[\text{WHICH}_F(\text{politicians}) \text{ she called an idiot }]]$ $^f = \{ \text{which politicians she called an idiot, how many politicians she called an idiot, whether she called any politician an idiot } \}$ and $A = \text{how many politicians she called an idiot}$; therefore $A \models E^f$, as required. See Romero forthcoming for detailed exemplification.

(58) Q[I know [Q-politicians she called an idiot]]

A similar computation gives us the desired result in the following case:

(59) I know she called some politician an idiot, but I don't know WHICH.

Since knowing that she called some politician an idiot entails knowing whether she called any politician an idiot (i.e., *knowing whether she called any politician an idiot* will be GIVEN), the S-Focus condition will be satisfied.

But again this is not enough for our purposes: using the one-way entailments in the definition of GIVENness in (54) will allow for the illicit IP-ellipsis in (60).

(60) * I know how many politicians she called an idiot, but I don't know WHICH
(politicians) ~~[_{IP} she insulted t]~~

Again, this is because *calling someone an idiot* entails *insulting someone*, in the relevant sense. Thus Romero, like others before her, adopts an LF-identity condition supplemental to the focus conditions in order to rule out these kinds of ellipsis. But we have already seen the difficulties associated with such an isomorphism requirement on IP-ellipsis. In line with the analysis of VP-ellipsis above, we can solve this problem by abandoning the isomorphism condition and instead adopting the revised Focus condition above, applied now to IP-ellipsis. Recall the definition of e-GIVEN in (42), repeated here.

(42) **e-GIVENness**

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

- i. A entails F-clo(E), and
- ii. E entails F-clo(A)

Using this, we now state the Focus condition on IP ellipsis:

(61) **Focus condition on IP ellipsis**

An IP can be deleted only if it is e-GIVEN.

Consider how this requirement applies to the following example.

- (62) I know how MANY politicians she called an idiot, but I don't know WHICH (politicians).

First, we need to decide what to do with the traces of wh-movement, in this case, in both the elided and antecedent IP (again, for the time being, I will concentrate on cases where there is no F-marking inside the IP; I return to the other cases below). The same issue arose above with respect to the VP-internal subject trace; as I did there, I will translate them as simple variables, existentially bound. This is a convenient oversimplification which will make the exposition clearer, but it should be borne in mind that there is good evidence that traces have more structure than this notation indicates (this fact is actually crucial in accounting for several cases that I will not consider in detail here; see Romero 1997b, Sauerland 1998, Fox to appear, Merchant to appear).

Adopting this, then, gives us the following, in satisfaction of the first part of the definition of e-GIVENness, since IP_A entails $F\text{-clo}(IP_E)$.

- (63) a. $F\text{-clo}(IP_E) = x.\text{she called } x \text{ an idiot}$
b. $IP_A = x.\text{she called } x \text{ an idiot}$

Second, IP_E entails $F\text{-clo}(IP_A)$, satisfying the second clause of the definition. Therefore, by the Focus condition in (61), IP_E can be deleted.

Likewise for the following example:

(64) I know she called some politician an idiot, but I don't know WHICH.

Here again, we have the following for IP_A and IP_E , in satisfaction of (42i).

- (65) a. $IP_A = F\text{-clo}(IP_A) = x.\text{she called } x \text{ an idiot}$
b. $IP_E = F\text{-clo}(IP_E) = x.\text{she called } x \text{ an idiot}$

Again, since these are identical (42ii) will also be satisfied.

But note that (42ii) will rule out the cases discussed above that the original focus conditions allowed for:

- (66) * I know how many politicians she called an idiot, but I don't know WHICH
(politicians) ~~$\{_{IP} \text{she insulted } t\}$~~

Now we have:

- (67) a. $F\text{-clo}(IP_A) = x.\text{she called } x \text{ an idiot}$
b. $IP_E = x.\text{she insulted } x$

Since (67a) gives rise to entailments which (67b) does not (since *she insulted x* does not entail *she called x an idiot*), IP_E is not e-GIVEN under (42ii). Therefore, by (61), IP_E cannot be deleted.

These definitions have the additional desirable result of accounting for the paradigm discovered by Chung et al. 1995 (their (21)), given in (68):

- (68) a. * She served the soup, but I don't know who(m).
(cf. She served the soup, but I don't know to whom.)
b. She served the students, but I don't know what.

- (71) * She served₁ the meal, but I don't know WHO *she served₁ it to*.
 (cf. She served₁ the meal, but I don't know who *she served₁ it TO*.)

The preposition in (71) cannot be deaccented, because it is not GIVEN. The relevant pieces of the computation are given in (72):

- (72) a. IP_A = she served the meal
 b. F-clo(IP_E) = x[she served the meal to x]

By the Focus condition, IP_A must entail the F-closure of IP_E. Since this is not the case, the IP in (71) cannot be deaccented. *A fortiori*, it cannot be deleted, as would be required to derive (68a). Thus the observed contrast follows from the present system as well.

One last possibility must be considered, and dispensed with, before we can move on. From what does Chung et al.'s correct observation that *serve₁* is not equivalent to *serve₂* under sluicing follow in the present system? In other words, what rules out a derivation like (73)?

- (73) * She served₁ the meal, but I don't know WHO_i ~~she served₂ *t_i* the meal~~.
 (cf. She served₂ someone the meal, but I don't know who_i ~~she served₂ *t_i* the meal~~.)¹⁵

The answer to this question lies, again, in the respective entailments generated, given in (74).

¹⁵ Note that the grammaticality of this second example indicates that the often-noted restriction on the extraction of the first object in a double object construction (as in (i); see Fillmore 1965 and Kuroda 1968) must similarly be located at the PF interface, and not built into the mechanisms of extraction in the syntax, as pointed out to me by M. den Dikken (p.c.) (essentially the same point is made by Baker and Brame 1972:62 with respect to their example (31)).

(i) ?? Who_i did she serve *t_i* the meal?

- (74) a. $IP_A = \text{she served the meal}$
 b. $F\text{-clo}(IP_E) = x[\text{she served } x \text{ the meal}]$

As we observed above, $serve_1$ does not entail the existence of a recipient of the meal. But exactly this entailment is needed to license deletion of an IP containing a moved wh-phrase corresponding to the recipient of $serve_2$, since the λ -closure of such an IP will entail a recipient.

A related question concerns examples like like (75), brought to my attention by S. Chung:

- (75) * Someone shot Ben, but I don't know by who(m) [~~IP Ben was shot t~~]

This will be ruled out if the subject of the active transitive *shoot* induces entailments in the relevant sense which the object of the *by*-phrase does not. Although I cannot give specifics at this point, it does seem plausible that the active-passive difference in form corresponds to a difference in meaning, whether this be solely perspective-based (see Dowty 1991 for discussion and references) or actually found in lexical entailments. However these differences are characterized, it seems that the GIVENness conditions are sensitive to them. (Further complications, partly noted above, arise in the case of VP-ellipsis; note, however, that pseudogapping examples parallel to (75) have a comparable status: * *Abby shot Ben {before / and} Chuck was by Dara.*)

Up to this point, we have concentrated on examples that contained no F-marking in the antecedent IP. But it is instructive to examine two of these cases as well.

The first of these is illustrated by examples like (76):

- (76) She called Ben an idiot, but I don't know who else [~~IP she called t an idiot~~].

If there were no F-marking in the antecedent IP, clause (ii) of (42) would be violated, since simply existentially closing the apparent free variables in the deleted IP would give

us $IP_E = \exists x. she \text{ called } x \text{ an idiot}$. But $F\text{-clo}(IP_A) = she \text{ called } Ben \text{ an idiot}$, which is not entailed by IP_E . This should violate (42ii) and rule out the IP deletion, contrary to fact.

But this problem is resolved once we take the necessary F-marking into consideration. Consider the interpretations of the pair in (77):

- (77) a. $ABBY_F$ called Ben an idiot, but I don't know who else.
 b. Abby called BEN_F an idiot, but I don't know who else.

The interpretations of the sluices in (77a) and (77b) correspond to (78a) and (78b), respectively:

- (78) a. ... but I don't know who else called Ben an idiot.
 b. ... but I don't know who else Abby called an idiot.

This distribution is exactly that predicted by the Focus condition. Consider (77a) with respect to (42ii). The relevant elements for comparison are given in (79).

- (79) a. $IP_E = x.x \text{ called Ben an idiot}$
 b. $F\text{-clo}(IP_A) = x.x \text{ called Ben an idiot}$

Since these are the same, the relevant entailments hold (namely, $IP_E \models F\text{-clo}(IP_A)$). This would not be the case if the antecedent IP were the first IP in (77b), though, since in that case, $F\text{-clo}(IP_A) = \exists x. Abby \text{ called } x \text{ an idiot}$. The reverse holds, *mutatis mutandis*, for (77b): the F-marking on *Ben* ensures that the sluice can only derive from (78a), not (78b). (The fact that the implicit argument of *else* must be resolved to the F-marked constituent in these cases follows from a natural semantics for *else*, such as that in Romero forthcoming [1998:31 (81)], and the more general Focus conditions; the reasoning is the same as that given for pronouns above.)

The second case where F-marking plays a role in sluicing is in cases like those in (80), which we can call 'contrast'-sluices.

- (80) a. She's an absolute idiot: unaware of who she is, or where. [David F. Wallace, *The Broom of the System*, 1986, Avon Books: New York]
- b. The channel was 15 feet wide, but I don't know how deep.
- c. Abby knew which of the MEN Peter had invited, but she didn't know which of the WOMEN.
- d. We know which streets are being re-paved, but not which avenues.
- e. Max has five Monets in his collection, and who knows how many van Goghs.
- f. There are nine women in the play, but I don't know how many men.
- g. I know how many women are in the play, but I don't know how many men.
- h. She has five CATS, but I don't know how many DOGS.

Consider (80h). We can assume it has the structure in (81).

- (81) She has [five CATS]_F, but I don't know how many DOGS [~~IP she has #~~].

Here, the relevant computations are given in (82), which satisfy (42ii).

- (82) a. $IP_E = x.she\ has\ x$
 b. $F-clo(IP_A) = x.she\ has\ x$

If we were to only look at IP_A without being able to abstract away from the material that contrasts with the descriptive content DOGS in the wh-phrase, we would incorrectly predict deletion to be impossible, since IP_E does not entail *she has five cats*. In cases where there is no contrasting material in the wh-phrase, as in the usual cases with NP-ellipsis or the like, the more general Focus conditions employing GIVENness will ensure that the correct descriptive content is understood (as Romero forthcoming

shows) — it is only in these cases, where there is some contrast in the wh-phrase, that the necessity of the formulation in (42) becomes fully apparent.

1.5 Summary

This chapter has examined some of the general conditions on ellipsis, in particular the question whether the conditions regulating VP and IP-deaccenting are the same as those that regulate VP and IP-ellipsis. While the more general focus conditions still apply to structures in which ellipsis has applied, we have seen that the interpretations of ellipsis sites are constrained in ways that go beyond their merely deaccented cousins.

While the majority of researchers either assume or have argued that these additional constraints on ellipsis reflect a structural isomorphism requirement, I have shown that such a requirement is extremely problematic in a number of domains. Even simple cases of sluicing fail it, and it leaves us without a satisfying account of the equivalence of elided pronouns to R-expressions in the antecedents to ellipsis. Instead, I have argued that the appropriate division in the data can be made by adopting an expanded definition of Schwarzschild's to appear GIVENness which I called e-GIVENness.

Using this revised definition, I proposed the following simple constraint on the interpretation of ellipsis sites, generalized here over both VP and IP-ellipses:

(83) **Focus condition on ellipsis**

A constituent can be deleted only if it is e-GIVEN.

Because e-GIVENness incorporates 'two-way' entailment requirements (that is, checking the entailments of the antecedent XP against those of the deleted XP and vice versa, modulo certain complications arising from focussed constituents), the antecedent will not be able to vary from the deleted constituent in the ways it can when triggering mere deaccenting.

This system successfully accounts for those cases which were taken to motivate the structural isomorphism condition. Because it is fundamentally semantic in nature, it will allow for syntactic variation in the ellipsis site, just in case these can lead to satisfaction of the focus condition. This leads to a significant overall simplification of the theory, eliminating any need for an additional theory of ‘vehicle change’ or of the other kinds of deviancies from structural identity needed especially under sluicing.