

# An asymmetry in voice mismatches in VP-ellipsis and pseudogapping

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VP-ellipsis and pseudogapping in English show a previously unnoticed asymmetry in their tolerance for voice mismatch: while VP-ellipsis allows mismatches in voice between the elided VP and its antecedent, pseudogapping does not. This difference is unexpected under current analyses of pseudogapping, which posit that pseudogapping is a kind of VP-ellipsis. I show that this difference falls out naturally if the target of deletion in the two cases differs slightly: in VP-ellipsis, a node lower than Voice is deleted, while in pseudogapping a node containing Voice is deleted. This analysis furthermore accounts for a new observation concerning the distribution of floated quantifiers in these two constructions as well.<sup>1</sup>

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<sup>1</sup>Thanks to Kirsten Gengel, Kyle Johnson, and the two *LI* reviewers for very helpful comments.

# 1 Voice mismatches

It is well known that VP-ellipsis in English tolerates mismatches between the voice of the elided constituent and that of its antecedent, in both directions. Typical examples are those in (1) and (2) (the (a) examples from Kehler 2002:53; see also Sag 1976:17, 75, Dalrymple et al. 1991, Hardt 1993, Johnson 2001, and Arregui et al. to appear for further examples, discussion, and qualifications).

- (1) Passive antecedent, active ellipsis
  - a. This problem was to have been looked into, but obviously nobody did. <look into this problem>
  - b. The system can be used by anyone who wants to. <use it>
  
- (2) Active antecedent, passive ellipsis
  - a. Actually, I have implemented it [=a computer system] with a manager, but it doesn't have to be. <implemented with a manager>
  - b. The janitor must remove the trash whenever it is apparent that it should be. <removed>

What has escaped previous notice, however, is that pseudogapping contrasts in this respect with VP-ellipsis in not permitting such voice mismatches (aligning with sluicing, fragment answers, stripping, and gapping).<sup>2</sup>

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<sup>2</sup>Stump 1977, to whom we owe the term 'pseudogapping', did note that voice mismatches were disallowed in pseudogapping, but, following the widely accepted judgments

- (3) Passive antecedent, active ellipsis
- a. \*Roses were brought by some, and others did lilies. <bring>
  - b. \*Klimt is admired by Abby more than anyone does Klee. <admire>
  - c. \*Hundertwasser's ideas are respected by architects more than most people do his work. <respect>
  - d. \*More people were invited to Beth's reception by her mother than Beth herself did to her wedding! <invite>
- (4) Active antecedent, passive ellipsis
- a. \*Some brought roses, and lilies were by others. <brought>
  - b. \*Abby admires Klimt more than he is by anyone else. <admired>
  - c. \*Laypeople respect Hundertwasser's work more than his ideas are by architects. <respected>
  - d. \*Beth's mother invited more people to her wedding than were by Beth herself! <invited>

This difference is the puzzle to be solved.

## 2 Voice heads and ellipsis sites

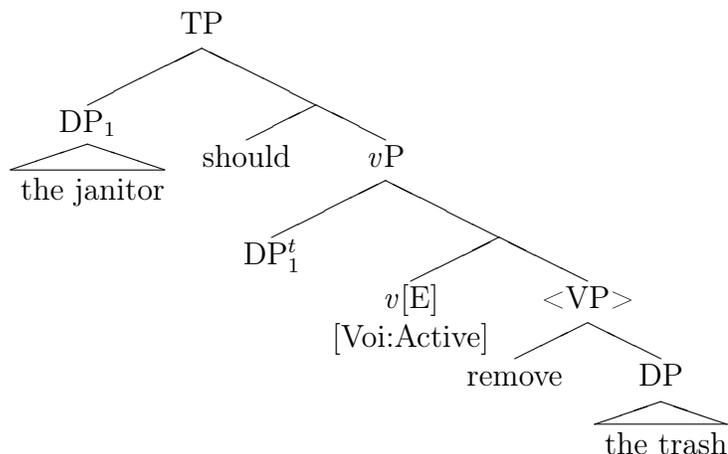
### 2.1 Permitting voice mismatches in VP-ellipsis

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of the day, he also claimed that voice mismatches were ruled out in VP-ellipsis: for him, there was no contrast to be explained.

I propose that VP-ellipsis consists of deletion of the phrasal complement to the  $v$  head which determines the voice properties of the clause ( $v$ [Voi]; see Kratzer 1996, and Collins 2005 for recent discussion). Ellipsis is implemented as a result of a feature, E, present on the head whose complement is elided; this E feature (taken from Merchant 2001) triggers PF non-parsing (‘deletion’) of the complement of its host head, and furthermore is the locus of morphosyntactic and semantic ‘identification’ requirements. I will notate the presence of an E feature on a head by appending E, e.g.,  $v$ [E]. For a simple example such as (5a), the structure is that in (5b), where angled brackets indicate the elided material, and the superscript  $t$  on a node indicates that that node is a ‘trace’ copy of moved material.

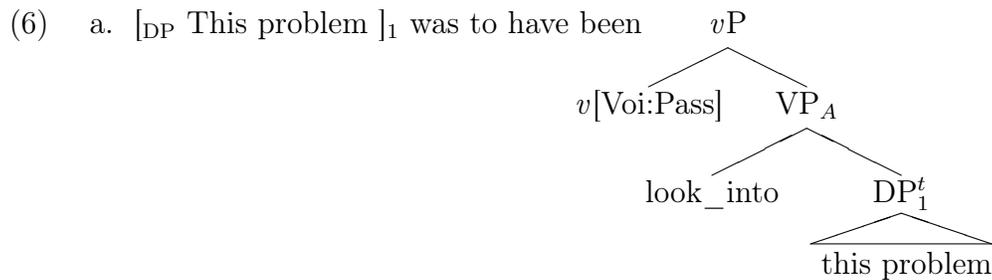
- (5) a. Bill shouldn’t remove the trash—the janitor should.  
 b.

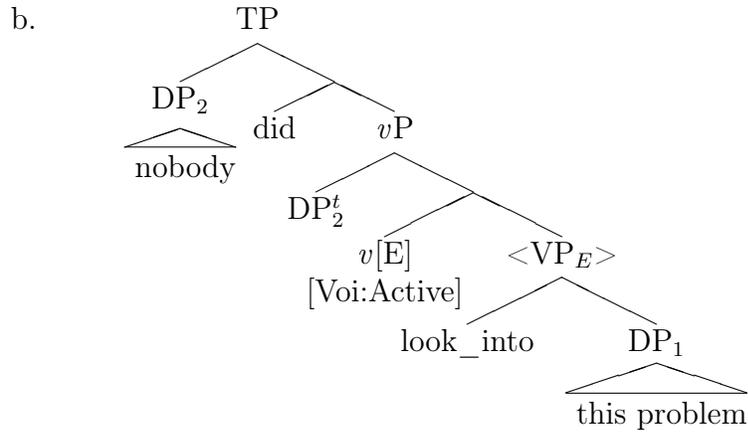


One major research tradition posits that ellipsis is subject to a syntactic identity condition (possibly in addition to semantic and other containment conditions) requiring that an elided XP have a syntactically identical an-

tecedent  $XP'$ , modulo contrastive elements; representatives of this general approach include Sag 1976, Kitagawa 1991, Fiengo and May 1994, Chung et al. 1995, Fox 2000, Chung 2005, and many others (authors that argue against a syntactic isomorphism requirement include Klein 1986, Dalrymple et al. 1991, Hardt 1993, Prüst et al. 1994, Ginzburg and Sag 2000, Merchant 2001, Culicover and Jackendoff 2005, and Potsdam to appear). If VP-ellipsis is in fact ellipsis of  $VP$ , and if the head that determines voice alternations (and ultimately is responsible for the voice morphology on the verbal head) is external to  $VP$ , then we are in a position to understand the fact that voice mismatches are permitted in VP-ellipsis.

Consider first the case of a passive antecedent and ellipsis in an active clause. The two clauses in an example like (1a) will have the structures given in (6a) and (6b).





In these structures, the antecedent VP,  $VP_A$  in (6a), is identical to the VP targeted by ellipsis,  $VP_E$  in (6b), assuming that the copy theory of movement applies to A-traces as well: the ‘trace’ of the moved passive subject is identical to the object of the elided VP.<sup>3</sup>

The account is the same for the opposite case, with an active antecedent and ellipsis in a passive clause, as seen in (7a) and (7b).

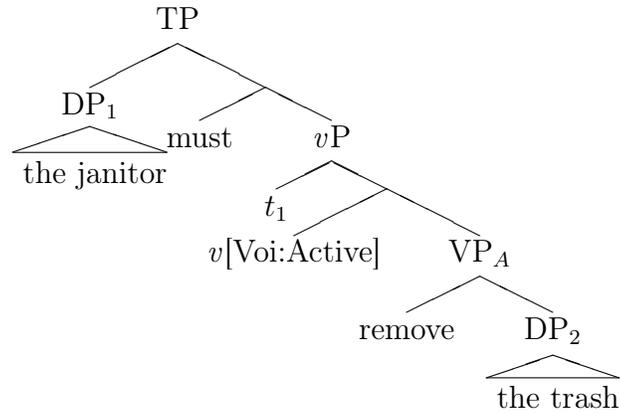
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<sup>3</sup>Passive subjects across VP-ellipsis need not be identical, of course, provided that they contrast:

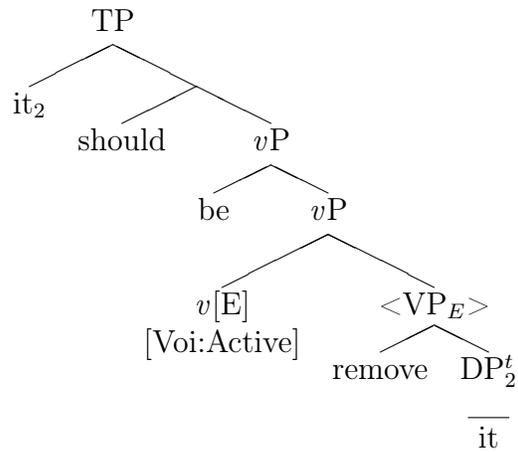
(i) John needs to be hired and Mary<sub>F</sub> does, too.

The elided VP,  $\langle need\ to\ be\ hired\ t_{Mary_F} \rangle$ , is identical to the antecedent VP,  $need\ to\ be\ hired\ t_{John}$ , modulo the contrasting material marked by the subscript F. This tolerance for contrastive material is orthogonal to the voice question examined here: contrastive subjects are also allowed in voice mismatch cases (*They fired Sheila<sub>F</sub>, though really Amanda<sub>F</sub> should've been*  $\langle fired\ t_{Amanda_F} \rangle$ ), as Fiengo and May 1994 note.

(7) a.



b. ...whenever it is apparent that



The elided VP in (7b) is identical to the antecedent VP in (7a), assuming that the passive subject pronoun *it* is structurally equivalent to the antecedent *the trash* (see Elbourne 2005 and Kratzer 2006 for recent defenses of this analysis of pronouns, from Postal 1966).

## 2.2 Ruling out voice mismatches in pseudogapping

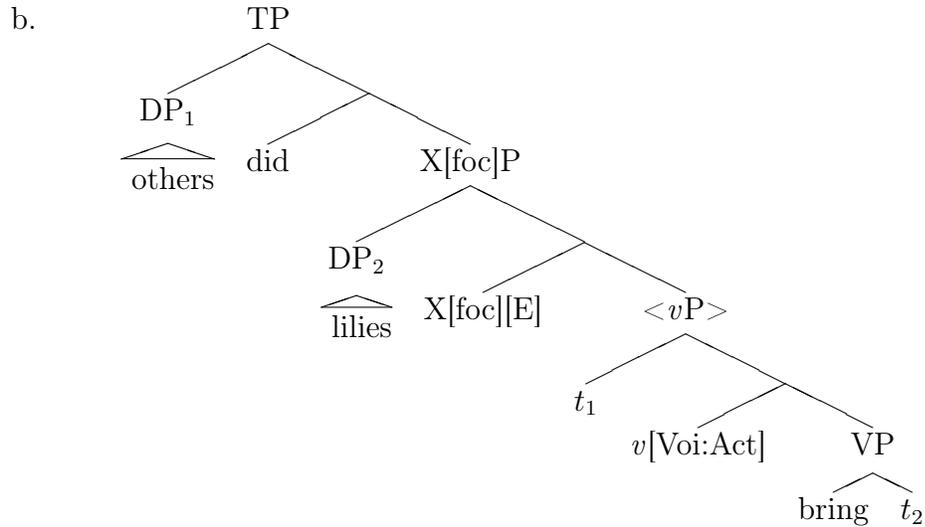
The majority of analyses of pseudogapping, such as Kuno 1981, Jayaseelan 1990, 2001, Lasnik 1995, 1999, Johnson 2001, Baltin 2002, 2003, and others, argue that pseudogapping involves an instance of ellipsis of some verbal projection supplemented by prior movement of some subconstituent of the VP—prototypically an argument DP or PP—to a position external to the target of the ellipsis; they vary mostly in what exact landing site they posit, the type of movement, and in how to account for the cooccurrence restriction with ellipsis (see Takahashi 2004 for a review, and Levin 1978, 1986, Miller 1991, Hardt 1993, Agbayani and Zoerner 2004, and Culicover and Jackendoff 2005:292ff. for dissents). For concreteness, I will follow the particular proposals of Jayaseelan 2001 and Gengel 2006 in analyzing movement of the remnant as movement to a clause-internal focus position (see Kuno 1981, Kim 1997, Depiante 1999, López and Winkler 2003, and Winkler 2005 for related proposals), though for present purposes it is immaterial whether the focus position is the result of the projection of a designated Focus head or whether some other clause-internal head is co-opted into hosting a specifier due to the optional addition of a [focus] feature to its feature matrix. For this reason, I will represent this head agnostically as X[foc]. This focus position is, by hypothesis, equivalent to that found in Hungarian focus movement, with the difference that in English, it is only present in elliptical structures—that is, clause-internal overt focus movement does not occur in English except in such cases. This is conceptually equivalent to the claim in Takahashi 2004 that Object Shift occurs just in pseudogapping, in Johnson 2001 that Dutch-

like scrambling occurs only in pseudogapping, and in Lasnik 1999, 2001 that verb movement to above  $\text{Agr}_O$  fails to occur only in pseudogapping, though the details differ in immaterial ways.<sup>4</sup> The requirement that movement to the specifier of  $\text{X}[\text{foc}]\text{P}$  be concomitant with ellipsis is most straightforwardly captured in a Minimalist framework—where syntactic differences are posited to be solely the result of differing feature combinations in the lexicon—if this  $\text{X}[\text{foc}]^0$  head is listed in the English lexicon as having an E feature (akin to the E on the head that licenses fragment answers in the analysis of Merchant 2004). E on  $\text{X}[\text{foc}]$  will therefore cause the deletion of the  $v\text{P}$  complement to  $\text{X}[\text{foc}]$ . A typical pseudogapping example such as (8a) will have the structure in (8b).

- (8) a. Some brought roses, and others did lilies.

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<sup>4</sup>Kim 1997 in fact claims that the English clause-internal  $\text{FocP}$  projects its specifier to the *right*, not left, and that Heavy XP Shift (HXPS) is movement into this position. If true, overt focus movement is well attested in English, and there is a clear connection to Jayaseelan’s (1990) and Takahashi’s (2004) claim that HXPS can move pseudogapping remnants. But as a reviewer points out, the problem with such claims is that they lead us to expect that HXPS should feed ellipsis of  $\text{VP}$  and *permit* voice mismatches with pseudogapping, contrary to fact. They fail to account for the absence of voice mismatches with pseudogapping, since they piggyback the movement of the remnant on an otherwise attested movement (HXPS) which can equally occur without ellipsis.

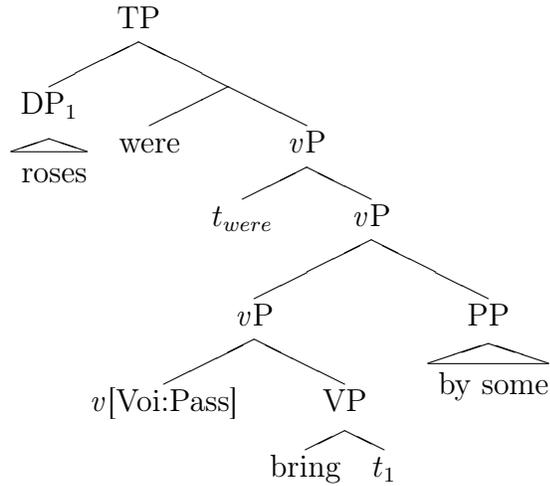


Like most previous researchers, I therefore take pseudogapping to be similar to VP-ellipsis in involving the deletion of a verbal projection; I claim that pseudogapping is *dissimilar* to VP-ellipsis in that it involves deletion of the *vP* sister to  $X[\text{foc}]^0$ , not of the VP sister to *v* as is the case in VP-ellipsis. This structural difference accounts for why voice mismatches are impossible in pseudogapping: in such cases, the antecedent *vP* and the elided *vP* are not identical—one has  $v[\text{Voi:Active}]$  and the other has  $v[\text{Voi:Passive}]$ .<sup>5</sup> The

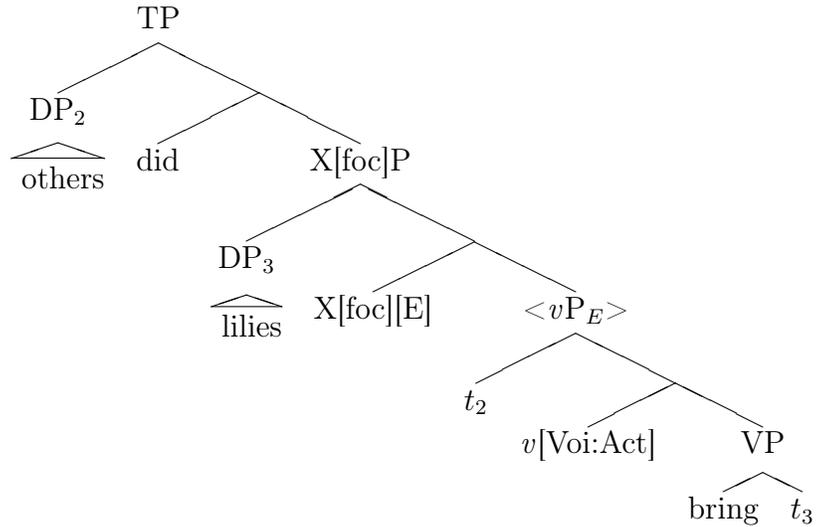
<sup>5</sup>It has sometimes been claimed that voice mismatches in pseudogapping structures *are* possible in certain circumstances. In particular, Miller 1991:94 (55) gives one example he claims is unremarkable (*The arms were hidden by the rebels as a woman would (do) her most precious jewels*), and Coppock 2001:135 (4c) gives one example she marks with a ‘?’, calling it ‘marginal’ (*?That should be explained to individual students by the TA, but the professor will to the class in general*); to the extent these judgments reflect true variation, we might attribute it to a variable target of deletion—that is, grammars that allow such structures allow VP to be targeted in pseudogapping as well.

examples in (3) will have the structures in (9).

- (9) a. \*Roses were brought by some, and others did lilies.  
 b.



c.



The intended target of ellipsis,  $vP_E$ , has no identical antecedent, regardless of how one wishes to represent the *by*-phrase, since it will necessarily require some corresponding  $v$ [Voi] head, and the available antecedent does not match its value for the Voice feature. In short, voice mismatches in pseu-

dogapping are impossible because the Voice head is inside the ellipsis site, triggering a failure of identity.

### 3 Floated quantifiers

Support for the above posited structural difference in the target of deletion in VP-ellipsis vs. pseudogapping comes from the distribution of floated quantifiers in the two constructions. Floated quantifiers may co-occur with VP-ellipsis:<sup>6</sup>

- (10) *Many* of them have turned in their assignment already, but they haven't yet *all*.

Floated quantifiers are impossible in pseudogapping, however, either before or after the remnant:

- (11) *Many* of them have turned in their take-home already, but they haven't yet (\**all*) their paper (\**all*).

This state of affairs is expected on the analysis presented above, if the floated quantifier *all* is situated in the specifier of (or adjoined to) *vP*: in such a position, it will survive VP-ellipsis, but not *vP*-ellipsis.

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<sup>6</sup>Sag 1976:42 marks as ungrammatical his example *My brothers have all left, and my sisters have all, too*, which indeed seems worse than (10), presumably because the second *all* fails to contrast in quantity with the first *all*.

## 4 Conclusion

Despite first appearances, voice mismatches are uniformly impossible under ellipsis: ellipsis requires identity of syntactic structure, including that of Voice heads. Apparent mismatches arise under VP-ellipsis only because what is elided in those cases in fact is something smaller than a verbal projection containing Voice: it is merely VP. In pseudogapping, however, *vP* is targeted, and so the identity condition cannot be satisfied. It is this structural difference in the height of ellipsis that accounts for the attested asymmetry in voice ‘mismatches’ in the two kinds of verbal projection ellipsis.

The fact that voice mismatches have an apparently *uneven* distribution across different ellipsis types constitutes a problem for theories that claim that ellipsis is uniformly licensed by semantic identity of some sort: if voice is irrelevant for VP-ellipsis, why should it be relevant for pseudogapping (or sluicing, etc.)? Only an analysis which posits syntax in the ellipsis site and identity of syntactic structure can capture the fact that larger ellipsis sites will be sensitive to voice, while smaller ones will not be.

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