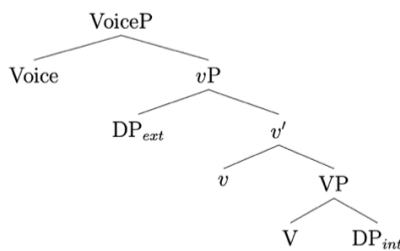# Voice and VP-ellipsis revisited

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1. Introduction

Though English verbal morphology is not very rich, Collins (2005) proposes that English monotransitive clauses have at least three functional heads: Voice, v, and V. According to his view, v and V introduce the external and internal arguments respectively, while Voice is the locus of the active/passive distinction. Collins' proposed functional hierarchy is shown in (1).

(1) Collins' (2005) functional hierarchy for the verbal domain

```
            VoiceP
           /      \
       Voice       vP
                  /    \
            DP_ext      v'
                       /   \
                      v     VP
                           /   \
                          V    DP_int
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Merchant (2013) argues that ellipsis tests provide important motivation for Collins' proposed functional hierarchy. He suggests that Voice mismatches under various types of ellipsis can be used to diagnose the amount of functional structure that gets elided. Based on his tests, he argues that Voice must indeed be projected above all of the argument-introducing heads, as Collins proposes, and that VP-ellipsis necessarily deletes a constituent that is smaller than VoiceP.

In this paper, I demonstrate that different argument configurations behave differently with respect to Merchant's tests. More specifically, we will see that double object constructions and predicates that take multiple non-DP arguments block Voice mismatches under VP-ellipsis where monotransitives and prepositional dative constructions permit them. Given these new data, I conclude that "VP-ellipsis" can target different heads in different circumstances, depending on how many heads are needed to introduce all of the arguments.

2. Merchant (2013)

Merchant presents data like (2) and (3), which show two things: 1) that VP-ellipsis permits the Voice of the ellipsis site to differ from that of the antecedent clause, and 2) that sluicing does not permit such a mismatch in Voice.

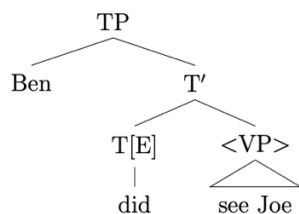(2) Voice-mismatches in VP-ellipsis (Merchant 2013, ex. (1a), (2a), p. 78-79)

a. The janitor must remove the trash whenever it is apparent that it should be <removed>. (active antecedent, passive ellipsis)

b. The system can be used by anyone who wants to <use it>. (passive antecedent, active ellipsis)

(3) No Voice-mismatches in sluicing (Merchant 2013, ex. (5), p. 81)

a. *Joe was murdered but we don't know who. (passive antecedent, active ellipsis)

b. *Someone murdered Joe, but we don't know who by. (active antecedent, passive ellipsis)

Merchant, following Lobeck (1995), describes two main requirements that must be met for a phrase to be elided: the *licensing* requirement and the *identity* requirement. The licensing requirement relates to an idiosyncratic property of the head whose complement is elided, while the identity requirement refers to the properties of the elided phrase relative to its antecedent. To illustrate a simple case of VP-ellipsis, the licensing condition demands that the sister of the elided VP have some property (labelled *E*) that licenses the ellipsis, while the identity condition requires the content of the elided phrase to match that of its antecedent. In (4), both conditions are met: T has a feature *E*, which licenses ellipsis of its sister VP, and the content of the elided VP (*see Joe*) is identical to that of its antecedent.

(4) Abby didn't see Joe, but Ben did. (Merchant 2013, ex. (18), p. 86)

The central puzzle that Merchant addresses is why Voice-mismatches under ellipsis are variably tolerated for different kinds of ellipsis. We saw that VP-ellipsis permitted Voice-mismatches (2), but sluicing, or TP-ellipsis (3), did not. Merchant proposes that the contrast is easily explained by the identity condition on ellipsis if we adopt a slightly richer clause structure than the one in (4), namely that of Collins (2005), repeated below in (1).

(1) Collins' (2005) functional hierarchy for the verbal domain
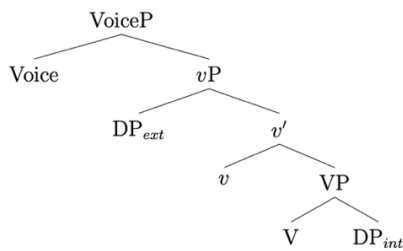
Merchant proposes with Collins that the Voice head in (1) is not an argument-introducing head. Instead, it is the locus of the active/passive distinction. In other words, all material below Voice is presumed to be identical across Voice contexts. What makes an active clause active and a passive clause passive is just the choice of Voice head, where each choice has subsequent consequences for the morphosyntactic alignment of the clause.

According to this view, ellipsis that targets a constituent below Voice will see no Voice value, but ellipsis that targets a constituent above Voice will. As a result, the identity condition on ellipsis should care about Voice in the latter but not the former case. This distinction is illustrated in (5).

(5) Voice mismatches permitted if something smaller than VoiceP is elided, but not if something larger is
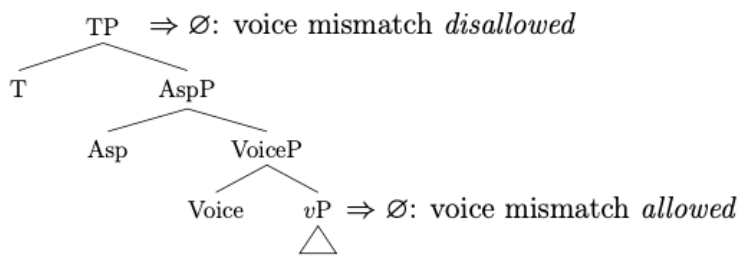
In addition, Merchant argues that VP-ellipsis always targets vP, rather than VP. In other words, "VP-ellipsis" always elides the base position of the external argument. He supports this claim with evidence from other kinds of transitivity alternations, in which mismatches are uniformly blocked across all kinds of ellipsis, including VP-ellipsis. For example, the causative/inchoative alternation (6) does not tolerate mismatches under VP-ellipsis (7). Assuming that the causative/inchoative alternation is controlled by the choice of v head, this result suggests that the identity requirement evaluates v in the antecedent, even under VP-ellipsis, where it doesn't evaluate Voice.

(6) Causative/inchoative alternation

    a. Bill melted/broke the copper vase.

   b. The copper vase melted/broke.

(7) No transitivity alternations under VP-ellipsis

   a. *Bill melted the copper vase, and the magnesium vase did, too. (Sag 1976:160, (2.3.48))

   b. *Maria still tried to break the vase even though it wouldn't. (Houser, Mikkelsen, and Toosarvandani 2007:188)

 In sum, Merchant argues that the availability of Voice-mismatches in ellipsis is a good diagnostic of the size of the elided constituent. Whenever Voice-mismatches are tolerated, we know that the elided portion is a constituent smaller than Voice; whenever Voice-mismatches are disallowed, we know that the elided portion is at least as large as Voice. Moreover, similar transitivity alternations indicate that VP-ellipsis always targets a constituent at least as large as vP.[1] As an aside, this approach also requires us to assume (uncontroversially) that the pronounced position of the verb in English is within vP, or else it would not be deleted under VP-ellipsis. I will suppose that the verb is usually pronounced in v.

 3. VP-ellipsis with other kinds of VPs

 It is important to note that Merchant's examples of Voice-mismatches under VP-ellipsis, while extensive, are fairly limited in form. Almost all of his (~20) examples are of monotransitive VPs. There are three possible exceptions to this generalization, where the extra phrase in the elided portion of each is arguably an adjunct.

(8) Voice mismatches in VP-ellipsis with an extra VP-internal phrase (Merchant 2013, ex. (1f,g,h), p. 79)

   a. Actually, I have implemented it [= a computer system] with a manager, but it doesn't have to be <implemented <u>with a manager</u>>.

   b. Steve asked me to send the set by courier through my company insured, and it was <sent by courier <u>through my company insured</u>>.

   c. "Nevertheless, I shouldn't have brought you into this."

    It seems I already am <brought <u>into this</u>>, thought the piano tuner, but he was silent.

 If we try to replicate Voice mismatches under VP-ellipsis with a wider range of argument configurations, the results are more variable. Double object constructions (9) and examples with multiple non-DP internal arguments (10) (e.g. PP+TP) do not tolerate Voice mismatches

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[1] See Tanaka (2011) for motivation for this overall approach, with arguments that Voice mismatches under VP-ellipsis require a syntactic rather than a semantic explanation.

under VP-ellipsis. Prepositional dative constructions (11), by contrast, do appear to tolerate Voice mismatches under VP-ellipsis, like monotransitives.[2]

(9) No Voice mismatches in VP-ellipsis of double object constructions

    a. ??/*The janitor must give the animals food whenever it is apparent that they should be \<given food\>.

    b. ??/*The system can be given my personal information by anyone who wants to \<give the system my personal information\>.

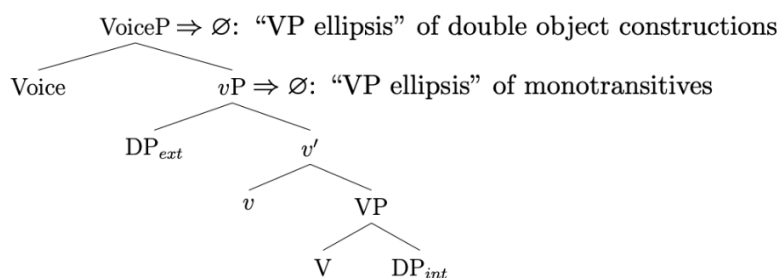(10) No Voice mismatches in VP-ellipsis of double-XP constructions

    a. *The janitor should rely on the superintendent to call in a plumber whenever it is clear that the manager can't be \<relied on to call in a plumber\>.

    b. *The system can be relied on to store personal information by anyone who has to \<rely on the system to store personal information\>.

(11) Voice mismatches in VP-ellipsis of prepositional dative constructions

    a. ?The janitor must give food to the animals whenever it is apparent that it should be \<given to the animals\>.

    b. My personal information can be given to the system by anyone who wants to \<give my personal information to the system\>.

Assuming Merchant's analysis of monotransitives is correct, these additional results suggest a surprising difference between the VP-ellipsis of these different kinds of argument configurations. "VP-ellipsis" of double object and double XP constructions patterns like sluicing, indicating that when the "VP" of one of these constructions is elided, whatever structure is silenced must contain VoiceP.

(12) "VP ellipsis" might be different sizes for different argument structures

These examples raise the following puzzle: why does "VP-ellipsis" target different amounts of structure for different kinds of argument configurations?

4. Flexible "VP-ellipsis"

Taking Merchant's analysis as our baseline, the puzzle is: why does VP-ellipsis of monotransitives and prepositional dative constructions target vP, while VP-ellipsis of double object and double XP constructions targets something at least as large as VoiceP? Though I don't have space to attempt a full analysis here, I will provide some speculation. Essentially, I hypothesize that VP-ellipsis is always licensed by the head that minimally c-commands all of the argument-introducing heads (loosely inspired by Bošković 2014, who suggests that the highest head in the extended projection of the verb licenses ellipsis). This head might or might not c-command Voice, depending on how many functional heads are needed to introduce all of the arguments.

(13) Tentative proposal:

VP-ellipsis always deletes a constituent containing the highest argument-introducing head, which may include Voice in some contexts but not others.

Recalling the data in (9-11), it seems that the difference between the constructions that tolerate Voice mismatches under VP-ellipsis vs. those that don't relates to the height of the additional internal argument. Prepositional dative constructions arguably project the second internal argument within VP, where the direct object is introduced. By contrast, double object and double XP constructions arguably project the second argument in a higher position. Each case is explored below in (14-16).

(14) Prepositional datives, like monotransitives, project all internal arguments in VP
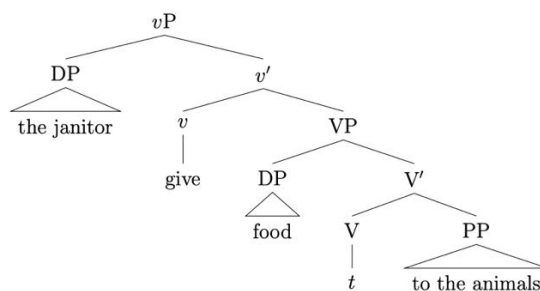
(15) Double object constructions require additional functional structure, like a VP-shell or an ApplP
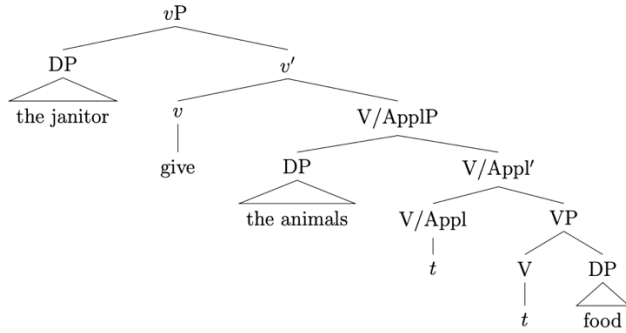
Though double XP constructions have attracted less attention than double object constructions, Pesetsky (1995) offers a VP-shell structure for those as well, with the second VP shell licensing the higher XP argument.[3]

(16) Double XP constructions also require additional functional structure, such as a VP-shell (Pesetsky 1995, following Larson 1988)
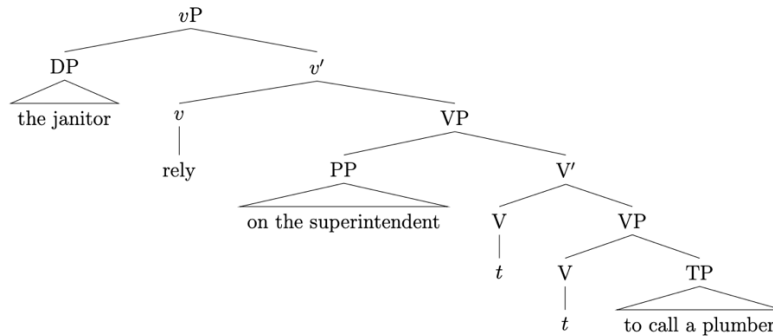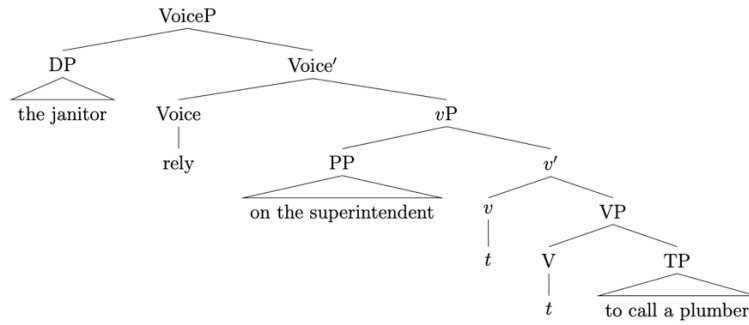

If the additional structure in double object and double XP constructions is projected below *v*P, it is not immediately obvious why these structures should expand the domain of VP-ellipsis to VoiceP. However, if we ignore the category labels in (15-16), the shape of an explanation begins to emerge. Another way of capturing the generalization is to say that when all of the arguments span just two functional projections, VP-ellipsis targets *v*P. When all of the arguments span three functional projections, however, VP-ellipsis targets VoiceP.

On this description, the most natural explanation follows if the function of each head in Collins' functional hierarchy becomes different in these different contexts. In monotransitives and prepositional datives, we can imagine that *v* introduces the highest argument, leaving Voice to solely control the active/passive distinction, as proposed by Collins and Merchant. In double object and double XP constructions, which require another argument-introducing head, we could instead imagine that *v* introduces the second argument, leaving Voice responsible for both the active/passive distinction and external argument-introduction.

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[3] See also Newman (2021) for further arguments that additional non-DP arguments require additional structure.

(17) Changing the category labels for double object and double XP constructions

If the head that introduces the external argument is always silenced in VP-ellipsis, VP-ellipsis would have to target vP in monotransitives and prepositional datives, but VoiceP in double object and double XP constructions. Allowing ourselves flexibility with category labels thus captures the facts in (9-11).

Is such an analysis plausible? In other words, is it plausible that Voice and v can take on these different roles in different structural contexts? Possibly, though a deeper investigation of the syntax-morphology interface is required to decide for sure. Some independently motivated claims that would support the present approach are explored here.

Pylkkänen (2002, 2008) argues that the different functions of Voice and v can indeed span one or two heads in different languages and contexts, calling this choice the "Voice-bundling" parameter (see Harley 2017 for additional discussion). If this is right, English would have to exhibit both parametric settings, each in a different context. In monotransitives and prepositional dative constructions, the functions of Voice and v would have to be split, so v introduces the external argument and Voice controls the passive alternation. In double object and double XP constructions, these functions would be bundled together on Voice, because v introduces another argument instead.

A second relevant proposal from Wood & Marantz (2017) treats argument-introduction as a syntactic feature rather than a lexical property. On this view, the meaning and function of a head are impacted by its local context, rather than the reverse. As a result, we could imagine that all of these heads (V, v, and Voice) have access to such argument-introducing features. Depending on how many arguments we have, different combinations of those features might get checked or unchecked, affecting meaning and pronunciation.

5. Conclusion

In sum, this short paper has explored how the number and distribution of arguments affects the availability of Voice mismatches under VP-ellipsis. We discussed data and argumentation from Merchant (2013), which suggested that English monotransitive clauses

have three verbal heads: V, *v*, and Voice, where V and *v* introduce arguments, and Voice controls the passive alternation. Merchant's data suggested that VP-ellipsis always targets *v*P, which, being smaller than Voice, does not require Voice-matching with its antecedent.

We then discussed some cases of VP-ellipsis that did not tolerate Voice mismatches under VP-ellipsis, suggesting that the elided portion in these cases contained Voice. Such examples had in common the property that they required additional functional structure for the purpose of introducing a second internal argument. I speculated that this additional structure did not add to the total number of functional heads in the clause, but rather shifted some of the functions of *v* to Voice. As a result, VP-ellipsis of such constructions targeted VoiceP instead of *v*P. An elided VoiceP must match its antecedent in Voice.

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