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Ellipsis, contradiction and voice mismatch

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Previous research has attributed differences in the acceptability of verb phrase ellipsis (VPE) with voice mismatches to processing effects (Arregui et al. 2006; Grant et al. 2012). This paper argues that they can instead be accounted for in terms of a standard, focus-based condition on ellipsis (Rooth 1992a,b), supplemented with the principle that accommodated antecedents cannot contradict an elliptical sentence. This perspective is compatible with voice mismatched VPE being fundamentally grammatical (Merchant 2013; cf. Hardt 1993) rather than ungrammatical (e.g. Kim & Runner 2018). It also encompasses other focus-based factors modulating voice mismatches, which in turn reveal that implicit arguments do not count for contrast in VPE (cf. Overfelt to appear). The account here aligns with a reappraisal of the 'mismatch asymmetry' (Arregui et al. 2006) as being driven by a penalty against passive ellipsis in subject focus environments (Poppels & Kehler 2019).

1 Introduction

This paper is concerned with the varying acceptability of verb phrase ellipsis (VPE) with voice mismatches, as in (1):

(1)   a. ?This information should have been released, but Gorbachev didn't.
           b. *This information was released, but Gorbachev didn't.

The paper contributes an explanation of the contrast in (1) in terms of a standard, focus-based condition on ellipsis (Rooth 1992a,b), supplemented with the principle that accommodated antecedents cannot contradict an elliptical sentence. This explanation is significant for reinforcing the position that voice mismatched VPE can be fundamentally grammatical (Merchant 2013; cf. Hardt 1993) as opposed to ungrammatical (Kim & Runner 2018) and in need of repair by processing (Arregui et al. 2006) and pragmatics (Grant et al. 2012). It also encompasses other focus-based modulations of (1b), particularly with respect to contrasting individuals, leading to the conclusion that implicit arguments do not count for contrast in VPE (cf. Overfelt to appear). The account here aligns with a reappraisal of the 'mismatch asymmetry' (Arregui et al. 2006) as being driven by a penalty against passive ellipsis in subject focus environments (Poppels & Kehler 2019).

The paper is structured as follows. Section 2 provides background, setting out the data, two opposing views of the grammatical status of voice mismatched VPE, and Rooth's (1992a,b) focus-based semantic identity condition on ellipsis. Section 3 then reinforces the view that voice mismatched VPE can be fundamentally grammatical by applying the focus-based condition to the data. The analysis rules in voice mismatched VPE in (1a), whereas (1b) falls to contradiction between the elliptical sentence and its accommodated antecedent. Further subsections extend the proposal to individual contrasts and the mismatch asymmetry before section 4 concludes.

2 Background

This section lays out the background that will feed into the analysis and its significance in the next section. The first subsection gives further introductory comments on the data before the second introduces the standard, focus-based identity condition on ellipsis that will form the backbone of the analysis. The third subsection overviews the debate on the grammatical status of voiced mismatched VPE, where the present proposal will reinforce the position that it can be fundamentally grammatical.

2.1 Data

Voice mismatches can be acceptable in VPE (see Merchant 2013: 78 for extensive exemplification and references). In (1) (cf. Hardt 1993: 131), (a) is relatively acceptable despite the switch from

a passive antecedent to an active elliptical clause. But replacing *should have been* with indicative *was* is distinctly unacceptable in (b):

(1)   a. ?This information should have been released, but Gorbachev didn't.
       b. *This information was released, but Gorbachev didn't.

Grant et al. (2012) confirm the contrast in (1) experimentally in terms of acceptability, antecedent selection, and processing speed. Another pair from their experimental items is (2) (Grant et al. 2012: 338). Switching from passive to active is again considerably more acceptable with *needed to be* in (a) than *was* in (b):

(2)   a. ?A taxi driver needed to be called, but Sally didn't.
       b. *A taxi driver was called, but Sally didn't.

Again in (3), the acceptability of the naturally occurring (a) (Sag 1976: 75, note 2) relies on *should*, as compared to the indicative in (b):

(3)   a. ?It should be noted, as Dennett does, that…
       b. *It will be noted, as Dennett does, that…

Contrasts of the sort in (1)–(3) are the target data of this paper. Examples of the (a) shape are well-attested (Merchant 2013), and their relative acceptability over the (b) examples has been confirmed experimentally (Grant et al. 2012). Further judgements later in the paper are based on the native speaker intuitions of the author, as confirmed with at least six other native speakers.

This paper is not primarily concerned with the 'mismatch asymmetry'. This is the claim that in VPE with voice mismatches (4), a passive antecedent for active ellipsis (a) is better than the other way round (b):

(4)   a. ^{better} The report was first read by the judge, and then the lawyer did too.   [P → A]
       b. ^{worse} The judge read the report first, and then the confession was.   [A → P]

This asymmetry was first reported by Arregui et al. (2006: Exp.5). Its existence has subsequently been supported by Kim & Runner (2018) and Clifton et al. (2019), among others, but is contested by Poppels & Kehler (2019). We will return to the mismatch asymmetry at the end of the paper in section 3.4.

Keeping focused on (1)–(3) in the meantime, the next subsection sketches two opposing views regarding the grammatical status of voice mismatched VPE.

2.2 Status

This subsection situates the proposal that follows among views of the grammatical status of voice mismatched VPE. While voice mismatched VPE is often taken to be fundamentally

ungrammatical, the proposal here will provide reinforcement for the view that it can be fundamentally grammatical. We outline each view in turn.

One view of voice mismatched VPE is that it is fundamentally ungrammatical (Arregui et al. 2006; Grant et al. 2012; Kim & Runner 2018; a.o.). On this view, voice mismatches fail a syntactic identity requirement on ellipsis. Active and passive are different syntactic structures; with respect to (1), releasing information is not structurally the same as information being released. This non-identity explains why the bad example of voice mismatched VPE from (1b) is unacceptable.

It remains to explain why voice mismatched VPE is ever acceptable, as in (1a). The explanation on this view appeals to processing and pragmatics. According to the Recycling Hypothesis (Arregui et al. 2006), the processor can repair mismatching antecedents into matching ones.[1] In the case of voice mismatch, the processor takes the passive A and recycles it into an active A'. Syntactic identity then holds between E and the recycled A', raising the acceptability of ellipsis.

The second, pragmatic component of the explanation is Non-Actuality Implicatures (NAIs) (Grant et al. 2012).[2] NAIs are conveyed by intensional predicates like *should, want to,* or *be eager to*, which implicitly contrast the actual versus desired state of affairs in suggesting an implicit Question Under Discussion (QUD) (Roberts 1996). The QUD then guides processing repair, which is facilitated when the elliptical clause comments on the QUD.

Applied to (1), the claim is that voice mismatch is fundamentally ungrammatical:

(1) a. ?This information should have been released, but Gorbachev didn't.
     b. *This information was released, but Gorbachev didn't.

In (a), *should* carries an NAI, implying that the information has not been released. This suggests an implicit QUD: *Was the information released?* This QUD aides recycling by the processor, which succeeds in constructing an active antecedent VP that is syntactically identical to the ellipsis.[3] Thus the fundamentally ungrammatical ellipsis in (a) is raised to a relatively high level of acceptability. In (b), on the other hand, the indicative *was* does not carry such an NAI, so does not give rise to a QUD. Without a QUD to guide recycling, the processor is unable to construct a matching antecedent. Thus the mismatched ellipsis, having started out ungrammatical, remains unacceptable.

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[1] Cf. already the discussion of 'reconstruction' in Tanenhaus & Carlson (1990: 270f.).

[2] Cf. Clifton Jr. & Frazier (2010). It is not clear that 'implicature' is the appropriate term for what Grant et al. (2012) have in mind. It may be that *should* implicates *not* in (1a), but such non-actuality is not conveyed in the general case. A sentence like *John wants to leave* raises the issue of whether John will leave without implicating either way that he will or won't.

[3] Notice that an implicit QUD raised by a passive clause is supposed to aid in constructing its active alternate.

Another view of voice mismatched VPE is that it can be fundamentally grammatical. This view comes in two versions, subject to the broader question of whether there is syntactic structure inside ellipsis sites.

Supposing that there is syntactic structure inside ellipsis sites, it is possible to reconcile voice mismatches with syntactic identity (Merchant 2013; cf. also Kim et al. 2011). For sure, active and passive are different syntactic structures overall. At the VP level, however, they are abstractly identical, as sketched in (5) (~~ellipsis~~). In the active case, the VP consists transparently of the verb and its object; but also in the passive case, the VP consists abstractly of the verb and its internal argument. Ultimately, the internal argument raises to subject position in forming the passive; but if VPE requires syntactic identity only of VPs, it holds in spite of voice mismatch:[4]

(5) $E = [_{\text{Voice-Active}}$ Gorbachev $[_{\text{VP-}\varepsilon}$ release info $]]$
        $A = \text{info}_i [_{\text{Voice-Passive}} \text{be} + \text{-en} [_{\text{VP-}\alpha} \text{release } \cancel{\text{info}_i}]]$
        $\text{VP-}\varepsilon = \text{VP-}\alpha$

On the other version of the view that voice mismatched VPE is fundamentally grammatical, the syntactic identity question does not arise. This view holds that there is no syntactic structure inside ellipsis sites beyond silent pro-forms, which are anaphoric to meanings, not structures (e.g. Dalrymple et al. 1991; Hardt 1993). Since active and passive are truth-conditionally equivalent ($[\![\text{VP-active}]\!] = [\![\text{VP-passive}]\!]$) voice mismatched VPE should be fundamentally grammatical.

On both versions of this view, the degradation in (1) is so far unexplained. Even in (a), the "?"-level of imperfection must be accounted for. Moreover, it remains to explain why voice mismatched VPE is ever fully unacceptable, as in (b):

(1)   a. ?This information should have been released, but Gorbachev didn't.
        b. *This information was released, but Gorbachev didn't.

The proposal in section 3 will provide the required explanation, bolstering the view that voice mismatched VPE can be fundamentally grammatical. For now, the table in (6) summarises the

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[4] The sketch in (5) simplifies to an extent that suffices for voice mismatch. As Merchant (2013) observes, other argument structure alternations are ungrammatical under VP ellipsis. The examples in (i) illustrate with causative (a), transitive-middle (b), and prepositional alternations (c):

(i)   a. *This can freeze. Please do ~~freeze it~~.   (Johnson 2004: 7)
        b. *They sell Hyundais in Greece because Hondas don't ~~sell in Greece~~.   (Merchant 2013: ex. 35b)
        c. *She embroiders peace signs on jackets more often than
           she does ~~embroider peace signs~~ with swastikas.   (Merchant 2013: ex. 44)

Merchant's (2013) analysis covers (i) as long as these argument alternations are regulated by syntactic material below Voice and within the domain of syntactic identity required for ellipsis; for example, different flavours of functional little v heads. To the extent that these alternations are truth-conditionally equivalent, their incompatibility with ellipsis would not be straightforwardly expected on the pro-form analysis introduced immediately below.

various views on the grammatical status of voice mismatched VPE.[5] On the left, voice mismatched VPE might be considered fundamentally ungrammatical due to syntactic non-identity, with improvements to acceptability via processing and pragmatics. Alternatively on the right, voice mismatched VPE might be considered fundamentally grammatical, with syntactic identity either holding at the VP level, or rendered moot by a pro-form. The contribution of the analysis to follow is shaded in grey: to come out as grammatical overall, ellipsis must additionally pass the focus-based semantic identity condition introduced in the next subsection.

(6)   *The status of voice mismatched VPE*

	Ungrammatical	Grammatical	
		Yes	N/A
Syntactic identity?	No (e.g. Kim & Runner 2018)	at VP level (e.g. Merchant 2013)	pro-form (e.g. Hardt 1993)
Why the contrast in (1)?	(a) improves via processing and pragmatics: recycling (Arregui et al. 2006) and NAIs (Grant et al. 2012)	(a) also passes focus-based semantic identity; (b) does not	

2.3 Focus and ellipsis

The central argument of this paper is that the varying acceptability of voice mismatched VPE of the sort in (1)–(3) can be made to follow from the standard, focus-based condition on ellipsis in (7):

(7)   *Ellipsis as proper alternative-hood*
        Ellipsis must be contained in a phrase E that has an antecedent A such that:
        i. $\llbracket A \rrbracket \in F(E)$ – A is an alternative to E; and
        ii. $\llbracket A \rrbracket \neq \llbracket E \rrbracket$ – A and E contrast.

This semantic identity condition comes in two parts. The alternative-hood condition (i) requires the ordinary meaning of the antecedent A to be a member of the focus semantic value of the elliptical constituent E (Rooth 1992b; e.g. Heim 1997; e.g. Fox 1999; cf. Tancredi 1992). The focus semantic value of E, F(E), is calculated by replacing F(ocus)-marked constituents in E with things of the same type and collecting the results into a set (Rooth 1992a). By definition,

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[5] The table in (6) is not intended as a complete picture of the acceptability of voice mismatched VPE. Indeed, further contributions from information structure will be discussed in section 3.4.

the ordinary semantic value of a constituent is always a member of its focus semantic value – everything is an alternative to itself. In the absence of focus, therefore, alternative-hood alone allows equality of A and E. The contrast condition (ii) requires further that A and E have distinct ordinary meanings (as argued for explicitly by Griffiths 2019; Stockwell 2020; 2022a). Overall, (7) requires that A be a 'proper' alternative to E: A and E must be similar enough to satisfy alternative-hood (i), while at the same time differing in at least one dimension in order to satisfy contrast (ii).

The proper alternative-hood condition on ellipsis can be satisfied in various ways. In (8), it is satisfied by contrasting individuals:[6]

(8) $[_A$ John left $]$ before $[_E$ BILL did ~~leave~~ $]$.
       E $=$ BILL$_F$ left $[\![E]\!]$ $=$ leave' (b)   F(E) $=$ { leave' (x) | x $\in$ D$_e$ }
       A $=$ John left $[\![A]\!]$ $=$ leave' (j) $[\![A]\!]$ $\in$ F(E) and $[\![A]\!]$ $\neq$ $[\![E]\!]$

Ellipsis of *leave* is licensed by evaluating A and E at the clause level. Since E contains a focused constituent, its focus value is the set of propositions of the form *x left*, *x* an individual. With A as *John left*, alternative-hood is satisfied. Contrast is likewise satisfied: John leaving is different from Bill leaving. Thus (8) passes proper alternative-hood, and ellipsis is successfully licensed.

Another way of satisfying proper alternative-hood is with contrasting polarity, as in (9):

(9) $[_A$ It's raining $]$ and $[_E$ it ISN'T ~~raining~~ $]$.
       E $=$ It ISN'T$_F$ raining $[\![E]\!]$ $=$ not-rain'   F(E) $=$ { rain', not-rain' }
       A $=$ It is raining $[\![A]\!]$ $=$ rain' $[\![A]\!]$ $\in$ F(E) and $[\![A]\!]$ $\neq$ $[\![E]\!]$

The elided *raining* is contained in the elliptical clause E *it is not raining*. Focus on *not* introduces polar focus alternatives for E: *it is raining, it is not raining*. The antecedent A is indeed a member of this set, satisfying alternative-hood. In addition, the opposition between the positive antecedent and the negative elliptical clause satisfies contrast.

Notice that ellipsis is licensed in (9) despite the sentence being contradictory. That is, there is no direct incompatibility between contradiction and ellipsis. The next section will argue that contradictory accommodation for ellipsis licensing causes ungrammaticality, if not contradictory elliptical sentences.

Further to contrasting individuals and polarity, proper alternative-hood can be satisfied by contrasting intensionality. In (10), evaluating ellipsis based on the embedded clause *John to win* would fail to contrast with the elliptical clause *John did win*. Instead, on an intuitive level, contrast holds between Sue's expectations and the actual state of affairs:

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[6] Apostrophes indicate metalanguage expressions. The type of *leave'* is $\langle e, \langle s,t \rangle \rangle$.

(10) Sue expected John$_1$ to win, and he$_1$ DID ~~win~~.   ε = win
   A = Sue expected John to win   ⟦A⟧ = λw. expect'$_w$ (λw'. win'$_{w'}$ (j))(s)
   E = VERUM$_F$ John win   ⟦E⟧ = λw. for-sure'$_w$ (λw'. win'$_{w'}$ (j))
   F(E) = {it is for sure true that John won, it is possible that John won, ...,
   Mary wanted that John won, <u>Sue expected that John won</u>, ... }
   ⟦A⟧ ∈ F(E) and ⟦A⟧ ≠ ⟦E⟧   (Hardt & Romero 2004: 406, ex. 98)

This intuition can be implemented in terms of verum focus (cf. Höhle 1992). Formally, Romero & Han (2004) introduce VERUM, an intensional operator meaning roughly 'it is for sure that'.[7] Hardt & Romero (2004) analyse focus on VERUM as contributing alternatives to the proposition being 'for sure' true; the proposition is instead merely possible, or someone expects or wants or hopes it to be true or not true, etc.[8] Applied to (10), alternative-hood is satisfied, since Sue expecting John to win is an alternative to John 'for sure' winning. Thus contrast is also satisfied: Sue expecting John to win is different from it actually happening.

The final point regarding proper alternative-hood that will be relevant for our purposes is accommodation. In (8)–(10), alternative-hood was satisfied directly based on the meaning of A. It is also possible for alternative-hood to be satisfied indirectly based on an accommodated antecedent that can be inferred from what was said. This is Rooth's (1992b) 'implicational bridging' or Fox's (1999) 'indirect parallelism', and is exemplified in (11) (Rooth 1992b: exx. 30, 31):

(11) First John told Mary$_2$ I was bad-mouthing her$_2$,
   and then SUE$_1$ heard I was ~~bad-mouthing her$_1$~~.
   a. VP A and E: ⟦[bad-mouthing her$_2$]⟧ ∉ F([bad-mouthing her$_1$])
   b. Clausal A and E: ⟦[John told Mary λx. I was bad-mouthing x]⟧
        ∉ F([SUE$_F$ λx. heard I was bad-mouthing x])
   c. Accommodation: ⟦[John told Mary λx. I was bad-mouthing x]⟧
        = ⟦[Mary λx. heard I was bad-mouthing x]⟧
        ⟦A⟧ ∈ F(E) and ⟦A⟧ ≠ ⟦E⟧

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[7] More precisely, VERUM is a conversational epistemic operator which asserts that the speaker is certain that p should be added to the Common Ground. In the definition in (i) (Romero & Han 2004: 627, ex. 43), x is a free variable whose value is contextually identified with the addressee (or the individual sum of the addressee and the speaker); Epi$_x$(w) is the set of worlds that conform to x's knowledge in w; Conv$_x$(w') is the set of worlds where all the conversational goals of x in w' are fulfilled (e.g., attain maximal information while preserving truth); and CG$_{w''}$ is the Common Ground, or set of propositions that the speakers assume in w'' to be true (Stalnaker 1978):

(i)   ⟦VERUM$_i$⟧$^{gx/i}$ = ⟦really$_i$⟧$^{gx/i}$ =
    λp$_{st}$ λw.∀w' ∈ Epi$_x$(w) [∀w'' ∈ Conv$_x$(w') [p ∈ CG$_{w''}$]]

[8] Modal functions introducing quantification over possible worlds form a natural class of alternatives to VERUM, as sketched in (i) (Hardt & Romero 2004: 405, ex. 97). Notice that the alternatives include both positive and negative polarities of *p*, making F (VERUM$_F$ p) equivalent to F(VERUM$_F$ ¬p):

(i)   F(VERUM$_F$ p) = F(VERUM$_F$ ¬p) = {it is for sure true that p, it is possible that p, it is hoped that p, it is doubted that p, it is wanted that p, it is expected that p, ..., John expects that p, John hopes that p, Sam expects that p, ..., it is for sure true that ¬p, it is possible that ¬p, it is hoped that ¬p, it is doubted that ¬p, it is wanted that ¬p, it is expected that ¬p, ..., John expects that ¬p, John hopes that ¬p, Sam expects that ¬p, ... }

Ellipsis is grammatical;[9] yet as things stand, alternative-hood is not satisfied. Attempting to evaluate A and E at the VP level (a) fails alternative-hood, since the two *her*s point to different people without being focused. Evaluating A and E at the clause-level (b) resolves this difference via binding, but alternative-hood continues to fail due to the difference between *hear* and *tell*. We can infer, however, that if someone was told something, then they heard it. Based on this inference, we accommodate as antecedent that Mary heard I was bad-mouthing her (c). With this accommodated antecedent, proper alternative-hood is satisfied, licensing ellipsis.[10]

With this much background, the next section uses the proper alternative-hood condition in (7) to account for the varying acceptability of voice mismatched VPE in (1)–(3).

3 Analysis

This section analyses the varying acceptability of voice mismatched VPE as following from the proper alternative-hood condition on ellipsis from (7). Illustrating on (1), the first subsection shows how proper alternative-hood rules in voice mismatched VPE in (a), thus bolstering the view that voice mismatched VPE can be fundamentally grammatical. The second shows how it rules out (b) when supplemented with the additional principle that accommodated antecedents cannot contradict an elliptical sentence.

These two subsections will consider contrasting polarity and intensionality and their interaction with accommodation. Discussion of contrasting individuals will follow in the third subsection before the fourth turns finally to the mismatch asymmetry.

3.1 Good voice mismatch: accommodation and intensionality

The good example of voice mismatched VPE from (1a) is repeated in (12). Ellipsis passes the proper alternative-hood condition from (7) despite there being two differences between A and E.

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[9] While I accept (11) in my native British English, a reviewer reports that it is unacceptable in theirs (regardless of whether the pronoun in the antecedent clause bears a focus-related accent). The extent and explanation of this variation would be interesting questions for future research.

[10] Rooth (1992b) compares (11) with (i) and (ii) (Rooth 1992b: exx. 14, 15):

(i) First someone told Mary about the budget cuts, and then Sue heard about them.

(ii) *First someone told Mary about the budget cuts, and then Sue did ~~hear about them~~.

Parallel to ellipsis in (11), deaccenting in (i) is licensed by alternative-hood, with accommodation of 'Mary heard about the budget cuts' as an inferred antecedent. Ellipsis is not possible in (ii) for failing an additional requirement for syntactic identity. See Rooth (1992b) for details, and Fox (1999) on the importance of the spoken *heard* as 'accommodation-seeking material' in (11) and (i).

The first difference is with respect to agency: where the agent is implicit in A, it is explicitly Gorbachev in E. This difference can be resolved via contextual accommodation. Based on the second conjunct, we can assume as background for A that Gorbachev is the person under obligation to release the information. With that assumption, the equality in (a) holds (written in terms of event semantics). This enriched meaning of A is sufficiently similar to the meaning of E (b) for alternative-hood to be satisfied, as underlined in (c). In a sense, we read Gorbachev into the antecedent clause, making for parallelism with the elliptical clause:[11]

(12)   ?This information should have been released, but Gorbachev DIDN'T.
   a. $[\![A]\!]$ = should' ($\exists$e.info-rel'(e)) $=_{by\ accommodation}$ should' ($\exists$e.info-rel'(e) $\land$ agent(e,g))
   b. $[\![E]\!]$ = for-sure' ($\neg\exists$e.info-rel'(e) $\land$ agent(e,g))
   c.   F(E) = { For sure the information was not released by Gorbachev, Possibly the information was released by Gorbachev, Masha thinks the information was not released by Gorbachev, Ivan hopes the information was released by Gorbachev, <u>The information should have been released by Gorbachev</u>, The information could have been released by Gorbachev, … }
   d. $[\![A]\!]$ $\in$ F(E) and $[\![A]\!]$ $\neq$ $[\![E]\!]$

The second difference between A and E is with respect to the auxiliaries: *should* in A versus *DIDN'T* in E. This difference can be resolved via contrasting intensionality.[12] Taking *DIDN'T* to realise VERUM$_F$, the modality of A with *should* makes it a member of F(E). At the same time, contrast holds between the ordinary meanings of *should'* and *for-sure'*.

Thus contextual accommodation and contrasting intensionality combine to satisfy proper alternative-hood and license ellipsis in (1a). With VP-level syntactic identity also satisfied (Merchant 2013), if relevant (e.g. Hardt 1993), this ellipsis could thus be considered fundamentally grammatical. The remaining "?"-level of degradation can be attributed to the effort of positing an active ellipsis in the context of passive spoken linguistic material.[13]

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[11] Recall from footnote 8 that both positive and negative polarities of *p* are included among the alternatives to focused VERUM, meaning that the negation in *DIDN'T* has no effect on the focus calculations. See Romero & Han (2004) and Hardt & Romero (2004) for details.

[12] Taking focused *DIDN'T* to realise polar focus rather than focused VERUM would fail for the same reason as (1b), as analysed in (15) in the next subsection.

[13] There may also be information-structural incongruities in the switch from passive to active that are costly to resolve; cf. section 3.4. It might be tempting to attribute the relative marginality of (1a) to effort involved in antecedent accommodation. However, no such degradation was felt in accommodating for ellipsis back in (11); and as a reviewer notes, marginality remains even with *by Gorbachev* explicitly added to the first clause, as in (13) immediately below.

The success of ellipsis in (12) is predicated on the ability to read Gorbachev into the antecedent so as to satisfy proper alternative-hood. Indeed, explicitly adding Gorbachev to the antecedent in (1a) as a *by*-phrase agent is equally good in (13):

(13)   ?This information should have been released by Gorbachev, but he DIDN'T.

Furthermore, ellipsis should turn bad when it is not so possible to accommodate the agent of the elliptical clause into the antecedent. The ungrammaticality of (14) bears this out. Despite having the same shape as (1a), ellipsis is bad because it does not make sense for hackers to have been under an obligation to release government information. This means that an appropriate antecedent cannot be accommodated, and proper alternative-hood fails:

(14)   *The government information should have been released. In the event, hackers did.
        #Background: $\exists$e.info-release'(e) = $\exists$e.info-release'(e) $\wedge$ agent(e,h)

The next subsection turns to explaining the ungrammaticality of (1b). As with (14), there is a problem with accommodation, but one that is more systematic: proper alternative-hood cannot be satisfied in (1b) without deriving a contradiction.

3.2 Contradiction and ellipsis

The bad example of voice mismatched VPE from (1b) is repeated in (15). Ellipsis fails the proper alternative-hood condition from (7), since the two differences between A and E cannot be consistently reconciled.

Take first the difference in auxiliaries. This time, there is no contrasting intensionality; where before we had modal *should*, now there is indicative *was* in A. In the absence of modality, DIDN'T in E can only be read as realising polar focus, as in (d), not focus on VERUM (cf. 10, above). Even with contrasting polarity, however, ellipsis will not be licensed:

(15)   *This information was released, but Gorbachev DIDN'T.
        a. #Background: $\exists$e.info-release'(e) = $\exists$e.info-release'(e) $\wedge$ agent(e,g)
        b. $[\![A]\!]$ = $\exists$e.info-release'(e)
        c. $[\![E]\!]$ = not' ($\exists$e.info-release'(e) $\wedge$ agent(e,g))
        d. F(E) = { not'($\exists$e.info-release'(e) $\wedge$ agent(e,g)), $\exists$e.info-release'(e) $\wedge$ agent(e,g) }
        e. $[\![A]\!] \notin$ F(E)

Ellipsis fails because contradiction blocks contextual accommodation. Regarding agency, we are faced with the same difference as before: an implicit agent in A versus Gorbachev explicitly in E. In order to resolve this difference, we would again need to assume as background for A that Gorbachev is the person under obligation to release the information. With that assumption (a), the enriched meaning of A would be sufficiently similar to E for alternative-hood to license

ellipsis, as it was in (12). However, the sentence itself contradicts this assumption: the second conjunct (c) states the very opposite, that Gorbachev did not release the information. This conflict is summarised in (16):

(16)   For ellipsis: $\exists$e.info-release'(e) = $\exists$e.info-release'(e) $\wedge$ agent(e,g)
       Sentence: not' ($\exists$e.info-release'(e) $\wedge$ agent(e,g))

Thus we derive a contradiction between the meaning of the sentence and the assumption that would license ellipsis within it. This contradiction, I claim, is responsible for the ungrammaticality of (1b): accommodated antecedents cannot contradict the meaning of an elliptical sentence.

The rest of this subsection aims to clarify the nature of this contradiction problem. We will see that ungrammaticality results when contradiction arises between the meaning of an elliptical sentence and the assumptions that would have to be made in order to construct it.

To begin, recall from the discussion of (9), repeated here, that there is no direct incompatibility between contradiction and ellipsis; ellipsis can be fine in contradictory sentences:

(9)   [$_A$ It's raining] and [$_E$ it ISN'T ~~raining~~].
       E = It ISN'T$_F$ raining $[\![E]\!]$ = not-rain'   F(E) = { rain', not-rain' }
       A = It is raining $[\![A]\!]$ = rain' $[\![A]\!] \in$ F(E) and $[\![A]\!] \neq [\![E]\!]$

Although A and E contradict one another, ellipsis is good; there is nothing wrong with an explicit antecedent contradicting an elliptical sentence. The contradiction problem only arises with the inference step in accommodating an indirect antecedent. As for (1b) in (15), accommodation of p is not allowed for constructing an elliptical sentence that means not-p; that is, it is not possible for an accommodated antecedent to contradict an elliptical sentence.

Notice also that there is nothing contradictory about the fully pronounced counterparts of (1). As in (17), both are fully acceptable, and contingent:

(17)   a.   This information should have been released, but Gorbachev didn't release it.
       b.   This information was released, but Gorbachev didn't release it.

Contradiction arises only after adding in the background assumption required for calculating alternative-hood as part of licensing ellipsis; namely, that Gorbachev is the person under obligation to release the information. Explicitly adding this assumption to (17) leads to contradiction in (18b):

(18)   a.   This information should have been released by Gorbachev, but he didn't release it.
       b. #This information was released by Gorbachev, but he didn't release it.

In sum, the sentences in (1) themselves, as spelled out in (17), are not contradictory. Contradiction only arises – as made explicit for (b) in (18) – as part of the ellipsis licensing calculations, due

to the accommodation required to pass alternative-hood. Thus the contradiction problem arises only when the meaning of a sentence is contradicted by an antecedent accommodated to license ellipsis within it.

To see more starkly that the contradiction problem arises between the sentence and ellipsis accommodation, we can consider dialogues across speakers. Across speakers, the contradiction in (18b) dissipates to disagreement in (19), relieving infelicity regardless of ellipsis. With *by Gorbachev* in the first speaker's utterance (S), both the fully pronounced (R) and elliptical (R') responses are acceptable:

(19) S: This information was released by Gorbachev.
      R: No, Gorbachev didn't release it.   R': ?No, Gorbachev didn't.

But returning to (1b), without *by Gorbachev*, contradiction between the sentence and the antecedent accommodated for ellipsis causes ungrammaticality, even across speakers. In (20), while the fully pronounced R response is acceptable, the elliptical R' is not:

(20) S: This information was released.
      R: No, Gorbachev didn't release it.   R': *No, Gorbachev didn't.

Just as for (1b) in (16), the accommodated antecedent that would be needed to satisfy alternative-hood and license ellipsis in R' – namely, that the information was released by Gorbachev – is contradicted by the sentence stating that Gorbachev didn't release the information. Thus the contradiction problem arises not within the sentence (9, 17 vs. 18) nor within one speaker (19 vs. 20), but between the sentence and an antecedent accommodated in an attempt to license ellipsis within it.

In sum, it is impossible to elide based on an accommodated antecedent that contradicts the sentence itself: a sentence cannot contradict assumptions made en route to its own elliptical construction.

Overall, these two subsections have contributed an explanation of the varying acceptability of voice mismatched VPE, as in (1), in terms of the standard, focus-based, semantic identity condition on ellipsis in (7), plus the principle that accommodated antecedents cannot contradict an elliptical sentence. This analysis has significance for the debate regarding the grammatical status of voice mismatched VPE. On one view, voice mismatched VPE is considered fundamentally ungrammatical due to syntactic non-identity, with improvements to acceptability via processing and pragmatics. The present proposal fills a gap in the opposing view that voice mismatched VPE can be fundamentally grammatical. Further to syntactic identity or anaphora resolution, ellipsis must also satisfy focus-based semantic identity. In (1a), focus-based semantic identity is satisfied via accommodation and intensionality, and so ellipsis is grammatical. In (1b), on the

other hand, focus-based semantic identity fails due to contradiction between the sentence and the accommodation required for ellipsis licensing.

This account thus reinforces the view that voice mismatched VPE can be fundamentally grammatical. The next subsection broadens the empirical scope to other focus-based modulations of (1b), and (implicit) individuals in particular.

3.3 Contrasting individuals

On either view of the grammatical status of voice mismatched VPE, contrasting intensionality is central. In (1), ellipsis is fine with intensional *should* in the antecedent (a) and bad with indicative *was* (b):

(1)   a. ?This information should have been released, but Gorbachev didn't.
        b. *This information was released, but Gorbachev didn't.

The two perspectives on the status of voice mismatched VPE locate intensionality contrasts in different parts of the theory. On the view that voice mismatched VPE is ungrammatical, intensionality contrast is pragmatic; for Grant et al. (2012: 332, 335), Non-Actuality Implicatures are an additional sort of pragmatic alternative separate from those implied by focus semantics (Rooth 1992a). On the view reinforced here that voice mismatched VPE can be fundamentally grammatical, on the other hand, intensionality contrast is semantic, mediated by focus on VERUM (Hardt & Romero 2004; Romero & Han 2004) as part of a focus-based identity condition on ellipsis.

This section argues that the semantic perspective offers a more unified view of the varying acceptability of voice mismatched VPE. Further to intensionality, the focus-based semantic identity condition from (7) offers insight into the successes and failures of ellipsis with contrasting individuals. As a corollary, we will find that implicit arguments do not count for contrast in VPE (cf. Overfelt to appear).

To begin, notice that *Gorbachev* is not contrastively focused in (1). Nor can he be – doing so in (21) degrades (a) and leaves (b) ungrammatical:

(21)   a.?*This information should have been released, but GORBACHEV DIDN'T.
        b. *This information was released, but GORBACHEV DIDN'T.

With a contrasting individual in the antecedent, however, focus on *Gorbachev* becomes good. In (22), the explicit passive *by*-phrase provides *Dmitry* to contrast *Gorbachev* against:

(22)   ?This information was corroborated by Dmitry before GORBACHEV did.
        $[\![A]\!] = \exists e.\text{info-corrob'}(e) \wedge \text{agent}(e,d)$ $[\![E]\!] = \exists e.\text{info-corrob'}(e) \wedge \text{agent}(e,g)$
        $F(E) = \{ \exists e.\text{info-corrob'}(e) \wedge \text{agent}(e,x) \mid x \in D_e \}$
        $[\![A]\!] \in F(E)$ and $[\![A]\!] \neq [\![E]\!]$

Before, the agency difference – implicit in A versus Gorbachev explicitly in E – had to be mediated by contextual accommodation. Now it can be mediated by contrasting individuals. Hence ellipsis satisfies proper alternative-hood, even without contrasting intensionality or polarity; though adding back these dimensions of contrast does no harm in (23):[14]

(23)   a.   ?This information was released by Dmitry, so GORBACHEV DIDN'T.
       b.   ?This information should have been released by Dmitry, but GORBACHEV actually DID.

Given the success of contrasting individuals in licensing ellipsis in (22) and (23), we may wonder why such contrast was not available to help in (1b). In (1b), there was an implicit existential passive agent (which may well be syntactically represented) and ellipsis failed. Indeed, minimally modifying (22), ellipsis is possible with *someone* in place of *Dmitry* in (24), which is then synonymous with (1b):

(24)   ?This information was released by someone, but GORBACHEV DIDN'T.

Thus we see that not all individual arguments participate in contrast to the same extent. With the explicit indefinite *someone* in (24), ellipsis succeeds based on contrasting individuals. With the implicit existential in (1b), however, ellipsis fails. Taken together, it seems that whereas overt DPs support contrast for ellipsis, implicit arguments do not.[15]

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[14] A reviewer finds that a sentence-level accent is not necessary on the auxiliary in configurations like (23b), providing the example in (i):

(i)   ?The information should've been released by MI6. In the end, the HOME OFFICE did.

It could be that such an accent is difficult to discern or realise relative to the focused subject; compare the addition of *actually* between the subject and auxiliary in (23b). Alternatively, (i) could present a case where the domain for evaluating ellipsis is smaller than TP, with proper alternative-hood satisfied at the vP level as in (ii):

(ii)   A = [$_{vP}$ released the information by MI6]
       E = [$_{vP}$ the [HOME OFFICE]$_F$ released the information]

With these calculations, the difference between *should've* and *did* is out of scope, and ellipsis is licensed regardless of auxiliary focus.

[15] This is not to say that 'unspoken' individuals can never count for contrast. As a reviewer notes, contrastive focus is licensed in (i):

(i)   [On bumping into a friend wearing a superman shirt:]
      Hey, [my BROTHER]$_F$ has a superman shirt too!

The salient individual in this context is quite different from the implicit existential agent of the passive, however; see also footnote 17, below.

This difference accords with the recent finding that implicit existential objects do not support sprouting from VPE (Overfelt to appear).[16] In (25), VPE is fine in (a), where *what* contrasts with *article* – cf. *Gorbachev* vs. *Dmitry* in (22). VPE is likewise fine in (b), where *what* contrasts with *something* – cf. *Gorbachev* vs. *someone* in (24). In (c), however, VPE is bad:

(25) a. PAM will read the ARTICLE, but I forget WHAT$_1$ SUE will ~~read t$_1$~~.
    b. PAM will read SOMETHING, but I forget WHAT$_1$ SUE will ~~read t$_1$~~.
    c. *PAM will read, but I forget WHAT$_1$ SUE will ~~read t$_1$~~.

Just as *Gorbachev* fails to contrast with the implicit agent in (1b), so here *what* fails to contrast with the implicit object of *read* in (c). Combining these findings, we converge with Overfelt (to appear) on the conclusion that implicit arguments do not count for contrast in VPE.[17]

In sum, focus-based semantic identity offers a more unified view of the varying acceptability of voice-mismatched VPE than the processing and pragmatic alternative. The proper alternative-hood condition from (7) encompasses contrasts involving individuals together with those involving intensionality and polarity. In section 3.1, we saw that the difference between *was* and *should* in (1) can be captured by focus on VERUM just as much as NAIs. Here we saw that contrast between *by*-phrase agents follows from focus-based identity calculations of the same kind. This integration leads to broader empirical coverage, all under the umbrella of ellipsis as requiring proper alternative-hood. In addition, we find that individual arguments are not all equal in contrastivity: referential DPs and overt indefinites provide a means of contrast that implicit existentials do not (cf. Overfelt to appear).

The final subsection turns to voice mismatches in the opposite direction, where the findings here align with a reappraised view of the mismatch asymmetry (Poppels & Kehler 2019).

3.4 The mismatch asymmetry

So far, this paper has accounted for contrasts of the kind in (1) with a passive antecedent for active ellipsis:

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[16] The same is true of pseudogapping (Johnson 2019: cf. ex. 21). In (i), ellipsis is passable in (a) based on the contrast between *something* and *chocolate* (which is taken to have vacated the elided VP). But the implicit existential object argument of *eat* does not count for contrast; hence the badness of ellipsis in (b):

(i) a. ?Jill will eat something, but she won't ~~eat t~~ CHOCOLATE.
    b. ?*Jill will eat, but she won't ~~eat t~~ CHOCOLATE.

Thus in pseudogapping, as well as in sprouting and voice mismatched VPE, existentials differ in contrastivity based on whether they are explicit or implicit.

[17] This difference in contrastivity accords with the very limited ability of implicit existential arguments to do much at all. As shown for objects in (i), compared with overt indefinites (a), implicit existentials (b) are unable to take wide scope (Fodor & Fodor 1980):

(i) a. Every student ate something. $\forall > \exists$ $\exists > \forall$
    b. Every student ate. $\forall > \exists$ $*\exists > \forall$

(1)   a. ?This information should have been released, but Gorbachev didn't.   [P → A]

            b. *This information was released, but Gorbachev didn't.   [P → A]

Consider now (26), where an active antecedent leads into a passive ellipsis. Subjecting ellipsis to proper alternative-hood predicts both sentences to be good, making an incorrect prediction on (b):

(26)   a. ?Gorbachev released the information, though it shouldn't have been.   [A → P]

            b. *Gorbachev released the information, but the report wasn't.   [A → P]

Both ellipses in (26) pass proper alternative-hood; there is contrasting intensionality in (a) and contrasting themes and polarity in (b). To understand the issues raised by (26), we return to the mismatch asymmetry.

Repeating from (4), an asymmetry is claimed to hold of voice mismatched VPE (27) whereby a passive antecedent for active ellipsis (a) is better than the other way round (b):

(27)   a. *better* The report was first read by the judge, and then the lawyer did too.   [P → A]

            b. *worse* The judge read the report first, and then the confession was.   [A → P]

Notice first how (1) and (26) cut across this asymmetry. Mismatch with contrasting intensionality is good in (a) but bad without in (b), regardless of the direction of mismatch.

The mismatch asymmetry was first reported by Arregui et al. (2006: Exp.5), and its existence has subsequently been supported by Kim & Runner (2018) and Clifton et al. (2019), among others. However, Poppels & Kehler (2019) show experimentally that it is not in fact driven by mismatch.[18] They observe a penalty against passive ellipsis clauses even between matching active-active versus passive-passive pairs. In their data, this penalty fully explains the contrast in (27), which turns out not to interact with mismatch.

More specifically, their experimental materials involved contrasting subjects, as in (27). Poppels & Kehler (2019) go on to compare their findings with Kertz (2013), who found a mismatch asymmetry in the reverse direction (28), but one confounded with auxiliary (a) versus subject contrast (b):

(28)   a. *better* The technicians didn't install the line   [A → P]

               as quickly as it could have been.

            b. *worse* The line wasn't installed by the technicians   [P → A]

               as quickly as the engineers did.

Putting everything together, the overall problem is thus not active to passive mismatch, as it appeared in (27). The main problem is instead passive ellipsis with subject focus, as in (26b) and (27b). Passive ellipsis with auxiliary focus is fine, as in (26a) and (28a).[19]

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[18] Cf. also Kim et al. (2011), who found no reliable effect.

[19] Meanwhile active ellipsis is possible based on a passive antecedent with contrasting explicit agents, as in (27a), (28b), and the previous section. The preference for auxiliary over subject contrast in (28) persists without ellipsis – see Kertz (2013) for details.

Poppels & Kehler (2019) speculate that the penalty against passive ellipsis with subject focus may result from a clash between the information-structural properties of the passive and ellipsis. Both mark topicality, but of the subject and the VP respectively. Ellipsis with subject focus clashes with the subject topicality of the passive, degrading (26b) and (27b). Ellipsis with auxiliary focus (26a, 28a), however, is compatible with the topicality of both subject and VP. Moreover, it allows ellipsis to pass the proper alternative-hood condition, as advocated for here, via contrasting intensionality.

Thus the unacceptability of (26b) can be said to derive from a penalty against passive ellipsis with subject focus. This constraint needs to be added to the overall theory in order to capture the contrast in (26) regardless of one's view of the grammatical status of voice mismatched VPE. On the view that it is fundamentally ungrammatical, the recipe for determining the acceptability of voice mismatched VPE would need to be sensitive to information structure in addition to processing and pragmatics. And on the opposing view that voice mismatched VPE can be fundamentally grammatical, this information-structural constraint would be another reason, further to focus-based semantic identity, why such ellipsis can end up unacceptable. In addition, and as with contrasting individuals in the previous subsection, the present proposal offers a positive account of the auxiliary focus (26a, 28a) cases as passing proper alternative-hood via contrasting intensionality.

4 Conclusion

This paper was concerned with the varying acceptability of VPE with voice mismatches. It contributed an explanation in terms of a standard, focus-based condition on ellipsis (Rooth 1992a,b), supplemented with the principle that accommodated antecedents cannot contradict an elliptical sentence. This explanation was significant for reinforcing the position that voice mismatched VPE can be fundamentally grammatical (Merchant 2013; cf. Hardt 1993) as opposed to ungrammatical (Kim & Runner 2018) and in need of repair by processing (Arregui et al. 2006) and pragmatics (Grant et al. 2012). It also encompassed modulations of voice mismatched VPE involving contrasting individuals, pointing to the additional conclusion that implicit arguments do not count for contrast in VPE (cf. Overfelt to appear). Finally, the account here aligns with a reappraisal of the mismatch asymmetry (Arregui et al. 2006) as being driven by a penalty against passive ellipsis in subject focus environments (Poppels & Kehler 2019).

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Competing Interests

The author has no competing interests to declare.

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