Agreement switch in verb-echo answers: Evidence for Distributed Ellipsis

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Abstract

In this article, we claim that syntactic objects undergoing ellipsis can be targeted by both narrow syntactic and PF operations. We base this conclusion on experimental evidence from the interaction between single conjunct agreement and verb-echo answers in South Slavic, which we show to be derived via verb-stranding VP ellipsis. Adopting the view that Vocabulary Insertion replaces Q-variables on lexical heads (Halle 1991) and ellipsis is a syntactic operation which deletes Q-variables (Saab 2022), we demonstrate that constituents properly included in the ellipsis site can undergo Internal Merge in the narrow syntax, and can participate in PF processes from the derived position. The interaction between ellipsis, Internal Merge and Agree-Copy that accounts for these patterns of data follows naturally within the Distributed Ellipsis approach.

Keywords: ellipsis, single conjunct agreement, verb-echo answers, Q-variable, Distributed Ellipsis

1 Introduction

In an early argument for a transformational approach to ellipsis, Ross (1969) observed that the material properly included in the ellipsis site can control agreement reflected in morphology outside the ellipsis site, see, e.g., (1), adapted from Ross (1969, 273), and (2) from Merchant (2013, 704).

(1) Some people think there are no such rules, but there {*is/are}.

(2) a. First, there were bananas available, and then there {weren't/ *wasn't}.
b. First, there were going to be bananas available, and then there {weren't/ *wasn't}.

The present contribution, building on Ross's line of reasoning, focuses on the interaction of agreement and ellipsis in short answers to polar questions, which in several languages can consist of the lexical verb alone, sometimes accompanied by a polarity particle and an auxiliary clitic. These verb-echo answers, e.g., (3) are exemplified in Bosnian/Croatian/Serbian, henceforth BCS. (Note that whenever we use BCS examples for illustration in what follows, the acceptability judgements hold for their equivalents in Slovenian as well.)

(3) A: Jel' kupuje Ivan šećer?
Q buy.3SG Ivan sugar
'Is Ivan buying sugar?'

B: Da, kupuje.
yes buy.3SG
'Yes, he is (buying sugar).'

Such patterns pose a number of important questions (see, a.o., Goldberg 2005, Gribanova 2013, Gribanova 2020, Holmberg 2016, Mendes and Ruda 2019, Mendes 2020, Ruda 2022, and references therein). The present focus will be on exploring the potential of agreement-related facts in this context to help us determine the optimal analytic approach to ellipsis of this type. Importantly, verb-echo answers, as they have first been referred to in Holmberg (2016), are not verbatim repetitions of the finite verb form from the antecedent clause, since the ϕ-morphology on the verb sometimes needs to be modified in the answer, as in (4):

(4) A: Jel' kupuješ šećer?
Q buy.2SG sugar
'Are you buying sugar?'
B: Da, kupujem.
yes buy.1SG
'Yes, I am (buying sugar).'

In fact, the main empirical contribution of this paper rests on cases where agreement morphology within the answer is distinct from the agreement morphology within the question, that is patterns of *switch agreement* uncovered in experimental studies of South Slavic languages, known for their rich array of conjunct agreement strategies (resolved/default, hierarchical, and closest conjunct agreement; see, e.g., Marušič et al. 2015, Willer-Gold et al. 2016, Willer-Gold et al. 2018; for the theoretical modeling of conjunct agreement in

South Slavic see, e.g., Bošković 2009, Franks and Willer-Gold 2014, Murphy and Puškar 2018).

While post-verbal conjoined (&P) subjects allow only first conjunct agreement in South Slavic, pre-verbal &P subjects allow default (black in our examples below), first conjunct (blue), and last conjunct (red) agreement (see Marušič et al. 2015, Willer-Gold et al. 2016, Willer-Gold et al. 2018).[1]

(5) *VS order*

U trgovini su { *izložene/ izložena/ *izloženi } [$_{\&P}$
in shop AUX.PL displayed.F.PL displayed.N.PL displayed.M.PL [$_{\&P}$
ogledala i lampe].
mirrors.N.PL and lamps.F.PL]
'Mirrors and lamps are displayed in the shop.'

(6) *SV order*

[$_{\&P}$ Molbe i rješenja] su { ovjerene/ ovjerena/
[$_{\&P}$ request.F.PL and resolution.N.PL] AUX.PL verified.F.PL verified.N.PL
ovjereni } pečatom.
verified.M.PL by stamp
'Requests and resolutions are verified by a stamp.'

Focusing exclusively on single conjunct agreement, the generalization that arises can be stated compactly as follows:

(7) **Single conjunct agreement generalization**: For single conjunct agreement morphology, SV word order allows both first and last conjunct agreement, whereas VS word order allows only first conjunct agreement.

Following Marušič et al. (2015), we assume that single conjunct agreement is sensitive to hierarchical structure or to linear order, depending on the stage of the PF-cycle in which it applies. Specifically, in this framework, which we refer to as Distributed Agree, the Agree operation is divided into two operations: Agree-Link, connecting a probe and a goal in the narrow syntax, and Agree-Copy, applying in PF, where morphosyntactic features are passed onto the probe. Agree-Copy can be sensitive either to hierarchical structure or to linear structure in PF, depending on whether it applies before or after Linearization. As a result, single conjunct agreement patterns provide a unique opportunity to test different approaches to ellipsis.

In order to investigate the interaction between single conjunct agreement and verb-echo answers, we first establish the availability of verb-stranding VP ellipsis in verb-echo answers, as schematized in (8). We support this type of derivation in Section 3 with a number of tests showing also that argument ellipsis is unlikely to be available in the languages of interest here and, just like *pro*-drop, it would struggle to deliver verb-echo answers with single conjunct agreement.

(8) A: Jel' kupuje Ivan šećer?
Q buy.3SG Ivan sugar
'Is Ivan buying sugar?'
B: Da, kupuje ~~[$_{VP}$ Ivan *t* šećer]~~.
yes buy.3SG ~~[$_{VP}$ Ivan *t* sugar]~~
'Yes, he is (buying sugar).'

The empirical support for the approach to ellipsis proposed here comes from an experimental study investigating single conjunct agreement options in verb-echo answers in contexts where the antecedent question of the verb-echo answer has an &P subject

(Willer-Gold et al. 2019, in preparation). Focusing on single conjunct agreement and leaving default masculine aside for the moment, the experimental results show that the agreement options observed with &P subjects in verb-echo answers are the same agreement options that the answer would have with a word order that matched that of the question:

(9) *VS order*

A: Jesu li izložena [$_{\&P}$ ogledala i lampe] u trgovini?
AUX.PL Q displayed.N.PL [$_{\&P}$ mirrors.N.PL and lamps.F.PL] in shop
'Are mirrors and lamps displayed in the shop?'

B: Da, { *izložene su/ izložena su/ *izloženi su }.
yes displayed.F.PL AUX.PL displayed.N.PL AUX.PL displayed.M.PL AUX.PL
'Yes. They are (displayed in the shop).'

(10) *SV order*

A: Jesu li [$_{\&P}$ molbe i rješenja] ovjerena pečatom?
AUX.PL Q [$_{\&P}$ request.F.PL and resolution.N.PL] verified.N.PL by stamp
'Are requests and resolutions verified by a stamp?'

B: Da, { ovjerene su/ ovjerena su/ ovjereni su }.
yes verified.F.PL AUX.PL verified.N.PL AUX.PL verified.M.PL AUX.PL
'Yes. They are (verified by a stamp).'

In (10), but not in (9), the pattern of single conjunct agreement in the answer can be distinct from that within the question; hence the name *switch agreement*. Strikingly, the switch reveals agreement with a conjunct that is not visible on the surface in the elided version. The following generalization summarizes these results:

(11) **Verb-echo agreement generalization:** For single conjunct agreement, the agreement morphology options in a verb-echo answer are the same as the options in the antecedent, taking into account the position of the participial verb in relation to the subject.

In what follows, we offer an analysis of the verb-echo agreement generalization relying on establishing the derivational timing of ellipsis, subject fronting and agreement. We take ellipsis to be an instruction to forgo Vocabulary Insertion (see, e.g., Wasow 1972, Bartos 2000, Saab 2008, Saab 2022), adopting the approach on which syntactic heads that can be realized phonologically contain a Q-variable and Vocabulary Insertion is the replacement of this variable by a morphological exponent (Halle 1991, Noyer 1992, Embick 2015). Ellipsis can thus be modeled as deletion of Q-variables in the narrow syntax, which bleeds Vocabulary Insertion in PF (Saab 2022). We call this approach *Distributed Ellipsis*, as the elements and operations involved in the final result belong to different components of the grammar. Distributed Ellipsis provides precisely the type of flexibility that is needed to account for the verb-echo agreement generalization, allowing Q-less elements to participate in grammatical operations both in the narrow syntax and in the PF-cycle (see Abels 2012, Section 2.2.4, Park 2017, Section 4.2.1, and Park 2023 for analyses along these lines, and for independent evidence that syntactic objects marked for ellipsis in the syntax can be re-merged outside the ellipsis site; see also Section 4 below). Furthermore, in order to constrain the single conjunct agreement options in verb-echo

answers, we assume that ellipsis must be sensitive to some degree of isomorphism beyond lexical identity alone (see Chomsky 1965, Lasnik 1995, Tanaka 2011, Rudin 2019, Ranero 2020, Saab 2022; *pace* Merchant 2001, 2013, Chung 2006, Abels 2017).

We lay the groundwork for our subsequent discussion in Section 2, by outlining the phenomenon of single conjunct agreement and the mechanics of Distributed Agree. In Section 3, we present a battery of tests demonstrating the availability of verb-stranding VP ellipsis in verb-echo answers and the unavailability of argument ellipsis in BCS and Slovenian, as well as the inadequacy of *pro*-drop as a derivational strategy for verb-echo answers with single conjunct agreement. In Section 4, we present our experimental investigation of single conjunct agreement in verb-echo answers and provide an analysis in terms of Distributed Ellipsis. Section 5 offers a discussion of some theoretical consequences of our findings for the theory of ellipsis, which is followed by a general conclusion in Section 6.

2 The single conjunct agreement generalization: Distributed Agree

In this paper, we adopt in general terms the analysis of single conjunct agreement offered by Marušič et al. (2015), where the operation Agree is divided into two steps (see also Benmamoun et al. 2009, Arregi and Nevins 2012, Bhatt and Walkow 2013): Agree-Link, establishing a connection between the probe and the goal in the narrow syntax, and Agree-Copy, taking place in PF, where the morphosyntactic values are passed onto the probe. Agree-Copy is sensitive either to hierarchical structure or to linear order, depending on the stage of the PF-cycle in which it applies.[2]

According to Marušič et al. (2015), whose view is further supported experimentally in Mitić and Arsenijević (2019), &P can only compute a number value (typically plural in South Slavic), but not a gender value when the conjuncts mismatch in gender. In the narrow syntax, Agree-Link finds &P (e.g., [$_{\&P}$ Conj_1 [$_{\&'}$ & Conj_2]]), by assumption con-

necting not only the &P with the probe, but also the heads of the conjuncts, thereby making them potential goals for Agree-Copy (see also Bhatt and Walkow 2013 for an analysis along these lines).[3] The multiple links created by Agree-Link in this system resemble those from Multiple Agree analyses (Hiraiwa 2001, Nevins 2007, Nevins 2011, and Citko 2018).

Because &P cannot compute a coherent gender value based on mismatching conjuncts, Agree-Copy with &P, applying at PF, can only value the number feature of the probe on the participial head (Part), leaving the gender feature unvalued. Another application of Agree-Copy is thus called for, so that the residual unvalued gender feature on the participial probe can be properly valued, targeting one of the conjuncts inside &P as an available goal.

Both &P, typically specified as plural, and one of the conjuncts provide a feature value for the probe on Part (number and gender respectively).[4] The choice between the conjuncts depends on the ordering of PF operations. Namely, if Agree-Copy of the gender feature applies before Linearization, the highest conjunct is selected (see below for details). If it applies after Linearization, the linearly closest conjunct is selected. Since the structural relations have been converted into linear relations, c-command is not available at this stage anymore.

When the subject is in a post-verbal position, as in (5), repeated here in (12), these two different orderings of operations yield the same result for single conjunct agreement.

(12) *VS order*

U trgovini su	{ *izložene/	izložena/	*izloženi	}
in shop	AUX.PL	displayed.F.PL	displayed.N.PL	displayed.M.PL

ogledala i lampe.

mirrors.N.PL and lamps.F.PL

'Mirrors and lamps are displayed in a store.'

As specified above, the first application of Agree-Copy, resulting from the relation established by Agree-Link, is not enough to satisfy the probe on Part. Agree-Copy thus applies again to value the gender feature of the probe, picking up both on the links created by Agree-Link and the relations connecting these links (either structural or linear, depending on the ordering of the operations). Like any other operation in the grammar, Agree-Copy is also constrained by locality, which demands it to target the closest link to the probe. This is the familiar notion of *minimality*, which has different incarnations within syntactic theory (Rizzi 1990, Chomsky 1995, a.m.o). Locality has a special role to play in structures with &P subjects, specifically because of the multiple links resulting from Agree-Link. If the structure has not been linearized yet, Agree-Copy has only structural information available to it, resulting, by minimality (closest c-command), in highest conjunct agreement (13).[5]

(13) *Agree-Copy*$\prec$*Linearization* $\Longrightarrow$ *Highest (first) conjunct agreement*

a. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (applications of Merge)

b. V+Part [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] (Agree-Link)

c. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (Agree-Copy(Part,&P); number)

d. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (Agree-Copy(Part,Conj$_1$); gender)

e. V+Part$^\frown$Conj$_1{}^\frown$&$^\frown$Conj$_2$ (Linearization)

If Agree-Copy targeting the gender feature applies after Linearization, when structural relations have already been converted into linear relations, by the same logic, the

linearly closest element is selected (14). Crucially, Agree-Copy with the second conjunct is never possible when the subject stays in a post-verbal position, as the highest conjunct, the structurally closest link within &P (the closest conjunct in a c-command relation with the probe), is also linearly closest to the probe.

(14) *Linearization*$\prec$*Agree-Copy* $\Longrightarrow$ *First (highest) conjunct agreement*

a. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (applications of Merge)

b. V+Part [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] (Agree-Link)

c. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (Agree-Copy(Part,&P); number)

d. V+Part⌒Conj$_1$⌒&⌒Conj$_2$ (Linearization)

e. V+Part⌒Conj$_1$⌒&⌒Conj$_2$ (Agree-Copy(Part,Conj$_1$); gender)

On the other hand, with pre-verbal subjects, as in (6), repeated here in (15), these different orderings of operations matter.

(15) *SV order*

Molbe i rješenja su { ovjerene/ ovjerena/
request.F.PL and resolution.N.PL AUX.PL verified.F.PL verified.N.PL
ovjereni } pečatom.
verified.M.PL by stamp
'Requests and resolutions are verified by a stamp.'

If Agree-Copy of the gender feature applies before Linearization, then assuming it applies at PF, it operates in the same way as with post-verbal subjects. Namely, as at this point of the derivation the lower copy of the subject is still present in the structure, the highest conjunct in this lower copy is the closest one to the probe in terms of c-command

(see (16e)). We also assume that copies created by Internal Merge have to be deleted to avoid conflicting Linearization instructions; we identify this operation with Chain Reduction/Obliteration in PF (see, e.g., Chomsky 1995, Nunes 2004, Fox and Pesetsky 2005, Bošković and Nunes 2007, Arregi and Nevins 2012, a.o., *pace* Saab 2022).

(16) *Agree-Copy≺Linearization* $\Longrightarrow$ *Highest (first) conjunct agreement*

a. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (applications of Merge)

b. V+Part [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] (Agree-Link)

c. [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] ((Internal) Merge)

d. [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]]
(Agree-Copy(Part,&P); number)

e. [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]]
(Agree-Copy(Part,Conj$_1$); gender)

f. [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] V+Part (Chain Reduction)

g. Conj$_1$⌒&⌒Conj$_2$⌒V+Part (Linearization)

Conversely, if Agree-Copy targeting the gender feature takes place after Linearization, the second conjunct in the highest copy of the subject is selected (see (18g)), as it is linearly closest to the probe (note that after Linearization the lower copy is no longer available (Chomsky 1995, Nunes 2004, Fox and Pesetsky 2005, Bošković and Nunes 2007)).

(17) *SV order*

Molbe	i	rješenja	su	{ ovjerene/	ovjerena/
request.F.PL	and	resolution.N.PL	AUX.PL	verified.F.PL	verified.N.PL

ovjereni } pečatom.

verified.M.PL by stamp

'Requests and resolutions are verified by a stamp.'

(18) *Linearization*$\prec$*Agree-Copy* $\Longrightarrow$ *Last conjunct agreement*

a. V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] (applications of Merge)

b. V+Part [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] (Agree-Link)

c. [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]] ((Internal) Merge)

d. [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] V+Part [$_{\&P}$ Conj$_1$ [$_{\&'}$ & Conj$_2$]]
(Agree-Copy(Part,&P); number)

e. [$_{\&P}$ Conj$_1$[$_{\&'}$ & Conj$_2$]] V+Part (Chain Reduction)

f. Conj$_1$⌒&⌒Conj$_2$⌒V+Part (Linearization)

g. Conj$_1$⌒&⌒Conj$_2$⌒V+Part (Agree-Copy(Part,Conj$_2$); gender)

Thus, with pre-verbal subjects, different orderings of operations lead to different outcomes. The single conjunct agreement generalization follows from the dynamics of Agree-Copy within the PF-cycle, more specifically from the interaction between Agree-Copy and Linearization.

Finally, as pointed out by Murphy and Puškar (2018), it is important to notice that modifiers bearing gender features can intervene between the head of the last conjunct and the agreeing participle:

(19) [Crteži na kojima su šume] i [slike na kojima su
drawing.M.PL on which are forest.F.PL and painting.F.PL on which are

jezera] su { prodate/ *prodata }.

lake.N.PL are sell.PRT.F.PL sell.PRT.N.PL

'Drawings of forests and pictures of lakes are sold.' [Murphy and Puškar 2018, 1217]

Within the current set of assumptions, these modifiers are not potential goals for Agree-Copy, as determined by the links created by Agree-Link in the narrow syntax. Since the NP (*jezera* 'lakes') intervening between the head of the second conjunct (*slike* 'paintings') and the probe did not participate in the relevant Agree-Link operation, it does not count for locality purposes.[6]

Before we proceed, a comment about default morphology is in order. While outside the domain of single conjunct agreement, an asymmetry is observed in the availability of default masculine on the verb, which is grammatical in the SV word order, but not in VS. This asymmetry is arguably a result of *index agreement* (Willer-Gold et al. 2016; see also Wechsler and Zlatić 2003, Smith 2017b, Smith 2017a). The main idea is that the default masculine feature is available for &P (Willer-Gold et al. 2016), and that index agreement requires the agreement controller to c-command the target (Smith 2017a,b). This requirement, according to Smith (2017a), is responsible for the effect observed with collective nouns such as *committee*, *government* and *team* in some dialects of British English. Even when singular, these nouns can trigger plural morphology on the verb, but only if they are in a pre-verbal position (e.g., *The committee are here*/**There are a committee here*).

3 Verb-echo answers in BCS and Slovenian

In this section we present several strands of evidence that verb-echo answers in BCS and Slovenian are derived via verb-stranding VP ellipsis and not argument ellipsis or *pro*-drop, the former being a natural option to consider given that VP ellipsis is clearly in-

dependently available in these languages, as (20) illustrates.[7]

(20) Ana bi svaki put došla na sastanak, ali danas nije ~~[došla na~~
Ana would every time come to meeting, but today NEG.AUX.3.SG ~~[come to~~
~~sastanak]~~.
~~meeting]~~
'Ana would come to the meeting every time, but today she didn't.'

Our initial evidence for the availability of verb-stranding VP ellipsis in BCS and Slovenian verb-echo answers comes from adjunct-inclusive interpretations, illustrated here in (21) (see Landau 2018, 2020, among others, for discussion).

(21) *Adjunct-inclusive interpretation*

A: Jesi li ispekao tortu prema maminom receptu?
AUX.2SG Q baked.M.SG cake according.to mum's recipe
'Did you bake the cake according to mum's recipe?'

B: Da, ispekao sam. I zato je tako fina.
yes baked.M.SG AUX.1SG and why AUX.3SG so tasty
'Yes, I did (bake it according to mum's recipe). And that's why it turned out so tasty.'

This inclusion of the adjunct *prema receptu* 'according the the recipe' in the interpretation of the verb-echo answer despite its non-pronunciation is predicted straightforwardly if verb-echo answers in these languages can be derived by verb-stranding VP ellipsis, as indicated for (21B) in (22). (Note that in the example below, the participle moves to a position lower than the auxiliary. Word order in the example reflects subsequent encliti-

cization of the auxiliary; we return to this late prosodic inversion in Section 4.2.1.)

(22) Da, ispekao sam ~~[$_{VP}$ *t* tortu *prema receptu*]~~. ...
yes baked.M.SG AUX.1SG ~~[$_{VP}$ *t* cake *according.to recipe*]~~
'Yes, I did (bake it according to the recipe).'

Apart from verb-stranding VP ellipsis, verb-echo answers could in principle also be derived via argument ellipsis. However, subject argument ellipsis seems in general not to be operative in BCS and Slovenian. In particular, if argument ellipsis were available here, we should be able to observe, for example, null arguments with the cardinal quantificational interpretation (see, e.g., Saito 2007; Takahashi 2014; Landau 2023, among others). The Slovenian example in (23), where the subject cannot be associated with such an interpretation, shows that this prediction is not borne out in the languages under investigation here.[8] Both the context and the default neuter singular agreement on the verb used here enforce the cardinal quantificational interpretation of the subject, for which the referential reading picking out the soldiers is not available (see also the discussion below example (25)).

(23) *QP subjects cannot be dropped independently.*
A: V Nemčiji je umrlo pet vojakov.
in Germany AUX.3SG died.N.SG five soldiers
'Five soldiers died in Germany.'
B: *Umrlo je tudi ~~[$_{QP}$ pet vojakov]~~ v Franciji.
died.N.SG AUX.3SG also ~~[$_{QP}$ five soldiers]~~ in France
Intended: 'Five soldiers also died in France.'

(24) *Non-QP subjects can be dropped independently.*

A: V Nemčiji so umrli vojaki.
in Germany AUX.3PL died.M.PL soldiers
'Soldiers died in Germany.'

B: Umrli so tudi v Franciji.
died.M.PL AUX.3PL also in France
'They also died in France.'

However, in the verb-echo answer environment, which is conducive to a verb-stranding VP ellipsis derivation (see, e.g., Holmberg 2016; Gribanova 2017; McCloskey 2017; Mendes 2020; Sato and Maeda 2020; Ruda 2022), the quantificational interpretation of the omitted argument is possible, as in (25). One crucial difference between (23B) and (25B) is that in the former the VP adjunct is overt, whereas in the latter it is omitted. The presence of the adjunct in (23B) suggests that the VP has not been omitted, whereas its absence in (25B) suggests that the elided constituent is not the quantificational argument itself, but a constituent properly including it, namely the VP.

(25) *QP subjects can be dropped in verb-echo answers.*

A: Ali je pet vojakov v Nemčiji umrlo?
Q AUX.3SG five soldiers in Germany died.N.SG
'Did five soldiers die in Germany?'

B: Ja, umrlo je ~~[$_{VP}$ *t* [$_{QP}$ pet vojakov] v Nemčiji]~~.
yes died.N.SG AUX.3SG ~~[$_{VP}$ *t* [$_{QP}$ five soldiers] in Germany]~~
'Yes, five soldiers died in Germany.'

Notice also that the verb-echo answer in (25B), unlike the answer in (24B), cannot be the result of subject *pro*-drop, independently available in the language, as plural pronomi-

nal subjects trigger plural morphology on the verb (as well as gender agreement), as illustrated in (26). In the verb-echo answer in (25B), the verb has neuter singular agreement, a default value which is realized on the verb in the context of subject QPs in BCS and Slovenian (see (25A)).

(26) a. Poginuli su oni.
died.M.PL AUX.PL they
'They died.'

b. *Poginulo je oni.
died.N.SG AUX.SG they
Intended: 'They died.'

The contrast between (25) and (26) can thus be accounted for if the quantificational subject can be elided as part of a larger elliptical structure, enabled by polarity focus, a point which we return to in Section 4.

In addition to these empirical diagnostics, we would like to add an additional, theoretically-motivated set of arguments. In recent work Landau (2022, 2023) argues that only ⟨e⟩-type elements can be targeted by argument ellipsis.[9] If this hypothesis can be maintained, it offers another argument against an argument ellipsis analysis of verb-echo answers in BCS and Slovenian. In particular, such answers make available the ellipsis of such non-⟨e⟩-type elements as idiom chunks (see (27)), argumental adverbs (see (28)), argumental measure phrases (see (29)), proper names (see (30)), predicate nominals (see (31)), and generalized quantifiers (see (32)), unlike what Landau documents for Hebrew null objects, undergoing argument ellipsis on his account.

(27) *Idiom chunk: directed to a boxer after a boxing match*

A: I, jesi li išao glavom kroz zid?
and AUX.2.SG Q go head through wall
'Did you go with your head through the wall (= be stubborn)?'

B: Da, išao sam.
yes went.M.SG AUX.1.SG
'Yes, I did (go with my head through the wall/be stubborn).'

(28) *Argumental adverb*

A: Je li se Perica hrabro ponašao kod zubara?
AUX.3.SG Q SE Perica bravely behaved.M.SG at dentist
'Did Perica behave bravely at the dentist?'

B: Da, ponašao se.
yes behaved.M.SG SE
'Yes, he did (behave bravely at the dentist).'

(29) *Argumental measure phrase*

A: Jesi li (zaista) težio 70 kg?
AUX.2.SG Q (really) weighed.M.SG 70 kg
'Did you really weigh 70 kg?'

B: Da, težio sam.
yes weighed.M.SG AUX.1SG
'Yes, I did (weigh 70 kg).'

(30) *Proper name*

A: Jesi li nazvao (svoju) mačku Garfield?
AUX.2SG Q named.SG.M own cat Garfield
'Did you name a/the/your cat Garfield?'

B: Da, nazvao sam (je).
yes named.SG.M AUX.1SG her
'Yes, I did (name a/the/my cat Garfield).'

(31) *Predicate nominal*

A: Jesu li princevi postali žabe?
AUX.3PL Q princes become.PL.M frogs
'Did the princes become frogs?'

B: Da, postali su.
yes become.PL.M AUX.3PL
'Yes, they did (become frogs).'

(32) *Generalized quantifier*[10]

A: Je li većina semantičara objavila
AUX.3SG Q majority.SG.F.NOM semanticists.PL.M.GEN published.SG.F
(po) dvije knjige?
PREP two books
'Did most semanticists publish two books?'

B: Da, objavila je.
yes published.SG.F AUX.3SG
'Yes, most semanticists did (publish two books).'

In sum, following Landau's (2022) proposal, the availability of elided arguments that are not ⟨e⟩-type elements in the above examples (contrasting with their unavailability in, for example, Hebrew), demonstrates that argument ellipsis is not at play here, and that the unpronounced structure in the answers is instead due to the verb-stranding ellipsis we have posited for BCS and Slovenian.

Finally, the last point we would like to make in this section is that while South Slavic languages are typically *pro*-drop, and at least subject *pro*-drop is likely available in verb-echo answers, an analysis in terms of *pro*-drop cannot derive any examples of single conjunct agreement and thus cannot account for the verb-echo agreement generalization. Namely, there are in principle two options to refer to both conjuncts via *pro*-drop. The first is to use a null pronoun version of *they* (e.g., pro_{they}), substituting for the entire &P. However, when a pronoun is used to do so in contexts where the gender values of the conjuncts mismatch, it has to be masculine, yielding masculine gender agreement on the verb, which is not the only option available in the relevant data sets.

The second possibility could in principle be to *pro*-drop each conjunct individually (e.g., pro_{they} & pro_{they}), but then one would be left only with the overt coordinator, which cannot be elided independently in these languages.

Thus, we assume that *pro*-drop is not an adequate mechanism to elucidate the single conjunct agreement data patterns which are the main focus of this paper (though it is adequate to account for the default agreement pattern, likewise attested experimentally in the verb-echo answer environment; see Section 4.1). Ellipsis is implicated. All in all, we take all of the above to indicate that verb-echo answers in BCS and Slovenian result from verb-stranding VP ellipsis, and not argument ellipsis or *pro*-drop.

4 The Verb-echo generalization: Experimental investigation and Distributed Ellipsis

In this section we discuss single conjunct agreement in verb-echo answers. We start by presenting the experimental results that support the verb-echo agreement generalization. We next move on to presenting our analysis in terms of Distributed Ellipsis.

4.1 Experimental investigation

The verb-echo agreement generalization in (11) is based on the empirical results from experimental studies on switch agreement in native speakers of six South Slavic varieties, presented in greater detail in Willer-Gold et al. (in preparation) and Ristić et al. (submitted). The studies used both forced-choice and acceptability judgment tasks to probe the robustness of conjunct agreement patterns in verb-echo answers to polar questions, as in (9)–(10) above.

A three-alternative forced choice task was chosen. A fully-crossed 2x2 design manipulated word order in the question [SV,VS] and the presence of the auxiliary in the answer [with,without], resulting in 96 experimental items for BCS and for Slovenian. The structure of the question in the SV condition was [aux-pol-subject-verb-adverbial] for BCS and [aux-pol-subject-adverbial-verb] for Slovenian, and in the VS condition it was [aux-pol-verb-subject-adverbial] for BCS and [aux-pol-adverbial-verb-subject] for Slovenian. The subject of the question was a NF conjunction phrase. This combination of genders was chosen for its transparency with respect to diagnosing agreement patterns, for example first conjunct agreement (e.g., neuter in (33)) and second conjunct agreement (e.g., feminine in (33) below). Conjunct agreement in the question was consistently with the preferred *closer* conjunct, that is the second conjunct (feminine) in the SV order and the first conjunct (neuter) in the VS order (Willer-Gold et al. 2016, Willer-Gold et al. 2018). The answer was composed of the polarity phrase and the verb alternatives, either followed by

the auxiliary or not, [pol-verb-(aux)], with the two components presented independently (see (33) below).

In the answer, the three verbal forms alternated in gender [masculine, feminine, neuter] and were coded for the agreement patterns: closest conjunct agreement, that is agreement with the same conjunct as in the question, labeled as *old* (e.g., neuter in (33)); distal conjunct agreement, that is agreement with the other conjunct than the one in the question, labeled as *switch* (e.g., feminine in (33)); and default agreement, that is agreement with the conjunction phrase, labeled as *def* (masculine in (33)).

(33) *VS order*

a. Jesu li izložena ogledala i lampe u trgovini?
AUX.PL Q displayed.N.PL mirrors.N.PL and lamps.F.PL in shop
'Are mirrors and lamps displayed in the shop?'

b. Nego što nego,...
indeed
'Indeed...'
{ (su) izložene/ (su) izložena/ (su) izloženi }
AUX.PL displayed.F.PL AUX.PL displayed.N.PL AUX.PL displayed.M.PL
'...they are (displayed in the shop).'

The primary interest of the study was the percentage of *switch* agreement in the SV vs. the VS condition, as an indicator of the unattested *distal* conjunct agreement. The *old* agreement on the verb in the answer, matching the agreement in the polar question, was expected to obtain the highest choice rate overall; therefore, reduction in the *old* agreement was expected to be proportional to the increase in the *switch* agreement. Based on the previous empirical findings on conjunct agreement in non-elided sentences relative to

the word order constraint on the agreement alternatives (e.g., elicited production study on South Slavic, Willer-Gold et al. 2016, Willer-Gold et al. 2018), the *old* agreement is expected to be reduced significantly more in the answer to SV polar question compared to the VS polar question; and, conversely, the *switch* agreement in the VS condition (the unattested *distal* agreement) is expected to be chosen significantly less in comparison with the *switch* agreement in the SV condition (the attested *distal* agreement).

The experiment tested native speakers of Slovenian and BCS (n=225), with the data collected at six research locations across the South Slavic region (Nova Gorica, Slovenia; Sarajevo, Bosnia; Zadar and Zagreb, Croatia; Niš and Novi Sad, Serbia).

The results of the forced-choice experiment confirm the predicted main effect of word order with a significant reduction in the choice of *switch* agreement answers in the VS compared to the SV conditions (from 26% to 15%; z=-9.78, $p < .001$, as indicated by the blue-colored bars in Figure 1).

These results show that the native speakers of these South Slavic varieties chose significantly less *switch* agreement in the answers to the VS compared to the SV word order in the questions. More generally, the word order effect restricting the conjunct agreement alternatives in non-elided sentences found in the elicited production study (Willer-Gold et al. 2016, Willer-Gold et al. 2018) was replicated in verb-echo answers to polar questions in this large-scale study on the same set of the six South Slavic varieties.

The replication of the word order effect strongly suggests that the native speakers prefer to reconstruct the word order from the polar question in the ellipsis site, which in turn predictably constrains their choice of the agreement alternative. As such, these results provide a strong empirical grounding for the verb-echo generalization. It is also important to highlight that the word order effect was achieved against the high choice rate for the *old* agreement. Finally, no effect of presence or absence of the auxiliary was observed (z=-0.50, p=0.63).

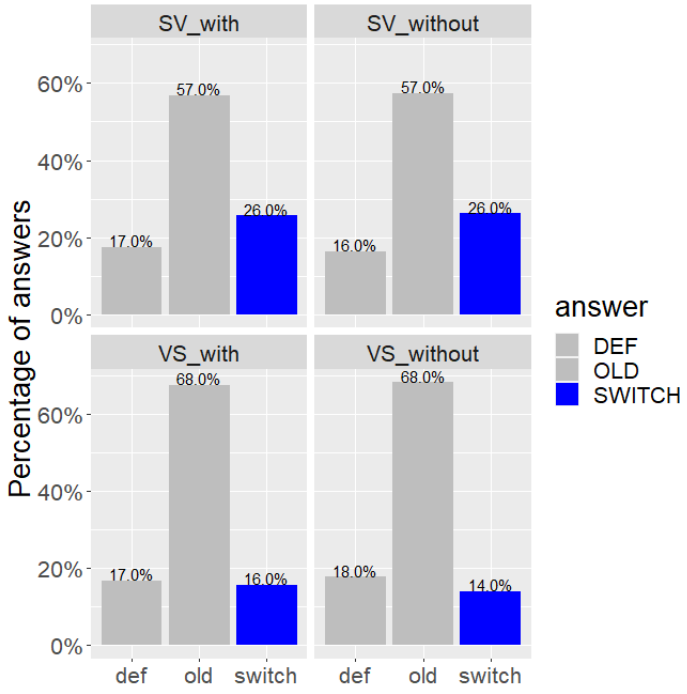


Figure 1: Switch agreement in the SV and the VS word order (Willer-Gold et al. in preparation): Three-alternative forced choice experiment (n=225). Switch agreement is produced significantly less in verb-echo answers to VS polar questions (bottom) than it is to verb-echo answers to SV polar questions (top), irrespective of the presence of the auxiliary ('with' or 'without') in the answer (from 26% to 15%; z=-9.78, $p < .001$).

An additional analysis was performed on the data presented in Willer-Gold et al. (in preparation), where a conservative criterion was employed to sample participants whose mean value for switch agreement in the VS condition was lower than 10%, that is at error rate in production studies (see, e.g., Franck et al. 2008 for Romance, Badecker and Kuminiak 2007 for Slavic). The application of this criterion yielded a group of 110 native speakers from the six South Slavic varieties, which represented 49% of participants from the original sample (n=225). The results for this group of native speakers show an even stronger main effect of word order, with a steeper reduction in the choice rate for *switch* agreement in the VS condition (from 27.5% to 2.5%; z=-10.808, $p< .001$), as indicated by the blue-colored bars in Figure 2. This group of participants exhibits the patterns re-

flected by the verb-echo generalization.

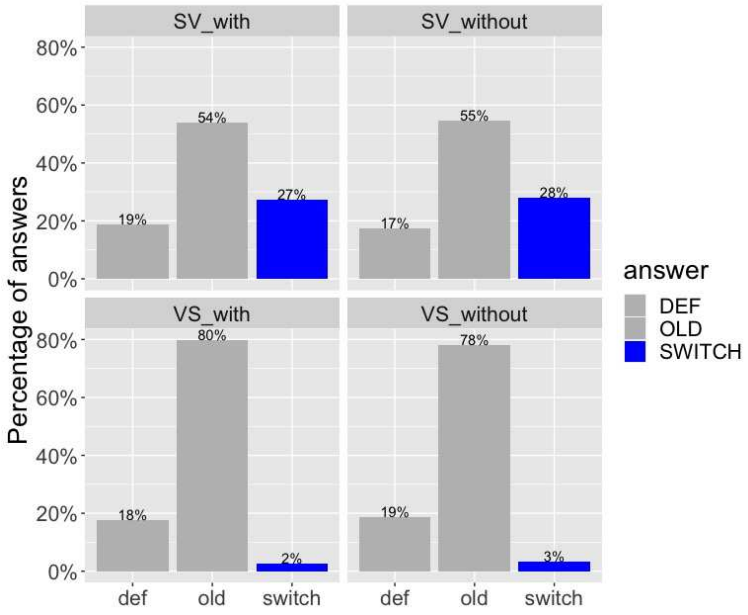


Figure 2: Switch agreement percentages in the data sample from Willer-Gold et al. (in preparation): Three-alternative forced choice experiment, group analysis (n=110), in the presence or absence of the auxiliary ('with' or 'without') . Native speakers with <10% switch agreement in the VS condition; difference between SV and VS from 27.5% to 2.5%; z=-10.808, $p < .001$.)

The other group of native speakers with switch agreement in the VS condition higher than 10% (n=115, 51%) conflates three groups of participants. The first group still manifests the word order effect expected by the verb-echo answer generalization, with a higher choice rate of switch agreement in the SV than the VS condition (n=31, 13% of the participants).

The second group chose to an equal ratio between old and switch (across the four conditions) (n=28, 12%), and the third group consists of participants with a 'reverse' verb-echo generalisation pattern, with a higher choice rate of switch agreement in the VS than the SV condition (n=56, 24%).

Let us consider the latter group. It is possible that this 'reverse' pattern arises as a result of substituting the actual VS antecedents with accommodated SV antecedents (for

discussions of accommodation, a phenomenon still not fully understood, see, e.g., Lewis 1979, Fox 1999, Thoms 2015, a.o.), coupled with a preference for closest conjunct agreement both in SV and in VS structures (where highest/closest conjunct agreement is the only option). In the experimental design, all SV antecedents had last conjunct agreement. Thus, if accommodation from a VS antecedent to an SV antecedent indeed happened to some speakers, a preference for closest conjunct agreement would predict higher levels of agreement switch for VS antecedents than for SV antecedents. Another possibility, more plausible, regarding the latter two groups is that the non-compliance with the generalization results from a confound in the experimental design. Namely, word order changes, as well as prosody, in South Slavic typically affect information structure. Since the prompt in this experiment was written, it is possible that the task required was not sufficiently contextually constrained for some speakers, which might have led them to either choose consistently the option that reflects the neutral word order, namely SV (with a preference for closest conjunct agreement), or to randomly choose between old and switch options.

As part of the same experimental study, an acceptability judgment task was designed to collect naturalness judgments (Likert scale 1–7) for the agreement procedures in verb-echo answers to polar questions with native speakers (n=167) of the same six South Slavic varieties (Ristić et al. submitted). A 2x2x2 design manipulated the word order [SV,VS] in the polar question, the gender combination of the two conjuncts [M(asculine)M(asculine), N(euter)F(eminine)], and the agreement on the verb in the answer [old, switch], with 24 items per condition, resulting in 96 [NF] and 96 [MM] experimental items for BCS and Slovenian, exemplified in (34), in which the NF gender combination is crossed with the VS word order in the question with the *switch* agreement in the answer.

(34) *VS order*

A: Jesu li izložena ogledala i lampe u trgovini?
AUX.PL Q displayed.N.PL mirrors.N.PL and lamps.F.PL in shop
'Are mirrors and lamps displayed in the shop?'

B: Nego što nego, izložene su.
indeed displayed.F.PL AUX.PL
'Indeed, they are (displayed in the shop).'

Neuter or feminine gender were used on the verb in the answer to indicate switch in agreement relative to the agreement on the verb in the question. Notably for [MM], this entailed that in the [switch] condition, the gender agreement on the verb in the answer (feminine or neuter) mismatched not only the gender agreement on the verb in the question but also the gender of the two masculine nouns in the conjoined subject resulting in ungrammatical agreement, exemplified in (35), by crossing the MM gender combination and the VS word order in the question with the feminine switch agreement in the answer.

(35) *VS order*

A: Jesu li uključeni kompjuteri i mobiteli u
AUX.PL Q plugged.M.PL computer.M.PL and mobile phone.M.PL in
struju?
electricity
'Are computers and mobile phones plugged in?'

B: *Nego što nego, uključene su.
indeed plugged.F.PL AUX.PL
'Indeed, they are (plugged in).'

The MM conditions were designed to provide a grammaticality baseline (MM*old=grammatical, MM*switch=ungrammatical) against which to evaluate the grammaticality of switch agreement answers to the VS word order in the polar question in the NF conditions (NF*switch*VS). The experimental items for [NF] were those used in the forced-choice experiment, and the experimental items for [MM] were created for the purposes of this experiment.

In line with the results from the previous studies, *switch* agreement in the verb-echo answer is predicted to be given a significantly lower rating than *old* agreement; and, more to the point, *switch* agreement in the answer to the VS polar question is predicted to be rated significantly lower compared to *switch* agreement in response to the SV polar question. The latter prediction is primarily expected to hold for the [NF] conditions, as the word order contrast is expected to collapse for the [MM] condition with grammaticality being the only relevant contrast in this condition.

The results confirmed these predictions with the main effect of word order found for the [NF] combination of conjuncts (and not the [MM] conditions), showing a significant reduction in naturalness for the switch agreement in the VS (blue bars) compared to the SV (grey bars) polar question (from 3.39/7 to 3.15/7; $z=4.06$, $p<.0001$), as indicated in Figure 3.

An 'index of preference' measure was calculated in confirmation of the word order effect and to establish a measure for a more direct comparison of the ungrammatical agreement in the MM condition and switch agreement in the SV and VS word order. The index of preference absorbs the contrast of the switch agreement rated higher in SV than VS (and the reverse for old agreement—higher rates in VS than SV). The calculated index of preference for the MM condition served as a baseline against which to directly contrast the NF VS condition, (NF VS) index of preference, and the NF SV condition, (NF SV) index of preference. The index of preference was calculated by subtracting the rating for [switch] from the rating for [old] per condition for each item *averaged over partici-*

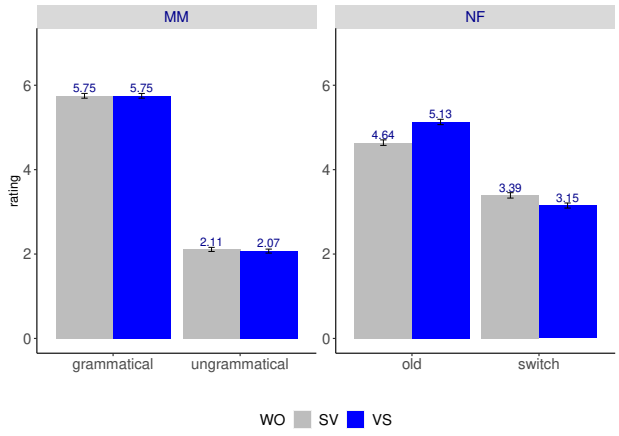


Figure 3: Switch agreement in the SV and the VS word order (data presented in Ristić et al. submitted): Acceptability judgment experiment (n=167). Switch agreement is rated significantly lower in verb-echo answers to the VS polar question (blue bar) compared to the SV (grey bar) polar questions for [NF] gender combinations of plural conjuncts (3.39/7 to 3.15/7; z=4.06, p<.0001.)

pants. The analysis showed a significant contrast between the NF VS condition (grey bar) (z value= 9.54, p<.0001) and the NF SV condition (blue bar) (z value= 14.569, p<.0001) compared to the MM condition (green bar), but, crucially, also between the two NF conditions (z value= - 5.16, p<.0001), restating the word order effect (see Figure 4).

In sum, in testing the choice rates and naturalness judgements for switch agreement in verb-echo answers to polar questions in a series of experiments, the main effect of word order was found in the forced choice (Willer-Gold et al. in preparation) and the acceptability judgment (Ristić et al. submitted) experiments. This word order effect indicated significantly lower production and naturalness of switch agreement (*distal* agreement) in answers to VS questions, providing strong empirical support for the verb-echo agreement generalization.

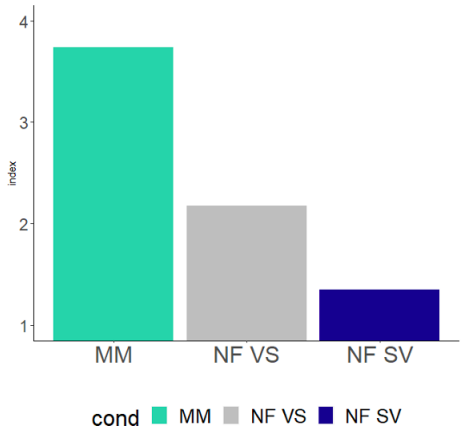


Figure 4: Switch penalty index: Acceptability judgment experiment (n=167). The switch penalty index for the NF VS condition (grey bar) (z value= 9.54, p<.0001) and the NF SV condition (blue bar) (z value= 14.569, p<.0001) is significantly lower than the switch penalty index for the MM condition (green bar), but the NF VS condition (grey bar) is significantly higher than the switch penalty index for the NF SV condition (blue bar) (z value= -5.16, p<.0001).

4.2 Analysis in terms of Distributed Ellipsis

4.2.1. Proposal

Our goal is to account for the verb-echo agreement generalization (see (11) above), according to which the single-conjunct agreement options of verb-echo answers are those that are predicted to arise if the answer has the same word order as the antecedent question. Our proposal is that the baseline examples have the following representations:

(36) *VS order*

A: Jesu li izložena [ogledala i lampe] u trgovini?
AUX.PL Q displayed.N.PL [mirrors.N.PL and lamps.F.PL] in shop
'Are mirrors and lamps displayed in the shop?'

B Da, izložen-a/*-e su [$_{VP}$ *t* [ogledala i lampe] u
yes displayed-N.PL/-*F.PL AUX.PL [$_{VP}$ *t* [mirrors.N.PL and lamps.F.PL] in

~~trgovini]~~.

~~shop]~~

'Yes, they are (displayed in the shop).'

(37) *SV order*

A: Jesu li [ogledala i lampe] izložena u trgovini?

AUX.PL Q [mirrors.N.PL and lamps.F.PL] displayed.N.PL in shop

'Are mirrors and lamps displayed in the shop?'

B: Da, ~~[ogledala i lampe]~~ izložen-a/-e su ~~[$_{VP}$ *t t* u~~

yes ~~[mirrors.N.PL and lamps.F.PL]~~ displayed-N.PL/-F.PL AUX.PL ~~[$_{VP}$ *t t* in~~

~~trgovini]~~.

~~shop]~~

'Yes, they are (displayed in the shop).'

The position of the subject in relation to the participial verb in the answer is the same as that in the question. (Participle movement is to a position below the auxiliary; the surface placement of the auxiliary in these examples is due to subsequent encliticization, as mentioned earlier above example (22).)

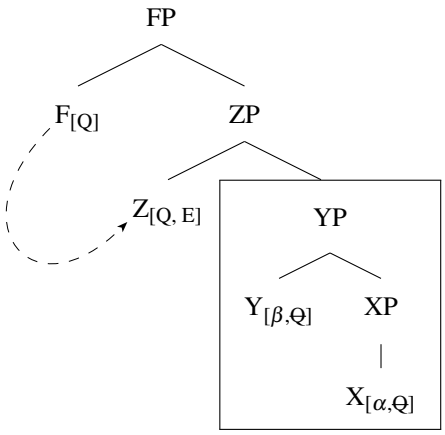
Apart from Agree-Link and Agree-Copy, there are three operations interacting in these examples, namely, verb movement, VP ellipsis and subject raising, which, we argue, apply in this specific order. The VS example in (36) is straightforward. V vacates the VP before ellipsis, and since the subject stays inside the VP, in a post-verbal position, only first conjunct agreement is possible. That is, agreement cannot switch. However, in (37) the subject rises after VP ellipsis, and hence, at the point of the derivation when ellipsis applies, it is inside the ellipsis site. The pre-verbal subject is thus not elided independently, which we have shown to be impossible in BCS and Slovenian in Section 3; it lacks

pronunciation by virtue of being inside the VP when VP ellipsis takes place. From the pre-verbal position in [Spec,TP], the subject &P, while bound to remain silent, can now nevertheless feed closest/last conjunct agreement when Agree-Copy follows Linearization. When Agree-Copy precedes Linearization, the lower copy of &P inside VP feeds highest/first conjunct agreement, and hence agreement switch is possible.[11]

The explanation of this pattern has three ingredients, which we spell out in the remainder of this section. The first ingredient is rooted in the nature of ellipsis itself. The second is related to the timing of the relevant operations, and the third concerns the identity condition on ellipsis, which has to be sensitive to some degree of syntactic isomorphism.

Implementation of ellipsis We adopt the Q-deletion approach to ellipsis (Saab 2022), which we call Distributed Ellipsis, in combination with Aelbrecht's (2010) licensing mechanism via Agree between the licensor and the head bearing the [E] feature (cf. Merchant 2001, who however models ellipsis as PF deletion and [E] as imposing the mutual entailment condition at LF, neither of which are adopted by Saab 2022). In this implementation, Vocabulary Insertion replaces Q-variables on syntactic terminals in PF (Halle 1991, Embick 2015), and ellipsis is a syntactic operation that deletes Q-variables, thus bleeding lexical insertion in the PF cycle. To illustrate, in a configuration such as (38), where F is the licensor head and [E] is a feature on Z, the Q-variables in its complement, YP, are deleted in the syntax, as a result of which only Z and F, whose Q-variables are intact, are targeted by Vocabulary Insertion.

(38)



Timing of operations Since Q-deletion does not implicate either obliteration of the whole syntactic terminals or any further tampering with their morphosyntactic features, Q-less elements are still available to other grammatical operations, both in the narrow syntax and in the PF-cycle (though see Lipták and Saab 2016 for further discussion on the interaction between ellipsis sites and morphological operations). We contend that this flexibility is exactly what is behind the observed single conjunct agreement patterns, and in particular the possibility of agreement switch in verb-echo answers with SV antecedents. Namely, we suggest that the elided argument loses its Q-variables in the syntax as part of VP ellipsis before being promoted to the subject position in the case of the SV structure (see Park 2017, Park 2023, and Stigliano 2022 for analyses of other elliptical phenomena along these lines). Being morphosyntactically active, the subject is thus an eligible target for Agree-Link in the syntax and Agree-Copy in PF, identically to what would be the case if ellipsis had not applied. As we demonstrate below, the ordering of the syntactic operations involved in deriving the patterns (V-to-Part movement, ellipsis (as Q-deletion), and subject &P raising) can be deduced from the successive merge of the heads triggering these operations in the clausal spine.

Identity condition on ellipsis The verb-echo agreement generalization implies that the word order in the elliptical answer parallels the word order in the question, as otherwise

no asymmetry in the agreement patterns is expected to arise (the SV order in the answer to a VS question could feed last conjunct agreement). We take this effect to follow from a syntactic identity condition on ellipsis which requires parallelism at Spell-out, as formulated in (39) (see Chomsky 1965, Lasnik 1995, Saab 2008, 2022, Tanaka 2011, Ranero 2020, Stigliano 2022 for related approaches; our definition here is closely related to Structure Matching as proposed by Rudin 2019, 258).

(39) **Syntactic identity condition:** At Spell-out of a domain *d*, every syntactic head X without a Q-variable must have an identical correlate Y in an antecedent domain *d′* such that X and Y are in the same syntactic position. (X and Y are in the same syntactic position iff X and Y are dominated by the same projections in *d* and *d′* respectively.)

While space limitations preclude an in-depth discussion of evidence for some degree of isomorphism required in ellipsis and of potential cases of mismatches between the ellipsis site and its antecedent, we would like to locate (39) in the broader context of the literature on the identity condition and point to some relevant phenomena before we proceed. For example, the condition in (39) can potentially be extended to account for the following phenomena: case-matching between sluiced DPs and their correlates (Form-Identity Generalization I in Merchant 2001); Chung's Generalization (the *No New Words constraint*, see Chung 2006, Merchant 2015, Rudin 2019),[12] Warner's effects (Lasnik 1995); impossibility of voice mismatches in sluicing in contrast with VP ellipsis (Merchant 2013); the unavailability of argument structure mismatches (Merchant 2013); and vehicle change (Abels 2022).[13] For further relevant discussions of syntactic parallelism conditions on ellipsis, see also Fox and Lasnik (2003), Griffiths and Lipták (2014), and Thoms (2015).[14]

Importantly, in this formulation, inflectional features resulting from Agree-Copy are not evaluated by the identity condition, since they are inserted only in the PF-branch of the grammar, and, by that time, syntactic identity has already been calculated. This allows certain instances of morphological mismatches that have been documented in the literature (e.g., *John saw* **someone***, but Peter didn't* ~~*see*~~ ~~**anyone**~~; see Chomsky 1965, Lasnik 1995, Merchant 2013, a.o.). Other types of mismatches that do not arise from features added by Agree-Copy have also been argued to exist (e.g., finiteness mismatches and polarity mismatches). For these, different strategies have been proposed, such as: (i) limiting the identity condition to a specific portion of the structure (Rudin 2019, Anand et al. 2023); (ii) defining the identity condition in terms of non-distinctness instead of strict identity (Ranero 2020, see also Chomsky 1965); (iii) using label identity instead of strict identity (Saab 2022); and (iv) allowing accommodated antecedents (Thoms 2015, and references therein). Further research is clearly needed to arbitrate among these options.

Returning to (39) and the cases at hand, as this condition applies at Spell-out, it is evaluated separately from the application of Q-deletion, with movement applying in between potentially affecting the outcome. (39) applies to every node properly included in a domain with Q-less heads. It builds on previous work on syntactic parallelism in ellipsis, but, importantly, it applies also to Q-less constituents that have evacuated the constituent targeted by ellipsis, as shown below. Key for our purposes, (39) forces the position of the elided subject to match that of the antecedent:

(40) *SV question, SV answer required by (39)*

A: Jesu li lampe izložene u trgovini?
AUX.PL Q lamps.F.PL displayed.F.PL in shop
'Are lamps displayed in the shop?'
Jesu li [$_{TP}$ lampe$_2$ izložene$_1$ [$_{VP}$ t_1 t_2 u trgovini]]?

B: (Da,) izložene su.

yes displayed.F.PL AUX.PL

'Yes, lamps are displayed in the shop.'

(Da,) [$_{TP}$ ~~lampe~~$_2$ izložene$_1$ su ~~[$_{VP}$ t_1 t_2 u trgovini]~~]

(41) *VS question, VS answer required by (39)*

A: Jesu li izložene lampe u trgovini?

AUX.PL Q displayed.F.PL lamps.F.PL in shop

'Are lamps displayed in the shop?'

Jesu li [$_{TP}$ izložene$_1$ [$_{VP}$ t_1 lampe u trgovini]]?

B: (Da,) izložene su.

yes displayed.F.PL AUX.PL

'Yes, lamps are displayed in the shop.'

(Da,) [$_{TP}$ izložene$_1$ su ~~[$_{VP}$ t_1 lampe u trgovini]~~]

The approach to identity in ellipsis suggested here prevents overgeneration of agreement switch with VS antecedents not only due to restricting subject-verb ordering manipulations in the elliptical answer, but also by preventing the conjuncts inside the elided &P from being reshuffled. The order of the conjuncts in the antecedent must be maintained in the ellipsis site in the answer, as otherwise the restriction on the agreement options observed in VS would not be ensured, as illustrated in (42).

(42) a. Da, izložena su [$_{VP}$ *t* [ogledala i lampe] u

yes displayed.N.PL AUX.PL [$_{VP}$ *t* [mirrors.N.PL and lamps.F.PL] in

~~trgovini]~~.

~~shop]~~

'Yes, mirrors and lamps are displayed in the shop.'

b. Da, izložene su ~~[$_{VP}$ *t* [lampe i ogledala] u~~

yes displayed.F.PL AUX.PL ~~[$_{VP}$ *t* [lamps.F.PL and mirrors.N.PL] in~~

~~trgovini]~~.

~~shop]~~

'Yes, lamps and mirrors are displayed in the shop.'

An additional empirical argument supporting the requirement for the &P-internal matching in the antecedent and the elliptical structures comes from the agreement patterns observed with coordinations of three conjuncts, in which case the middle conjunct cannot be the source of the agreement values reflected on the verb (Marušič et al. 2015). For example, in (43), where a neuter conjunct is between feminine conjuncts, the agreement cannot be neuter.

(43) a. [$_{\&P}$ Molbe, rješenja i zahvalnice] su {

request.F.PL resolution.N.PL and appreciation.F.PL AUX.PL

ovjerene/ *ovjerena } pečatom.

verified.F.PL verified.N.PL by stamp

'Requests, resolutions and appreciation letters are verified by a stamp.'

b. Pečatom su { ovjerene/ *ovjerena } [$_{\&P}$ molbe,

by stamp AUX.PL verified.F.PL verified.N.PL request.F.PL

rješenja i zahvalnice].

resolution.N.PL and appreciation.F.PL

'Requests, resolutions and appreciation letters are verified by a stamp.'

The same holds of elliptical structures, which would not be predicted on the assumption that a reordering of the conjuncts in the ellipsis site is possible (the neuter conjunct in (44) could be merged as the highest or the lowest and could feed Agree-Copy, if syntactic isomorphism were not required here).

(44) A: Jesu li [$_{\&P}$ molbe, rješenja i zahvalnice]
AUX.PL Q request.F.PL resolution.N.PL and appreciation.F.PL
ovjerene pečatom?
verified.F.PL by stamp
'Are requests, resolutions and appreciation letters verified by a stamp?'

B: Da, { ovjerene su/ *ovjerena su }.
yes verified.F.PL AUX.PL verified.N.PL AUX.PL
'Yes. They are (verified by a stamp).'

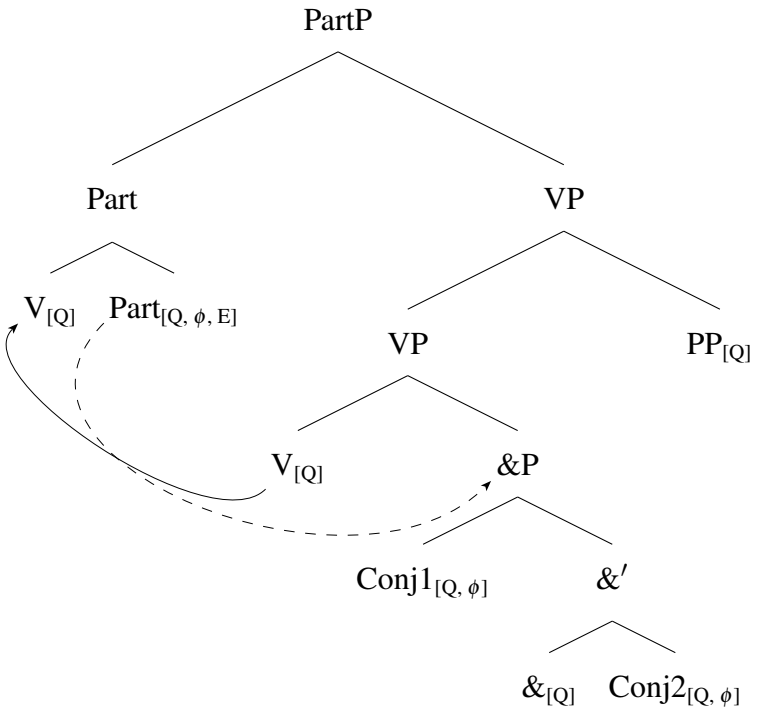
A final remark to make here concerns the position of the auxiliaries. We assume that they are generated in T and they are then placed in second position, following the participle, as a late prosodic inversion (see Bošković and Nunes 2007 and Ionova 2019; see also Migdalski 2016 for a discussion of alternative proposals). As in this study we are concerned with participial number and gender agreement with third person subjects, we do not discuss person/number agreement on the auxiliary.

In sum, an important outcome of the assumptions outlined above is that the patterns observed experimentally can be derived by combining previous analyses of the phenomena under discussion, namely the Q-deletion approach to ellipsis and the ordering of Agree-Link and Agree-Copy for single conjunct agreement. We now turn to our specific implementation, where each pattern of single conjunct agreement in verb-echo answers is discussed in detail.

4.2.2. Derivations

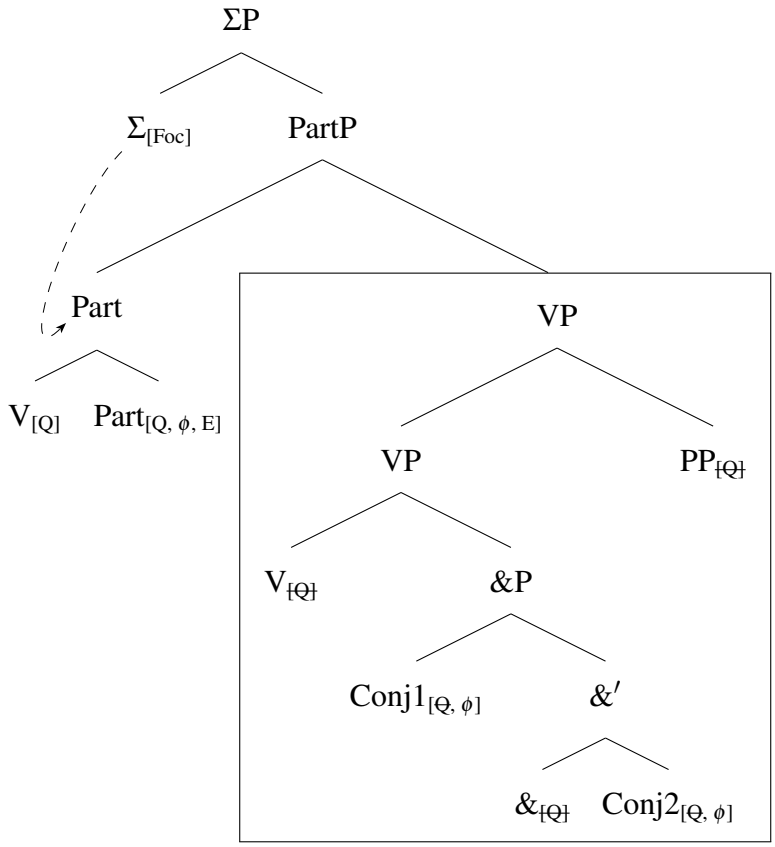
The representation in (45) presents the stage of the derivation where Part(iciple)P has been completed by merging the Part head with VP, containing V, the subject &P, and an adjunct PP.[15] The [ϕ] bundle on Part triggers Agree-Link, linking the probe with the &P, and V moves to Part (as we assume it does in non-elliptical structures in South Slavic too). All terminals bear the Q-variable, and Part is merged with an [E]-feature, which triggers Q-deletion in its complement once its licensor, a polarity head with a focus feature, is introduced into the structure:

(45) *Agree-Link between Part and &P, V movement to Part*



The next step is merging Σ, which introduces polarity focus and licenses VP ellipsis by Agree with the [E]-bearing Part, licensing the deletion of all Q-variables in its c-command domain, as illustrated in (46).

(46) *Agree between Σ and [E] on Part, Q-deletion inside the VP*



In VS structures, exemplified again in (47), the syntactic derivation is completed by merging the T and C heads, whose internal features we omit for the sake of the clarity of exposition.

(47) A: Jesu li izložena ogledala i lampe u trgovini?
AUX.PL Q displayed.N.PL mirrors.N.PL and lamps.F.PL in shop
'Are mirrors and lamps displayed in the shop?'

B: Da, { *izložene su/ izložena su/ izloženi
yes displayed.F.PL AUX.PL displayed.N.PL AUX.PL displayed.M.PL

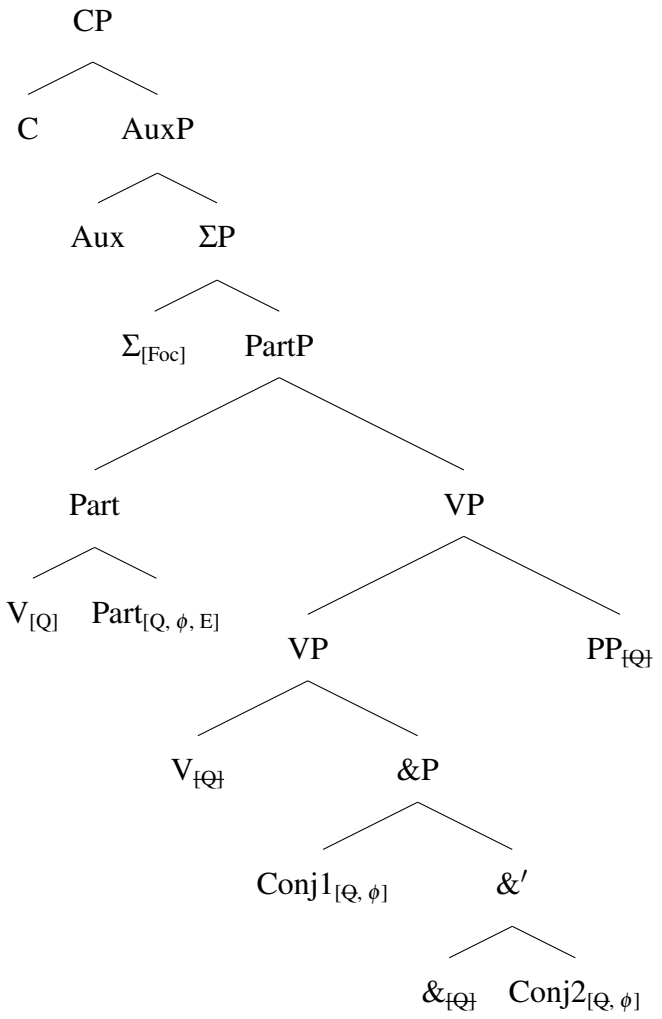
su }.

AUX.PL

'Yes. They are (displayed in the shop).'

In this case, when the syntactic structure is shipped off to PF, the first conjunct is both hierarchically highest and linearly closest to the probe (see (48)), which is why first conjunct agreement is available here, but last conjunct agreement is not.[16]

(48) *Verb-subject order: Agreement switch is impossible.*



(49) *Linearization of (48), following encliticization of Auxiliary:*

$V_Q \frown Part_Q \frown Aux_Q \frown Conj_{1\cancel{Q}} \frown \&_{\cancel{Q}} \frown Conj_{2\cancel{Q}} \frown P_{\cancel{Q}} \frown N_{\cancel{Q}}$

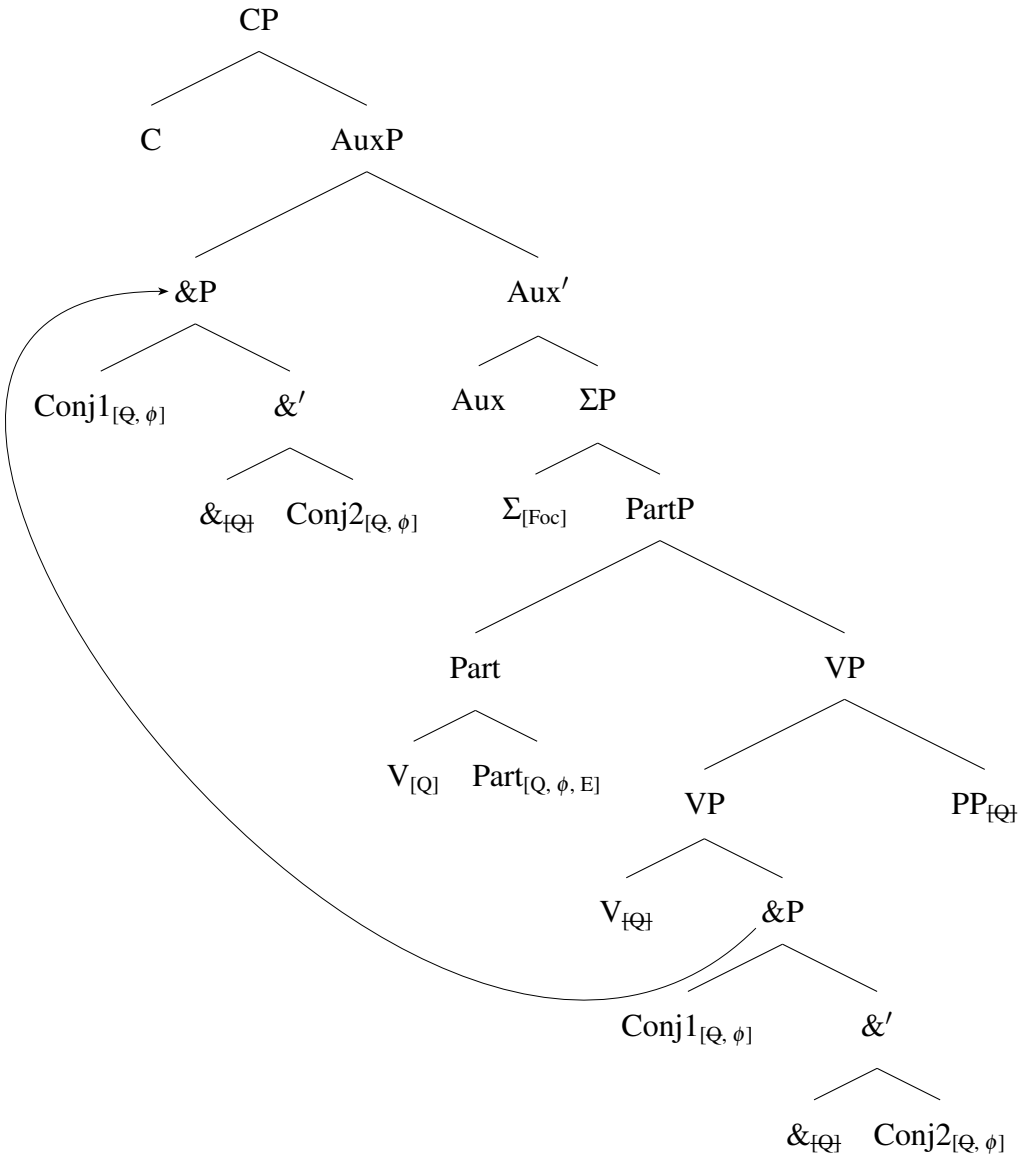
By contrast, the derivation of an SV structure, yielding data such as (50), involves the additional step of subject &P movement.

(50) A: Jesu li molbe i rješenja ovjerena pečatom?
AUX.PL Q request.F.PL and resolution.N.PL verified.N.PL by stamp
'Are requests and resolutions verified by a stamp?'

B: Da, { ovjerene su/ ovjerena su/ ovjereni su } .
yes verified.F.PL AUX.PL verified.N.PL AUX.PL verified.M.PL AUX.PL
'Yes. They are (verified by a stamp).'

In particular, when Aux is merged, &P moves to its specifier, as in (51), which is followed by the introduction of C.

(51) *Subject-verb order: Agreement switch is possible.*



(52) *Linearization of (51), following encliticization of Auxiliary:*

$Conj_{1Q\!\!\!/}{}^\frown\&_{Q\!\!\!/}{}^\frown Conj_{2Q\!\!\!/}{}^\frown V_Q{}^\frown Part_Q{}^\frown Aux_Q{}^\frown P_{Q\!\!\!/}{}^\frown N_{Q\!\!\!/}$

Since &P movement takes place after Q-deletion, &P is deprived of its Q-variables prior to movement (in contrast with V). From the pre-verbal position, the Q-less &P trig-

gers last conjunct agreement, if Agree-Copy of the gender feature takes place after Linearization. Last conjunct agreement thus requires that syntactic heads that have been deprived of their Q-variables participate in Linearization, so that they can feed Agree-Copy afterwards. Since these heads are present at PF when Linearization applies, typically before Vocabulary Insertion (Arregi and Nevins 2012, Embick 2010, 2015, a.o.), this is exactly what is expected, unless stipulated otherwise. As Agree-Copy preceding Linearization operates with c-command, if this ordering of operations obtains, it is the highest conjunct in the VP-internal copy of &P that values the gender feature of the participle.

Let us consider our account of the verb-echo agreement generalization in some more detail now. The first crucial aspect of our approach is that ellipsis, implemented in terms of Q-deletion here, must be primarily taken to be a syntactic operation rather than PF-deletion. This is so because Q-deletion and Internal Merge must be interleaved to derive verb-echo answers with last conjunct agreement. This interaction is a corollary of the proposal put forward in Saab (2022). Since last conjunct agreement can only obtain with pre-verbal subjects and since subjects cannot be elided independently in BCS and Slovenian, the subject loses its Q-variables by virtue of being inside the verbal projection affected by ellipsis, before moving to [Spec,TP]. From this position the Q-less subject can thus feed last conjunct agreement. In short, ellipsis sites must have a PF-cycle, so that last conjunct agreement can be obtained, and ellipsis and Internal Merge must be able to interrelate. The Q-deletion view of ellipsis, which we refer to as *Distributed Ellipsis*, can deliver these effects.[17]

As noted in subsection 4.2.1, the raising of a Q-less subject is only available if the antecedent also has a pre-verbal subject. We assume that this effect arises as a result of a syntactic identity condition on ellipsis, which also ensures that the order of the conjuncts is preserved, avoiding overgeneration of agreement switch when the antecedent question has a post-verbal subject. In the case of post-verbal subjects, the subject of the verb-echo

answer needs to stay in the elided verbal projection, matching the position of its correlate in the antecedent, and the order of the conjuncts cannot be reversed. We contend that this constraint restricts last conjunct agreement to structures whose antecedent question has a pre-verbal subject.

Before discussing the theoretical consequences of our proposal, we would like to touch briefly upon some cases where ellipsis does not deprive syntactic objects that evacuate the ellipsis site of their phonological features.[18] This includes, for example, sluicing and VP ellipsis in English:

(53) John ate something, but I don't know what ~~John ate *t*~~.

(54) a. *Mary thought John was seen, and, in fact, ~~he~~ was ~~seen *t*~~.

b. Mary thought John was seen, and, in fact, he was ~~seen *t*~~.

Just like in verb-stranding ellipsis discussed above, the answer resides in the timing of Q-deletion. In particular, *wh*-movement and subject raising in English precede Q-deletion. To make this idea concrete, we can assume that Q-deletion is licensed after all other features on the licensing and [E]-bearing heads have been satisfied. Hence, the satisfaction of [wh] in C and [EPP] in T takes precedence over Q-deletion triggered by [E] (see, e.g., Müller 2010, Georgi 2013, Stigliano 2022 for analyses based on feature ordering). Since [wh] takes precedence in (53), the *wh*-phrase will already have evacuated the TP when ellipsis applies. Similarly, the requirement that the subject move to [Spec,TP] is fulfilled first in (54), letting the subject escape the ellipsis site.

The situation in answers to polar questions in BCS and Slovenian is different in that neither the licensor (i.e., Σ) nor the [E]-bearing head (i.e., Part) imposes requirements concerning the movement of the subject, which therefore moves to [Spec,TP] in SV structures after its Q variables have been deleted. Still, when the head licensing VP ellipsis in

these languages is also T, as is plausibly the case in auxiliary-stranding ellipsis, the subject is overt here as well, lending support to the approach suggested here:

(55) a. Marko je pio pivo, a Marija nije.
Marko AUX drunk beer and Marija NEG.AUX
'Marko was drinking beer, but Marija wasn't.'

b. Marko nije pio pivo, ali Marija jeste.
Marko NEG.AUX drunk beer but Marija AUX
'Marko wasn't drinking beer, but Marija was.'

In the case of sluicing and contrastive structures such as (55), another factor which enforces the application of movement before ellipsis is that the *wh*-phrases and contrastive subjects typically require prosodic prominence and as such cannot be positioned within ellipsis sites. Both *wh*- and subject movement can thus precede ellipsis, if this is required by independent properties of the grammar (a PF-based explanation of the [EPP] effect in English may also be available, if, as suggested by a reviewer, one adopts the view that the [EPP] belongs to the PF branch of the grammar (see, e.g., Landau 2007, Sigurðsson 2002, and McFadden and Sundaresan 2018 for different approaches along these lines), in combination with the assumption that BCS and Slovenian, being consistent *pro*-drop languages, lack [EPP] or satisfy it by rich agreement inflection in T (see, e.g., Barbosa 1995, Alexiadou and Anagnostopoulou 1998, Landau 2007)).

5 Theoretical consequences and discussion of alternative models

There is a longstanding debate on the nature of ellipsis, and the choice among different approaches depends on balancing different types of evidence, conflicting at times, as well as theoretical commitments; indeed, nothing excludes the possibility that different types

of elliptical constructions are built with different devices. This article contributes to this debate, with the verb-echo agreement generalization aligning well with the Distributed Ellipsis framework, and remaining difficult to accommodate within alternative approaches to ellipsis, unless they include further stipulations about when agreement switch is or is not possible.

In particular, in the Direct Interpretation approaches and related frameworks, the meaning of ellipsis sites is recovered without resorting to complex unpronounced syntactic structure (see, e.g., Lobeck 1995, Ginzburg and Sag 2000, Culicover and Jackendoff 2005, Nykiel and Kim 2021). However, the verb-echo agreement generalization, the core empirical contribution of this article, strongly suggests that verb-echo answers have regular unpronounced syntactic PF structure in the ellipsis sites, and that Internal Merge can be interleaved with ellipsis. Without these analytical devices, it is hard to see how one would account for the observation that switch agreement is possible in answers to SV questions, but not in answers to VS questions. Agreement possibilities in verb-echo answers have been shown here not to dependent solely on the surface verbal morphology of the antecedent verb, but instead on the agreement possibilities that the antecedent clause provides given the verb-subject ordering. Clearly, this effect cannot be reduced to morphological priming. The analysis of verb-stranding VP ellipsis which we advocate for verb-echo answers in South Slavic is already inconsistent with these approaches, as the verb is moved from within the ellipsis site, which calls for a derivational approach to ellipsis, with ellipsis sites being fully represented in the syntax.

On the other hand, syntactic approaches typically posit fully-specified complex LF representations that lack a PF realization. This line of research has several incarnations and not all of them are fit to account for the verb-echo agreement generalization. In some of these analyses, LF structures corresponding to ellipsis sites are built counter-cyclically after spell-out, basically by copying the antecedent and pasting it in the ellipsis site (Fiengo

and May 1994, Chung et al. 1995, Oku 1998; see also Landau 2022 for a related approach). Details aside, what is crucial here is that in this type of analysis, ellipsis sites are not associated with a PF representation. If accounting for the verb-echo agreement generalization requires ellipsis sites to have unpronounced PF representations, as we have argued, these analyses also fall short.

Another set of syntactic approaches takes ellipsis to apply in the syntax proper, either by pruning the structure (Ross 1969) or by a null spell-out of sorts that renders ellipsis sites unavailable for further computations (Aelbrecht 2010, Sailor 2018, 2021, Murphy and Müller 2022).[19] This type of analysis is too strict to account for the sub-portions of the ellipsis site both being targeted by Internal Merge and feeding Agree-Copy in PF (see especially last conjunct agreement in verb-echo answers, discussed in the preceding section).

The next type of the syntactic approaches to ellipsis is PF-deletion (see, e.g., Merchant 2001, Lasnik 1995, a.m.o.), which faces two problems in the present context, if the pruning of a syntactic constituent is indeed implicated. For last conjunct agreement in SV, Agree-Copy has to apply after Linearization to target the linearly closest conjunct to the probe. This means that the morphosyntactic features of the conjunct and the probe must still be available, before the pruning of the VP obtains. However, if Linearization implicates structure flattening (Uriagereka 1999, Marušič et al. 2015, a.o.), the structural description of deletion is no longer available. That is, ellipsis cannot target constituents (e.g., VP, TP), because this information has been lost in the Linearization/flattening process preceding it. While in principle one could try to mitigate this issue by assuming that Linearization does not implicate the loss of structural information (Fox and Pesetsky 2005), the second problem for PF-deletion is more serious. Namely, by placing ellipsis in PF, constituents properly included in the ellipsis site cannot be affected by Internal Merge, which belongs to the narrow syntax. In our analysis, subjects that have been elided by

virtue of belonging to a verbal projection that undergoes ellipsis must be able to move to the pre-verbal position. If ellipsis applies in PF, this particular movement should not be possible (see also footnote (i)).

By contrast, in the analysis couched in terms of Distributed Ellipsis (Saab 2022), ellipsis is simply deletion of a lexical Q-variable, which would otherwise receive phonological realization in PF. Ellipsis, *qua* deletion of Q-variables in the syntax, bleeds Vocabulary Insertion in PF, and allows Q-less elements to be re-merged in the structure. As noted in the Introduction, the idea that ellipsis results from the lack of Vocabulary Insertion has already been suggested by Wasow (1972) and Bartos (2000), among others, and the claim that an elided constituent can still be a target of movement can be found in Abels (2012) and Park (2017, 2023). That this should be the case is in fact predicted by the mechanics of Distributed Ellipsis, which offers exactly the type of flexibility that accounting for the verb-echo agreement generalization requires. The experimental data presented above thus provide strong empirical support for this model of ellipsis.

Another important implication of the availability of agreement switch with pre-verbal &Ps and its unavailability with post-verbal &Ps is that a purely semantic identity condition on ellipsis is insufficient (*pace* Merchant 2001, Abels 2017). Furthermore, while supplementing a semantic identity condition with a lexical requirement helps in some cases (e.g. NONEWWORDS, *John is jealous, but I don't know *(of) who*), it is not enough either (*pace* Chung 2006, Merchant 2013), because it would in principle allow reshuffling the relative order of the conjuncts inside the subject &P in the ellipsis site. Clearly, approaches that impose a stricter structural matching condition between the antecedent and the ellipsis site, at least in some domains, are better suited to account for the present data set (Chomsky 1965, Lasnik 1995, Tanaka 2011, Rudin 2019, Ranero 2020, Saab 2022).

6 Conclusion

As van Craenenbroeck and Merchant (2013) point out, agreement has not played much role in the debate about the abstractness of syntactic representation in the ellipsis site. In this article, we follow Ross's (1969) line of reasoning, combining ellipsis with novel observations and advancements in the domain of agreement, in particular regarding single conjunct agreement, which point to the division of labor between syntax and PF in this domain. We have shown that constituents properly included in the ellipsis site can undergo Internal Merge in the narrow syntax, and they can participate in PF processes from the derived position, outside the constituent undergoing Q-deletion, or else the verb-echo agreement generalization cannot be accounted for. To our knowledge, the idea that Internal Merge and ellipsis can be interleaved was first suggested in Abels (2012), and has recently been independently argued for in Park (2017, 2023). Most approaches to ellipsis do not allow this kind of flexibility. However, the Distributed Ellipsis approach does. On this account, ellipsis is the result of the interaction of operations belonging to different components of the grammar (morphosyntactic features in lexical heads, Vocabulary Insertion in PF, and deletion of Q-variables in the syntax), opening the door for the type of interaction with single conjunct agreement that is needed to account for the verb-echo agreement generalization. Pursuing this Distributed architecture further may yield future research that will unveil other phenomena that require constituents properly included in the ellipsis site to be available to both syntactic and PF operations.

The analysis offered here also contributes to the debate on the identity conditions on ellipsis, showing that ellipsis requires at least some degree of syntactic isomorphism, and thus that a purely semantic identity condition cannot suffice. The interaction between ellipsis and agreement is thereby placed back at the forefront of debates about the nature of ellipsis, and, more broadly, the architecture of the grammar, as both Distributed Agree and

Distributed Ellipsis require a highly derivational system in which numerous grammatical operations can interact with precise timing.

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Notes

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[1]Evidence that single conjunct agreement is genuinely with a DP, and does not arise from clausal coordination plus ellipsis of only one of the conjoined verbs can be found in Arsenijević et al. 2020.

[2]There are conditions on single conjunct agreement in South Slavic which we do not discuss in detail here. Specifically, single conjunct agreement is in general restricted to inanimate plural conjuncts. We refer the reader to Marušič et al. (2015), Willer-Gold et al. (2016) and Willer-Gold et al. (2018) for further discussion of the data and their analysis. Accordingly, in this paper we restrict the discussion to inanimate plural conjuncts, where single conjunct agreement is possible.

Additionally, focusing on Slovenian, Marušič et al. (2015) divide speakers into two groups depending on whether they accept single conjunct agreement or not. As our focus in this paper is on single conjunct agreement, this dialectal variation will not be discussed here either. We refer the reader to Marušič et al. (2015) for further discussion of the experimental data and a technical implementation of these grammars.

[3]While this issue requires further research, this type of a multiple link within &P may be needed for T to be able to assign case to the conjuncts.

[4]A natural condition to impose on this procedure is that the features supplied to the probe from these two sources do not mismatch, resulting in conflicting number specifications. Conflicting grammatical instructions often lead to unacceptability (see, e.g., Fox and Pesetsky 2005, Mendes and Nevins 2022, Mendes and Kandybowicz 2023, among others; see also McGinnis 2004 on Lethal Ambiguity.). Since number computation in &P typically results in plural, single conjunct agreement is also restricted to plural conjuncts, providing a handle on Marušič et al.'s (2015) *Consistency Principle*, which restricts single conjunct agreement to conjuncts that match the number feature of &P by stipulation (see Hiraiwa 2001, Nevins 2007 and Nevins 2011 for similar effects and proposals in the domain of Multiple Agree).

[5]For the sake of exposition, we omit functional projections in these derivations.

[6]A distinct, syntax-only approach to single conjunct agreement patterns in BCS has been offered by Murphy and Puškar (2018), for whom single conjunct agreement is entirely the result of asymmetric Agree taking place within the &P, which subsequently supplies the &P-level gender feature for the participial probe . Though we cannot provide an in-depth discussion of their approach here, we would like to point out two reasons to reject their system in favor of ours. The first reason, a conceptual one, is the unnecessary use of global constraints (Lakoff 1970). In particular, Murphy and Puškar's analysis depends on two constraints of this type, one demanding that the ordering of operations from the initial cycle of the derivation be the same in subsequent cycles and the other demanding the operation Move to have an effect on the output. The second reason is empirical. In their analysis, single conjunct agreement is a by-product of asymmetric Agree within the &P targeting one of the conjuncts. Feature copying targets &P, specified for gender, and not individual conjuncts. The system struggles with (though can be made to handle) the known pattern of *sandwiched agreement* in Slovenian (see (i); see Marušič et al. 2007, Marušič et al. 2015, Marušič and Nevins 2020), where

two gender probes target different conjuncts, which implies that &P itself doesn't have a gender feature. If feature copying targets gender specified on &P, the difference in gender agreement on the verbal elements requires further stipulations.

(i) Včeraj so **bile** [krave in teleta] **prodana**.
yesterday AUX been.F.PL [cow.F.PL and calf.N.PL] sold.N.PL
'Yesterday cows and calves were sold.'

For further comparisons of this syntax-only approach to CCA with the Distributed Agree approach, see Shen (2023) and Zeller et al. (in preparation).

[7]For the sake of exposition, we mostly present examples from BCS; as mentioned in the introduction, Slovenian patterns in the same way in all relevant respects.

[8] There seems to be some disagreement about the judgments among BCS speakers for the equivalents of (23)–(24), which requires further research.

[9]According to Landau (2022), in argument ellipsis, *pro* is base-generated in the position of the argument gap, constraining its distribution, and the antecedent is then copied to that position after Transfer. The correct analysis of argument ellipsis is orthogonal to the point which we explore here.

[10]While the question is more natural with the preposition *po*, whose function is to introduce the distributive interpretation explicitly, omitting it is also possible. An alternative way to answer this question, perhaps more natural, is *Da, većina (semantičara) je (objavila (po) dvije knjige)* 'yes majority.SG.F (of semanticists) AUX.3SG (published.SG.F (PREP) two books)', which parallels our English translation.

[11] The current proposal that Agree-Copy can target the lower copy of the subject departs from Marušič et al.'s (2015) original implementation in the interest of maintaining the assumption that Agree is based solely on c-command prior to Linearization.

Notice also that if verb-echo answers in South Slavic could be derived by a verb-stranding TP ellipsis derivation, an analytical option widely adopted in the literature (Holmberg 2016, Gribanova 2017, Mendes 2020, among others), even when the antecedent is an SV question, the possibility of agreement switch would also be predicted, as head movement would flip the order of the subject and the verb:

(i) Verb ~~[$_{TP}$ subject *t*]~~

While this is an interesting result, it founders when it comes to the verb-echo agreement generalization. In particular, if the derivation in (i) were the only option responsible for single conjunct agreement, then first conjunct agreement would be predicted to be the *only* available pattern, contrary to fact.

In this connection, a reviewer poses the interesting question about how this line of reasoning is affected under the assumption that head movement applies at PF rather than in the narrow syntax. On the one hand, making this assumption while retaining the Distributed Agree approach to single conjunct agreement would force the problematic stipulation that head movement can apply after the structure has been linearized. In particular, starting with the necessary assumption that ellipsis allows for overt realisation of an element which has moved outside the ellipsis site (unlike what is the case on the Q-deletion approach), deriving second conjunct agreement, available with SV antecedent questions, would require the following ordering of operations applying to an SV structure at PF:

(ii) a. Linearization $\prec$ Agree-Copy (copying the features of $Conj_2$)

b. Agree-Copy $\prec$ V-to-C movement (V escapes the ellipsis site)

c. V-to-C movement $\prec$ TP deletion (instruction blocking Vocabulary Insertion for TP-internal terminals)

d. Vocabulary Insertion applies only to V (second conjunct agreement in the

V-echo answer)

On the other hand, giving up the Distributed Agree approach and taking single conjunct agreement to be established purely syntactically could derive the desired result via TP ellipsis within the standard architecture of the grammar; however, an adequate account of the South Slavic agreement patterns purely within the narrow syntax is currently lacking (see Section 2.2).

[12]A reviewer asks how the identity condition in (39) can account for sprouting, in which a copy of a *wh*-phrase within the ellipsis site lacks a correlate in the antecedent, e.g.:

(i) John ate, but I don't know what ~~John ate *t*~~.

Recall that we assume in Section 2 that copies created by Internal Merge are obliterated in PF by Chain Reduction. The reviewer points out that in the narrow syntax, the lower copy of *what* in (i) is still present (in the trace position) and it does not have a correlate when the identity condition applies, a configuration that should be blocked by (39).

The basic intuition in most studies that assume syntactic identity is that the lower copy is exempt because it can be deleted independently as a lower member of a chain (see Merchant 2013, Rudin 2019, Ranero 2020, Saab 2022, a.o.). The question thus is how to make this idea compatible with our assumptions. One way would be to assume that merging *what* internally outside of the ellipsis site in examples like (i) is enough to exempt the lower copy from the identity evaluation of the elided TP. Another possibility would be to place the identity condition in PF, so that it applies after Chain Reduction, when the lower copy of the *wh*-phrase has been obliterated. Other possibilities may be conceivable, depending on assumptions about how multiple copies created by Internal Merge are approached.

[13]The identity condition in (39) is consistent with the analysis proposed in Saab (2008) for vehicle change (e.g., *Mary loves John$_1$, and he$_1$ thinks that Sally does* ~~*[$_{VP}$ love {him$_1$/*John$_1$}]*~~

too; Fiengo and May 1994, 220). Pronouns are assumed to be D-heads, also present in DPs headed by R-expressions (see also Postal 1966, Elbourne 2001, Huang and Mendes 2019) (e.g., R-expression: [$_{DP}$ $D_{[MASC,SG]}$ John]; pronoun: [$_{D}$ $D_{[MASC,SG]}$]). See also Abels (2022) for further discussion.

[14]A reviewer raises the intriguing possibility of relating our parallelism condition to the observation in Fox (1995) that quantifier scope of subjects is frozen in the antecedent clause of VP-ellipsis sites out of which the subject has moved:

(i) A Canadian flag is in front of every building, and an American flag is, too.

A potential application of (39) to (i) could rest on the assumption that ellipsis of the phrase *every building* in its narrow scope position can only be licensed if the antecedent quantifier remains in the same narrow scope position. We leave the development of (39) with respect to scope-changing operations for future research; similar remarks apply to the analysis of Warner's effects in ellipsis in Thoms (2015), in terms of parallelism of variable binding configurations.

[15]While we represent the subject as the complement of V in this section to maintain consistency with the type of examples used throughout the paper (passives, which represent the majority of the experimental materials, alongside unaccusatives), the derivations of unergative and transitive structures are parallel in all relevant respects.

[16] Notice that default masculine plural is possible even when the structure of the verb-echo answer is VS (matching the antecedent), in contrast with VS in non-elliptical clauses (see (5) in the main text). This difference is compatible with the claims in this paper. In particular, as noted in Section 3, a *pro*-drop derivation can deliver this result, as indicated in (i), representing a possible answer to the question in (47) in the main text.

(i) *VS: default masculine*

B: Da, izloženi su *pro*.

yes displayed.M.PL AUX.PL *pro*.M.PL

'Yes, they are (displayed in the shop).'

The inclusion of the adjunct in the interpretation can be achieved by pragmatic enrichment (see, e.g., Recanati 2010, Ahn and Cho 2021 and Landau 2023).

[17]One important aspect of our analysis of last conjunct agreement with pre-verbal subjects is the resulting effect which resembles *non-constituent deletion* approaches (e.g. Morgan 1973, Hankamer 1979, Kimura 2010, Abe 2015, Ott and Struckmeier 2016), without actually resorting to such a process.

(i) *SV order*

Da, ~~molbe i rješenja~~ { ovjerene su/ ovjerena

yes ~~request.F.PL and resolution.N.PL~~ verified.F.PL AUX.PL verified.N.PL

su/ ovjereni su } ~~pečatom~~.

AUX.PL verified.M.PL AUX.PL ~~by stamp~~

'Yes, requests and resolutions are verified by a stamp.'

While we acknowledge that one might in principle succeed in providing an account of the data in terms of non-constituent deletion, it is important to note that non-constituent deletion is frequently regarded as conceptually problematic. How can a constituent be pruned away from the structure without also removing all the constituents that are properly included in it? To make this idea work, elements within the ellipsis domain should be targeted by deletion independently. If ellipsis is taken to be PF-deletion/obliteration of syntactic nodes, a problem arises for verb-echo answers with last conjunct agreement, with which Agree-Copy applies after Linearization. If deletion precedes Linearization, deletion bleeds Agree-Copy, as the relevant links

created are removed from the structure. If Linearization precedes deletion, the structural information specifying the domain of ellipsis is lost. To the best of our knowledge, the only approach which could in principle successfully overcome these difficulties for (i) is the one that takes ellipsis to be an instruction to forgo Vocabulary Insertion, in the syntax, targeting individual heads (i.e., Stigliano 2022), similarly to what we suggest here. It should be noticed though that, in order to achieve this effect, Stigliano proposes a more articulated ellipsis mechanism, which is blocked in the sub-portions of the ellipsis site that contain F(ocus)-features (for further discussion, see, e.g., Benz et al. forthcoming). A potential source of difficulty posed by our examples here is the fact that not only the main verb survives, but also the auxiliary clitic, a T element. F-marking of both of these elements independently in the syntax to the exclusion of the rest of the clause would require further assumptions about F-assignment/projection. See also Section 5 for further discussion of some alternatives.

[18]We thank an anonymous reviewer for raising this issue.

[19]Purported evidence that ellipsis implicates null spell-out of the silenced material that has been offered in the literature includes a series of apparent bleeding effects in Dutch modal complement ellipsis, exemplified in (i), the lack of verb-stranding ellipsis in V2 languages like Norwegian, which have both verb movement and verb-phrase ellipsis, as in (ii), and apparent bleeding of object agreement in Hocąk, as in (iii) (the examples below are adapted from Aelbrecht 2010 and Sailor 2022, to which we refer the reader for a more complete data sets and further discussion).

(i) *Ik weet niet wie Thomas MOET uitnodigen t_{wie}, maar ik weet wel **wie** hij niet
I know not who Thomas must invite t_{who} but I know AFF **who** he not
MAG [uitnodigen t_{wie}]
is.allowed [to.invite t_{who}].
Intended: 'I don't know who Thomas HAS to invite, but I do know who he isn't

ALLOWED to invite.'

(ii) Johan leste ikke Lolita, men Marie { *leste **/gjorde** }.
Johan read.PST not Lolita, but Marie { *read.PST **/do.PST** }
Intended: 'Johan didn't read Lolita, but Marie did.'

(iii) Cecil-ga nee **hį**-hojį anąga Hunter-ga šge nee (***hį**)-ųų.
Cecil-PROP me **1OBJ**-hit and Hunter-PRO also me (***1OBJ**)-do
'Cecil hit me, and Hunter hit me too.'

However, these bleeding relations do not need to be interpreted as the bleeding of the operations involved. More specifically, if the object marker in Hocąk is a clitic moved from inside the ellipsis site rather than an agreement marker, all that must be said to render these examples consistent with our approach to ellipsis as Q-deletion is that the *wh*-element in (i), the moved verb in (ii), and the object clitic in (iii) have lost their Q-variable before the movement. Ellipsis, as implemented in Aelbrecht (2010) and Sailor (2022), applies before these elements move outside the ellipsis site. However, instead of bleeding the movement operation, ellipsis can be taken to bleed Vocabulary Insertion. While a Q-deletion approach can thus account for these data in this way, a null spell-out/transfer approach to ellipsis cannot account for the verb-echo agreement generalization.