

1 Introduction

- A conceptual question at the heart of modern syntactic theory:
 - *What is the correlation between ϕ -Agree and movement?*
- Early minimalism (e.g., ?) postulated a strong correlation: ϕ -Agree is the result of movement through specific syntactic positions
 - (1) **Specifier-head agreement:**
If AgrX is an agreement head and DP a phrase bearing ϕ -features, morphological agreement obtains only if the following structural configuration obtains:
 - (2) [AgrXP DP [AgrXP AgrX [... ~~DP~~ ...]]]
- This is especially successful for agreement phenomena in the v P domain, e.g., past-participle agreement in Romance and Scandinavian, which is (mostly) contingent on movement across the participle (?, ?; ?)
 - (3) *French*
 - a. Jean n'a jamais fait(*es) **ces sottises**
Jean NEG.have.3SG never done.M.SG/*F.PL these stupid things.F.PL
'Jean has never done these stupid things'
 - b. Jean ne **les** a jamais fait(**es**)
Jean NEG THEM.CL have.3SG never done-F.PL
'John has never done them.'
(adopted from ?)
- Modern minimalist theories usually assume, however, that ϕ -Agree is formally dissociated from movement
 - (4) **Agree (? ? , ?):**
An Agree relation obtains between a head H and a phrase XP, provided:
 - (i) Matching: XP bears valued features that are a superset of the unvalued features on H
 - (ii) Locality: There is no YP asymmetrically c-commanding XP that satisfies matching
- This formulation is based on a variety of cross-linguistic examples where ϕ -Agree obtains in the absence of overt movement (some examples may involve covert movement; see ?)

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- Tsez (?), English (?), Icelandic (?), Hindi-Urdu (?), Basque (?)

- (5) Ram-ne [rotii khaa-nii] chaah-ii
 Ram-ERG bread.F eat-inf.F want.PERF.FSG
 ‘Ram wanted to eat bread.’
 (? : 792)

- Cases where ϕ -Agree appears to trigger movement are captured by a stipulated feature, either on the head or on the Agree-probe itself
- This state of affairs leaves unanswered a number of fundamental questions, both theoretical and technical
 - How do we handle PPA and other apparent instances of Spec-Head agreement in a long-distance ϕ -Agree framework?
 - Can we predict the distribution of EPP features, i.e., which probes trigger movement, or must this be stipulated in an ad-hoc, language specific way?
 - Why should agreement and movement ever be correlated in the first place?
- Goals for today: Use PPA as a case study to probe the bigger questions surrounding ϕ -Agree and Merge/Move, in support of the following conclusion:

- (6) **ϕ -Agree/Merge correlation:**
 Every ϕ -probe is associated with an EPP feature that forces Merge to the triggering head

- Consequences:
 - ⇒ All else being equal, ϕ -Agree triggers movement
 - * Spec-Head patterns result from interference effects on heads with a semantic requirement to introduce an argument: agreement trigger and argument compete for Merge
 - ⇒ (At least some) null subject languages have EPP and null expletives
 - ⇒ A new approach to expletive *there*
 - ⇒ Broad cross-linguistic empirical coverage of when Agree can be “long-distance”
- Outline
 - Past-participle agreement
 - * Challenges to long-distance-Agree frameworks
 - * A new empirical generalization
 - * Capturing the data
 - A new treatment of expletive *there*
 - The Agree/Merge correlation
 - * Proposal
 - * Null subject languages have the EPP & null expletives
 - * Predicting the cross-linguistic distribution of LDA

2 Proposal

2.1 Architectural Preliminaries

My proposal depends on some background conclusions concerning the nature and structure of the syntactic derivation, which I lay out here. I will be taking for granted ?'s (?) *Obligatory Operations* (ObOp) framework, as well as some ancillary assumptions concerning *Case* and *Agree*. The central premise of the ObOp framework is that each primitive syntactic object H is associated with a (potentially empty) set of operations $O = \{o_1, o_2, \dots\}$, along with structural conditions $C = \{c_1, c_2, \dots\}$ that govern when the operations can apply. If, in the course of the derivation, condition c_i on operation o_i on head H is met, then operation o_i must apply. If condition c_i is never met, however, o_i never applies and the derivation continues.

ObOp has important consequences for both of the main syntactic operations, *Agree* and *Merge*, that will be relevant to my proposal. Concerning *Agree*, ObOp is usually coupled with some independent assumptions about Case that I will also adopt, so I begin by spelling them out. First, I will assume the Dependent model of case (?; ?), and in particular (i) that case is valued configurationally in the syntax (Preminger 2014: Ch.9) according to the rules in (7), and (ii) that unvalued case features do not crash the derivation, in keeping with general ObOp logic.

(7) **Case valuation:**

- a. Lexical Case: Given the configuration [H DP], where H is a lexical case assigner, value the case feature on DP.
- b. Dependent Case: Given the configuration [DP₁ [... [... DP₂ ...]]], where DP₁ and DP₂ have unvalued case features, value the case feature on DP₂.

I also adopt the related hypothesis that ϕ -*Agree* is case discriminating (?; ?): case valuation determines whether or not a given DP is accessible to ϕ -*Agree* (see ??), with accessibility parameterized across languages according to the *Moravcsik Hierarchy* (see (8b)). The most restrictive languages make only those DPs with unmarked case accessible for agreement, while some languages also make DPs with dependent case accessible, and some even tolerate agreement with DPs bearing lexical case.

(8) **Case Accessibility:**

Accessibility to *Agree* is determined according to the *Moravcsik Hierarchy*:
unmarked case » *dependent case* » *lexical/oblique case*

With these results in place, we can define *Agree* as in (9).

(9) **X-Agree**

- a. o_i : copy the value of X on YP onto H
- b. c_i : apply o_i at H iff there is some YP with feature X such that:
 - (i) Locality: H c-commands YP and there is no ZP c-commanded by H and asymmetrically c-commanding XP that bears feature X
 - (ii) Accessibility: YP is (case) accessible to H

The ObOp logic then dictates that if a head H is associated with an agreement operation *X-Agree*, this operation must take place if the conditions on its application are met. If these conditions fail to be met, for example because the only possible target of *Agree* is not case-accessible, the derivation proceeds without crashing. I refer the reader to Bobaljik (2008) and Preminger's (2014) work for more information and accept these principles as given.

The ObOp logic also has important consequences for the operation of *Merge*. Following Preminger (2014: 10.1.3), this can be nicely illustrated via the paradigmatic case of *wh*-movement. Granting that *wh*-movement proceeds through all Spec(CP) positions along its path, so that the derivation of (10a) contains at least the two steps in (10b), it has always been a challenging to motivate the movement to non-interrogative C heads.²

- (10) a. What did John say that Sue bought?
 b. [_{CP} What [_{CP} did John say [_{CP} ~~what~~ [that Sue bought ~~what~~]]]]

In the ObOp framework, we can capture this behavior in a uniform and parsimonious way by assuming that all C heads, both interrogative and not, are associated with the operation *Merge-wh*, defined in general below.

- (11) *Merge-X*
 a. o_i : merge (a projection of) H with an YP bearing the feature X
 b. c_i : apply o_i at H iff there is some YP with feature X such that:
 (i) YP is present in the numeration/lexicon (hasn't been merged before), or
 (ii) Locality: H c-commands XP in the structure and there is no YP c-commanded by H that both asymmetrically c-commands XP and bears the feature *wh*

In the case of the embedded clause in (10), ObOp therefore dictates that the non-interrogative C must merge with the *wh*-phrase in its scope. In examples where there is no *wh*-phrase present in the structure, however, the *Merge-wh* operation simply goes untriggered.³ Because untriggered operations are unproblematic, the derivation converges, as desired. We can therefore safely assume that all C heads have the same operations associated with them, thereby removing the “special” status of intermediate movement.⁴

This logic can be readily extended to other cases of *Merge* as well. For instance, we can capture the canonical EPP effect by positing that there is an obligatory *Merge-D* operation associated with T, as follows. Granting that T is not capable of introducing new arguments (it is not a θ -position, nor is $\llbracket \text{TP} \rrbracket$ underlyingly type $\langle e, \tau \rangle$), there are therefore two cases in which *Merge-D* could apply, given the definition in (11): (i) there is an expletive, which does not require a θ -role and which I will take to be semantically vacuous, present in the lexicon/numeration, or (ii) there is an XP already present in the structure that can be moved to Spec(TP). Adopting the null hypothesis that *Merge* has access to both the lexicon and the outputs of all previous instances of *Merge*, one of these two conditions will always be met: either the complement to T contains an DP that can move to satisfy EPP, or there is no such DP, in which case an expletive can be selected from the lexicon.⁵ In either case, there is always something available to be merged, so by the ObOp logic, Spec(TP) must always be occupied. This correctly captures the fact that Spec(TP)

²See ? for a principled analysis that does not involve ObOp.

³The selection and introduction of a *wh*-phrase from the lexicon is ruled out by θ -theoretic concerns, I assume.

⁴In contrast, if we assume, following Chomsky (2000, 2001), that uninterpretable features crash the derivation, the treatment of long-distance *wh*-movement requires that we posit two varieties of non-interrogative C: one that bears the movement-triggering feature, and which is used in exactly those cases where there is a higher interrogative C, and one that does not bear the movement-triggering feature, and which is used in all other cases.

⁵Languages like English, French, Mainland Scandinavian present a *prima facie* problem in that expletives are arguably restricted to being merged in Spec(ν P) (see Section ??; ?; ?; ?; a.o.). This raises the possibility that such languages should allow an empty Spec(TP) in the case where the complement to T does not furnish an EPP-satisfying element, counter to fact. We can exclude this possibility if we assume that ν also has an $[\text{oXo}]$ feature. The logic above then proceeds identically, but at the ν P level: either a lower XP must be merged or attracted, or an expletive merged. Spec(ν P) will therefore always be occupied, which ensures that there will always be an XP that is accessible to satisfy the EPP at T.

must be occupied in languages with this operation.

- (12) a. Case (i): lower accessible DP
 [EXPL/XP [T [... [... DP ...]]]] (Merge(T,DP) or Merge(T,EXPL) *obligatory*)
 b. Case (ii): no lower accessible DP
 [EXPL [T [... [... YP ...]]]] (Merge(T,EXPL) *obligatory*)

Once we admit that some heads are associated with obligatory *Merge* rules that operate according to the ObOp logic, an important question arises: are these cases somehow special, or are all possible merger operations available at a given head specified in the lexicon, like the types of available *Agree* operations? For the remainder of this paper, I assume that the possible *Merge* operations available at *H* are indeed pre-specified, so that each syntactic head is associated in the lexicon with the set of possible operations that it may trigger. All cases of *Merge* and *Agree* are thus governed by the same logic. It's important to point out that this does not replicating syntactic structure in the lexicon, a common criticism of other varieties of feature-driven *Merge*. Specifying the merge operations at head *H* merely serves to define the domain of operations available at that head, but gives no information about the order they apply in, which operations apply in which derivation, etc. In particular, I do not assume any predetermined ordering on operations, or any requirement that a given operation take place beyond those imposed by ObOp. The operations that take place in the derivation and their order are therefore governed purely by concerns of interpretability, e.g., as encoded in a type theory on semantic interpretation, and by the ObOp logic.

Before moving on, I illustrate a simplified derivation to highlight the key aspects of the system. For convenience, I will hereafter encode the operations available at a given head in terms of the features below, and say that a given feature is discharged by the associated operation.

- (13) a. Agree features: [X: _], *Agree* with a YP bearing X
 b. Merge features: [oXo], *Merge* with a YP bearing X

Limiting attention to the heads V, *v*, T, C, and assuming for simplicity that these are the only heads in the clausal spine, we arrive at the feature specification in (14) for English: V has at least a feature selecting its complement; *v* has a [oDo] feature for merging the external argument and various merge features for attracting A'-elements (assuming it is a phase); T has a canonical EPP feature and a feature for triggering ϕ -agreement; C has features for attracting various A'-elements.

- (14) a. V: [[oDo],...] c. T: [[o_vo],[oDo], ϕ :_]
 b. *v*: [[oVo],[oDo],[owho],[oTopo],...] d. C: [[oTo],[owho],[oTopo],...]

Example (15) is then derived as follows, with the order of operations determined by concerns of interpretability. First, V merges with *what*, satisfying its [oDo] feature. Next *v* merges with VP, satisfying its [oVo] feature, then the external argument, satisfying its [oDo] feature, then finally with the internal argument *what*, satisfying its [owho] feature. T is then merged in the structure, satisfying its [o_vo] feature, and attracts the external argument *Mary*, satisfying its [oDo] feature. Finally, C merges with TP, satisfying [oTo], and with *what*, satisfying [owho].

- (15) a. What did Mary buy?
 b. [_{CP} what [C [Mary [T [what [Mary [*v* [buy what]]]]]]]]]

2.2 Proposal

Recall the essential challenge raised by the PPA data in the introduction: on the one hand, there is a clear correlation between movement and PPA that does not follow on the long-distance theory of *Agree* (at least not without additional stipulations); on the other hand, the correlation is not perfect, raising well known challenges to the Spec-Head theory (citations). I would like to argue that this essential conflict teaches us that the correlation between *Agree* and movement is neither as rigid as assumed under the Spec-Head theory, nor as stochastic as assumed by theories that posit an “EPP”-property on some but not all probes. Specifically, I propose that the syntactic derivation is governed by the basic economy principle in (16), and that this encodes the precise degree of correlation between *Agree* and movement evidenced by the PPA data.

(16) **Feature Maximality (FM):**

Given head H with features $[F_1] \dots [F_n]$, if XP discharges $[F_i]$, XP must also discharge each $[F_j]$ that it is capable of.

The core idea is that once a phrase XP has been selected as the target for a syntactic operation originating at head H , the relationship between H and XP must maximize to include all possible additional operations originating at H capable of targeting XP . This principle subsumes and extends the “free rider” property of *Agree* (ϕ , ϕ ; ϕ , ϕ), and is closely related to the notion of economy proposed by ϕ .

For a brief demonstration, suppose H is a head bearing an *Agree*-triggering feature, say $[\phi: _]$, and an *Merge* feature, say $[\circ D \circ]$. By (16), if $[\phi: _]$ on H is discharged via *Agree* with a ϕ -bearing target DP, then DP must also discharge $[\circ D \circ]$, that is, DP must be merged with (a projection of) H . This has the effect that *Agree* obligatorily triggers *Move* if the head bearing the probe feature has an undischarged EPP feature. Alternatively, suppose that $[\circ D \circ]$ on H is discharged by merging a new DP in the structure. Since *Agree* is conditioned on c-command by the head containing the probe feature, a first-merged DP is not eligible to discharge the $[\phi: _]$ on H , so only the EPP-feature is discharged. In such a scenario, a lower DP may then discharge the probing feature on H without undergoing obligatory movement, since the EPP feature has already been discharged.

I now argue that (16) encodes precisely the degree of correlation between *Agree* and movement that is manifest with PPA. This both explains the formerly puzzling PPA data and supports the existence of a principle like FM in the grammar.

3 Capturing PPA: Core cases

In this section, I show how the economy constraint in (16), when combined with the framework assumptions laid out above, captures the core behavior of PPA in the languages introduced in Section 1. Throughout this section, I will especially depend on the hypothesis that ϕ -*Agree* is case discriminating (Bobaljik 2008; Preminger 2014), and in particular that Standard Italian, French, and Mainland Scandinavian are alike in limiting ϕ -*Agree* to DPs unmarked for case.

3.1 Transitive clauses, *in situ* objects

I begin by considering the behavior of transitive clauses with *in situ* objects, where PPA fails to obtain in the languages under consideration. I repeat the illustrative examples from Section 1 below.

(17) Standard Italian

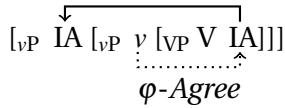
(18) French

(19) MSc

Adopting the usual structural assumptions from the PPA literature – that PPA is triggered by a ϕ -probe on the head that introduces the external argument (see, e.g., Kayne 1988; Chomsky 1995; Belletti 2001; Chomsky 2001; Roberts & D’Alessandro 2008; a.o.) – this behavior is exactly as predicted on the present theory. As discussed above, at the point where v is merged in the structure, it has an undischarged $[\circ D \circ]$ feature for introducing the external argument, an undischarged $[\phi: _]$ feature, and various undischarged $[\circ X \circ]$ features for attracting A' -elements. Setting aside the A' -features for now, there are two derivational options available at this point: (i) discharge $[\phi: _]$ via *Agree* with the internal argument; (ii) discharge $[\circ D \circ]$ by merging the external argument.

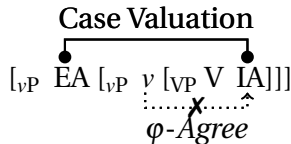
Because I am assuming no inherent ordering, both operations are equally available, so let’s assume first that option (i) is chosen, *Agree* with IA to discharge $[\phi: _]$. By (16), because IA is also capable of discharging $[\circ D \circ]$, it must, so *Agree* triggers movement in this case. While this sequence of operations is syntactically licensed, the corresponding derivation crashes at LF. To see why, let τ denote the type that vP must be to combine felicitously with higher projections. Since v is responsible for introducing the external argument, it must therefore be type $\langle e, \tau \rangle$. Granting that DP movement is interpreted via λ -abstraction (?), movement of IA to Spec(vP) does not saturate the type e argument slot of v , so that the resulting vP will be type $\langle e, \tau \rangle$. After movement of IA, the vP is therefore still an unsaturated predicate that needs an external argument to combine with higher functional heads. However, the $[\circ D \circ]$ feature on v was exhausted by merger with IA, so no further DP can be merged. The derivation therefore crashes at LF, so that option (i) is ruled out on interpretive grounds.

(20) *Agree* w/ IA ($[\phi: _]$); *Move* IA ($[\circ D \circ]$); crash



Let’s see what happens with option (ii), which instead features merger of the external argument (EA), discharging $[\circ D \circ]$, as the first step. Because *Agree* is contingent on asymmetric c-command, merger of EA does not discharge $[\phi: _]$ on v . We might therefore expect that v finds IA and undergoes *Agree* with it, producing unattested PPA with an *in situ* object. Crucially, however, the presence of EA renders IA inaccessible to ϕ -*Agree*: recall that on the model of case adopted here, merger of EA triggers valuation of the case feature on IA, rendering IA inaccessible to ϕ -*Agree*, by hypothesis. In other words, while IA is local enough to trigger ϕ -*Agree*, it is blocked from doing so by the case feature induced by the presence of EA. Finally, while ϕ -*Agree* is ruled out, this derivation is otherwise convergent, correctly deriving the surface form for a basic transitive clause.

(21) *Merge* EA ($[\phi: _]$); Case valuation; ϕ -*Agree* blocked; ✗ PPA



It’s worth pausing at this point to review the work that *Feature Maximality* does in the context of the wider framework. One way to summarize our conclusions is to say that by directly tying *Agree* to movement in the case of v , Feature Maximality induces a competition between

Agree with the internal argument and *Merge* with the external argument. Because the external argument must be merged for interpretive purposes, it always “wins” this competition, with the effect that ϕ -*Agree* is obligatorily delayed until after the external argument has been merged. This is the essential role of Feature Maximality. The absence of PPA is then a side effect of this delay, reflecting the familiar fact from Bobaljik and Preminger’s work that ϕ -*Agree* is often allergic to case-marked DPs.

One point that this discussion makes clear is that v ’s role as an argument introducer is fundamental to blocking PPA: if there was no semantic need to merge an argument in $\text{Spec}(vP)$, derivation (i) from above, where the internal argument moves to $\text{Spec}(vP)$ concomitant with PPA, might be expected to converge.⁶ As I will now argue, this is exactly the state of affairs that obtains with passive and unaccusative clauses, deriving the second core class of PPA data from Section 1.

3.2 Passive/unaccusative predicates

I turn my attention now to the second major class of PPA data from Section 1, passive/unaccusative predicates. Before I can show how the proposal explains these facts, however, it is necessary to understand the feature composition of passive and unaccusative v . It turns out that the ObOp framework adopted here commits us to some very particular assumptions in this domain, which I briefly spell out now.

3.2.1 Feature composition at passive/unaccusative v

To this end, recall that with transitive v , a $[\phi D \phi]$ feature was independently needed to introduce the external argument. Assuming passive and unaccusative v s do not introduce an external argument, there is no semantic prerequisite for postulating such a feature in these cases. We are thus left to ask whether $[\phi D \phi]$ is present at all on passive/unaccusative v .

I’d like to begin by observing that this question is intimately linked with the related question of where expletives are introduced in the structure. In particular, if we assume, following e.g., Chomsky (2000; 2001), that expletives are always merged directly in $\text{Spec}(TP)$, we are lead to the conclusion that passive/unaccusative v has an optional $[\phi D \phi]$ feature. I illustrate with an example from Swedish: the internal argument of a passive clause with an expletive subject may appear *in situ* as well as in an intermediate position to the left of the participle, which I take to be $\text{Spec}(vP)$:

- (22) a. Det har blivit skrivet **tre böcker**.
 EXPL has been written.N.SG three books
 b. Det har blivit **tre böcker** skrivna
 EXPL has been three books written.N.PL
 (Holmberg 2001: 86)

From (21) we conclude that v must not have an $[\phi D \phi]$ feature, as it would obligatorily attract the internal argument, and from (22) that v must have this feature, to facilitate short movement across the participle. If we assume that v is a phase in all its incarnations ($?$; $?$), we can make the same argument in French, where passive internal arguments are obligatorily *in situ* with expletive subjects ((23a)) indicating v must not have D, but can nonetheless front to subject position in

⁶Alternatively, if v had more than one $[\phi D \phi]$ feature, we would expect that it could both trigger movement of IA and merger of EA. None of the languages under consideration seem to allow this option, although we might expect to find it cross-linguistically, e.g., in languages where there is overt evidence for multiple A-specifiers. I set aside this interesting extension for now.

the absence of an expletive ((23b)), necessitating an intermediate A-movement step to Spec(ν P) and hence a $[\circ D \circ]$ feature on ν .⁷

If, in contrast, we follow $\text{?}, \text{?}, \text{?}$ in assuming that expletives are merged in Spec(ν P) (at least in languages without transitive expletives), then $[\circ D \circ]$ is obligatory on all varieties of ν . Cases with an *in situ* object (cf. (21a), (22a)), involve, on this view, expletive merger in Spec(ν P), exhausting $[\circ D \circ]$ and blocking movement of the internal argument to Spec(ν P). Cases with a promoted internal argument (cf. (21b), (22b)) conversely involve object movement to Spec(ν P), exhausting $[\circ D \circ]$. Cases with intermediate object promotion (cf. (21b) and its English counterpart) involve, following Deal (2009), moving the object to Spec(ν P), then introducing the expletive in the specifier of the head hosting *be*, which we can likewise take to be a variety of unaccusative ν and hence itself capable of introducing an expletive.⁸

- (23) a. *In situ* object:
 b. Full promotion:
 c. Partial promotion:

Faced with the choice between the two options above, we have strong cause to prefer the second. Empirically, this option is supported by a variety of arguments that expletives are indeed merged in Spec(ν P), a full rendering of which is precluded for space reasons (but see $\text{?}, \text{?}, \text{?}$ for extensive discussion). At the conceptual level, this optional allows us to maintain a uniform feature distribution across all varieties ν , limiting variation to the semantic contribution these heads make. Finally, permitting optional features, as is required on the first approach, presents a serious challenge to ObOp, and must therefore be avoided if we are to maintain the essential hypothesis that syntactic operations are obligatory. In particular, allowing that features, and the associated syntactic operations they encode, are optionally present or absent on a head is equivalent to allowing that syntactic operations are optional, which contradicts the ObOp hypothesis. If we are to maintain ObOp, then, we must adopt the hypothesis that $[\circ D \circ]$ is present on passive/unaccusative ν in all cases, and hence that expletives are merged in Spec(ν P).

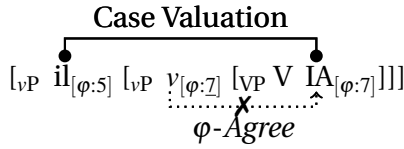
- (24) **Uniformity of feature distribution:**
 All incarnations of ν have the same feature makeup: $\{[\circ D \circ], [\varphi: _], [\circ A' \circ], \dots\}$
 (25) **Low-merge theory of expletives:**
 In languages without transitive expletives, expletives must be merged in Spec(ν P).

3.2.2 Back to PPA

We are now prepared to address the main issue of this section – the distribution of PPA in passive/unaccusative clauses. Let's begin with the case where the internal argument is promoted to Spec(TP). PPA is obligatory in this scenario in all the languages under consideration.

⁷The intermediate position is for some reason not available in French (Svenonius 1998).

⁸Two additional questions remain about this case (i) why such movement is not possible in French, and (ii) why it is obligatory in English. Concerning (i), descriptively speaking it appears that French *be* is not capable of introducing an expletive, forcing expletive insertion at the lower ν head and keeping the expletive low. This should ideally be derived, or at least confirmed independently. For the English case, one option is to say that passive ν cannot introduce an expletive, but only truly unaccusative ν 's can, including the one associated with *be*. I set these two complications aside for the remainder of the paper.



The languages under consideration split into two groups concerning the prediction. The first group, French and Mainland Scandinavian, use the third person default pronoun as an expletive. Because case is only marked in these languages on pronouns, and because pronouns are generally barred from appearing as the associate to an expletive, it is not possible to directly confirm that these expletives are case competitors. That said, on their non-expletive uses, the third person singular default pronoun in both languages is clearly a case competitor, inducing dependent (accusative) case on its co-arguments.

- (33) a. French
b. MSc

Under the null hypothesis that the expletive and non-expletive version of the pronoun have the same case properties, we conclude that the expletive in these languages is a case competitor, so that PPA should be blocked with *in situ* internal arguments in the presence of expletive subjects. This is borne out.

- (34) French
- a. Il est mort(*es) **trois sauterelles**.
it is died.(*PL) three grasshoppers
'There died three grasshoppers.'
- b. Il a été fait(*es) **deux erreurs**.
it has been made.(*F.PL) two errors
'There have been three errors made'

- (35) Swedish (a) & Norwegian (b)
- a. Det har blivit skriv-et/*na **tre böcker** om detta.
EXPL have been written-N.SG/*PL three book.PL on this
'There have been three books written on this'
- b. Det har vorte skriv-e/*ne **mange bøker** um dette.
EXPL has been written-PL/*SG many book.PL on this
'There have been many books written on this' (? : 86, 104)

As is well known, Italian passive and unaccusative predicates with *in situ* objects pattern differently, in two important ways. First, setting aside PPA for the moment, Italian, as a null-subject language, tolerates *in situ* objects of passive/unaccusative predicates without an overt expletive in Spec(TP) (see ? for arguments that the internal argument is *in situ* in cases like (36)).

- (36) Unaccusative w/out participle

This behavior can be encoded in the present system in one of two ways. First, we can assume that [$\circ D \circ$] is optional on T and *v* in Italian; in cases like (36), it is absent, whereas in cases of full object promotion (see ??), it is present. Second, we can assume that Italian T and *v* have [$\circ D \circ$], like their counterparts in French and MSc, but that Italian has a null expletive. The first option is subject to the same caveats about optional features discussed above, so I will for now adopt the second option. In Section ??, I present independent evidence for this conclusion.¹⁰

Second, *in situ* objects of passives and unaccusatives in Italian obligatorily trigger agreement

¹⁰The account of PPA actually does not depend on the choice between the two options in this case (see fn.12).

at T. Such objects are thus licit targets for *Agree* and hence case accessible. Granting that Italian has a null expletive and our default assumption that dependent case is not accessible to *Agree* in Italian, we conclude that the Italian expletive is not a case competitor. Crucially, this conclusion is completely independent of PPA; it is forced, given our framework assumptions, purely on the basis of agreement at T. It's worth pointing out, moreover, that non-case-competing expletives are attested elsewhere cross-linguistically. One famous example is Icelandic, so that in (37), agreement at T is with the associate DP, which surfaces with unmarked (nominative) case.

(37) Icelandic

The English *there* expletive arguably falls in this category as well, given the potential for agreement at T with the associate to the expletive.¹¹

(38) There were/*was three men in the room.

Returning to PPA, we arrive at the following prediction for Italian passive/unaccusative clauses. Summarizing above, Italian v uniformly has an $[\circ D \circ]$ feature, which may be satisfied by merging a null, non-case-competing expletive. Because the expletive is not a case competitor, it can be merged in Spec(vP) without rending the internal argument inaccessible to *Agree*. The $[\varphi: _]$ feature on v must therefore be discharged by the object according to ObOp logic, so we predict that Italian obligatorily shows PPA with *in situ* objects in passive and unaccusative clauses.¹²

(39) Merge EXPL; no Case assignment; φ -*Agree* obligatory; ✓ PPA:

$$\begin{array}{c} [_{vP} \text{ pro}_{\text{EXPL}} [_{vP} v [_{VP} V \text{ IA}]]] \\ \vdots \quad \quad \quad \uparrow \\ \quad \quad \quad \varphi\text{-Agree} \end{array}$$

This is borne out.

(40)

Summarizing, we have arrived at two main conclusions in this section. First, our particular perspective on the ObOp framework commits us to the view that expletives are merged in Spec(vP) in languages without transitive expletives, which has been extensively and independently argued for in the literature. Second, adopting the low merge view of expletives, the present theory readily predicts the distribution of PPA in passive and unaccusative clauses across the languages thus considered.

3.3 Optional PPA with clitics/*wh*-phrases

The final case remaining from the introduction is the mostly optional PPA that obtains with fronted clitics and *wh*-phrases. The present theory extends to these data as well with minimal modification.

¹¹We can encode the behavior of the Italian, Icelandic, and English non-case-competing expletives in our system as follows. Observe that these expletives are capable of satisfying $[\circ D \circ]$ features, and moreover incapable of triggering φ -*Agree*: in Italian, Icelandic, and English, agreement at T is always with the highest DP c-commanded by the expletive. Under the model of case adopted here, we can couple these two conditions by positing that these expletives are imbued with lexical oblique case. DPs with oblique case can be independently shown not to trigger case competition (e.g., in Icelandic; Preminger 2014: 145), and it follows from (8) that oblique-marked DPs will not be accessible to *Agree* in languages where dependent marked DPs are not.

¹²Setting aside the optionality problem, we also predict the PPA facts if we assume Italian does not have a null expletive. On this model, passive/unaccusative v has a variant without a $[\circ D \circ]$ feature. The $[\varphi: _]$ must therefore be discharged via *Agree* with the object, and no movement ensues because v has no feature to trigger it.

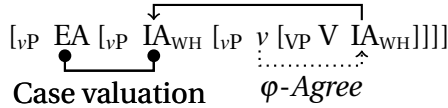
Setting aside PPA, the only difference between the derivation of an example like (41), with a fronted *wh*-object, and its counterpart in ??, with an *in situ* object, is the activation of a $[\circ wh \circ]$ feature on v in the former but not the latter case. The extra degree of freedom that the active $[\circ wh \circ]$ feature provides is exactly predicted to license the type of PPA we observe in such cases.

- (41) a.
b.

In particular, consider the stage of the derivation of (41) where v has just been merged in the structure. In addition to the two derivational options possible in the simple transitive case, we now have the additional option of activating the $[\circ wh \circ]$ feature on v and attracting the object.

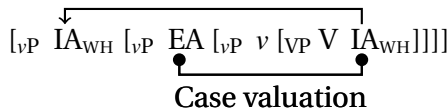
Let's see what happens if we take this option. According to Feature Maximality, we must ask which of the other features on v can be discharged by the object, then discharge them all. Recall that v has at least the features $[\circ D \circ]$, $[\circ wh \circ]$, $[\phi: _]$. Assume for now that the object cannot discharge both merge features simultaneously (I return to this issue below), so that discharge of $[\phi: _]$ is the only other available option, and hence must be taken. It follows that *wh*-movement of the object to Spec(v P) is accompanied by ϕ -Agree, triggering PPA. The external argument can then be merged, exhausting $[\circ D \circ]$. The derivation converges, yielding (41a).

- (42) Merge IA ($[\circ wh \circ]$)/ ϕ -Agree IA; Merge EA ($[\circ D \circ]$); assign case; ✓ PPA:



Alternatively, if upon merging v we decide to first merge the external argument, discharging $[\circ D \circ]$, the *wh*-object is assigned dependent case, and is inaccessible to ϕ -Agree. The subsequent discharge of $[\circ wh \circ]$ will then not extend to the discharge of $[\phi: _]$, so *wh*-movement will not be accompanied by ϕ -Agree, correctly deriving (42b) without PPA. Finally, the option where we chose to discharge $[\circ D \circ]$ first by attracting the object is blocked on the same lines as in the simple transitive case (see ??).¹³

- (43) Merge EA ($[\circ D \circ]$); assign case; Merge IA ($[\circ wh \circ]$); ✗ PPA:



The account extends trivially to clitics on the hypothesis that they are attracted into the TP-domain by a special feature, call it $[\circ cl \circ]$ (?), present on all phase heads and on the attracting head in the TP domain. The activation of this feature then licenses the optional PPA observed in, e.g., French exactly as above.

Recall that we have assumed the condition that the object is blocked from discharging both $[\circ D \circ]$ and $[\circ wh \circ]$ on v simultaneously. Before moving on, I'd like to show that this can be motivated and formally encoded in a principled manner. In particular, I propose the following principle on syntactic derivations.

- (44) **Syntactic Operations are non-overlapping:**

A given instance of *Merge* or *Agree* may discharge at most one $[\circ X \circ]$ or $[X: _]$ feature, respectively.

¹³This has the interesting, if unusual, consequence that in PPA cases, A'-movement "tucks in" below the external argument. This property is shared by ?'s (?) related system, and as he points out, does not cause any obvious problems.

To motivate (44), it's helpful to think about the role that features play in our system. Recall from Section 2 that features are for us a notational aid for encoding the syntactic operations that head H is associated with. As suggested by its heading, (44) amounts in these terms to the hypothesis that each syntactic operation must be non-overlapping: the derivation can be conceived as comprising a finite sequence of discrete steps, each of which takes an input and produces an output. If a H is associated with two merge operations, say *Merge-X* and *Merge-Y*, these must be undertaken separately, so that for instance merger with a phrase ZP with property X and Y discharges only one of the relevant merger operations. Crucially, though, (44) does not block a single ZP from being the target of multiple operations at a given head, as long as these operations may be enacted in a discrete sequence such that the conditions on the operation at each step are met. Thus a ZP may be the target of both an *Agree* and a *Merge* operation at head H , since the output of *Agree* between H and ZP meets the conditions on *Merge* of H and ZP. Feature Maximality may therefore still apply as before.¹⁴

The proposal that the *wh*-object in the examples above cannot discharge both the $[\circ D \circ]$ and $[\circ wh \circ]$ features on ν can thus be seen to reduce to the basic generative assumption that the derivation is a finite sequence of discrete operations, hardly an innovation.

A final comment is in order concerning the pattern of PPA under clitic/*wh*-movement in languages other than French. Consider first Mainland Scandinavian. Per Holmberg's generalization, object pronouns never shift across the participle, so we do not expect this variety of PPA. In Swedish, there are two forms for the participle, the passive participle, which appears in passives, and the *supine*, which appears everywhere else. Only the passive participle inflects for number and gender, making it impossible to test whether *wh*-movement can trigger PPA. It should, in principle, be possible to test whether *wh*-movement triggers PPA in those Norwegian dialects with PPA, but I do not have data on this. It's important to note that PPA is completely absent from standard Norwegian *bokmål*, and only manifests in less common dialectal variants. Italian, on the other hand, behaves like French with respect to clitic-triggered PPA, with the exception that PPA with third person clitics is obligatory. Italian does not show PPA with *wh*-phrases, however. These facts are consistent with the present system, and can be captured if (i) third person clitics must move before EA is merged and (ii) *wh*-objects must move after EA is merged. As it stands, however, I see no obvious way of forcing (i) and (ii) without enrichment of our hypotheses. I will not pursue this further here, leaving the derivation of (i) and (ii) to future research.

Let's review where things stand at this point. First, the ObOp framework adopted here commits us to the hypothesis that ν shares the same features across the clause types and languages considered, and that in particular all varieties of ν are endowed with at least $[\circ A' \circ]$, $[\circ D \circ]$, and $[\phi: _]$ features. Second, we hypothesized that the syntactic derivation is constrained by a basic economy principle, Feature Maximality, which dictates that syntactic operations should involve the fewest number of operands as possible, i.e., if ZP discharges feature $[F_i]$ at H , it must also discharge all features $[F_j]$ that it is capable of. The relevant consequence is that *Agree* at H with ZP triggers movement to *Spec(HP)* if H can host ZP as a specifier. The PPA facts then fall out as a direct consequence of these two results.

In transitive clauses, if *Agree* is initiated with IA at ν before merger of EA, IA must move to *Spec(vP)*, exhausting the feature needed to merge EA and rendering the structure uninterpretable; if EA is merged first, IA receives dependent case and is inaccessible to *Agree*, blocking PPA. Making the object a *wh*-phrase, and hence activating the $[\circ wh \circ]$ -feature on ν , adds the exact additional degree of freedom needed to license PPA: *Agree* with IA can trigger discharge of $[\circ wh \circ]$

¹⁴Recall that *Merge* is subject to locality (see ??), so that once ZP has been merged at H , it no longer qualifies as a target for *Merge* at H . This rules out a derivation where ZP is merged to H per one obligatory operation, then immediately remerged per another.

rather than [$\circ D \circ$], allowing IA to shift to Spec(νP) without blocking subsequent merger of EA; alternatively, EA can merge first, ruling out subsequent agreement with IA, which is nonetheless attracted to Spec(νP) by [$\circ wh \circ$]. The same logic carries over unchanged in passive/unaccusative clauses. The [$\circ D \circ$] feature on ν may either attract IA, in which case *Agree* (and PPA) is obligatory, or [$\circ D \circ$] may trigger expletive insertion. If the expletive is a case competitor, the derivation proceeds as in the transitive case. If, however, the expletive is non-agreeing and non-case-assigning, ν may subsequently *Agree* with IA, licensing PPA.

The present account therefore offers the following answer to the essential challenge raised by PPA, namely that its distribution is unlike the distribution of agreement triggered by heads higher in the clause. The understanding of *Agree* deduced on the basis of agreement phenomena in the TP domain is correct. *Agree* is long-distance, and does not depend on a Spec-Head configuration. Rather, PPA is different from TP-domain agreement because it is triggered at a head that is also responsible for introducing syntactic (and semantic) arguments, and is thus more deeply intertwined with the calculus of case and predicate saturation. Agreement here is complex because it interacts with these processes directly. Agreement triggered by heads in the TP domain, in contrast, accesses the output of this process, rather than directly taking part in it.

4 Additional Predictions

The account sketched in the previous section makes a number of additional predictions concerning the possible realization of PPA cross-linguistically. I focus in this section on two such cases, the first concerning that availability of PPA with *in situ* objects of transitive clauses and the second on PPA with *in situ* objects of passives and unaccusatives.

4.1 PPA *in situ*

In Section 2, I presented the hypothesis that ϕ -*Agree* is sensitive to the case on the target DP, and moreover that languages can vary according to which cases they make accessible to ϕ -*Agree*, subject to the implicational hierarchy encoded below.

(8) **Case Accessibility:**

Accessibility to *Agree* is determined according to the *Moravcsik Hierarchy*:
unmarked case » *dependent case* » *lexical/oblique case*

The languages we have investigated so far fall into the most restrictive class, which makes only unmarked case accessible. It is well known, however, that even closely related languages can vary in terms of whether dependent case is accessible for ϕ -*Agree*. One well known case is the contrast between Hindi-Urdu and Nepali. The latter but not the former makes dependent case accessible, as illustrated below.

- (45) a. raam-ne rotii khaayii thii
 Ram-ERG.M bread.F eat.PERF.F be.PST.F
 ‘Ram had eaten bread.’ Hindi-Urdu
- b. Maile yas pasāl-mā patrikā kin-ē
 1.SG.ERG DEM.OBL store-LOC newspaper.NOM buy.PAST-1SG
 ‘I bought the newspaper in this store.’ Nepali
 (?: 309f.)

We are therefore lead to expect that there should be Romance or Mainland Scandinavian varieties that both have a participle that can inflect morphologically to reveal the presence of ϕ -

This prediction – that there should exist languages with obligatory PPA with all objects – is borne out across Romance: obligatory PPA with all objects occurs in at least Neapolitan (46a), pre-19th-century Italian (46b), some dialects of Occitan (46c), some dialects of Gascon (46d), and some dialects of Catalan (46e) (❑; ❑).

- I have not found similar data in Mainland Scandinavian, although this may be in part because there are many fewer speakers overall and the variation is more constrained than in Romance.

A second prediction of the account that is borne out in both Romance and Mainland Scandinavian concerns the predicted behavior of PPA in the presence of non-agreeing, non-case-assigning expletives. Recall from Italian that in passive and unaccusative clauses, if the expletive does not induce dependent case on the object, we predict that PPA should be possible in the absence of movement. I illustrate the basic derivation in (47).

- I will now show that both French and Mainland Scandinavian license a non-agreeing expletive in certain situations, and that PPA is indeed licensed with an *in situ* object in these cases. I begin with French, and in particular with the *Stylistic Inversion* (?: ?) construction. Descriptively,

Stylistic Inversion refers to the possibility for subjects of transitive and unergative verbs and internal arguments of passive and unaccusative verbs to appear post-verbally in subjunctive and interrogative contexts without an overt expletive. In all other contexts, such arguments must be pre-verbal, at least in the absence of an overt expletive. For the remainder of this section, we will be focused on the passive/unaccusative case, although I present the basic transitive/unergative pattern in (47) for the sake of completeness.¹⁵

(47) Transitive/unergative

- a. SI
- b. No SI

(48) Passive/unaccusative

- a. SI
- b. No SI

There is evidence that in cases like (48), the internal argument may remain *in situ*, at least for some speakers: *en*-cliticization of IA is possible in these contexts (see again Kayne 2001: 112, fn.9), which is generally limited to *in situ* internal arguments (?).

- (49) a. %Il faut qu'en_i aient été condamnés au moins [trois e₁]
 it requires that-of them have.SBJ.PL been sentenced.PL at least three
 'It's necessary that there have been at least three of them sentenced.'
 b. %Il faut qu'en_i aient repeintes au moins [trois e₁].
 it requires that-of them have.SBJ.PL repainted.PL at least three
 'It's necessary that there have been at least three of them repainted.'
 (Paul Marty, p.c.)

Granting that French has [oD◊] features at *v* and T, we are therefore lead to the conclusion that French licenses a null expletive in such cases.¹⁶, and moreover that it must be a non-agreeing/case-assigning expletive, as agreement at T is with the *in situ* IA. Such cases are thus exactly parallel to Italian passive/unaccusative clauses with *in situ* objects. We therefore predict that PPA should be obligatory here. We also predict that if we re-insert the overt case-assigning expletive, which is also licensed in all SI contexts, PPA should become impossible again. Both predictions are borne out.¹⁷

- (50) a. Où ont été exécutés **des innocents**?
 where have.PL been executed.PL some innocents
 'Where have there been some innocents executed?'
 (? : 521)
 b. Où a-t-il été exécut(*es) **des innocents**?
 where have.SG-it been executed.(*PL) some innocents
 'Where have there been some innocents executed?'

¹⁵As ?, who give an analysis of the transitive/unergative data acknowledge (p.112, fn.9), the passive/unaccusative examples likely represent a different phenomenon with a distinct derivation.

¹⁶As in Italian, the prediction concerning the presence of PPA in such cases is the same if we assume, alternatively, that French T and *v* optionally lack a [oD◊] feature in such cases. See fn. ??.

¹⁷Note that the agreement on the participle is not with *en*, which does not trigger PPA for the speakers who accept (49b,c). In general, PPA with *en* is a marked option that is impossible for most speakers (?), including all those I have consulted.

- (51) a. Il faut que aient été repeintes **trois chaises**.
it requires that have.SBJ.PL been repainted.PL three chairs
'It's necessary that there have been three chairs repainted.'
b. Il faut qu'il ait été repeint*(es) **trois chaises**.
it requires that-it has.SBJ.SG been repainted.(*PL) three chairs
'It's necessary that there have been three chairs repainted.'
(Paul Marty, p.c.)
- (52) a. Il faut que soient mortes **trois sauterelles**.
it requires that are.SBJ.PL died.PL three grasshoppers
'It's necessary that three grasshoppers have died.'
b. Il faut qu'il soit mort*(es) **trois sauterelles**.
it requires that-it is.SBJ.SG died.(*PL) three grasshoppers
'It's necessary that three grasshoppers have died.'
(Paul Marty, p.c.)

While there remains the very important question of why subjunctive and interrogative contexts are unique in licensing the null non-agreeing expletive in French (or alternatively in licensing a relaxing of the EPP; see fn. ??), these data are exactly predicted on the present account: in just those contexts where French shows Italian-type behavior with respect to agreement at T and null expletives, it too shows Italian-type behavior with respect to PPA. This corroborates the main idea of this paper, that the restricted nature of PPA reflects the fact that the triggering head, ν , is also an argument/expletive introducer.

The same prediction is also borne out in some dialects of Mainland Scandinavian. The dialects in question all license an expletive version of the distal locative proform, cognate to English *there*, in addition to the third singular neuter pronoun. As ? observes, in those dialects with both expletives, they tend to be in relatively free variation, unlike in English. Thus both may be used in meteorological contexts, with CP associates, and with passives and unaccusatives. As before, let's adopt the null hypothesis that expletive pronouns have the same formal syntactic properties as their semantically contentful variants, so that expletive *der* in Mainland Scandinavian is lexically oblique. This means both that it is inaccessible to ϕ -Agree, and that it does not induce dependent case on its associate.¹⁸ We thus predict that an *in situ* object should trigger PPA in the presence of the *der* but not the *det* expletive. This is borne out.

- (53) a. **Det** vart skote-(*n) **ein** **elg**
it was shot.N.SG/*M.SG an.M.SG elk.M.SG
b. **Der** vart skoten **ein** **elg**
there was shot.M.SG an.M.SG elk.M.SG
'There was an elk shot'
(Åfarli 2008: 171)
- (54) a. **Det** er nett kom-e/*ne **nokre gjester**
it is just come.N.SG/*M.SG some guests.PL

¹⁸Because Mainland Scandinavian lacks ϕ -Agree at T, it is hard to independently verify that expletive *der* is not an agreement trigger, although the locative expletives in closely related English and Dutch clearly do not trigger agreement, which is always with the associate.

- (i) a. There were/*was three men arrested.
b. Dutch example

- b. **Der** er nett kom-**ne/*e** **nokre gjester**
 there is just come.PL/*N.SG some guests.PL
 ‘There have just arrived some guests.’
 (Christensen & Taraldsen 1989: 58)

In summary, when the type of expletive is modulated in French and Mainland Scandinavian, we see in both cases that the Italian type PPA pattern emerges exactly where the present account predicts that it should. This both corroborates the technical details of the account, as well as the broader idea that the restricted nature of PPA is directly tied to *v*’s status as an argument/expletive introducing head.

5 Alternative treatments

While PPA has played a prominent role in the development of modern syntactic theory, there are relatively few analyses in the literature. Here, I briefly consider Kayne’s classical analysis, as well as one modern competitor, and explore how they compare to the present account.

Perhaps the best known analysis of PPA is the classic treatment of **?**, which directly links PPA to movement through the specifier of a dedicated agreement head. Setting aside technical details, this approach faces two major obstacles. The first is the preponderance of cross-linguistic evidence that *Agree* is not formally dependent on movement, in general. Granting that *Agree* is the mechanism responsible for PPA, the account must therefore be considerably enriched – perhaps along the lines suggested in this paper – to capture the basic facts. Second, as we have seen, PPA is possible with an *in situ* object in at least two distinct cases: (i) in passive/unaccusative clauses when a non-case-assigning expletive is merged in Spec(*v*P); (ii) in all clauses in languages that make dependent case accessible to ϕ -*Agree*. A pure spec-head theory has no immediate way to account for these data.

In response to these challenges, **?** propose the following update to Kayne’s original theory, couched in the uninterpretable-features model of *Agree* (Chomsky 2000; 2001). The core idea in their proposal is this: transitive and passive/unaccusative *v* are endowed with agreement features, and in fact always undergo *Agree* with IA; this agreement is only spelled out morphologically, however, when the head hosting the agreement is in the same phase as the target. The account is based on three main claims. The first is that agreement is only spelled out morphologically when the trigger and goal are in the minimal complement of the same phase head:

(55) **Phasal Agreement Condition** (**?**: 482)

- a. Given an *Agree* relation A between probe P and goal G, morphophonological agreement between P and G is realized iff P and G are contained in the complement of the minimal phase head H
- b. XP is in the complement of a minimal phase head H there is no distinct phase H’ contained in XP whose complement YP contains P and G

The second claim is that in Italian transitive clauses, the head hosting the participle raises to at least *v*. They provide as evidence the fact that Italian participles must raise above manner adverbs in active sentences (**?**: 102f.).

- (56) Hanno *(accolto) bene *(accolto) il suo spettacolo solo loro.
 have.PL (recieved) well (recieved) the his show only they
 ‘They alone have received his show well.’

(57) a. [TP I [have [_{vP} eaten + v [_{VP} eaten the apple]]]]
spell-out domain
b. [CP C [TP them.CL [TP I [have [_{vP} eaten + v [_{VP} eaten them]]]]]]]
spell-out domain spell-out domain

There are two major challenges facing this account. The first and more serious is that PPA isn't conditioned on the height of the participle cross-linguistically. In particular, there are languages where the participle can stay very low in the structure, possibly even *in situ*, and yet PPA is impossible in transitive clauses, as well as languages where the participle raises at least as high as in Italian, and yet PPA is licensed with *in situ* objects. In the former class is French, where the participle cannot raise above manner adverbs like *bien*, and may appear below much lower VP-level adverbs like *presque*, *à peine*, *souvent* (?; ?). As we have seen, however, PPA is robustly impossible in transitive clauses.

- (58) a. Il en a (bien) compris (*bien) à peine la moitié.
(Cinque 1999: 46)
b. Guy a (presque) mis (presque) fin au conflit.
c. Jean a (à peine) vu (à peine) Marie.
(Pollock 1989: 417)

(59) kill a (*tuttə) kapitə (tuttə) e kkill a:tə nunn a kapitə
that-one has all understood all and that-one other not has understood
njentə
nothing
'He understood everything and the other one didn't understand anything'
(Loporcaro 2010: 235)

(i) Li ho spiegati (tutti) bene (*tutti) a Gianni.
'I have explained well all to Gianni'
(Cinque 1999: 119)

- (60) addʒə kottə/*kwottə a pastə
 have.1.SG cookPTCP.F/cookPTCP.M the.F.SG pasta.F.SG
 ‘I’ve cooked the pasta’
 (Lopocaro 2010: 226)

The second major challenge is the correlation between PPA in passive/unaccusative clauses and the status of the higher expletive. As we have seen in Italian, French, and Mainland Scandinavia, if the expletive is itself an agreement trigger and case competitor, PPA is blocked, whereas if the expletive is an oblique and thus not a case competitor, PPA is licensed. It is hard to see how these facts could be given a principled analysis on the present account. Presumably, it would be necessary to reduce these facts to a difference in the phasal status of the ν introducing oblique vs. non-oblique expletives, since this is the main tool at our disposal on this account. But I see no principled ground on which to motivate the contrast.

Compared with these approaches, two aspects of the present account are particularly salient. First, like Kayne’s Spec-Head agreement approach, we have posited a tight formal connection between agreement and movement, and moreover proposed that this connection is essential to the syntax of PPA. The absence of PPA in transitive clauses is a direct result of the fact that *Agree* at ν must trigger movement unless another DP has first been merged in its specifier. Unlike the Spec-Head analysis, however, this link is flexible enough to allow for agreement without movement in the very particular case that the IA is case accessible to *Agree*, such as when there is no higher case-competitor or the language makes dependent-case-marked DPs so accessible. Second, like ?, we have postulated that the differential behavior of PPA compared to ϕ -*Agree* operations triggered from the TP domain reduces to a special property of ν , in our case its status as an argument/expletive introducing head. We have therefore preserved two of the core insights of previous work – that PPA is deeply intertwined with movement, and that its relatively restricted nature is somehow linked with the special status of ν – while allowing for the additional flexibility needed to overcome some of the challenges facing this work.

6 Generalizing the result

At the outset of this paper, we set out to explore two main issues. The first was the technical challenge raised by PPA given the modern understanding of agreement, and we have now sketched a theory in these terms that captures the data. The second, more open-ended issue concerned the nature of the correlation between agreement and movement. We have now seen, in addition to the cross-linguistic evidence pointed to in the introduction, that the strong correlation posited under the Spec-Head theory runs into trouble even in the domain of PPA, which at least partially motivated the theory in the first place. Some degree of decoupling between agreement and movement is therefore warranted, and the prevailing hypothesis is that this decoupling should be complete. Agreement and movement share no formal link, and cases of apparent correlation are essentially accidental: some heads happen to have both agreement and movement inducing features, but there is no formal dependency. Our account of PPA has essentially adopted this view. While we made extensive use of the fact that ν had both merge and agreement features, this feature coupling has not been shown to follow from any deeper principles. Our one innovation in the agreement-movement correlation domain has been to postulate that when a head happens to have both agreement and movement features, they must act concurrently if possible, i.e., agreement triggers movement when it can.

In this final section, I argue that if we re-examine the canonical examples of agreement *sans* movement (ASM) in the literature from the perspective of the theory developed so far, a deeper

link between agreement and movement tentatively emerges. In particular, the following hypothesis is borne out:

- (61) **The agreement-movement coupling hypothesis:**
 [ϕ :_] features are parasitic on [\circ D \circ] features

Phrased alternatively, if a head can license agreement, it must also be capable of triggering movement, and, given Feature Maximality, must do so unless something else exhausts its merge feature first.

In the ensuing section, I examine well-known cases of ASM from the literature, showing that the behavior supports (61) once we adopt the other aspects of the present framework. Cross-linguistic instances of ASM can be broadly classified in terms of whether they are cross-clausal or not. The cross-clausal cases are usually termed *long distance agreement*, and comprise the most reliable instances of ASM. Intra-clausal ASM is harder to unequivocally establish, although I will argue that many of the cases we have already considered arguably fall into this class and thus can be taken to support the generalization in (62). In short, then, all of the clearest cases of ASM seem to be triggered by a head that can be independently seen to license merger with another DP.

6.1 Long-distance agreement

The phenomenon of long-distance agreement – cross-clausal ASM – has been extensively researched, and is arguably instantiated in a wide variety of genetically diverse languages. Such examples tend to present the clearest cases of ASM cross-linguistically. I focus on three canonical cases here, that when taken together, broadly cover the range of phenomena attested cross-linguistically: Hindi-Urdu, Basque, and Tsez. In each of the three cases, I will show that the head triggering the relevant instance of ASM is also plausibly endowed with a [\circ D \circ] feature, supporting the generalization in (61).

I begin with Hindi-Urdu. The phenomenon in question is illustrated in (62), where the matrix verb agrees with the object of the embedded clause.

- (62) Raam-ne [rotii khaa-naa] caah-ii
 Ram-ERG bread.F eat-INF.M.SG want-PERF.F.SG
 ‘Ram wanted to eat bread.’
 (? : 237)

ASM in Hindi-Urdu is optional, limited to the highest case-accessible DP in the relevant embedded domain, and only possible with infinitival embedded clauses. I refer the reader to ?, ?, ?, ?, and ? for an in-depth examination of the various other properties of this phenomenon.²⁰ For

²⁰Of particular note is how the agreement step between the matrix TP and the embedded object satisfies locality. Assuming that movement into the matrix clause is not a pre-requisite for agreement in (62), there are three main competing options. The first is that the clause-boundary is (optionally) permeable to *Agree*, perhaps because by virtue of some sort of restructuring (?: ?; ?). This is fully compatible with our proposal, and has the advantage that the optionality of ASM can be reduced to whether or not the embedded clause is taken to be reduced in the necessary way, a process that is independently known to be optional. The second is that the agreement target must first undergo some sort of additional, optional movement step to the edge of the embedded clause, where it is then accessible to agreement at matrix T (?). Assuming the movement in the matrix clause can be suitably motivated, this is also fully compatible with our proposal, as the crucial agreement step at matrix T does not involve movement. The third proposal is that agreement at T is mediated by a series of intermediate functional heads, so that the features of the target are propagated up the tree via cyclic agree between these heads. It is less clear that this is compatible with the present proposal, but see, e.g., ? for independent issues with this approach.

our purposes, however, two main aspects of (62) are relevant. First, there is a variety of independent evidence that the agreement in (62) does not require (covert) movement of the embedded agreement target to matrix Spec(TP). Space does not allow a full rendering of these arguments, but see at least ?, ?, and especially ? for in depth discussion. I accept this conclusion as given. Second, following, e.g., ?, ?, ?, Hindi-Urdu T has both [ϕ :_] features, which trigger ASM in cases like the above, and the canonical EPP property, indicating the presence of an [ϕ D ϕ] feature.²¹ We therefore conclude that ASM is triggered by a head with the independent ability to merge a DP specifier, supporting (62).²²

Most of the best known instances of “long-distance agreement” fall into the category of ergative/quirky-subject ASM, which can be characterized as follows: a head *H* with an overt specifier DP₁ agrees with a DP₂ that it asymmetrically c-commands; DP₁ is lower on the case-accessibility hierarchy than DP₂.

There are two ways that a DP in some domain can be lower on the Moravcsik hierarchy than a DP it c-commands in the same domain. The first, which we have already seen, is for the higher DP to appear with oblique/quirky case. By hypothesis, such DPs do not trigger the case computation algorithm, and hence do not trigger dependent case marking on the lower DP. The second way is for the language in question to have an ergative/absolutive case system. So far, we have limited discussion to nominative-accusative languages where case is always valued downward, as encapsulated in (96), repeated below.

(96) **Configurational Case** (nominative):

Given DP₁, DP₂, where DP₁ c-commands DP₂ and both are in the same local domain, value the case feature on DP₁ ~~DP₂~~

Ergative-absolutive case systems, in contrast, flip the valuation rule, so that the higher DP gets dependent case. Dependent case is termed *ergative* in such systems, and unmarked case *absolutive*.

(63) **Configurational Case** (ergative):

Given DP₁, DP₂, where DP₁ c-commands DP₂ and both are in the same local domain, value the case feature on DP₁.

It turns out that ASM obtains under both means of establishing the configuration described above. I focus first on the ergative/absolutive case. ASM of this sort arises in Hindi-Urdu, Tsez, Basque, Itelman, among other languages (see ? for an overview). I illustrate with an example from Hindi-Urdu.

- (64) Raam-ne [rotii khaa-naa] caah-ii
 Ram-ERG bread.F eat-INF.M.SG want-PERF.F.SG
 ‘Ram wanted to eat bread.’
 (? : 237)

The relevant details are the following. First, the specifier of the head licensing ASM, matrix T,

²¹In examples like (62), Hindi-Urdu exhibits a so-called ergative/absolutive case alignment, where dependent case is marked on the higher of two DPs in a local domain. So far we have only seen nominative/accusative alignments, which conversely mark dependent case on the lower DP. This is what renders the surface subject inaccessible to ϕ -Agree itself.

²²Following Preminger (2014), if we assume that case-inaccessible DPs are nonetheless interveners for ϕ -Agree, there is an additional argument that Hindi T must have both ϕ - and [ϕ D ϕ] features. If DP_{ERG} is an intervener, it must have to move to the specifier of the agreement triggering head to license agree with the lower DP, so that the same head must have a [ϕ D ϕ] feature.

is filled by a DP with ergative case, while agreement targets the unmarked-for-case embedded object. Assume T is the head licensing agreement in the matrix clause. By hypothesis, then, T has an [$\circ D \circ$] feature that is discharged by attracting the matrix subject from its base-position in Spec(νP). T also has a [ϕ :_] feature, which can then be discharged by the lower DP, *rotii*, which is case accessible by virtue of the ergative/absolutive case system in this clause. I refer the reader to **?, ?, ?, ?** for evidence that this agreement need not involve covert movement of the lower DP to Spec(TP) of the matrix clause.

(65)

Crucially, then, we have

In nominative-accusative languages, which we have so far limited our attention to, this configuration manifests most commonly when an oblique-case-marked DP surfaces in subject position, and T shows agreement with a lower, nominative (unmarked) DP. I illustrate with an example from Icelandic.

- (66) Henni virðast [myndirnar vera ljótar].
 her.DAT seem.3.PL paintings.the.NOM be ugly
 'It seems to her that the paintings are ugly.'
 (Sigurðsson & Holmberg 2008: 252)

In the theory developed here, data like (66) has the following derivation. By virtue of being the argument of *seems*, the surface subject is assigned oblique case when it is merged in the structure. As an oblique, it does not trigger the case computation algorithm, so the lower DP remains unmarked for case and surfaces as nominative. T by hypothesis has a [$\circ D \circ$] feature that, in Icelandic, can attract dative/oblique DPs, as well as a [ϕ :_] feature. The oblique DP is then obligatorily attracted to Spec(TP). Since the lower nominative object is accessible to ϕ -Agree, it is then so targeted.²³

Agreement thus takes place in the absence of movement by virtue of the fact that [$\circ D \circ$] on T is exhausted by the oblique DP, which since it is oblique does not preclude, via case-assignment, a further instance of Agree with the lower DP.

(i) Null-subject languages, *in situ* objects (ii) LD PPA (iii) Quirky subject LDA (iv) Ergative subject LDA
 Proposal

- (67) ϕ -Merge correlation:
 ϕ features are parasitic on [$\circ \phi \circ$] features

1. Null subject languages have expletives 2. LDA supports proposal

- Questions we set out to answer:

1. How do we handle PPA and other apparent instances of Spec-Head agreement in a long-distance ϕ -Agree framework?

²³I set aside the important and difficult question of locality in such contexts, i.e, whether the nominative object has moved (overtly or covertly) to the edge of the embedded clause or whether there is a single long-distance agreement step. See **?** for an overview of these and other hypothesis. What is important at present is that agreement step is possible in the absence of movement into matrix subject position exactly because that position is occupied by an element that does not by virtue of its presence render the lower nominative subject inaccessible to Agree.

- 25

- | | |
|--|--|
| <p>(71)</p> <p>a. What happened?</p> <p>b. È entrato Dante.
is entered Dante</p> <p>c. È affondata la Attilio Regolo.
is sunk the Attilio Regolo</p> <p>d. È morto Fellini.
is died Fellini
(Pinto 1997: 20)</p> | <p>(72)</p> <p>a. What happened?</p> <p>b. Dante è entrato
Dante is entered</p> <p>c. La Atilio Regolo è affondata
the Attilio Regolo is sunk</p> <p>d. Fellini è morto
Fellini is died
(Pinto 1997: 23)</p> |
|--|--|

- There is no definiteness effect, but *ne*-cliticization shows that the object can at least optionally be *in situ*
- Pinto (1997): The VS and SV word orders have a subtly different interpretation
 - VS: the location of the action/event is speaker oriented
 - SV: the location of the action/event is neutral/not specified

- (73) a. È arrivato Gianni
'Gianni arrived here'
b. Gianni è arrivato
'Gianni arrived (somewhere)'

- Following Pinto (1997), those verbs that allow VS in wide-focus contexts project a (optionally covert) locative argument
 - When covert, this argument gets an obligatorily deictic interpretation
- **Observation 1 (?)**: With passive and unaccusative predicates, a locative argument must be projected in VS but not SV orders
- **Observation 2** (Pinto 1997): If the locative is overtly realized, either it or its (definite) DP co-argument must move to pre-verbal position

- (74) a. Che cosa è successo?
what happened
b. ??È partito Dante da Firenze. ??[V DP PP]
c. Dante è partito da Firenze. ✓ [DP V PP]
d. Da Firenze è partito Dante. ✓ [PP V DP]

- **Observation 3** (Sheehan 2010; Belletti 1988): both a locative PP and its DP co-argument can remain *in situ* if the DP is non-specific

- (75) a. È partito un uomo da questo Spedale.
is left a man from this hospital
(Google)
- b. Era finalmente arrivato qualche studente a lezione.
arrived finally some student to the lecture
(Belletti 1988)

- Taken together, these three observations furnish an argument for a traditional EPP and (null) oblique expletives in Italian
 - Observation 1: in VS orders, we must project a (null) locative argument, so that Spec(TP) is projected

(76)

a.	[_{TP} LOC [T ... [V DP]]]	(obligatory <i>speaker orientation</i>)
b.	[_{TP} DP [T ... [V (LOC)]]]	(optional <i>speaker orientation</i>)

 - Observation 2: if LOC and DP arguments are overt, one must move to satisfy EPP²⁴
- (77)

a.	[_{TP} LOC [T ... [V DP]]]	(✓ EPP)
b.	[_{TP} DP [T ... [V LOC]]]	(✓ EPP)
c.	[_{TP} ∅ [T ... [V DP LOC]]]	(✗ EPP)
- Observation 3: alternatively, we can insert a (null) oblique expletive to satisfy EPP, diagnosed by the presence of a characteristic definiteness effect²⁵
- (78)

[_{TP} EXPL.OBL [T ... [V DP _{NS} LOC]]]	(✓ EPP, ✓ definiteness effect)
--	--------------------------------
- This analysis reduces the differences between Italian and English to the independent possibility for null-subjects in Italian
 - We can observe essentially the same effects in English with locative-inversion
 - V-DP order requires either a locative subject or a null expletive, which induces a definiteness effect

(79)

a.	*Appeared John (out of the mist).
b.	Out of the mist appeared John.
c.	*There appeared John out of the mist.
d.	There appeared a ghostly figure out of the mist.

- Observation 2: if LOC and DP arguments are overt, one must move to satisfy EPP²⁴

- Observation 3: alternatively, we can insert a (null) oblique expletive to satisfy EPP, diagnosed by the presence of a characteristic definiteness effect²⁵

- This analysis reduces the differences between Italian and English to the independent possibility for null-subjects in Italian
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- (79) a. *Appeared John (out of the mist).
 b. Out of the mist appeared John.
 c. *There appeared John out of the mist.
 d. There appeared a ghostly figure out of the mist.

- In a context with two logophoric centers, the speaker-oriented one must antecede the pronoun

(81) #

‘Sue told me that arrived the children (here)’

- In wide scope, post-verbal subjects with an overt PP are marked if definite, fully acceptable if indefinite

- (82)
- What happened?
 - #higi?a ha-jeled l-a-mesilea
arrived.3.M.SG DEF-child.M to-the-party
‘The child arrived at the party’
 - higi?a jeled l-a-mesilea
arrived.3.M.SG child.M to-the-party
‘A child arrived at the party.’

6.3.2 Chicheŵa

- Three locative noun classes in Chichŵa (and Bantu more generally; Buell 2007): 16, *general place*; 17: *specific place*; 18: *enclosed place*

- (83)
- Pa-m-sikǎ-pa pá-bádw-a nkhonya.
16-3-market-16 this 16-SB.IM.FUT-be.born-IND 10.fist
‘At this market a fight is going to break out.’
 - Ku-mu-dzi ku-na-bwér-á a-lěndo.
17-3-village 17.SB-REC PST-come-IND 2-visitor
‘To the village came visitors.’
 - M-nkhalǎngo mw-a-khal-á mí-kângo.
18-9.forest 18.SB-PERF-remain-IND 4-lion
‘In the forest have remained lions.’
(?: 9)

- Like most Bantun languages, Chicheŵa shows agreement with the locative subject in locative inversion contexts

- (84)
- Ku-mu-dzi ku-li chi-tsîme.
17-3-village 17SB-be 7-well
‘In the village is a well.’
 - Chi-tsîme chi-li ku-mu-dzi
7-well 7SB-be 17-3-village
‘The well is in a village.’
(Bresnan & Kanerva: 1989, p.2)

- Also like most Bantu languages, Chicheŵa is (i) a null subject language, (ii) freely permits VS order with passives & unaccusatives, (iii) uses locative noun-class agreement in VS constructions

- On its own, (iii) is already suggestive that Chicheŵa has an EPP
 - If the subject is not promoted, a null locative pronoun must move to Spec(TP)
 - But maybe locative agreement is simply the default in the language
 - Following Perez (1983) and Demuth & Mmusi (1997), many Bantu languages appear to use noun class 16 or 17 in all cases where English would use expletive *it*
- (85) Kú-no-fungir-w-a kuri Sekúru vá-ngu íbenzi
 17-PR-suspect-PASS-IND that 1A.uncle 2A-my fool
 ‘It is suspected that my uncle is a fool.’
 (Perez 1983)
- This suggests that class 16/17 might be some kind of morphological default used when agreement can’t take place
- Chicheŵa is (relatively) unique in furnishing an argument against this view:
 - In VS structure, the agreement on the verb can be with any of the three locative noun classes
 - The agreement is interpreted, suggesting there really is a covert locative pronoun fronting to Spec(TP)
- (86) a. Pá-bád-w-a nkhonya.
 16 SB IM FUT-be born-IND 10fist
 ‘There will be a fight (at some place).’
 b. Ku-na-bwé r-á a-lěndo.
 17SB-REC PST-come-IND 2-visitor
 ‘There came visitors (in/to some place).’
 c. Mw-a-khal-á mí kângo.
 18SB-PERF-remain-IN 4-lion
 ‘There have remained lions (inside some place).’
 (Bresnan & Kanerva: 1989, p. 11)

6.3.3 Other cases

- Following Sheehan (2010), Sabine Iatridou (p.c.), Brandi & Cordin (1989), Saccon (1993), the argument can be replicated in at least the following languages
 - Spanish
 - European Portuguese
 - Catalan
 - Greek (??)
 - Trentino
 - Florentino
 - Conegliano

6.4 Implications for long-distance agreement

- The φ -Agree/Merge correlation, in conjunction with the framework adopted here, makes very specific predictions concerning when long-distance agreement (LDA) should be possible
- Take head H with $[\circ\varphi\circ]$ and φ
 - φ -Agree at H feeds Merge (move) to H *multi-tasking (MT)*
 \Rightarrow LDA is only possible if H Merges with something it can't Agree with
 \Rightarrow LDA requires first-Merge to H, or attraction of a non-Agreeing element
 - First-Merge to H may block φ -Agree with lower DPs *case accessibility (CA)*

(87) Conditions on LDA:

Long-distance Agree at H requires:

- (First)-Merge w/ a non-case competitor
- Accessible dependent case *MT+CA*

- **Proposal:** These two conditions exhaustively capture the cross-linguistic instances of LDA
- Long-distance PPA

- **Type A:** Standard Italian (and many many Italian languages), Mainland Scandinavian: long-distance PPA arises in, and only in, the following two configurations

* Both cases involve Merge of a non-case competitor, per (87a)

- (88) **Due ladri** sono entrat-**i/*o** dalla finestra.
 two robbers are entered-M.PL/*M.SG from the window
 'Two robbers entered from the window'
 (?: ex. 34c)

- (89) a. $[_{vP} \text{ EXPL.OBL } [_{vP} \text{ } v \text{ } [\dots \text{ IA } \dots]]]$
 \uparrow
 φ -Agree

- b. $[_{vP} \text{ LOC } [_{vP} \text{ } v \text{ } [\dots \text{ IA } \dots \text{ LOC } \dots]]]$
 \uparrow
 φ -Agree

- **Type B:** Neapolitan, 18th Century Italian, Occitan, Gascon, Catalan: PPA with all *in situ* objects

* Dependent case is accessible in these languages, per (87b)

- (90) add_{3ə} kottə/*kwottə a pastə
 have.1.SG cook.PTCP.F/cookPTCP.M the.F.SG pasta.F.SG
 'I cooked the pasta'
 (?: 806) *Neapolitan*

- (91) $[_{vP} \text{ EA/there/it } [_{vP} \text{ } v \text{ } [\dots \text{ IA } \dots]]]$
 \uparrow
 φ -Agree

- English-type LDA (locative inversion, expletive *there*)

- Also: French, Italian, Bantu, Spanish, Hebrew
- Oblique expletive or locative is attracted by T, satisfying [ϕ], per (87a)
- ϕ on T probes closest DP

(92) From this trench (there) **are**/?is sure to be recovered **sacrificial offerings from the Aztec period.**

(93)
$$\begin{array}{c} \downarrow \\ [\text{TP} \text{ EXPL.OBL } [\text{TP} \text{ T}_{[\phi:2]} [\dots [_{\text{vP}} \text{ EXPL.OBL } [_{\text{vP}} \text{ v } [\dots \text{IA} \dots]]]]]] \end{array}$$

 ϕ -Agree

- Icelandic type LDA (oblique subject)

- We see the system at work more transparently here
- LDA configurations involve a dative subject and agreement with a post-verbal nominative
- Dative moves to Spec(TP) to satisfy [ϕ], per (87a)
- Dative fails to induce dependent case: closest DP is nominative
- ϕ probes nominative

(94) Henni virðast myndirnar vera ljótar.
 her.DAT seem.3.PL paintings.the.NOM be ugly
 ‘It seems to her that the paintings are ugly.’
 (Sigurðsson & Holmberg 2008: 252)

(95)
$$\begin{array}{c} \downarrow \\ [\text{TP} \text{ DAT } [\text{TP} \text{ T}_{[\phi:2]} [\dots [_{\text{vP}} \text{ DAT } [_{\text{vP}} \text{ v } [\dots \text{IA} \dots]]]]]] \end{array}$$

 ϕ -Agree

- Ergative-type LDA (Basque, Hindi-Urdu, Tsez)

- In ergative/absolutive alignment systems, dependent case is induced on the structurally superior of two DPs

(96) **Configurational Case** (ergative):
 Given DP₁, DP₂, where DP₁ c-commands DP₂ and there is no phase head that m-commands DP₂ but not DP₁, value the case feature on DP₁ ~~DP₂~~

- The famous cases of LDA in Tsez, Hindi-Urdu involve an ergative subject
- Ergative DP saturates [ϕ] on T (or some other head)
- Because lower object is accessible, ϕ can probe it

(97) Ram-ne [rotii khaa-nii] chaah-ii
 Ram-ERG bread.F eat-inf.F want.PERF.FSG
 ‘Ram wanted to eat bread.’
 (? : 792)

(98) Enir [užā magalu bāc’ruli] b-iyxo
 mother boy bread.III.ABS ate III-know
 ‘The mother knows the boy ate the bread.’
 (Potsdam & Polinsky 2001)

7 Conclusion