Past Participle Agreement Revisited[1]

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1 Introduction

Past participle agreement (PPA) in the Romance languages is well known for its correlation with movement. The contrast in (1), from French, is typical of the pattern: the participle shows agreement with the feminine plural object only if it has undergone leftward movement.

(1) 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.'
         (adapted from Belletti 2006)   *French*

The best-known analysis of data like these, due to Kayne (1989), posits that there is a dedicated agreement head above the VP but below the canonical position of the subject, and that PPA is licensed if and only if the target DP moves through the specifier of this head (a Spec-Head configuration). The absence of agreement in (1a) therefore follows because the target DP does not move out of the VP; in (1b), in contrast, the target DP moves out of the VP and through the specifier of the agreement head, triggering PPA. Partly based on its success in explaining the data in (1), this analysis was subsequently generalized to a full-fledged theory of agreement, the Spec-Head model (Kayne 1989; Pollock 1989; Chomsky 1991, 1993), which holds that all agreement is contingent on movement of the target through the specifier of an agreement-triggering head.

In the decades following Kayne's work, however, there has emerged extensive evidence that agreement is not generally confined to a Spec-Head configuration, but rather may operate *at a distance*, without movement of the agreement target into the specifier of the agreement trigger. Evidence of this sort has been presented from languages including Basque (Etxepare 2006, Preminger 2009), Chukchee (Dahlstrom 1995), Itelman (Bobaljik & Wurmbrand 2005), Icelandic (Sigurðsson 1996, 2008; Boeckx 2010), Tsez (Polinsky and Potsdam 2001), Hindi-Urdu (Boeckx 2004; Bhatt 2005; Keine 2013), Kashmiri (Bhatt 2005), Passamaquoddy (Bruening 2001), English (Chomsky 2000, 2001). These data, in conjunction with independent conceptual arguments (see, e.g., Chomsky 2000, 2001), have lead to widespread acknowledgement that agreement may indeed operate at a distance, and to a corresponding rejection of the Spec-Head model.[2]

Granting that agreement is possible at a distance, the appealingly simple analysis of French PPA sketched above breaks down. To a first approximation, the challenge is this: if there is an agreement licensing head in the French *v*P, and if agreement is, generally speaking, licensed at a distance, without movement, why is PPA conditioned on movement of the internal argument? While the challenge posed by these data has been noted (see especially D'Alessandro and Roberts 2008), I know of no existing analysis in terms of agreement at a distance that simultaneously predicts the existence of phenomena like French PPA (see also Section 6).

To complicate matters further, if we expand our domain of investigation very slightly beyond

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[2]For a spec-head analysis of some of the long-distance agreement facts, see Koopman (2006).

the languages Kayne investigated (French, Standard Italian), there are PPA data that do appear to receive a simple treatment on the agreement at a distance model. Thus in at least Neapolitan, pre-19th-century Italian, some dialects of Occitan, some dialects of Gascon, and some dialects of Catalan (Loporcaro 2016), PPA obtains with internal arguments that have evacuated the VP and those that remain *in situ*. I illustrate this less well-known pattern – agreement with an *in situ* object – with an example from Neapolitan.

(2) addʒə   kɔttə/*kwottə   a   pastə
     have.1.SG cookPTCP.F/cookPTCP.M the.F.SG pasta.F.SG
     'I've cooked the pasta'   *Neapolitan*
     (Loporcaro 2016: 806)

This behavior is expected if there is an agreement-licensing head, say at *v*, in all clauses, that always targets the highest internal argument, provided agreement can operate at a distance.

In fact, even in those languages usually taken to clearly instantiate the Spec-Head pattern, such as Standard Italian, French, and Mainland Scandinavian, it is possible to find PPA with *in situ* internal arguments in some passive/unaccusative sentences. This is well known in Italian, where it is the default pattern (see (3a)), but to my knowledge has not been observed previously in French, where PPA obtains with a demonstrably *in situ* object of a passive/unaccusative verb in stylistic inversion contexts (see (3b)). In Mainland Scandinavian, the availability of PPA with *in situ* objects appears to be governed by the status of the higher expletive, with the locative expletive *der* licensing PPA, but not the third singular neuter expletive *det* (see (3c,d)), as originally observed by Christensen and Taraldsen (1989).

(3) a. Sono entrat-**i/*o**   **due ladri** dalla   finestra.
         are.PL entered-M.PL/*M.SG two robbers from the window
         'Two robbers entered from the window'   *Italian*
         (Belletti 2006: ex. 34c)
     b. Il faut   que aient   été repeint**es**   **trois chaises**.
         it requires that have.SBJ.PL been repainted.F.PL three chairs
         'It's necessary that there have been three chairs repainted.' *French*
     c. **Det** er nett kom-**e/*ne**   **nokre gjester**
         it   is just come.N.SG/*M.SG some guests.PL
     d. **Der** er nett kom-**ne/*e**   **nokre gjester**
         there is just come.PL/*N.SG some guests.PL
         'There have just arrived some guests.'   *West Norwegian*
         (Christensen & Taraldsen 1989: 58)

PPA is thus considerably more complicated than the familiar Spec-Head data suggest. First, there are languages where it behaves as expected if agreement operates at a distance, obligatorily targeting the highest DP in the relevant domain. Let's call these languages, represented by Neapolitan, PPA *in situ* languages. Second, there are languages that follow the more familiar Spec-Head pattern documented by Kayne. Even in these languages, however, there are exceptions to the Spec-Head pattern that resemble true agreement at a distance.

Based on the data seen so far, we can establish the following desiderata for a theory of PPA. First, it must explain why PPA is coupled to movement in a variety of languages and constructions, granting that agreement is intrinsically licensed at a distance. Second, it must explain why PPA is sometimes decoupled from movement, generally in PPA *in situ* languages and in the specific passive and unaccusative cases mentioned above in movement-based PPA languages.

In this paper, I show that these desiderata can be parsimoniously met with almost no special theoretical innovations. In particular, I develop an account of the various PPA phenomena described above that depends only on a novel combination of the following three well-established ingredients: the Bobaljik/Moravcsik treatment of Case and Agreement (Bobaljik 2008), the *Obligatory Operations* Hypothesis of Preminger (2014), and a basic notion of derivational economy along the lines of Chomsky's (1995) *Free Rider* condition and the *Multitasking* principles of Pesetsky and Torrego (2001) and Van Urk and Richards (2015). The resulting account both captures the movement-dependence of PPA and reduces the variation between movement-based and *in situ* PPA languages to a single, independently needed parameter: whether the language makes DPs with dependent Case accessible to agreement.

The basic logic of the analysis is the following. Adopting the Bobaljik/Moravcsik treatment of Case and agreement (Bobaljik 2008), Case features on DPs are valued configurationally (Marantz 1984; Preminger 2014), and determine whether the DP is a licit target for φ-*Agree*. In some languages, only DPs with unvalued (nominative) Case features can be agreed with, while other languages also allow agreement with DPs whose Case feature has been valued as dependent (accusative). The movement-based vs. PPA *in situ* distinction reduces to this parameter, whether or not a language allows agreement to target DPs with dependent Case values. In French, Standard Italian, and MSc, PPA with *in situ* objects is blocked because these languages do not allow agreement with DPs valued for accusative/dependent Case: in transitive clauses with *in situ* objects, the combination of the Obligatory Operations hypothesis and the economy condition mentioned above block agreement from taking place until after the object has been valued with accusative/dependent Case, rendering it inaccessible to agreement. Examples with object movement differ in that agreement (and movement) may target the object before its Case feature is valued, avoiding the blocking effects of accusative/dependent Case. This captures the correlation between movement and PPA. PPA-*in situ* languages differ in that they allow agreement to target DPs with dependent Case values. It follows that the internal argument will always be a licit target for agreement, so PPA obtains in all clauses.

There are four main upshots. First, the analysis depends on no special theoretical innovations, but rather a novel combination of existing hypotheses. Second, the combination of the Obligatory Operations hypothesis with (a generalization of) Chomsky's Free Rider economy constraint yields a new understanding of the correlation between movement and agreement. Third, the movement dependence of PPA arises as the result of the interaction of various derivational and economy constraints in the *v*P domain in a manner fully compatible with the *Agree*-at-a-distance model. Finally, the analysis reduces the observed cross-linguistic variation to a single independently needed parameter, whether or not dependent Case is accessible to agreement.

The structure is as follows. In Section 2, I detail the three basic building blocks of the theory: the Bobaljik/Moravcsik treatment of Case and *Agree*, *Obligatory Operations* architecture, and the economy condition that will underlie the account. Section 3 comprises the account of the core data in movement-based PPA languages. In Section 4, I show how the account extends to the data in (3), as well as to PPA *in situ* languages. In Section 5 I extend the analysis to a language with a fundamentally different pattern of PPA, Abruzzese, and show that this behavior is also predicted, corroborating the present analysis. Finally, in Section 6 I discuss the leading current competitor to the present account, the theory of D'Alessandro and Roberts (2008).

2   Theoretical building blocks

In this Section, I introduce the three existing proposals underlying my account. In all three cases, there is substantial literature supporting the main hypotheses, which I highlight as appropriate.

2.1 The Bobaljik/Moravcsik theory of Case and Agreement

The Bobaljik/Moravcsik theory of Case and Agreement (Bobaljik 2008) has two essential components. The first is that morphological case on DPs is determined configurationally, following Marantz (1991), rather than via agreement with functional heads (as in, e.g., Chomsky 2000, 2001). I adopt a formalization of this insight due to Preminger (2014), in which the determination of morphological case proceeds as follows. Every DP is endowed with a Case feature that is, by default, unvalued when the DP enters the derivation. This feature may then be valued by one of two syntactic processes. First, there are certain syntactic heads are lexically specified to value the Case feature of their specifier or complement. The Case feature of a DP occupying the specifier or complement of such a head is valued as *lexical/oblique* as soon as the DP is merged in the relevant position, as encoded in (4a). The morphological realization of the lexical/oblique value is determined according the specific lexical instructions of the licensing head. Second, the Case feature of a DP can be valued by virtue of the DP being merged in a special syntactic configuration with another DP, provided the Case features of both DPs are unvalued. Valuation takes place instantaneously when the relevant configuration is achieved. The value determined in this way is denoted *dependent* and is realized morphologically as accusative.

(4) **Case valuation procedures**:
   a. Lexical/Oblique: Given the configuration [H DP] or [$_{HP}$ DP [H . . .]], where H is a lexical case assigner, value the case feature on DP to *lexical/oblique*
   b. Dependent Case (*nominative*): Given the configuration [DP$_1$ [. . . [. . . DP$_2$. . .]]], where the Case features on DP$_1$ and DP$_2$ are unvalued, value the Case feature on DP$_2$ to *dependent*[3]

An important aspect of this system is that many DPs do not have their Case feature valued in the course of the derivation, e.g., most external arguments. On this theory, this is unproblematic: *Case valuation plays no role in nominal licensing*, so there is nothing inherently wrong with a DP having an unvalued Case feature at the end of the derivation. Unvalued Case is realized morphologically as nominative, depending on the case system of the language.

I illustrate the procedures in (4) with two simple examples. First, consider the derivation of a simple transitive clause. Both the external argument (EA) and internal argument (IA) enter the derivation with an unvalued Case feature. At the stage in the derivation when the EA is merged in Spec(vP), the condition in (4a) is met on Case valuation, so the Case feature on the IA is valued (see (5)). The Case feature on the EA remains unvalued throughout the derivation. At PF, the IA is therefore spelled out with accusative case, and the EA, by virtue of having an unvalued Case feature, is spelled out with nominative case.

(5) **Dependent Case valuation**
   Transitive clause: Merge EA, value Case on IA:
   [$_{v}$P **EA** . . . [$_{VP}$ V IA]]
   Case valuation
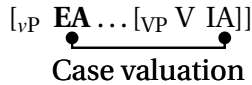
The condition in (4b) is intended to capture the fact that some heads idiosyncratically assign a

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[3]As pointed out by an anonymous reviewer, there is an additional cross-linguistically attested system of dependent case valuation, the 'ergative-absolutive' system. Here, in the relevant configuration, it is DP$_1$ that gets its Case feature valued, not DP$_2$. Because the languages under discussion in this paper do not manifest the ergative-absolutive pattern, I won't discuss it further, except to briefly note (see fn. 23) that we do not expect PPA-type agreement patterns in such languages.

case value to their complement or specifier that is not expected according to the calculus in (4a). For example, certain verbs in German require that their IA surface with dative case, as in (6), rather that the accusative (dependent) case we would expect given (4a).

(6) Ich helfe dir/*dich.
     I   help you.DAT/*you.ACC
     'I'm helping you'   *German*

The valuation procedure in (4a) explains such data on the assumption that certain heads are lexically specified to assign case to their complements or specifiers:

(7) **Lexical case valuation**
     Merge complement/specifier, value Case:
     [$_{HP}$ H   DP]   or   [$_{HP}$ DP   [H . . .]]
     Case valuation   Case valuation

The second essential component of the Bobaljik/Moravcsik theory is the hypothesis that *φ-Agree* is case discriminating (Bobaljik 2008; Preminger 2014): Case valuation determines whether or not a given DP is accessible to *φ-Agree*, with accessibility parameterized across languages according to the *Revised Moravcsik Hierarchy*:

(8) **Case Accessibility**:
     Accessibility to *Agree* is determined according to the *Revised Moravcsik Hierarchy*:
     unvalued Case » *dependent Case* » *lexical* and other Case

This hierarchy ranges over languages, not sentences, and should be interpreted as follows: if agreement is licensed in a given language, it is licensed with DPs with unvalued Case; if agreement is additionally licensed with DPs with other Case values, it is with DPs with dependent Case; and so on. See Bobaljik (2008) for a extensive cross-linguistic evidence supporting this view.

2.2   The *Obligatory Operations* Hypothesis

The second theoretical building block on which I rely is Preminger's (2014) *Obligatory Operations* (ObOp) hypothesis, the core premise of which is the following. All syntactic operations are associated with conditions on their application. In the course of the derivation, if the structural conditions on a given syntactic operation are met, that operation must apply; if, however, the conditions are never met, the operation unproblematically fails to apply and the derivation continues. Preminger shows that adopting an ObOp treatment of the two main syntactic operations, *Agree* and *Merge*, yields parsimonious treatments of a wide variety of syntactic phenomena, many of which are otherwise resistant to simple analysis. In what follows, I highlight the important aspects of the ObOp treatment of both operations.

2.2.1   ObOp & *Agree*

The ObOp treatment of *Agree* can be defined as follows. In keeping with the framework, I provide both the operation component and conditions on its application.

(9)   *X-Agree* at head *H*

    a.   Operation: copy the value of feature *X* on phrase YP onto *H*

    b.   Condition: apply *X-Agree* at *H* iff there is some YP such that:

        (i)   Locality: *H* c-commands YP and there is no ZP c-commanded by *H* and asymmetrically c-commanding YP that bears feature *X*

        (ii) Accessibility: YP is Case-accessible to *H* and bears feature *X*

The ObOp logic then dictates that if a head *H* is associated with an agreement operation *X-Agree*, this operation must take place if there is a locally accessible target XP. If no such XP is present, the *Agree* operation unproblematically fails to apply and the derivation proceeds without crashing.

    To illustrate, recall from Section 2.1 that one way for the conditions on application of (9) to not be met is if the closest DP to the triggering head has a Case value that renders it inaccessible to *φ-Agree*. For an explicit example, consider the Icelandic verb stem *leiddist*. On one use, this stem means 'be bored,' and is associated with a *v* that assigns lexical Case to its subject, as in (10a). Crucially, because lexical Case is not accessible to *φ-Agree* in Icelandic (Bobaljik 2008; Preminger 2014), the *φ-Agree* operation at T has no accessible target and hence fails to apply. The result is obligatory default agreement, third person singular. On another use, the same stem means 'walk hand in hand' and does *not* assign lexical Case to its subject, as in (10b). In this case, the *φ-Agree* operation at T does have an accessible target – the EA with unvalued/nominative Case – and hence must take place, per the ObOp logic. The result is obligatory agreement with the subject, in this case third person plural.

(10)   a.   Strákunum   **leiddist/*leiddust**.
           boy.the.DAT.PL were.bored.**3SG/*3PL**
           'The boys were bored.'

    b.   Strákarnir   **leiddust/*leiddist**.
           boy.the.NOM.PL were.bored.**3PL/*3SG**
           'The boys were bored.'   *Icelandic*
           (Preminger 2014: 130f.)

For extensive argumentation in support of this treatment of agreement, and against the Uninterpretable Features theory (Chomsky 2000, 2001), see Preminger (2014: Ch. 5, 6, 10).

2.2.2 ObOp & Merge

Preminger (2014: 10.1.3) also develops an ObOp treatment of *Merge*, focused on the internal merge involved in A′-movement. The basic premise is that A′-movement is triggered by the operation *Displace*, defined below. As with agreement, certain syntactic heads are lexically specified to trigger this operation, and its application is governed by the general ObOp logic.

(11)   *Displace-X* at head H (Preminger 2014: 10.1.3)

    a.   Operation: merge (a projection of) H with an YP bearing the feature *X*

    b.   Condition: apply *Displace-X* at H iff there is some YP with feature *X* such that H c-commands YP and there is no ZP c-commanded by H that both asymmetrically c-commands YP and bears the feature *X*

To illustrate the basic workings of (11), I consider the derivation of a basic *wh*-question. Let us grant that *wh*-movement proceeds through all Spec(CP) positions along its path, so that the derivation of (12a) contains at least the two steps in (12b).

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

We can capture both *wh*-movement steps in a uniform and parsimonious way by assuming that all C heads, interrogative and not, are lexically specified to trigger the operation *Displace-wh*. The derivation of (11) then proceeds as follows. When the embedded C is merged in the structure, the object *wh*-phrase is in its local domain, so the condition on the application of (12) is met. By the ObOp logic, then, this operation must take place, attracting the *wh*-phrase into the specifier of the embedded C. The derivation then continues until the matrix C is merged, at which point the same basic logic applies: the moved *wh*-phrase is in the local domain of the matrix C, so the conditions on (12) are met and the operation applies obligatorily.

In clauses without *wh*-phrases, the conditions on the application of *Displace-wh* are not met, as there is no *wh*-phrase in the local domain of the triggering head. Accordingly, *Displace-wh* will unproblematically fail to apply, in conformity with the ObOp hypothesis. It follows that assuming that all C heads are lexically specified to trigger the *Displace-wh* operation does not cause problems in these cases. This analysis has the benefit of capturing all instances of *wh*-movement, both intermediate and terminal, with the same mechanism. No special devices are needed to motivate the intermediate movement. As Preminger argues, this constitutes a distinct advantage over the UF treatment of long-distance *wh*-movement (Chomsky 2000, 2001; McCloskey 2002).

The same logic extends to cases of external merge. Preminger does not pursue this extension, but having a treatment of external merge will be crucial to the eventual analysis, so I sketch one version in (13). This operation differs from *Displace-X* defined above in that it contains an additional condition allowing for a suitable phrase to be selected from the lexicon/workspace and merged into the structure.

(13)   *Merge-X* at head *H*

        a. Operation: merge (a projection of) *H* with an YP bearing the feature *X*
        b. Conditions: apply o_i at *H* iff
            (i)   There is some YP with feature *X* present in the lexicon/workspace, but not in the syntactic structure containing *H*, *or*
            (ii) There is some YP with feature *X* such that *H* c-commands YP and there is no ZP c-commanded by *H* that both asymmetrically c-commands YP and bears the feature *X*

I illustrate the basic mechanics of (13) by analyzing the EPP effect in English. I focus on three cases that together summarize the main effect: (i) the subject must raise to Spec(TP) in transitive clauses; (ii) in passive/unaccusative clauses with an internal DP argument, either the internal DP argument must raise to Spec(TP) or an expletive must be present in Spec(TP); (iii) in clauses without any DP arguments, an expletive must be present in Spec(TP).

(14)   a. John has ~~John~~ talked to Mary.
        b. *∅ has John talked to Mary.

(15)   a. There have arrived three men
        b. Three men have arrived ~~three men~~.
        c. *∅ have arrived three men.

(16)   a. It seems like John is upset.
        b. *∅ seems like John is upset.

I assume that in languages without transitive expletive constructions, expletives are merged in

Spec(*v*P) (Richards 2005; Richards 2007; Deal 2009; Wu 2018). This means that both transitive and passive/unaccusative *v* must be associated with a *Merge*-X operation, the former to introduce the external argument and the latter to introduce expletives. I now show that this is sufficient to derive the effects above if we also take T to have a *Displace*-D feature, with 'D' a stand-in for whatever characterizes the sorts of XPs that may occupy canonical subject position. I substantiate my assumptions about the basic merge site of expletives and the status of passive/unaccusative *v* in more detail in Section ?? and in the Appendix.

The effects in (14) - (16) follow straightforwardly. Beginning with transitive clauses, the *Merge*-D operation at *v* is invoked to select a subject from the lexicon and merge it in Spec(*v*P). The ObOp logic dictates that because it is always possible to introduce a subject here, this operation *must* take place.[4] From Spec(*v*P), the subject is accessible to the *Displace*-D operation at T, so it must be merged in Spec(TP); leaving Spec(TP) empty would violate the ObOp principle that syntactic operations must apply if they can, capturing (14).

Moving on to (15), in passive/unaccusative clauses the *Merge*-D operation at *v* may be satisfied by attracting the internal argument, which must then be attracted to T by the ObOp logic, capturing (15b). Alternatively, the additional condition provided by *Merge*-X may be invoked to select an expletive from the lexicon and merge it into Spec(*v*P).[5] By the same logic as above, the expletive will then be attracted to Spec(TP), deriving (15a). Because it will always be possible to either attract the internal argument to or merge an expletive in Spec(*v*P), ObOp logic dictates that one of them must always be applied, ruling out (15c).

A similar logic captures the contrast in (16). When *v* is merged, there is no suitable XP present in the structure that may be targeted by its associated *Merge*-D operation. The ObOp logic therefore dictates that an expletive must be selected from the lexicon and merged in this position: since this operation is permitted by the additional condition provided by *Merge-X*, it must take place. This correctly ensures that there is a DP in the structure that can then be attracted to Spec(TP), capturing the contrast in (16).

Finally, it is crucial to this analysis of the EPP that *Merge-X* always be capable of accessing the entire lexicon, as is implicit in the definition in (13), and in particular that merge not be limited to combining elements from a numeration: if we assume that merge is confined to select from a pre-determined numeration, and if that numeration happened to lack an expletive, then we would erroneously generate the unacceptable example in (16), since there would be no suitable XP in the numeration or in the syntactic structure to merge in Spec(*v*P). Because we are not conceiving of the EPP as an output filter, there is no way to block this. Indeed, on the analysis here, the EPP property follows precisely because the conditions on the application of *Merge-X* are always met at *v*, since it can introduce a new element from the lexicon that can then be attracted to Spec(TP). I thank an anonymous reviewer for pointing this out.

2.2.3 Summarizing ObOp

We have now seen the ObOp treatment of the essential syntactic operations *Agree* and *Merge*. The main premise is that heads are specified in the lexicon with the syntactic operations they may trigger, along with structural conditions on those operations. If these conditions are met, the operations must apply, but otherwise they go untriggered. In the case of *Merge*, we then saw

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[4]The *Merge*-D feature on *v* can't attract the object or introduce an expletive for θ-theoretic reasons; see Section ?? for more discussion.

[5]I assume independent principles govern the choice between the *it* and *there* expletives in English, for example. See Ruys (2010) for an analysis compatible with the results of this paper.

how such a treatment yields straightforward analyses of *wh*-movement and EPP effects.[6]

There are two important points to clarify before moving on. First, I will be assuming that *all* syntactic operations available at a given head are governed by the same ObOp logic involved in the analysis of *wh*-movement and EPP effects. This means that each syntactic primitive is associated in the lexicon with the set of possible *Agree* and *Merge* operations that it may trigger, and that these operations must take place if and only if the conditions on their application are met. Second, I assume that the only additional syntactic constraint on the application of operations is cyclicity. This ensures that only those operations associated with the head of the maximal projection at the root of the tree may apply, as is standard. However, if this head is associated with multiple operations, there is no fixed order that they must apply in, as long as the result is interpretable. Both these assumptions are the null hypotheses in their respective domains. Once we admit that some *Merge* and *Agree* operations are governed by the ObOp logic, it requires an additional assumption to restrict this to only some cases. Likewise, positing a syntactic ordering on the operations available at a head imposes additional structure on the derivation, and so would require additional justification. The resulting framework is essentially Preminger's (2014), amended to extend to *all* syntactic operations, including external merge.

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. These features should crucially be thought of as instructions to carry out syntactic operations, not representational constraints on the structure (see Section 3.3). My notation for merge features is borrowed from Müller (2010).[7]

(17)   a.   Agree features: [X:_], *Agree* with a YP bearing X
       b.   Displace features: [∘X∘], *Merge* with a YP from the existing structure bearing X
       c.   Merge features: [●X●], *Merge* with a YP bearing X

2.3   Feature Maximality

The framework sketched so far assumes minimal *syntactic* constraints on the derivation: that operations are cyclic and that they are governed by the ObOp logic. However, there is an additional type of constraint that has played an important role in minimalist syntactic theory: derivational economy constraints. These are extra-syntactic principles that distinguish two sufficiently similar and otherwise licit derivations or derivational steps, to the effect that one is preferred over and hence blocks the other. The final component of the framework is a constraint of exactly this sort governing the interaction between agreement and movement, among other things.

In recent minimalist syntactic literature, there is a well-established family of economy constraints centered on the insight that agreement operations originating at a single head should target the smallest possible number of phrases. In practice, this preference has been encoded in a variety of ways, two of the most prominent of which are the so-called *free rider* constraint on

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[6]Given that the *Merge-X* operation is more general than Preminger's *Displace-X* operation, we might wonder if the latter is needed at all. In short, unless we introduce additional theoretical machinery, we do still need this operation. To see why, suppose all C heads were associated with a *Merge-wh* operation, to capture *wh*-movement effects. Since it is always possible to select a *wh*-phrase from the lexicon/workspace, the ObOp logic would dictate that Spec(CP) should always be filled with a *wh*-phrase. This is clearly not borne out in non-interrogative clauses. There are various ways we might try to get around this issue, e.g., by positing silent, semantically vacuous *wh*-expletive that can be merged in Spec(CP), but I will not pursue them further here (see McDaniel 1989 on *wh*-expletives, and Dayal 1993, Horvath 1997 for critiques).

[7]The present framework differs from Gereon Müller's theory of feature-driven merge (e.g., Müller 2010) in two key ways: (i) in Müller's system, features are pre-arranged on a stack which dictates the order in which feature discharge must take place; (ii) as an anonymous reviewer points out, Müller's theory does not allow operations to go untriggered.

Agree (Chomsky 1995: 4.4.4, 4.5.2, 2001: 15-19; Bruening 2001: 5.7; Rezac 2013: 310) summarized in (18), and the closely related *Multitasking* conditions proposed by Pesetsky and Torrego (2001) and Van Urk and Richards (2015), respectively, as in (19).

(18)   **Free Rider property**:
       If an *Agree* relation obtains between two items α and β, it must maximize to include all their features
       (Rezac 2013: 310)

(19)   **Multitasking**:
       At every step in a derivation, if a probe can trigger two operations A and B, and the features checked by A are a superset of those checked by B, the grammar prefers A.
       (Van Urk and Richards 2015: 132)

These principles encode slightly different perspectives on the basic insight sketched above, but in practice they yield essentially the same results. To illustrate, it's helpful to consider a toy example. Suppose head *H* has, in present terms, features [A:_], [B:_], and [C:_] that trigger agreement with a phrase bearing these features. Suppose further that there is a phrase XP bearing features [A], [B], [C], a phrase YP bearing features [B], [C], and that XP and YP are both licit targets for agreement at H.[8] Then both (18) and (19) dictate that a derivation where agreement at *H* targets XP for all three features is preferable to one where agreement targets XP for some features and YP for the remaining features. This result is trivial for (19). For (18), it arises because there is a preference for agreement to be maximally general: if *H* agrees with XP for feature [A], this relationship must extend to all features shared in common. Both principles converge, at least in cases like this, to the basic preference to minimize the number of items operated on by *Agree*.

Both the *Free Rider* constraint and *Multitasking* were originally proposed in Uninterpretable-Features-based frameworks that posit a stark distinction between *Agree* and *Merge*. Agreement operations are regulated by the distribution of interpretable and uninterpretable features, and are triggered specifically to satisfy output filters, while *Merge* operations operate more or less freely, assembling the syntactic structure. The framework developed in the previous two sections, however, posits much less distinction between agreement and merge. Both are lexically associated with certain heads and apply at the root of the structure in accordance with the core ObOp logic. Given this lack of distinction, my proposal is that the basic notion of economy expressed in (18) and (19) should apply equally to *Agree* and *Merge*. I therefore propose that the following economy constraint is active in the derivation.

(20)   **Feature Maximality** (FM):
       Given head H with features [F$_1$] ... [F$_n$], if XP discharges [F$_i$], XP must also discharge each [F$_j$] that it is capable of.

This principle is an extension of the Free Rider property of *Agree* to syntactic operations in general: if two items are singled out as syntactic co-operands, this relationship must be as general as possible, and hence encompass all syntactic operations that can legitimately act on the two items. In this way, FM encodes the basic notion of economy captured by the Free Rider property and by Multitasking in a framework which posits minimal differences between *Agree* and *Merge*.

As mentioned in the introduction, one of the main proposals of this paper is that PPA can be parsimoniously analyzed by combining well-established hypotheses in novel ways, rather than

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[8]This could come about in a variety of ways, e.g., perhaps agreement with XP is followed by movement of XP to Spec(HP), thus exposing YP to agreement, or perhaps XP and YP are in a configuration such that neither asymmetrically c-commands the other.

by introducing new theoretical machinery. To this end, one of the central innovations of this paper is that the combination of the ObOp framework and the generalization of the Free Rider property captured in FM yields a new understanding of the correlation between agreement and movement. Moreover, as we will see in the ensuing sections, this is precisely what is needed to capture the full array of PPA data in the introduction.

To briefly illustrate this correlation at an abstract level, suppose *H* is a head bearing an *Agree*-triggering feature, say [φ:_], and an merge feature, say [•D•]. By (20), if [φ:_] on H is discharged via *Agree* with a φ-bearing target DP, then DP must also discharge [•D•], that is, DP must be merged with (a projection of) *H*. Crucially, this has the effect that *Agree* obligatorily triggers *Move* if the head bearing the probe feature has an undischarged merge feature. Alternatively, suppose that [•D•] 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 [φ:_] on *H*, so only the merge feature is discharged. In such a scenario, a lower DP may then discharge the probing feature on *H* without undergoing obligatory movement, since the merge feature has already been discharged. The core insight is therefore that while *Agree* and *Merge* are formally dissociated, concerns of economy dictate that *Agree* triggers movement (*Merge*) if and only if the triggering head has an independent need to merge with an XP.

3   Capturing Movement-Based PPA

In this section, I show how the economy constraint in (20), when combined with the framework assumptions laid out in the previous section, captures the correlation between PPA and movement in Standard Italian, French, and Mainland Scandinavian. The main data that will be accounted for are: (i) the cases where PPA is blocked with *in situ* objects, and (ii) the cases of movement-facilitated PPA. I set aside all cases of PPA *in situ* until the next section. Finally, the discussion in this Section depends on the hypothesis that languages showing movement-based PPA are alike in limiting φ-*Agree* to DPs with unvalued Case:

(21)   **Case Accessibility** (Italian, French, Mainland Scandinavian):
       In Standard Italian, French, Mainland Scandinavian, only DPs with unvalued Case are accessible to φ-*Agree*

3.1   Transitive clauses, *in situ* objects

I begin by considering the behavior of transitive clauses with *in situ* objects. PPA is strictly impossible in movement-based PPA languages in this context. In Mainland Scandinavian, this is complicated by the fact that in at least some languages (Swedish, some dialects of Norwegian; Svenonius & Larson 2012), the perfect participle is distinct from the passive participle, and never inflects. Nonetheless, the fact remains that PPA is impossible with the *in situ* object.[9]

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[9]An anonymous reviewer suggests an alternative structural analysis of (22a) and (22b): the IA has raised to Spec(*v*P) and the participle has raised above it. Empirical and conceptual considerations argue against this treatment. First, such an analysis must posit string-vacuous movement of the internal argument that is both theoretically unmotivated and impossible to detect with any syntactic test that I am aware of. Assuming that the post-participial IA is *in situ*, in contrast, is the null hypothesis. Second, as argued by Rizzi (1982), the post-verbal internal argument in passive/unaccusative and transitive clauses pattern alike in allowing ne-clitics to be floated from them (parallel data also hold in French). This is not possible for transitive subjects, nor for promoted passive/unaccusative arguments, suggesting that the post-verbal internal argument is lower than the basic merge site of transitive subjects and hence has not evacuated the *v*P/VP. Finally, as I argue in Section 6, there is no correlation between the height to which the participle raises and the possibility for PPA, so even if there were unmotivated object movement taking place, it would be orthogonal to the issues being discussed here. The burden of proof is therefore on the alternative, and I know of

(22)   a.   Ho   mangiat-**o**/*a   **la mela**.
              have.1.SG eaten-M.SG/*F.SG the apple.F.SG
              'I have eaten the apple'   *Standard Italian*
              (D'Allessandro & Roberts 2008)
        b.   Jean n'a   jamais fait(***es**)   **ces   sottises**
              Jean NEG.have.3SG never   done-.M.SG/*F.SG these stupid things.F.PL
              'Jean has never done these stupid things'   *French*
              (Belletti 2006)
        c.   Jens har skut-**it**/*-**et**   ett lejon.
              Jens has shot-SUPINE/*-3.SG.N a   lion
              'Jens has shot a lion.'   *Swedish*
              (Christensen and Taraldsen 1989)

The analysis works as follows. Adopting the usual structural assumptions from the PPA literature – that PPA is triggered by the head that introduces the external argument (Kayne 1988; Chomsky 1995; Belletti 2001; Chomsky 2001; Roberts & D'Allessandro 2008; a.o.) – it follows that transitive v is associated with an obligatory φ-*Agree* operation, encoded here as a $[\varphi:\_]$ feature. Because transitive v is responsible for introducing the external argument, it must also be associated with a *Merge*-D operation, encoded here as a $[\bullet D\bullet]$ feature. Assuming that v is also an intermediate landing site for A′-movement (McDaniel 1989; Fox 1999; McCloskey 2000; Chomsky 2000; Gračanin 2004), it will also be associated with various *Displace*-A′ operations, although I set these aside until Section ??. When v is merged in the structure, there are therefore two derivational options available: (i) discharge $[\bullet D\bullet]$ by merging the external argument; (ii) discharge $[\varphi:\_]$ via *Agree* with the internal argument.[10]

Because I am assuming no inherent ordering, both operations are equally available, so let's assume first that option (i) is chosen: the EA is merged to discharge $[\bullet D\bullet]$. Because *Agree* is contingent on asymmetric c-command, merger of the EA does not discharge $[\varphi:\_]$ on v. We might therefore expect that v undergoes *Agree* with the IA, producing unattested PPA with an *in situ* object. Crucially, however, the presence of the EA renders the IA inaccessible to φ-*Agree*: recall that on the model of case adopted here, merger of the EA triggers immediate valuation of the Case feature on the IA, rendering it inaccessible to φ-*Agree*, by hypothesis. In other words, while the IA is local enough to trigger φ-*Agree*, it is blocked from doing so by the Case valuation induced by the presence of the EA. Finally, while φ-*Agree* is ruled out, this derivation is otherwise convergent, given that the ObOp framework tolerates derivations where *Agree* fails to take place because the conditions on its application have not been met. We therefore correctly derive the surface form for a basic transitive clause.

(23)   *Merge* EA; Case valuation; φ-*Agree* blocked; ✗ PPA

        Case Valuation
        ┌─────────┐
        •   •
        [$_{vP}$ EA [$_{vP}$ v [$_{VP}$ V IA]]]
                        ✗
                 φ-*Agree*
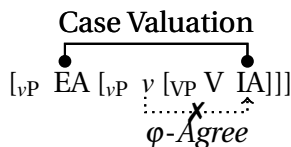
    What happens with option (ii), *Agree* with the IA to discharge $[\varphi:\_]$? By (20), because the IA is also capable of discharging $[\bullet D\bullet]$, it must, so *Agree* triggers movement of the IA to Spec(vP).

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no evidence supporting it over the simpler analysis adopted here.
    [10]There is a third conceivable option, discharge $[\bullet D\bullet]$ by attracting IA, although as we will see below, the effect of FM makes this option indistinguishable from option (ii).

(24)   *Agree* w/ IA; *Move* IA ([●D●])

$$[_{vP} \text{ IA } [_{vP} \text{ } v \text{ } [_{VP} \text{ V IA}]]]$$
$$\varphi\text{-}Agree$$
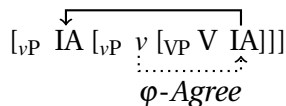
This exhausts the [●D●] feature on v, so there is no way to introduce the external argument: by hypothesis, [●D●] is the only feature on v capable of introducing a new argument – all of the A′ features only license internal merge. The derivation then continues, and T attracts the IA to Spec(TP), producing a clause with transitive morphology but unaccusative syntax, as in (25).

(25)   *Some apples have eaten ~~some apples~~.

This is obviously an undesirable result that needs to be ruled out. The challenge posed by (25), however, is neither unique to the present framework nor particularly serious. To see why, it's helpful to consider the example in (26), where an expletive has been merged in Spec(vP) of a transitive clause.

(26)   *It.EXPL has persuaded John to leave.
        (cf. Chomsky 1981: 40)

From a syntactic perspective, its not clear that anything is wrong with this example. We know from examples like *it is raining* that *it* expletives are licensed in subject position more generally, so (26) is arguably well formed from the perspective of Case-driven nominal licensing employed in the Government & Binding (Chomsky 1981) and Uninterpretable Features (Chomsky 2000; 2001) models. The upshot is that an independent means of requiring transitive clauses to have semantically contentful external arguments is needed, *on any theory*. There are a variety of proposals for accomplishing this in the literature, from which we can take our pick. All will successfully rule out data like (25) on the grounds that no external argument is introduced, defusing the challenge these data pose. [11]

It's worth pausing at this point to highlight 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 in a transitive clause, it always "wins" this competition, with the effect that *φ-Agree* is obligatorily delayed until after the external argument has been merged. The absence of PPA is then a side effect of this delay, reflecting the familiar observation from Bobaljik and Moravcsik that *φ-Agree* is often allergic to DPs valued with dependent Case.

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[11]Two prominent solutions are worth noting. The first is θ-theory (Chomsky 1981), which builds the argument requirement directly into the syntax by endowing all argument-selecting heads with a special θ-feature that they discharge onto their argument when it is merged. Each θ-feature must be discharged, ensuring that all necessary arguments are introduced, and each argument must bear exactly one θ-role, ensuring that every argument is introduced in an appropriate position. The example in (25) is then ruled out either because v never discharges its θ-role, or because it discharges it onto IA, so IA bears two θ-roles.

The second, formalized by Heim and Kratzer (1998), builds the argument requirement directly into the meaning of the relevant heads. This requirement is then checked as a part of the interpretive mechanism that translates syntactic structures into their corresponding extensions. The lexical entry for a transitive v, for example, specifies that its extension is a predicate with an open argument position for the agent of the event being described. If v is not combined with a syntactic (external) argument, the open argument position in its extension isn't saturated; the interpretive machinery is hence unable to combine the extension of vP with the extension of higher functional heads, which can only combine with fully saturated predicates. A syntactic structure with a transitive v but no external argument will thus be uninterpretable and hence ungrammatical. (25) is then ruled out on the hypothesis that moved phrases do not saturate open argument positions, as encoded in Heim & Kratzer's (1998: Ch. 5) rule of Predicate Abstraction.

The role of *v* as an argument introducer is therefore fundamental to blocking PPA: if there was no semantic need to merge an argument in Spec(*v*P), derivation (ii) from above, where the internal argument moves to Spec(*v*P) concomitant with PPA, might be expected to converge.[12] 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

In this section I consider the behavior of PPA with passive/unaccusative predicates in movement-based PPA languages. Discussion of PPA *in situ* in passive/unaccusative clauses is postponed to Section 4, so for now the crucial data are as follows. In French, PPA is directly tied to object promotion, giving rise to the contrasts in (27) and (28) with passives and unaccusatives, respectively.

(27)   a. Il a été fait**(*es)** **deux erreurs**.
          it has been made.(*F.PL) two errors
          "There have been three errors made"
    b. **Trois erreurs** ont été fait***(es)**. *French*

(28)   a. Il est mort(***es) trois sauterelles**.
          it is died.(*PL) three grasshoppers
          'There died three grasshoppers.'
    b. **Trois sauterelles** sont mort***(es)**. *French*

Mainland Scandinavian is the same, except that some varieties allow an intermediate promotion structure with passives, as in (29b). I illustrate with a passive from Swedish and an unaccusative from West Norwegian.

(29)   a. Det har blivit skriv-**et**/*na **tre böker** 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 blivit **tre böker** skriv-**na**/*et om detta
          EXPL have been three book.PL written-PL/*N.SG on this
    c. **Tre böker** har blivit skriv-**na**/*et om detta.
          three book.PL have been write.PRTP-PL/*N.SG on this
          'Three books have been written on this' *Swedish*
          (Holmberg 2001: 86)

(30)   a. Det er nett kom-**e/*-ne** **nokre gjester**.
          IT is just arrived.SG/*PL some guests.PL
          'There have just arrived some guests.'
    b. **Gjestene** er nett kom-**ne/*-e**.
          guests-the is just arrived.PL/*SG
          'The guests have just come.' *Western Norwegian*
          (Christensen and Taraldsen 1989)

In all cases, PPA is tied to movement. Italian, which has PPA *in situ* as the standard pattern in

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[12]Alternatively, if *v* had more than one [●D●] 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.

passives/unaccusatives, is discussed in Section 4.

3.2.1   Feature composition at passive/unaccusative *v*

Unsurprisingly, the treatment of these facts depends on our assumptions concerning the feature makeup of passive/unaccusative *v*. I will therefore take some time here to outline and justify the relevant hypotheses, namely (i) that expletives are merged low in the structure, at *v*, as argued for by, e.g., Richards (2005), Deal (2009), Wu (2018), but contra Chomsky (2000; 2001), and (ii) that all varieties of *v*, transitive, passive, and unaccusative, must therefore bear a [●D●] feature.

In particular, I show that the strongest version of the ObOp hypothesis provides a conceptual argument in favor of the view that expletives are introduced in Spec(*v*P) in languages without transitive expletive constructions. Taken in conjunction with the compelling arguments provided by Deal (2009) and Wu (2018), I therefore conclude that expletives are introduced low, necessitating a [●D●] feature on passive and unaccusative *v*. This has the additional benefit that all varieties of *v* are the same in hosting a [●D●] feature.

The argument is this: if we assume that expletives are always merged directly in Spec(TP), we are led to the conclusion that passive/unaccusative *v* has an optional [●D●] feature. This, in turn, conflicts with the strongest version of the ObOp hypothesis. In particular, recall that features are for us a notational convenience for encoding syntactic operations. To say that a head has an optional feature thus amounts to saying that the relevant syntactic operation at that head is optional, contradicting the strong ObOp hypothesis that all syntactic operations are obligatory.[13] The strongest version of the ObOp hypothesis, then, requires that expletives be introduced low.

To see why high-merger of expletives commits us to an optional feature on *v*, I focus on English unaccusatives. As documented by Sauerland (2003) and Legate (2003), English unaccusative *v*P is an intermediate landing site for both A- and A′-movement across it. As such, the existence of an example with full object promotion, as in (31a), entails the presence of a [●D●] feature on *v*. If expletives are merged in Spec(TP) in an example like (31b), however, *v* must not have an [●D●] feature, since this feature would obligatorily have to attract the internal argument, counter to fact. It follows that the [●D●] feature on *v* must be optional.

(31)   a.   A man has arrived.
       b.   There has (*a man) arrived *(a man).

To complete the argument, if expletives are merged low, the problem goes away. We assume passive/unaccusative *v* has a [●D●] feature which can be activated to either attract the internal argument, as in (31a), or introduce an expletive, as in (31b). No optional features are needed, and we maintain a uniform feature distribution across transitive, passive, and unaccusative *v*. As in Section 2.2.2, we can encode the fact that T must attract a DP but can't introduce an expletive by assuming it has a [D:_] feature.[14]

We therefore have strong cause to prefer the theory the expletives are inserted in Spec(*v*P).

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[13]As an anonymous reviewer points out, such a state of affairs would require the more nuanced and syntactically complex view that some but not all operations are obligatory. This is a coherent stance, but a less desirable one, especially because it raises serious learnability questions: determining whether a given instance of *Agree* or *Merge* is optional or not requires unpacking several layers of opacity. In the present case, for example, the crucial fact in determining the status of the merge operation at *v* is a fairly complicated one about reconstruction in subject-to-subject raising examples (see the appendix and Sauerland 2003).

[14]There is a very simple additional argument against the high-merge theory: in English and the languages discussed in this paper, expletives are not possible in transitive clauses. On the Spec(*v*P) theory, this follows because transitive Spec(*v*P) is reserved for the external argument, ruling out expletive insertion. On the high-merge theory, something additional must be said to block expletive merger in Spec(TP) of transitive clauses.

Not only is this option is supported by a variety of empirical arguments, but it also allows us to maintain the strongest version of the ObOp hypothesis – that all syntactic operations are obligatory.

A final comment is in order before returning to PPA. The conceptual argument in this section depended on the fact that English passive/unaccusative *v*P is an intermediate landing site for A-movement across it. The null hypothesis is that this extends to all languages, including those under discussion here. To corroborate this, I also provide a Romance-specific argument that A-movement stops in passive/unaccusative Spec(*v*P) in the appendix. That said, I am not committed to passive/unaccusative *v* being a phase head in Romance. In particular, nothing in the analysis depends on passive/unaccusative *v*P being an intermediate landing site for A′-movement, nor on it being especially (im)permeable to agreement. While I do assume later in the paper that agreement at T can target an *in situ* IA across a passive/unaccusative *v*, this same pattern is also possible for transitive *v*, which is usually assumed to be a phase head: in the Icelandic example in (32), main verb agreement triggered at T targets a *v*P-internal transitive object (see Harley 1995, Jónsson 1996 for arguments that the object is *v*P internal). This is predicted under some versions of the Phase Impenetrability Condition, and it shows that we need not make any special assumptions about the (im)permeability of passive/unaccusative *v*.

(32)   Jóni   líkuðu þessir   sokkar
          Jon.DAT liked.PL these.NOM socks.NOM
          'Jon liked these socks'   *Icelandic*
          (Jónsson 1996)

3.3   Back to PPA

We are now prepared to address the main issue of this section – the distribution of movement-based 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 both French and MSc, as we have seen (see (27b), (28b), (29c), (30b)).

As in the transitive case, I focus on the stage of the derivation directly after merger of *v*, which has two relevant undischarged features: [φ:_] and [•D•]. Assuming as before that there is no implicit order on the operations, there are two derivational options at this junction: (i) discharge [φ:_] by agreeing with the IA, or (ii) discharge [•D•] by merging an expletive.

3.3.1   Object promotion

Suppose first that we take option (i). In this case, *Feature Maximality* dictates that the IA must move to Spec(*v*P): it has been targeted for an operation at *v*, and hence all possible operations at *v* that can target it must. The logic so far is identical to the transitive case. The crucial difference, however, is that the present derivation does not crash at LF: passive/unaccusative *v* are not semantically specified to introduce an external argument, so there is no θ-theoretic/interpretability issue if we move the IA to Spec(*v*P). The derivation therefore proceeds unfettered.

(33)   *Agree*(*v*, IA), *Move* IA; ✓ PPA

      [$_{vP}$ IA [$_{vP}$ *v* [$_{VP}$ V IA]]]
               φ-*Agree*
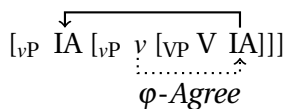
From this point, the IA is then be attracted to Spec(TP). PPA is correctly predicted to be obligatory in such cases: the φ-feature on *v* has an accessible goal, and so it must target it by the ObOp logic,

with corresponding obligatory movement to Spec(vP).

(34)   Full promotion (cf. (27b), (28b), (29c), (30b)):

$$[_{TP} \text{ IA } [_{TP} \text{ T } [\dots [_{beP} \text{ IA } [_{beP} \ v_{BE} \ [\dots [_{vP} \text{ IA } [_{vP} \ v \ [_{VP} \text{ V IA}]]]]]]]]]]]$$
φ-*Agree* (PPA)

This account extends straightforwardly to Italian, where promoted objects of passives and unaccusatives also trigger obligatory PPA.

(35)   a.   **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'
           (Belletti 2006: ex. 34c)
       b.   **Alcuni**   **sindaci**   sono stati   arrestat-**i/*o**
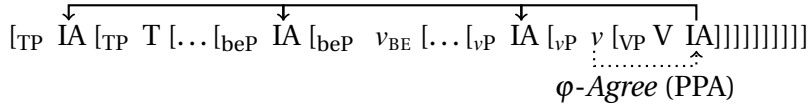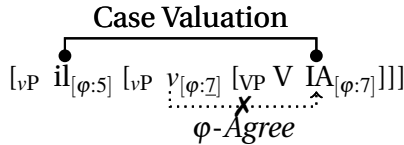   some.M.PL mayors.M.PL are.PL been.M.PL arrested.M.PL/*SG
           'Some mayors were arrested'

With the exception of the partial promotion case in (29b), to which I return shortly, the analysis thus correctly captures the full array of object-promotion data. [15]

3.3.2   *in situ* objects

Derivational option (ii) – discharge [•D•] on v first – proceeds much as in the transitive case, except that an expletive rather than an EA is merged in Spec(vP). PPA is thus predicted to be precluded just in case the expletive induces case valuation on the lower DP, granting that DPs valued with dependent Case are not accessible to *Agree* in the languages under consideration.

(36)   *Merge* EXPL; Case assignment; φ-*Agree* blocked; ✗ PPA:

Case Valuation

$$[_{vP} \ \text{il}_{[\varphi:5]} \ [_{vP} \ v_{[\varphi:7]} \ [_{VP} \text{ V } \text{IA}_{[\varphi:7]}]]]$$
φ-*Agree*

Both French and most Mainland Scandinavian dialects use the default third singular pronoun as an expletive in the passive/unaccusative contexts we are considering. In French, this is the third singular masculine pronoun *il*, and in Mainland Scandinavian the third singular neuter pronoun

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[15]Italian arguably provides an additional instantiation of movement-based PPA, unaccusative absolute small clauses (ASCs; see (ia)). These data are explained if we adopt Belletti's (1990) analysis: in unaccusative ASCs, a complementizer directly embeds a vP, with the participle raising through v to C and the internal argument raising to Spec(vP), as in (ib). Because no external argument is merged, the IA's Case feature is not valued and it surfaces as nominative, as Belletti independently shows to be the case. It is thus a licit target for φ-*Agree* triggered at v, explaining the PPA.

(i)   a.Arrivata   Maria, siamo andati al   cinema.   b.   Structure of unaccusative ASC:
        arrived.F.SG Maria we.are gone   to.the movies
        'Maria having arrived, we went to the movies.' $[_{CP} \text{ C+}v\text{+V } [_{vP} \text{ IA } [\ v \ [_{VP} \text{ V IA}]]]]$
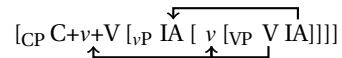
   As an anonymous reviewer points out, PPA is also licensed in transitive ASCs. The structure of such clauses is less certain (see D'Alessandro and Roberts 2008 for discussion), although Belletti (1990) argues they involve a PRO subject and an *in situ* object. If there is indeed no object movement, these examples do not immediately follow on the present account, although it's worth pointing out that Belletti's analysis of PPA likewise does not extend to such cases, which are instead explained with an ad hoc mechanism. I leave this issue open.

det. 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.

(37) a. Il   *(m')a   mordu (*je).
          3.SG.M/N CL.1.SG.ACC-has bitten 1.SG.NOM
          'He/it bit me.'   *French*
      b. Det   slog mig/*jag
          3.SG.N bit   1.SG.ACC/*1.SG.NOM
          'It bit me'   *Swedish*

Let us therefore adopt the null hypothesis that the expletive and non-expletive version of the pronoun have the same case and agreement properties, so the expletive in these languages is a case competitor.[16]. PPA is therefore predicted to be blocked with *in situ* internal arguments in the presence of expletive subjects, as observed in (27a), (28a), (29a), (30a). This pattern holds across all Mainland Scandinavian languages with the third person neuter expletive *det*. I provide an additional Norwegian example below.

(38) 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'   *West Norwegian*
      (Holmberg 2001: 86)

The final case that remains to be explained is the partial promotion possible in MSc passives, where the internal argument surfaces to the left of the participle but subject position is occupied by an expletive (see (29b)). To handle these cases, I follow Deal (2009) in assuming that passive constructions involve an additional unaccusative *v*, spelled out as *be*, e.g., *two books have **been** written*, that is itself capable of introducing an expletive. The partial promotion examples thus involve movement of IA to Spec(*v*P), saturating the [•D•] and [φ:_]-features, followed by expletive insertion in Spec(v_{be}). Because the expletive is inserted *after* the agreement operation is triggered at *v*, dependent Case is also valued on IA *after* agreement, and hence does not interfere. PPA is thus correctly predicted to be obligatory.[17]

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[16]This is equivalent to the widespread assumption in the Uninterpretable Features framework that these expletives bear both Case and φ-features (Chomsky 1995, 2000, 2001; a.o.)

[17]The intermediate position is unavailable in Romance and Danish (Holmberg 2001), and obligatory in English:

(i) a. Il   a été (*trois journalistes) arrêté *(trois journalistes).
         EXPL has been (three journalists) arrested three journalists
         'There have been three journalists arrested'   *French*
         (Svenonious 1998: 1)
     b. È   stato (*un libro) messo *(un libro) sul   tavolo
         has been a   book put   a   book on.the table
         'There has been a book put on the table.'   *Italian*
         (Lasnik 1995: 630)
     c. There were *(three men) arrested (*three men)

The availability of this position is not correlated with whether a language licenses participle agreement: neither English nor Danish license PPA, but English requires movement to the intermediate position and Danish forbids it; likewise, Swedish and French both license PPA, but Swedish tolerates movement to the intermediate position and French forbids it. Nor is there a correlation with the status of the expletive: English and Danish both use a *there*-type exple-

(39) Partial promotion (cf. (29b))

$$[_{TP} \text{EXPL} [_{TP} \text{ T} [\ldots [_{beP} \text{EXPL} [_{beP} v_{BE} [\ldots [_{vP} \text{ IA} [_{vP} v [_{VP} \text{V IA}]]]]]]]]]]$$

φ-*Agree* (PPA)
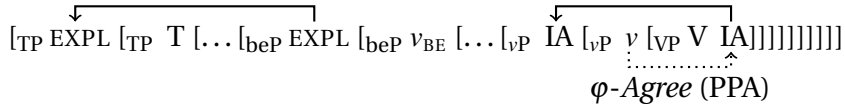
Summarizing, we have arrived at two main conclusions in this section. First, our particular perspective on the ObOp framework facilitates the view that expletives are merged in Spec(vP) in languages without transitive expletives, which has been extensively and independently argued for in the literature. 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. When the expletive is merged in Spec(vP), it triggers Case valuation on the IA, thus blocking PPA. If, however, the IA moves to Spec(vP), PPA is triggered obligatorily per Feature Maximality. From this point, an expletive can either be merged in the higher v_{BE}, as in some MSc varieties, or the IA can be promoted to subject position.

3.4   PPA with clitics/*wh*-phrases

The final instance of movement-based PPA that we will consider is the PPA that is triggered by clitic and *wh*-movement. The languages in question differ interestingly in this domain. To begin, in French, PPA is optional with fronted clitics and with *wh*-phrases (Belletti 2005: 497).[18,19]

(40)   a.   Jean ne **les**   a   jamais fait(es)
            Jean NEG THEM.CL have.3SG never   done-F.PL
            'John has never done them.'
       b.   **Les sottises**   [que Jean n'a   jamais fait**(es)**]…
            the stupid things.F.PL that Jean NEG.have.3SG never   done-.F.SG
            'The stupid things that John has never done…'   *French*
            (adapted from Belletti 2006)

Standard Italian is similar, except that third person clitics trigger obligatory agreement, while *wh*-phrases never trigger PPA.

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tive in such cases, but they are split on whether they allow the intermediate position; Swedish and French both use a 3.SG expletive, but they are split on whether they allow the intermediate position. The availability of the intermediate position is therefore not correlated with any of the factors we are discussing here, and is hence beyond the purview of the present work. That said, they can be encoded in the present system by positing that in languages that do not allow the intermediate position, the head hosting *be* passives has a [○D○] feature, not a [●D●] feature. This forces expletive insertion at v, which by hypothesis does have an [●D●] feature. At the very least this shows that the present facts pose no special challenge to the system itself.

[18]A caveat is necessary: as Belletti (2006: fn. 4) and others have pointed out, normative grammars indicate that PPA is obligatory for both clitics and *wh*-phrases. Whether this prescriptive indication reflects the grammar of actual speakers is unclear, however, especially given the widespread report in the literature (see e.g., Obenauer 1992, 1994; Déprez 1998; Belletti 2006) that the presence or absence of agreement has a semantic correlate in the case of *wh*-movement (see also fn. 19). I will therefore not attempt to analyze such cases beyond the discussion in fn. 21. I thank an anonymous reviewer for bringing this issue to my attention.

[19]In this section, I focus on cases where otherwise impossible PPA with an *in situ* IA is licensed by A′-movement or object cliticization. Cases of this sort are crucially not possible with passive/unaccusative clauses. In particular, to force the IA to remain *in situ* in such cases, an expletive must be merged higher in the structure. The definiteness effect associated with expletives therefore rules out pronominal IAs, blocking clitic movement across the participle. Likewise, with *wh*-objects, PPA is associated with a specificity effect, so that those *wh*-phrases that trigger PPA must be interpreted as specific (Déprez 1998). They are therefore barred from appearing with expletives. It follows that the specific pattern addressed here, where otherwise impossible PPA with an *in situ* IA is licensed via clitic or *wh*-movement, does not arise in passive/unaccusative clauses. The analysis therefore does not require us to postulate [○A′○] features on Romance passive/unaccusative v, which is consistent with them not being phase heads.

(41) a. **L'ho**   vist-**a**/*o.
          CL.F.SG-have.1.SG seen-F.SG/*M.SG
          'I have seen it.'

      b. **Ci/vi**   ha   vist-**e/i/o**.
          CL.1.PL/CL.2.PL has.3.SG seen.-F.PL/M.PL/M.SG
          'He has seen us/you (pl)'

      c. **Quanti**   **libri**   hai   lett-**o**/*i?
          how.many.M.PL books.M.PL have.2.SG read-M.SG/*M.PL
          'How many books have you read?'   *Standard Italian*
          (Belletti 2006)

This sort of PPA does not appear to be licensed in Mainland Scandinavian. Per Holmberg's Generalization, object pronouns can't move across the participle in transitive clauses, and PPA is not reported to be possible with *wh*-movement.[20]

   I now show how the present analysis treats these cases of PPA. For the sake of discussion, let's focus on the French pair in (42).

(42) a. Jean n'a   jamais fait   ces   sottises.
          Jean NEG.have.3.SG never done.M.SG these silly things

      b. Les sottises   [que Jean n'a   jamais fait(es)]   …
          the silly things that Jean NEG.have.3.SG never   done.M.SG/F.PL
          'The silly things that Jean has never done …'

Recall from Section 2.1 that the ObOp treatment of *wh*-movement holds that all heads whose specifiers are intermediate landing sites for A′-movement are endowed with a [∘A′∘]-features to attract the closest relevant phrase, if there is one. I adopt the well-supported proposal that transitive *v* is an intermediate landing site for A′-movement (McDaniel 1989; Fox 1999; McCloskey 2000; Chomsky 2000; Gračanin 2004), entailing the existence of these features. This means that the derivation of (42a) and its counterpart in (42b) differ crucially in that the [∘wh∘]-feature on *v* in the latter attracts the IA. The extra degree of freedom afforded by applying this additional merge operation licenses the type of PPA we observe in such cases.

   Consider the stage of the derivation of (42) 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 discharging the [∘*wh*∘] feature on *v* and attracting the IA. 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 as well. Recall that *v* has at least the features [•D•], [∘*wh*∘], [φ:_]. Assume for now that the IA can't discharge both merge features simultaneously (I derive this assumption from independent principles below), so that discharge of [φ:_] is the only other available option, and hence must be taken. It follows that A′-movement of the object to Spec(*v*P) is accompanied by *φ-Agree*, triggering PPA. The external

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[20]Additional complications make this difficult to independently verify. In Swedish and some dialects of Norwegian, there are two forms for the participle: (i) the passive participle, which appears in passives, and (ii) the *supine*, which appears in the perfect. Only the passive participle inflects for number and gender, making it impossible to test whether *wh*-movement can trigger PPA in these dialects. In passive/unaccusative clauses, A-movement of the internal argument triggers PPA, so we would need to test whether *wh*-movement of an *in situ* internal argument triggers PPA. But PPA is independently ruled out here in French by the definiteness effect (see fn. 19), so we have no reason to expect it to be possible in MSc. Likewise, while *wh*-phrases in transitive object position might be expected to trigger PPA, transitive participles are invariant. The only cases where we might expect to find PPA, then, is with *wh*-movement in those dialects with a transitive participle that can be inflected. These dialects are less common, and to the best of my knowledge this is not possible, although I have no data on the matter.

argument can then be merged, exhausting [●D●]. The derivation converges, yielding (42a).

(43)   Move/*φ-Agree* IA; *Merge* EA; assign case; ✓ PPA:

$$[_{vP} \text{ EA } [_{vP} \text{ IA}_{WH} [_{vP} \text{ } v \text{ } [_{VP} \text{ V IA}_{WH}]]]]$$

Case valuation   *φ-Agree*
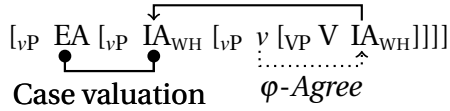
Alternatively, suppose that upon merging *v* we decide to first merge the EA, discharging [●D●]. The IA will then be assigned dependent case, rendering it inaccessible to *φ-Agree*. The subsequent discharge of [A′:_] will then not extend to the discharge of [*φ*:_], so A′-movement will not be accompanied by *φ-Agree*, deriving the version of (43b) without PPA. Finally, the option where we chose to discharge [●D●] first by attracting the IA is blocked on the same lines as in the simple transitive case (see (24)).

(44)   *Merge* EA; assign case; Move IA; ✗ PPA:

$$[_{vP} \text{ IA}_{WH} [_{vP} \text{ EA } [_{vP} \text{ } v \text{ } [_{VP} \text{ V IA}_{WH}]]]]$$

Case valuation
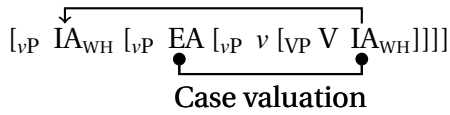
It follows that we correctly predict the optional nature of PPA with French *wh*-objects.

The analysis of PPA with clitics is similar. I assume, following the influential analysis of Sportiche (1996), that object clitic fronting is driven by a dedicated clitic projection in TP domain that attracts a pronoun merged in direct object position. We can reprise this analysis in present terms by postulating the existence of a special feature, call it [○cl○], which attracts the closest object clitic in its domain. This feature is then present on whatever head in the TP domain clitics ultimately end up at, as well as on all obligatory intermediate landing sites along the way, which in our case includes *v* (see Wurmrband 2015 for a modern elaboration of an analysis on these basic terms). The derivation of optional PPA with French direct object clitics then proceeds as in the case of *wh*-movement.

At the stage where *v* has just been merged, there are two viable derivational options: (i) discharge the [○cl○] feature on *v* and attract the object clitic; (ii) discharge the [●D●] feature on *v* and merge the EA. Option (i) yields PPA, as above: Feature Maximality dictates that [*φ*:_] must be simultaneously discharged, triggering PPA. The EA then merges, exhausting [●D●].

(45)   Move/*φ-Agree* IA; *Merge* EA; assign case; ✓ PPA:

$$[_{vP} \text{ EA } [_{vP} \text{ IA}_{CL} [_{vP} \text{ } v \text{ } [_{VP} \text{ V IA}_{CL}]]]]$$

Case valuation   *φ-Agree*
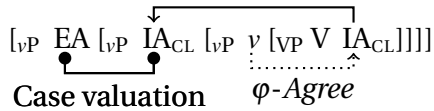
Option (ii) yields an absence of PPA. As soon as the EA is merged, the object clitic is valued with dependent Case, rendering it inaccessible to *φ-Agree*. The subsequent discharge of [cl:_] will then not extend to the discharge of [*φ*:_], so movement will not be accompanied by *φ-Agree*.

(46)   *Merge* EA; assign case; Move IA; ✗ PPA:

$$[_{vP} \text{ IA}_{CL} [_{vP} \text{ EA } [_{vP} \text{ } v \text{ } [_{VP} \text{ V IA}_{CL}]]]]$$

Case valuation
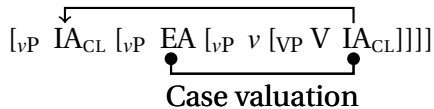
PPA is therefore licensed in these cases exactly because clitics and *wh*-phrases have an additional operation available to them: movement to Spec(*v*P) triggered by [○cl/*wh*○] features. This

movement is independently necessary, given that transitive *v* is an intermediate landing site for movement across it, and provides an additional means of satisfying feature maximality while agreeing with the IA. Agreement with the IA therefore need not exhaust the feature responsible for merging the EA. Alternatively, the EA can be merged before agreement/movement of the IA to satisfy [∘cl/*wh*∘], in which case Dependent Case is valued on the IA and PPA correspondingly does not take place.

Because both these derivations are possible, the upshot is that optionality of PPA with object *wh*-phrases and clitics is a feature of the present account that follows directly from our framework assumptions. In French, this conforms with the facts, corroborating the analysis.[21] In Standard Italian, however, the pattern of total optionality breaks down, so more needs to be said. As documented in (41), the breakdown happens in two independent places: (i) PPA is not licensed with *wh*-phrases; (ii) PPA is obligatory with 3rd person clitics.

I consider breakdown (i) first. Following a suggestion by Nico Baier (p.c.), this can be analyzed as an instance of *anti-agreement* (Ouhalla 1993). This terms refers to a phenomenon whereby the overt realization of φ-agreement with a given DP varies according to whether that DP bears A′-features or not. Crucially, in languages showing such behavior, the manifestation of agreement in the case where the DP bears A′-features is always less specific/more impoverished than when in the case where it does not, even holding all other factors such as grammatical role and syntactic position constant. Perhaps the best known instance of this pattern comes from the Berber family. For example, in Tarifit, verbs usually agree in person, number and gender with their subjects. But if the subject bears *wh*-features, agreement is impossible, as illustrated in (47).

(47) **man   tamghart** ay **yzrin**/****t**-zra   Mohand.
      which woman   C see.ptcp/3.F.SG-see Mohand
      'Which woman saw Mohand.'   *Tarifit (Berber)*
      (Ouhalla 1993: 479)

Baier (2018) argues at length that this is ultimately a morphological rather than a syntactic phenomenon, and it best explained in terms of the independently motivated morphological operation *impoverishment* (Halle 1990; Halle and Marantz 1993). In short, he posits that in some cases the spell-out of φ-features on a given head is subject to the rule in (48), which deletes the φ-features from a feature bundle when that bundle also contains an A′-feature.

(48) **Impoverishment of φ-features in the context of an A′-feature**:
      $[\varphi] \to \emptyset$ / [__, A′]

Baier (2018) documents instances of this phenomenon in 63 genetically and geographically diverse languages, showing that it is both widespread and common. In the present context, (48) suggests a straightforward explanation of the impossibility in Italian of PPA with *wh*-objects. Let's suppose that PPA in such cases takes place as predicted by our system, just as in French. Unlike in French, however, the overt manifestation of this agreement is blocked because the spell out rule for φ-features on Italian participles is superseded by (48).

While this approach is somewhat difficult to independently corroborate – its only prediction is what we set out to derive: that the overt manifestation of otherwise expected φ-agreement on Italian participles is blocked just in case the agreement target has A′-features – it provides a

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[21] As mentioned in fn. 18, its unclear that the prescriptive mandate that PPA is obligatory with French clitics and *wh*-phrases actually reflects the grammar of speakers. If it does, it can at least be encoded in the present system if we introduce an ordering on the operations at *v* such that external-argument introduction must follow all A′-movement. See Müller (2010) for an attempt to derive just such an ordering from independent principles.

principled analysis in terms of a cross-linguistically widespread and common operation of an otherwise unexplained (on any theory, as far as I know) difference between French and Italian. This explanation, moreover, is fully compatible with the present account of PPA in general.

The sole remaining unexplained data point, then, is the one summarized in (ii) above: PPA in Italian is obligatory with third person clitics. Assuming this behavior has a syntactic, and not a morphological, origin, it is equivalent to requiring that third person clitics obligatorily move to Spec(vP) prior to merger of the external argument, as in (45). In other words, the otherwise licit derivation where EA is merged first, as in (46), must be blocked. As it stands, I see no way of forcing this without enriching our hypotheses, so I will have to leave this as an open question

A final comment is in order concerning an as of yet unmotivated assumption invoked in the derivations above. Recall that it was crucial to the analysis of PPA with clitics and *wh*-phrases that IA can't discharging both [●D●] and [●wh●] on v simultaneously. If this were possible, then in a derivation like (45), movement of IA to Spec(vP) prior to EA merger would exhaust the feature needed to introduce EA, leading to an uninterpretable structure. I now show that this assumption follows without further stipulation from the conception of features and syntactic operations that we have been implicitly relying on all along.

To this end, it's crucial to recall the role that features play in our system: they are a notational aid representing instructions to carry out discrete derivational operations at a given head; they crucially are not representational constraints on the final output. Thus a [●X●] feature on head H encodes an instruction to carry out a merge operation at H with a YP bearing property X, not a requirement that at the end of the derivation H must have a YP with property X (or its trace) in its specifier. The assumption that one merge operation can't discharge two features therefore follows, as merge features are instructions to carry out operations. Two merge features thus call for two merge operations, even if the target of the first merge operation has the property demanded by the second merge operation. In this way, the relevant assumption reduces to the hypothesis, implicit in the discussion so far., that the ObOp framework is strongly derivational, as encoded below.

(49) **ObOp is strongly derivational**:
Each feature encodes an instruction to carry out one and only one syntactic operation.[22]

3.5 Summary

Let's review where things stand at this point. First, the ObOp framework facilitates an analysis where v in all its forms is endowed with a [●D●] feature. In transitive clauses, this feature introduces the external argument, and in passive/unaccusative clauses it either introduces an expletive or triggers the obligatory intermediate movement step to Spec(vP) involved in object promotion. 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 crucial consequence is that *Agree* at H with ZP triggers

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[22]It's important to note that this does not block a single ZP from be 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. Likewise, multiple *Agree* relations originating at H may target the same ZP, provided the conditions on the application of each of them is met. Feature Maximality therefore still applies as before. However, because *Merge* is subject to locality (see (13)), 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.

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 the IA at v before merger of the EA, the IA must move to Spec(vP), exhausting the feature needed to merge the EA and rendering the structure ill-formed (either for θ-theoretic or interpretability reasons); if the EA is merged first, the IA is valued with Dependent Case and is inaccessible to *Agree*, blocking PPA. If the IA is a clitic or *wh*-phrase, an additional derivational option becomes available. Because transitive v is an intermediate landing site for movement across it, it has [∘cl∘] and [∘*wh*∘] features to trigger this movement, and hence may attract a clitic or *wh* phrase. This provides the exact additional degree of freedom needed to license PPA: *Agree* with the IA can trigger discharge of [∘cl∘] or [∘*wh*∘] rather than [•D•], allowing it to shift to Spec(vP) without blocking subsequent merger of the EA; alternatively, the EA can merge first, ruling out subsequent agreement with the IA, which is then attracted to Spec(vP) by [∘cl∘] or [∘*wh*∘].

In passive/unaccusative clauses, the [•D•] feature on v may either attract the IA, in which case *Agree* (and PPA) is obligatory, or [•D•] may trigger expletive insertion. Since the *det/il* expletive is a case competitor, its insertion triggers Dependent Case valuation on the IA, blocking PPA. Finally, MSc makes available the additional option of inserting the expletive at a head above Spec(vP). This licenses a derivation where the IA first shifts to Spec(vP), discharging [•D•] and [φ:_], then the expletive is merged.

The present account therefore offers the following answer to the essential challenge raised by PPA on the agreement at a distance model. The Spec-Head behavior of PPA in the cases we have so far considered arises as a side effect of the complex interaction between case, argument/expletive insertion, and agreement in the vP domain. PPA is essentially different from TP-domain agreement – which more transparently exhibits the at-a-distance property – 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 at v thus interacts with these processes directly, whereas agreement triggered by higher heads merely accesses the output of this process, rather than directly taking part in it. The theory therefore captures why PPA is contingent, in many cases, on movement while maintaining the at a distance nature of agreement, satisfying the first desiderata set out in the introduction. Moreover, the combination of the ObOp hypothesis with the general economy constraint captured by Feature Maximality suggests a new understanding of the correlation between agreement and movement: *Agree* at head H triggers movement to Spec(HP) if and only if H has an independent, unrealized need to merge with a phrase of the sort being agreed with.

4   PPA *in situ*

Movement-based PPA, of course, is only part of the cross-linguistic PPA paradigm we set out to explain. It remains to be seen how the present account deals with the PPA *in situ* data. As in the introduction, it will be helpful in the ensuing discussion to split these data into two subcases.

The first is the case of the PPA *in situ* languages, which generally speaking show the following behavior. PPA is licensed in all of the main cases where it appears in Standard Italian, French, MSc, including with promoted subjects of passives and unaccusatives and with encliticized direct objects, and objects that have undergone A′-movement (Loporcaro 2016: 811). Additionally, however, these languages allow PPA with the *in situ* object of a transitive clause. The second case is the PPA *in situ* that obtains in some passive and unaccusative clauses in those languages that otherwise show only movement based PPA. These are the data reported in (3) in the introduction.

My main proposal here is that the difference between PPA *in situ* languages and movement-

based PPA languages can be accounted in terms of a single, independently needed parameter: whether DPs valued with dependent Case are accessible to agreement. I begin by reviewing the cross-linguistic evidence supporting such a parameter, then show how it can explain the difference between the two classes of languages. Finally, I turn my attention to the PPA *in situ* that obtains in some passive and unaccusative clauses in movement-based PPA languages.

4.1 The Dependent Case accessibility parameter

Recall from Section 2.1 that we have adopted the Bobaljik-Moravcsik treatment of Case and agreement, which comprises three crucial hypotheses: (i) that Case features are valued configurationally; (ii) that φ-*Agree* is sensitive to the case on the target DP; (iii) that languages vary in which DPs they make accessible to φ-*Agree*, according to the implicational hierarchy in (8):

(8) **Case Accessibility**:
Accessibility to *Agree* is determined according to the *Revised Moravcsik Hierarchy*:
unvalued case » dependent case » lexical/oblique case

We've already seen the basic action of hypotheses (i) and (ii), so I'd like to take a moment to explore and justify hypothesis (iii). Following Bobaljik, the Indo-Aryan languages present an especially clear demonstration that closely related languages can differ according to which DPs they make accessible, so I present data from Hindi-Urdu and Nepali. Note that both languages exhibit an ergative/absolutive case alignment in the relevant examples, where it is the higher, not the lower, of two DPs in a given domain that receives dependent case. Accordingly, it is the ergative subject, not the lower object, that bears dependent case. [23] I consider a simple transitive clause in both languages, and assume that verb agreement is licensed by an agreement probe at T (Bobaljik 2008). Crucially, this means that the subject is a closer potential target for agreement than the object. In Hindi-Urdu, agreement is nevertheless obligatorily with the object, which is unvalued for Case, not the subject, which is valued with Dependent Case (see (50a)). Following Bobaljik, this entails that Hindi-Urdu does not make DPs valued with Dependent Case accessible for agreement. Conversely, in Nepali transitive clauses, agreement is with the subject (see (50b)), which is valued with Dependent Case.[24] The conclusion is that Nepali licenses agreement with both DPs bearing unvalued Case features and DPs valued for Dependent Case.

(50) a. Myn-ne   iss   dukaan mein **akhbaar**   **khareeda tha**
me-ERG.M DEM.OBL store   in   **newspaper.NOM buy.PERF.M be.PST.M.SG**
'I bought the newspaper in this store'   *Hindi-Urdu*
(Maria Abbasi, p.c.)
b. **Maile**   yas   pasal-mā patrikā   **kin-ē**
1.SG.ERG DEM.OBL store-LOC newspaper.NOM **buy.PST-1SG**

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[23] An anonymous reviewer raises the interesting question of whether we should ever expect to see PPA-type behavior in languages with an ergative-absolutive case system. In short, we do not, as the competition between merging the external argument and agreeing with the internal argument does not arise in these languages. Recall from fn. 3 that in ergatigve-absolutive systems, the Case feature is valued on the higher DP in a Case assignment configuration, not the lower DP. As such, when EA is merged in the structure, its Case feauture is valued and IA's feature remains unvalued. IA will thus always be accessible for agreement, whether or not it moves. We therefore never expect to see the sort of movement-dependence that arises in nominative-accusative languages, but rather just straightforward agreement with the internal, unvalued-for-Case argument. As Bobaljik (2008) documents, this is indeed the pattern attested in ergative-absolutive languages. In this way, ergative-absolutive languages behave similarly to cases of PPA in the presence of oblique expletives, discussed in the next section.

[24]As Bobaljik shows, the crucial factor here is Case, not grammatical role *per se*. Thus in Hindi-Urdu, agreement is licensed with unergative subjects, which have unvalued Case features.

'I bought the newspaper in this store.'   *Nepali*
(Bobaljik 2008: 309f.)

These examples teach us that closely related languages differ in terms of the Case features they make available to agreement, thus providing independent support for the universal parameter suggested in hypothesis (iii).

4.2 PPA *in situ* languages

Returning to PPA, our discussion in the previous subsection immediately suggests a parsimonious analysis of the observed cross-linguistic variation documented in the introduction. In particular, my proposal is that the difference between PPA *in situ* languages and movement-based PPA languages boils down to a single parameter: whether DPs with dependent Case are accessible to agreement.

(51) **Case Accessibility** (PPA *in situ* languages):
      In PPA *in situ* languages, dependent case is accessible to *φ-Agree*

I show first how this captures the relevant data, then take up the question of motivating (51). Let's review the core data. PPA *in situ* appears to have been the default pattern in proto-Romance (Loporcaro 2016), and is preserved in a number of modern Romance varieties. According to Loporcaro (2016), at least the following languages can be counted among this set: Neapolitan (52a), pre-19th-century Italian (52b), some dialects of Occitan (52c), some dialects of Gascon (52d), and some dialects of Catalan (52e). In these varieties, PPA is crucially possible with the *in situ* object of a transitive clause.

(52)   a. addʒə   kɔttə   a   pastə
           have.1.SG cook.PTCP.F the.F.SG pasta.F.SG
           'I've cooked the pasta'   *Neapolitan*
           (Loporcaro 2016: 806)
       b. Maria ha conosciute le   ragazze.
           Maria has known.F.PL the girls.F.PL
           'Maria has known the girls.'   Pre-*19th Century Italian*
           (Belletti 2006: 502)
       c. Abiò   pla dubertos   sas   dos aurelhos.
           had.3.SG very opened.F.PL his.F.PL two ears.F.PL
           'He had well opened both ears.'   *Occitan*
           (Loporcaro 2016: 808)
       d. Oun ass   icados   éras   culhéros?
           where have.2.SG place.F.PL the.F.PL spoons.F.PL
           'Where did you put the spoons?'   *Gascon*
           (Loporcaro 2016: 808)
       e. He   trobats   els   amics.
           have.1.SG found.M.PL the.M.PL friends.M.PL
           'I have found the friends.'   *Catalan*
           (Loporcaro 2016: 808)

My proposal can then be summarized in terms of the revised Moravcsik hierarchy as follows:

(53)   <u>unmarked case</u> >> dependent case >> oblique case
        French, St. Italian, MSc

                Neapolitan, Occitan, Gascon, Catalan, …

To see how PPA *in situ* is captured, recall that PPA is blocked in movement-based PPA languages exactly when an external argument or expletive is merged in Spec(vP), triggering dependent Case on the associate and rendering it inaccessible to agreement. If, however, dependent Case is accessible to agreement, it should be possible for φ-*Agree* to target an internal argument even after the external argument has been merged, so PPA should never be blocked for case reasons. We therefore correctly predict PPA to be obligatory with *in situ* objects.

(54)   *Merge* EA ([•D•]); Case assignment; φ-*Agree* ([φ:_]), ✓ PPA:

        Case Valuation

        [$_{vP}$ EA [$_{vP}$ v [... [$_{VP}$ V IA]]]]
                φ-*Agree*
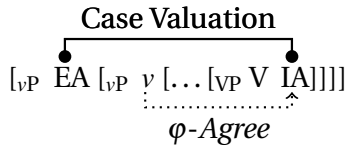
It follows that the difference between PPA *in situ* and movement-based PPA languages can be reduced to a single independently needed parameter, whether or not dependent case is accessible to agreement, thus satisfying the first half of the second desiderata set out in the introduction. In addition to parsimoniously explaining the cross-linguistic variation in PPA, the hypothesis in (51) is also conceptually well-motivated. We know from Bobaljik's work in general and from the specific Indo-Aryan examples that it is a typological fact that closely related languages vary in which DPs they make accessible to agreement. Positing that this variation exists in Romance is therefore the null hypothesis: independent evidence would be needed to motivate the assumption that the Romance languages fail to exhibit the variation.[25]

Before moving on, an anonymous reviewer raises an important question that is worth addressing here: does system incorrectly predict that T might trigger *Agree* with a transitive IA in languages that make dependent Case accessible for agreement? As long as the EA is accessible for agreement, however, this is not a problem. When T is merged in a transitive clause, the EA structurally intervenes between it and the IA. As such, as long as the EA is a licit target for agreement, basic concerns of locality dictate that it will always be the phrase targeted. That said, if the EA is not accessible, either because it bears lexical/oblique Case or does not have the relevant features the probe on T is looking for, we do indeed predict that agreement could obtain with the IA. Both of these scenarios are arguably borne out cross-linguistically. Thus in Icelandic quirky subject constructions, where the subject is valued with lexical dative case by v, agreement at T

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[25]The question does remain as to whether additional empirical evidence independent of PPA can be brought to bear on this issue. Unfortunately, the answer appears to be no. To see why, consider what such evidence would look like. Clausal agreement in Romance is generally triggered at v (PPA) and T (main verb/auxiliary agreement), so PPA-independent evidence must involve agreement at T. This requires a configuration where an internal argument with Dependent Case is structurally accessible to agreement at T, so that we could check if agreement is possible or not. Such a configuration could, in turn, arise in one of two ways: (i) there either must be no external argument or expletive, since such an argument would be closer to T and hence take precedence for agreement, or (ii) the external argument or expletive must not itself be a licit agreement target. In case (i), the absence of a higher argument entails that no Dependent Case assignment takes place, so this is not a viable test configuration. Case (ii) is arguably attested with quirky subjects and with certain locative expletives, as we will see in the next subsection. The issue is that DPs of this sort generally do not induce Dependent Case (see fn. **??**, Section 4.3), so that again this is not a possible test case. Barring a more complicated way of empirically corroborating (51) that is independent of PPA, we will therefore have to rely on the conceptual and typological arguments.

does indeed obtain with the IA.

(55) Jóni   líkuðu   þessir   sokkar
      Jon.DAT liked.PL these.NOM socks.NOM
      'Jon liked these socks'
      (Jónsson 1996)

The derivation proceeds as follows: the EA is merged in Spec(*v*P) and assigned lexical dative case; once T is merged, its [∘D∘] feature attracts the EA to Spec(TP); however, since the EA is not accessible to agreement, [*φ*:_] on T is not discharged and hence may target the IA. Following Preminger (2014), we can rule out a derivation where T agrees with the IA before attracting the EA – and hence by FM is forced to attract the IA to Spec(TP) – on the assumption that quirky subjects intervene for agreement and hence must be moved to Spec(TP) before T can agree with the IA. I present an example instantiating the second case in Section 5, where I discuss the Italo-Romance variety Abruzzese.

Finally, to conclude this section, it's worth asking whether there are any Mainland Scandinavian languages that pattern similarly in making dependent case accessible to agreement, and hence licensing PPA *in situ*. To the best of my knowledge, this has not been reported in the literature except for a footnote in Holmberg's (2001: fn. 12) study of associate positions in Germanic expletive constructions. Here, it is observed that there are speakers of Swedish and Western Norwegian for whom PPA is possible as a marked alternative for *in situ* objects of passive predicates with an expletive *det* subject.

(56) %Det blev skrivna tre böcker.
      EXPL was written.PL three books
      'There were three books written.'   *Swedish*

This is certainly promising, although I must leave a full investigation to future research.

4.3 PPA *in situ* in movement-based PPA languages

The final type of PPA data that we set out to explain in the introduction are the exceptional instances of *in situ* PPA in Standard Italian, French, and Mainland Scandinavian. Let's consider Mainland Scandinavian first, as we will eventually argue that the overt paradigm here also manifests covertly in Standard Italian and French.

Recall from the introduction that the exceptional Mainland Scandinavian data involve the alternation between the third singular neuter expletive, *det*, and an additional expletive, the distal locative proform *der*, cognate to English *there*. Relevant for our purposes is the contrast in (57) and (58), which shows up in all passive/unaccusative contexts. In short, exceptional PPA with the *in situ* object of a passive or unaccusative is licensed with the *der* but not the *det* expletive.

(57) a. **Det** vart skote-**(*n)**   **ein**   **elg**
          it   was shot.N.SG/*M.SG an.M.SG elk.M.SG
      b. **Der** vart skot**en**   **ein**   **elg**
          there was shot.M.SG an.M.SG elk.M.SG
          'There was an elk shot'
          (Åfarli 2008: 171)

(58) a. **Det** er nett kom-**e/*ne**   **nokre gjester**
it   is just come.N.SG/*M.SG some guests.PL

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)

As before, let us adopt the null hypothesis that expletive pronouns maintain the formal syntactic properties of their non-expletive variants. As a locative proform, *der* is therefore lexically oblique. This means that it can't trigger agreement – by hypothesis Mainland Scandinavian only licenses agreement with unvalued case – and moreover that it does not participate in the case system (Preminger 2014).[26] Because Mainland Scandinavian lacks *φ-Agree* at T, it is hard to independently verify the first assertion, although the locative expletives in closely related English and Dutch clearly do not trigger agreement, which is always with the associate.

(59) a. There were/*was three men arrested.

b. Er   zijn   enkele mensen   onverdragelijk.
EXPL be.PRES.3.PL some   person.PL intolerable
'There are intolerable people.'   *Dutch*
(Hoekstra 1991)

Likewise, as with the third singular neuter expletives we have encountered elsewhere, it is difficult to independently probe the case properties of expletive pronouns, since they can't co-occur with lower pronouns per the definiteness effect. However, it can be observed overtly in many languages that oblique DPs are not case competitors. Icelandic presents a clear example: in the basic case, as in (60a), a subject induces dependent (accusative) case on its highest co-argument; if, however, the subject is marked with an oblique case, the co-argument necessarily surfaces with unvalued case (nominative).

(60) a. þeir   seldu bókina.
they.PL.NOM sold.PL book.the.SG.ACC
'They sold the book'

b. Jóni   líkuðu þessir sokkar
Jon.DAT liked.PL these socks.NOM.PL
'John liked these socks.'   *Icelandic*
(Preminger 2014: 145)

Icelandic moreover provides overt precedent for positing that expletives need not be case competitors. While not a locative proform, the Icelandic expletive *það* clearly fails induce dependent (accusative) case on its associate, which likewise controls verb agreement.

(61) það hefur   verið tekinn einhver nemandi   í bókasafninu.
EXPL has.3.SG been taken some   student.NOM.M.SG in library-the
'There has been some student taken in the library.'   *Icelandic*
(Thrainsson 2007: 272)

Granting this treatment of the expletive, the contrast in (57) and (58) follows immediately. Since *der* does not trigger dependent Case valuation on the IA, we can both insert an expletive in

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[26]Again, this is equivalent to the widespread assumption on the Uninterpretable Features model that *there*-expletives lack Case and *φ*-features, as proposed by Chomsky (1995).

Spec(vP) and subsequently trigger agreement with the IA. PPA is therefore correctly predicted to be obligatory with *der* expletives.

(62) *Merge* EXPL; no Case assignment; *φ-Agree* obligatory; ✓ PPA:
[$_{v}$P EXPL [$_{v}$P v [$_{VP}$ V IA]]]
    φ-Agree

Let us turn now to Standard Italian. As is well known, PPA is obligatory with all *in situ* objects of passive and unaccusative predicates.

(63) a. Sono entrat-**i/*o**   **due ladri** dalla   finestra.
        are.PL entered-M.PL/*M.SG two robbers from the window
        'Two robbers entered from the window'
     b. Sono stati   arrestat-**i/*o**   **alcuni   sindaci**
        are.PL been.M.PL arrested.M.PL/*SG some.M.PL mayors.M.PL
        'Some mayors were arrested'

Setting aside the PPA for the moment, I would like to focus momentarily on two independent aspects of (63) that will be important for the eventual analysis. First, the data in (63) differ from all examples that we have considered so far in that there is no overt expletive higher in the structure. This is related to Standard Italian's status as a null-subject language, and can be encoded in the present system in one of two ways. First, we can assume that [•D•] is optional on T and v in Italian; in cases like (63), it is absent, and Spec(vP) and Spec(TP) are empty, whereas in cases of full object promotion (see (35)), it is present and IA moves to Spec(TP). Second, we can assume that Italian T and v have [•D•], 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 in Section 3.2, so I will for now adopt the second option. In the appendix, I present an argument justifying the existence of null expletives in Italian, due to Sheehan (2010).

Second, *in situ* objects of passives and unaccusatives in Italian obligatorily trigger agreement at T, as in (63). Such objects are thus licit targets for *Agree*, which means they must be unvalued for case – by hypothesis, only unvalued case is accessible for agreement in Italian. Granting that Italian has a null expletive, we can conclude that this expletive is not a case competitor, i.e., that it is a *there*-type rather than an *it*-type expletive, an observation that goes back at least to Rizzi (1982). Crucially, this conclusion is completely independent of PPA; it is forced, given our framework assumptions, purely on the basis of agreement at T.

Summarizing, Italian v has a [•D•] feature, which may be satisfied by merging a null, non-case-competing expletive.[27] Because the expletive is not a case competitor, it can be merged in Spec(vP) without rending the internal argument inaccessible to *Agree*. The [φ:_] feature on v must therefore be discharged by the IA according to ObOp logic, so we correctly predict that Italian obligatorily shows PPA with *in situ* objects in passive and unaccusative clauses.

(64) *Merge* EXPL; no Case assignment; *φ-Agree* obligatory; ✓ PPA:
[$_{v}$P pro$_{EXPL}$ [$_{v}$P v [$_{VP}$ V IA]]]
            φ-Agree

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[27]This raises a language acquisition question: how does a language learner determine the Case properties of a null expletive, an element with neither an LF nor a PF realization? If we assume that the EPP property is universally satisfied by DP-merger (e.g., Chomsky 1981), then the challenge does not necessarily seem harder than others. The existence of data like (63) immediately cue the learner that there is a null expletive in Italian. Recognizing that it is not a Case competitor is then akin to recognizing the overt fact that agreement at T is with the internal argument. The existence and Case properties of the expletive can hence be deduced from the overt distribution of the internal argument and of agreement. I thank an anonymous reviewer for bringing this to my attention.

On this view, Italian passives/unaccusatives are directly analogous to the Norwegian example in (57) and (58): in both cases, a non-case-competing expletive is merged in Spec(vP), so that PPA is obligatory with the therefore accessible internal argument. It just so happens that the expletive is overt in Norwegian and covert in Italian.

Finally, if we are willing to set 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 varient without a [•D•] feature. The [φ:_] must therefore be discharged via *Agree* with the object, and no movement ensues because v has no feature to trigger it.

The stage is now set to examine the final class of examples, exceptional *in situ* PPA in French. In particular, in stylistic inversion contexts, PPA is possible with the *in situ* object of passive and unaccusative predicates.

(65) Il faut   que aient   été repeint**es**   **trois chaises**.
      it requires that have.SBJ.PL been repainted.PL three chairs
      'It's necessary that there have been three chairs repainted.'   *French*

I first provide some basic background on stylistic inversion, then argue that the post-verbal DP in (65) is indeed *in situ*. Descriptively speaking, *Stylistic Inversion* (Kayne and Pollock 1978; Kayne and Pollock 2001) refers to the possibility for subjects of transitive and unergative verbs and internal arguments of passive and unaccusative verbs to appear in a non-canonical post-verbal position in subjunctive and interrogative contexts without an expletive. This position is not ordinarily available for transitive subjects (cf. (66a,b)), nor can the internal argument of a passive or unaccusative predicate appear here ordinarily without an overt expletive (cf. (67a,b)). For the remainder of this section, we will be focused on the passive/unaccusative data, although I present the basic transitive/unergative pattern in (66) for the sake of completeness.[28]

(66) Transitive/unergative

   a. A qui   a   téléphoné **ton ami**?
       to whom has called   your friend
   b. *(**Ton ami**) a téléphoné (***ton ami**) a Jean (***ton ami**).   *French*
       (Kayne and Pollock 2001: 107f.)

(67) Passive/unaccusative

   a. Il faut que aient été condamnés **au moin trois hommes**
       it requires that have.SBJ.PL been sentenced.PL at least three
       'It's necessary that there have been least three men sentenced.'
   b. *(Il) a été condamné **au moin trois hommes**
       EXPL has been condemned at least three men   *French*

While I do not have a proposal for why interrogative and subjunctive contexts license this behavior, there is evidence that in cases like (67a), the internal argument may remain *in situ*. Specifically, at least some speakers allow *en*-cliticization of the NP component of the internal argument in these contexts (see also Kayne 2001: 112, fn.9). This operation is generally limited to *in situ* internal arguments (Kayne 1975; Rizzi 1982; Kayne and Pollock 2001).

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[28]As Kayne and Pollock 2001, 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.

(68) a. %Il faut   qu'**en**$_1$ aient   été condamnés au moins [**trois** e_1]
    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**$_1$ aient   repeintes   au moins [**trois** e_1].
    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.'

Granting that French has [●D●] features at *v* and T, we are therefore led to the conclusion that French licenses a null expletive in these cases.[29] Moreover it must be a non-agreeing and non-case-assigning expletive, as agreement at T is with the *in situ* internal argument. Such cases are thus exactly parallel to Italian passive/unaccusative clauses with *in situ* objects. We therefore correctly 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. This is also borne out.[30]

(69) a. Où   ont   été exécute**s**   **des innocents**?
    where have.PL been executed.PL some innocents
    ' Where have there been some innocents executed?'
    (Cardinaletti 1997: 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?'

(70) a. Il faut   que aient   été repeint**es**   **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.'

(71) a. Il faut   que soient   mort**es 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.'

While there remains the very important question of why subjunctive and interogative contexts are unique in licensing the null non-agreeing expletive in French (or alternatively in licensing a relaxing of the EPP; see fn. 29), 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, *v*, is also an argument/expletive introducer.

Taking stock, we have now seen that the present system reduces the contrast between PPA *in situ* and movement-based PPA languages to a single parameter, whether or not dependent

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[29]As 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 [●D●] feature in such cases.

[30]Note that the agreement on the participle is not with *en*, which does not trigger PPA for the speakers who accept (68b,c). In general, PPA with *en* is a marked option that is impossible for most speakers (Belletti, 2006), including all those I have consulted.

case is accessible to agreement. Given that this setting commonly varies across closely related languages, as exemplified above in Indo-Aryan, it is unsurprising that we also see such variation in the Romance languages. This choice, moreover, allows us to avoid complicating the syntax of PPA in any other way.

Moreover, exceptional PPA *in situ* in Standard Italian, French, and Mainland Scandinavian is essentially a species of this same phenomenon. While these languages do not tolerate agreement with DPs bearing Dependent Case, they all furnish, in at least some contexts, an element that may be merged in Spec(vP) without triggering case valuation on a lower DP. In exactly these contexts, *in situ* PPA is obligatory.[31] This satisfies the final desiderata set out in the introduction.

5   Corroborating the analysis: PPA in Abruzzese

We have now seen how the combination of the Bobaljik/Moravcsik hypothesis, the ObOp hypothesis, and the economy condition *Feature Maximality* conspire to capture the core data we set out to understand. One of the major upshots of the analysis is that the peculiar movement-dependence of PPA arises because a single head, v, is the locus for both PPA and EA/expletive merger. Feature maximality then forces agreement at v to compete with the need to introduce an EA/expletive. In transitive clauses, the semantic requirement to saturate the vP with an argument always takes precedent, with the effect that agreement must be postponed until after the EA is merged and hence after dependent Case is valued on the IA. Unless dependent Case is accessible to agreement, however, the IA is therefore not a suitable agreement target and PPA is blocked. The introduction of an additional movement trigger at v relaxes the calculus and allows agreement with the IA before the EA is merged, explaining why PPA is possible under movement.

This leads to the prediction that if PPA in a given language were triggered by a head that was demonstrably distinct from v, it should show fundamentally different behavior than the languages analyzed so far, both with respect to movement dependence and the other properties discussed above. In this final section, I argue that Abruzzese is just such a language, and that its pattern of PPA is well predicted by the analysis so far developed, corroborating the overall approach.

The defining property that sets Abruzzese apart from the languages discussed so far is that it allows PPA to target transitive subjects, as in (72). This immediately forces the conclusion that the triggering head must be distinct from and above v, since by hypothesis agreement is only possible with phrases in the c-command domain of the agreement trigger, and the basic merge

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[31]An anonymous reviewer points out that Standard Italian also licenses *in situ* PPA in reflexive and impersonal *si*-constructions, as in (ia).

(i)   a.   Si sono viste   le   ragazze.
           SI are.PL seen.F.PL the.F.PL girls.F.PL
           ' The girls have been seen.'   *St. Italian*
           (D'Alessandro and Roberts 2008)

      b.   Se   citesc   cărti   bune.
           SI.ACC read.3.PL books.NOM.F.PL good.F.PL
           'People read good books.'   *Romanian*
           (D'Alessandro 2007: 61)

These data pose no special challenge to our conclusions if we adopt the basic analysis developed by D'Alessandro (2007), which can be translated into present terms as follows: *si* clitics are merged above the internal argument and, in at least some cases, assigned lexical case. This both renders the clitic inaccessible to agreement and ensures that the internal argument's Case feature goes unvalued. This can be seen overtly in impersonal *si* constructions in Romanian, where the lexical case on *si* is spelled out as accusative (as in some Icelandic constructions, see Zaenen and Maling 1984) and the internal argument surfaces as nominative (see (ib)). Agreement at v and at T therefore targets the internal argument, thus deriving the obligatory PPA. Reflexive *si* constructions can presumably be handled the same way assuming, following Kayne (1989) and D'Alessandro and Roberts (2008), that they also involve a mediopassive structure.

site of the subject is Spec(*v*P).[32] Below, I denote the head responsible for triggering PPA *F*.

(72) **Giuwanne e Mmarije** a   pitt**i**te   nu mure.
      [John   and Mary].PL have.3 painted.PL a   wall.SG
      'John and Mary have painted a wall'   *Abruzzese*
      (D'Alessandro & Roberts 2010)

So what exactly does the present account predict about such a language? I limit discussion to transitive clauses, because these are the only cases discussed by D'Alessandro and Roberts (2010). First, since the EA is closer to *F* than the IA, we predict that the EA should trigger agreement whenever it is accessible. Granting that dependent Case is accessible to agreement in Abruzzese (see fn. 33), we moreover predict that PPA should be allowed to target the IA, but only if the EA is not an accessible target. PPA should, moreover, be obligatory unless both the EA and IA are inaccessible targets. In sum, then, PPA in Abruzzese should show a preference to target EAs, with agreement licensed with the IA if and only if the EA is not an accessible agreement target, and no agreement if and only if both the EA and the IA are not accessible.

I argue now that these predictions are borne out. Demonstrating this requires being slightly more precise about the structure and nature of φ-features than we have been so far, so I begin by introducing the relevant elaboration of the theory of φ-features we have been working with. First, in the discussion thus far, it has been sufficient to assume that the *Agree* operation is sensitive to the full set of φ-features – person, number, and gender – on a given DP, and that it copies these features together in unison onto the triggering head. Cross-linguistic evidence (see, e.g., Nevins 2007, 2011; Preminger 2014; Coon and Bale 2014; Deal 2014; van Urk 2015; and references cited therein) strongly suggests, however, that in many cases the agreement operation can be sensitive to individual features or pairs of features, rather than the full set of person, number, and gender. There is even evidence of this in the domain of PPA: given that the participle never inflects for person features, the null hypothesis would seem to be that the associated *Agree* relation does not involve copying of person features, and is hence only sensitive to gender and number.

Second, we will need to be more precise about the actual values that φ-features may take. I focus on number features here, as they will be the most relevant for the ensuing discussion. The question, then, is how to best encode in the syntax the morphological fact that there are two possible number specifications, at least in the languages in question: singular and plural. One simple option is to posit that syntactic number features straightforwardly reflect the morphological realization, and hence take on a value of [+singular] or [+plural]. Considerable evidence has accumulated in both the morphological and syntactic literature, however, that this is the wrong approach (Harley and Ritter 2002; McGinnis 2005; Béjar and Rezac 2009; Preminger 2014; van Urk 2015; a.o.). These authors argue that the behavior and morphological realization of number agreement cross-linguistically is best captured in a system where number is syntactically represented by the single feature [plural]. Plural phrases have this feature, while singular phrases lack a number feature altogether.

One upshot is that this approach predicts that singular DPs, because they lack a number feature altogether, are inaccessible to number agreement. This means that a number agreement operation – *#-Agree* hereafter – may potentially skip over a singular DP to target a lower plural

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[32]It's worth noting that this conclusion is not unique to our framework, but is required by any theory that postulates a downward-probing *Agree* operation, most notably the uninterpretable features model of Chomsky (2000, 2001) and the elaborations stemming from it. An anonymous reviewer questions how such a treatment of *Agree* can be extended to account for the cases that motivated Béjar and Rezac (2009) to posit Cyclic-Agree. While a detailed exploration of this data is beyond the present scope, see Colley (2018) for an analysis of the relevant cases that is compatible with our assumptions.

DP, if this lower DP is otherwise accessible. This mechanism has been argued to underly a variety of so-called *omniverous agreement* patterns, and will be crucial for the analysis of Abruzzese.

(73)   [$H_{[\#:\_]}$ ... [DP.SG ... [DP.PL ...]]]
                    $\#$-*Agree*

We are now in a position to analyze Abruzzese PPA in full generality. The basic facts to be accounted for are the following: (i) PPA is limited to number features; (ii) PPA targets the plural argument in a clause, if there is one, be it subject or object.

(74)   a.   Giuwanne a   pittate   nu mure.
              John.SG   have.3 painted.SG a   wall.SG
              'John has painted a wall'   [subj.SG-obj.SG → pp.SG]
        b.   Giuwanne a   pit**ti**te   **ddu mure**.
              John.SG   have.3 painted.PL two   wall.PL
              'John has painted two walls'   [subj.SG-obj.PL → pp.PL]
        c.   **Giuwanne e   Mmarije** a   pit**ti**te   nu mure.
              [John   and Mary].PL have.3 painted.PL a   wall.SG
              'John and Mary have painted a wall'   [subj.PL-obj.SG → pp.PL]
        d.   Giuwanne e   Mmarije a   pit**ti**te   ddu mure.
              [John   and Mary].PL have.3 painted.PL two walls.PL
              'John and Mary have painted two walls'   [subj.PL-obj.PL → pp.PL]

Following the discussion above, I take the conservative view that (i) entails that the *Agree* operation behind PPA in Abruzzese involves only number features. The agreement patterns in (74), then, are exactly as we predicted through reasoning on ObOp grounds. Because PPA is possible with subjects, we know the triggering head *F* must be above *v* and hence the basic merge site of the subject. The [#:_] feature on *F* must therefore target the closer subject if it is accessible, which in this case means it is plural and hence bears a number feature. If the subject is singular and hence not a target for number agreement, the [#:_] feature at *F* may be discharged by targeting the object, if it is plural.[33] Finally, if neither argument is plural, there is no suitable target to discharge [#:_], so no PPA occurs, and if both arguments are plural, PPA trivially occurs, since the subject is again in this case an accessible target.[34]

(75)   a.   Singular subject, singular object: ✗ PPA
              [*F* ... [$_{vP}$ EA.SG [*v* [$_{VP}$ V IA.SG]]]]

        b.   Plural subject: ✓ PPA
              [*F* ... [$_{vP}$ EA.PL [*v* [$_{VP}$ V IA.SG/PL]]]]
                   $\#$-*Agree*

        c.   Singular subject, plural object: ✓ PPA
              [*F* ... [$_{vP}$ EA.SG [*v* [$_{VP}$ V IA.PL]]]]
                        $\#$-*Agree*

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[33]Note that this requires assuming that Abruzzese is among those Romance varieties that make dependent case accessible for agreement.

[34]I remain agnostic as to whether *F* also has an [∘D∘] feature. If it does, then by feature maximality it would be expected attract the object over the subject in examples like (74b). Since both the subject and the participle ultimately surface to the left of the object, both these phrases would need to then be attracted higher in the clause. I know of no evidence supporting or denying the existence of such movement in Abruzzese.

Because PPA in Abruzzese is triggered by a head above *v*, it necessarily takes place after argument introduction and Case valuation are complete. As such, there is no interplay between PPA and these operations; the #-*Agree* operation merely acts on the output. That this results in a fundamentally different pattern of PPA than in the cases we have so far discussed corroborates the central claim of this paper, namely that the movement-dependence of PPA reduces to the interplay of agreement, Case valuation, and argument introduction. When independent factors intervene to separate these operations, the pattern breaks down.

6 Alternative treatments

While PPA received wide attention following Kayne's (1989) work, there have been few subsequent studies that approach the phenomenon from a perspective accepting that agreement intrinsically operates at a distance.[35] The only work of this sort that I am aware of is due to D'Alessandro and Roberts (2008, 2010). In this section, I review this analysis and argue that it is not sufficient to capture the full array of data explored in this paper. That said, it shares an interesting similarity with the present account in that it reduces the exceptional (from the perspective of agreement at a distance) nature of PPA to the special status of *v*.

D'Alessandro and Roberts (2008) propose the following account of PPA in Italian, couched in the Uninterpretable Features model Chomsky 2000; 2001): transitive and passive/unaccusative *v* are endowed with agreement features, and always undergo *φ-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 morphonologically when the trigger and goal are in the minimal complement of the same phase head:

(76)   **Phasal Agreement Condition** (D'Alessandro and Roberts 2008: 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 (Cinque 1999: 102f.).

(77)   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."

The third claim is that transitive *v* is a phase head in active but not passive sentences, and that unaccusative *v* is never a phase head. Granting these three claims, the main Italian data are then derived as follows. First, in transitive clauses, *v* always agrees with IA. However, because the participle raises to *v*, it is not in the minimal complement to *v*, whereas an *in situ* object

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[35]It should be noted that Loporcaro has conducted a number of subsequent studies on the typological distribution of PPA and the various implicational hierarchies among the sorts of objects that license it, from the perspective of relational grammar.

is. By (76), PPA is not spelled out (see (78a)). If IA is a clitic, however, it must raise into the TP domain. Assuming C is the next phase head, both the participle, which is by hypothesis at v, and IA will therefore be in the minimal complement to C, so PPA is spelled out. Finally, in passive/unaccusative clauses, v is not a phase head, so irrespective of the position of the participle, V and IA will always be in the minimal complement to phase head C, and hence PPA will always be spelled out (see (78b)).

(78) a. [$_{TP}$ I [have [$_{vP}$ **eaten**+v [$_{VP}$ ~~eaten~~ **the apple**]]]]
          $\underbrace{\phantom{[_{vP} \text{eaten}+v [_{VP} \text{eaten the apple}]]}}_{\text{spell-out domain}}$

      b. [$_{CP}$ C [$_{TP}$ **them**.CL [$_{TP}$ I [have [$_{vP}$ **eaten**+v [$_{VP}$ ~~eaten~~ ~~them~~]]]]]]
          $\underbrace{\phantom{\text{them.CL [TP I [have}}}_{\text{spell-out domain}}$ $\underbrace{\phantom{\text{eaten+v [VP eaten them}}}_{\text{spell-out domain}}$

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 can't raise above manner adverbs like *bien*, and may appear below much lower VP-level adverbs like *presque, à peine, souvent* (Pollock 1989; Cinque 1999). As we have seen, however, PPA is robustly impossible in transitive clauses.

(79) 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)

An instance of the latter class of languages is Neapolitan, where transitive active participles must raise above *bene*[36] (see (80)), and yet PPA is licensed with *in situ* objects.

(80) 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)

(81) addʒə   kɔttə/*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

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[36]Following Cinque (1999: 119), quantifiers floated from the object are above *bene/bien*.

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

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 *v* 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.[37]

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[37]An anonymous reviewer points out an additional issue outside of the domain of PPA. Arregi & Nevins (2012) show that all agreement in Basque, including with the IA of a transitive clause, is triggered by T, not *v*. Nevertheless, there is evidence that at least some transitive IAs stay *in situ* within the *v*P phase (Preminger 2009). The Phrasal Agreement Condition therefore does not seem to apply in general.

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7 Appendix

I provide independent arguments supporting two important proposals from the main paper. The first is that passive/unaccusative *v* is an intermediate landing site for A-movement across it in the Romance languages, and the second is that Italian has a null expletive that it employs in passive/unaccusative clauses with *in situ* objects.

7.1 Romance passive/unaccusative *v* is an intermediate landing site for A-movement

Concerning the first proposal, I begin by pointing out that it represents the null hypothesis. As argued by Sauerland (2003) and Legate (2003), English passive/unaccusative *v* is an intermediate landing site for movement across it. Treating the Romance languages differently is therefore an additional assumption that requires empirical justification. Beyond this conceptual point, however, Sauerland's argument from English can be repeated verbatim in French, giving empirical support to the proposal that the Romance languages do not differ in this regard. To this end, consider the example in (82), which features subject-to-subject raising out of the infinitival complement to the passivized ECM predicate *voir*, 'to see.' Crucially, this example tolerates a reading where the raised subject takes scope below matrix negation, yet also binds into the matrix *by* phrase. Following Sauerland, this means that the raised subject is reconstructing to a matrix position below negation but above VP, and hence that this position – identified here as passive Spec(*v*P) – must be an intermediate landing site for movement across it.

(82)   Context: A group of parents are with their children at a park. Some parents are closely watching their children play, but others are engrossed in their phones and completely inattentive

    a.   [Tous les enfants]$_1$ n'ont   pas été vus   par leurs$_1$ parents [t_1
        all   the children$_1$ NEG.have.3.PL not been seen.PL by their$_1$ parents
        en train de jouer].
        while   play.INF
        'All the children weren't seen by their parents to be playing.'
        ≈ It's not the case that each child was seen by his parents to be playing

    b.   LF: [not [$_{vP}$ all the children$_1$ [$_{VP}$ seen by their$_1$ parents [$_{Inf}$ t_1 to be playing]]]]
        (Keny Chatain, p.c.)

The same argument can also be made for unaccusative *v* on the basis of the subject-to-subject raising example in (83). Here, the surface subject takes scope below matrix negation, but also binds into a matrix-VP adjunct *because*-adjunct. Again, this entails reconstruction to a matrix position above the VP but below negation, suggesting unaccusative Spec(*v*P) is also an intermediate landing for movement across it.

(83)   Context: We're at the museum of optical effects. Certain lines on the paintings attached to the wall look smaller than they actually are. Sometimes, it is due to the painting's frame being rigged in a particular way; sometimes, it's due to the colour of the ink of the line. I felicitously comment on this situation by saying:

    a.   [Toutes les lignes]$_1$ ne semblent pas [t_1 être   plus petites] parce que leurs$_1$
        all   the lines   NEG seem.PL not   be.INF more small.PL because   their$_1$
        cadres sont légèrement déformés
        frames are.PL slightly   bent
        'All the lines don't seem to be smaller than they are because their frames are slightly

bent'

≈ It's not the case that all the lines seem smaller than they actually are because their frames are bent

b. LF: [not [$_{vP}$ all the frames$_1$ [$_{VP}$ seem [$_{Inf}$ t_1 to be bent] [becasue their$_1$ ...]]]]
(Keny Chatain, p.c.)

7.2   Italian employs a null expletive in certain passive/unaccusative constructions

I now present an argument that Italian employs a covert expletive in some passive/unaccusative constructions. The main structure of the argument is due to Sheehan (2010), to which I refer the reader for a fuller presentation.

The argument hinges on two observations concerning Italian passive and unaccusative clauses. To begin, Italian allows the internal argument of most passive/unaccusative clause to appear post-verbally. I limit discussion here to wide-focus contexts, where the post-verbal DP receives no special focus and is arguably *in situ* (Rizzi 1982; Pinto 1997). These contexts can be forced by construing the relevant example as an answer to the question *what happened*. The post-verbal position alternates in such contexts with variants where the subject appears in a pre-verbal A-position, which I will assume is Spec(TP) (Pinto 1997). Relevant minimal pairs are presented in (84) and (85).[38]

(84) a. What happened?
b. È entrato Dante.
      is entered Dante
c. È affondata la   Attilio Regolo.
      is sunk   the Attilio Regolo
d. È morto Fellini.
      is died   Fellini
      (Pinto 1997: 20)

(85) a. What happened?
b. Dante è entrato
      Dante is entered
c. La Atilio Regolo è affondata
      the Attilio Regolo is sunk
d. Fellini è morto
      Fellini is died
      (Pinto 1997: 23)

The first observation, due to Pinto (1997), is that the examples with pre- and post-verbal arguments have subtly different interpretations: in examples with post-verbal arguments, the action or event being described is obligatorily speaker oriented, whereas no such requirement holds in examples with a pre-verbal subject. Thus in (86a), *Gianni* must have arrived either at the speaker's location or some other salient location related to the speaker. In (86b), there is no special requirement on the arrival.

(86) a. È arrivato Gianni
      'Gianni arrived here'

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[38]Note that these examples show that Italian is superficially different from English in such contexts in that despite the fact that the post-verbal argument is arguably *in situ*, there is no definiteness effect.

      b.   Gianni è arrivato
            'Gianni arrived (somewhere)'

To capture this, Pinto (1997) argues that passive and unaccusative verbs that allow post-verbal arguments in wide-focus contexts optionally project locative argument; this argument can be covert, and when it is it receives an obligatorily deictic interpretation. Granting this, the data in (86) teach us that the locative argument must be projected when the DP argument is post-verbal but not when it is pre-verbal.

    The second observation is that if the locative argument is overtly realized, both it and the internal argument can't remain *in situ* unless the internal argument is non-specific (Belletti and Rizzi 1988; Sheehan 2010).

(87)   a.   Che cosa   è successo?
            what happened
    b. ??È partito Dante da   Firenze.   ??[V DP PP]
          is left   Dante from Florence
    c.   Dante è partito da Firenze.   ✓ [DP V PP]
    d.   Da Firenze è partito Dante.   ✓ [PP V DP]

(88)   a.   Che cosa   è successo?
            what happened
    b.   È partito un uomo da   Firenze.   ✓ [V DP PP]
          is left   a man   from Florence
    c.   Un uomo è partito da Firenze.   ✓ [DP V PP]
    d.   Da Firenze è partito un uomo.   ✓ [PP V DP]

    Taken together, these two observations furnish an argument for a traditional EPP and a covert expletive in Italian. The first observation, that post-verbal arguments must be accompanied by a (covert) locative argument, suggests that Italian Spec(TP) must be filled by an argument. If the internal argument of a passive or unaccusative verb remains *in situ*, the locative argument must be projected and moved to this position. If the internal argument itself moves here, there is no independent need to project the locative and move it, although this should still be possible.

(89)   a.   [$_{TP}$ LOC [T … [V DP]]]   (obligatory *speaker orientation*)
    b.   [$_{TP}$ DP [T … [V (LOC)]]]   (optional *speaker orientation*)

The second observation further corroborates this view and suggests the existence of an expletive: if both the locative and DP arguments are overt, there are two ways to satisfy EPP: (i) one of the overt arguments can move to Spec(TP);[39] (ii) a null expletive can be merged to satisfy EPP, allowing both the DP and locative argument to remain *in situ*. If option (ii) is selected, the internal argument is subject to the well-known definiteness effect that arises in expletive constructions, both in Romance (French is a particularly clear case) and in general.

(90)   Option (i)
    a.   [$_{TP}$ LOC [T … [V DP]]]   (✓ EPP)
    b.   [$_{TP}$ DP [T … [V LOC]]]   (✓ EPP)
    c.   [$_{TP}$ ∅ [T … [V DP LOC]]]   (✗ EPP)

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[39] Norvin Richards (p.c.) suggests that this might have an explanation along the lines of Moro's "dynamic antisymmetry," e.g., movement is forced because the VP can't host two overt arguments, not because of EPP. On this view, however, data like (88) are mysterious.

(91)   Option (ii):
        [$_{TP}$ EXPL [T ... [V DP$_{NS}$ LOC]]]   (✓ EPP, ✓ definiteness effect)

Note that these effects are directly paralleled in English, where there are two ways by which the internal argument of a passive/unaccusative can remain *in situ* in English: (i) a locative phrase can be projected and moved to Spec(TP), in which case there is no definiteness effect (see (92a)); (ii) an expletive can be merged and moved to subject position, in which case there is a definiteness effect (see (92b,c)).

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

This analysis of the Italian facts therefore both captures the full array of data in a parsimonious way and reduces the differences between Italian and English to the independent possibility for null-subjects in Italian.