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# Auxiliaries and Participles

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## 1. Introduction\*

Kayne (1989) was the first to propose that the agreement relationship between a past participle and an object clitic or an object *wh*-phrase in, for instance, the Romance languages takes place within the confines of a projection of Agreement, a projection which has come to be known as AgrOP (object-AgrP). Kayne draws attention to several properties of the Romance participle agreement construction which argue for an analysis along these lines, roughly represented in (1b), the structure of the participial agreement construction involving *wh*-extraction in (1a):

- (1) a. *Combien de tables* as-tu repeintes?  
how-many of tables(F.PL) have-you repainted(F.PL)  
'How many tables did you repaint?'
- b. [<sub>CP</sub> [combien de tables]<sub>i</sub> as-tu [<sub>AgrOP</sub> *t*<sub>i</sub> AgrO<sub>i</sub> repeintes *t*<sub>i</sub>]]

Kayne's analysis lies at the heart of the account of Romance PARTICIPLE AGREEMENT constructions that will be presented in this paper, grounded in the MINIMALIST PROGRAM for linguistic theory put forward in Chomsky (1993). The analysis to be developed here will also give rise to a novel account of AUXILIARY SELECTION in perfective and passive constructions.

The basic claim upon which this paper will be based is that periphrastic perfective and passive constructions are in principle structurally ambiguous. That is, for a transitive perfective construction like (2), two initial structures — schematised in (3) and (4) — can be devised, given minimalist assumptions that will be made explicit as we proceed:

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\* In giving the ideas reported here shape, I have benefited greatly from discussions with Hans Broekhuis and Jan-Wouter Zwart. These ideas were first developed in a seminar given at the Free University Amsterdam (spring 1993), and have been presented in talks at the Linguistics Colloquium of the University of Groningen, 16 April 1993, and at NELS 24, University of Massachusetts, Amherst, 20 November 1993. I thank the audiences present on these occasions for valuable contributions, and Peter Ackema, Luis Lopez and Johan Rooryck for written comments on an earlier, longer version of this paper.

- (2) John has kissed Mary.  
 (3) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I'</sub> I [<sub>AgrOP</sub> Spec<sub>2</sub> [<sub>AgrO'</sub> AgrO [<sub>VP1</sub> SU [<sub>V'</sub> Vaux [<sub>VP2</sub> [<sub>V'</sub> Vptc OB]]]]]]]]]]]  
 (4) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I'</sub> I [<sub>VP1</sub> [<sub>V'</sub> Vaux [<sub>AgrOP</sub> Spec<sub>2</sub> [<sub>AgrO'</sub> AgrO [<sub>VP2</sub> SU [<sub>V'</sub> Vptc OB]]]]]]]]]]]

The structure in (3) will be argued to yield a more economical derivation. This structure is therefore to be preferred whenever there is a real choice, (4) being invoked only if independent considerations force its adoption. Though the facts will be seen to be considerably more subtle, (3) roughly yields sentences with no participial agreement and with *have*-selection, while (4) renders participle agreement available and leads to *be*-selection in ergative and passive constructions.

Already at the outset, I would like to present some specific assumptions that will figure prominently in the analyses to follow. These are summed up in (5), below. The statement in (5d), which diverges slightly but crucially from Chomsky's (1993:27–28) assumptions regarding feature checking, can be seen to follow naturally from the Principle of Full Interpretation, the rationale for feature checking. According to this principle, at the interpretive components no uninterpretable symbols may occur. At the LF interface, N- and V-features are uninterpretable. Whenever such features are visible at LF, they will prevent the derivation from converging. An important question arising in this context is whether the features of lexical and inflectional heads are equally susceptible to the need of being eliminated at LF. If Chomsky (1991) is right that inflectional elements have no logico-semantic contribution to make, and are therefore invisible at the LF interface, their feature bundles will be invisible at LF as well. There is no need, then, to assume that the features of *inflectional* heads are eliminated under checking. Lexical categories, by contrast, do play a role at LF, hence cannot be invisible there. If they retained their L-feature bundles, these would lead to a violation of the Principle of Full Interpretation. In the light of this line of thought, I therefore hold the view that only the L-features of *lexical* categories, *not* those of inflectional heads, must be eliminated at LF (cf. (5d)).<sup>1</sup>

- (5) a. Transitive verbs possess structural objective Case features (cf. Chomsky 1993:7).  
 b. All tokens of *have* (both main verb and auxiliary) are transitive verbs, hence are in the possession of an objective Case feature.  
 c. *Be* does not possess an objective Case feature.  
 d. Case features are checked in the course of the derivation; the Case features of *lexical* categories must be eliminated at LF.

## 2. The two structures of perfective constructions

For transitive perfective constructions, the assumptions expounded above allow us to construe two maximally simple structural analyses, differing with respect to the position in the structure of the AgrOP: it may either be generated outside the projection of the auxiliary verb, as in (3), or be inserted in the complement of the auxiliary, as in (4). Following Hoekstra (1984) and Kayne (1985), and more recently also Bures (1993) and Broekhuis (1993a), I shall assume that the base position of the

<sup>1</sup> Taking Chomsky's (1993:32) analysis of expletive *there* constructions seriously in effect forces one to conclude that the present view of feature elimination is correct. In an expletive construction like *There arrived a strange man yesterday*, the subject position (SpecAgrSP) is occupied in overt syntax by the expletive *there*, the 'real' subject *a strange man* finding itself in its base position inside VP. In examples such as this, the strong N-feature of T (raised to AgrS) must hence be checked by the expletive in subject position. At LF, *a strange man* moves to (an adjunction position to) SpecAgrSP ('expletive replacement'), 'driven by the Case Filter' (1993:32), in order to have its N-features checked. Suppose now that *there*, as a result of checking the N-feature present under AgrS, were to eliminate this feature. This would entail that at LF there would be no N-feature left in AgrS against which the N-feature of *a strange man* could be checked. Chomsky's 'expletive replacement' approach to *there* constructions thus effectively forces him to deny that L-features present under inflectional heads are eliminated as a result of feature checking. (Lasnik 1993 also brings up the tension between Chomsky's approaches to expletive constructions and feature elimination; he concludes that the Case Filter is not the motivation for expletive replacement.)

A consequence of the present view on feature checking/elimination is that we cannot restrict all parametrisation to *functional* elements. For independently proposed instances of parametrisation of the strength of the features of *lexical* heads, see, among others, Laka (1993:166), Koizumi (1993:112) and Ura (1993:266).

subject in the structure in (3) is the specifier of the auxiliary's VP, the auxiliary 'transmitting' the participle's external  $\Theta$ -role. Such  $\Theta$ -role 'transmission' will be possible iff no functional projection intervenes between the participle and the auxiliary, hence in (3) but not in (4), where the subject is base-generated in the specifier position of the participle's VP.<sup>2</sup>

- (3)  $[_{IP} \text{Spec}_1 [_I I [_{AgrOP} \text{Spec}_2 [_{AgrO} \text{AgrO} [_{VP1} \text{SU} [_V \text{Vaux} [_{VP2} [_V \text{Vptc} \text{OB}]]]]]]]]]]]$   
 (4)  $[_{IP} \text{Spec}_1 [_I I [_{VP1} [_V \text{Vaux} [_{AgrOP} \text{Spec}_2 [_{AgrO} \text{AgrO} [_{VP2} \text{SU} [_V \text{Vptc} \text{OB}]]]]]]]]]]]$

The structures in (3) and (4) are maximally simple, in the sense that no functional projections other than the ones that are necessary in non-perfective constructions are included in them.

Before proceeding to an analysis of Romance participial agreement based on (3) and (4), let us first of all inspect the NP-movement and head-movement operations obtaining in minimalist derivations employing these structures. In (3), Case-driven movement of the object to SpecAgrOP across the base position of the subject is unproblematic if the auxiliary verb moves to AgrO, thereby creating a minimal domain for the chain CH = (Vaux, *t*) that contains both the landing-site of OB-movement and the intermediate SpecVP position skipped in the movement process.<sup>3</sup> Movement of the subject to SpecIP across the landing-site of the moved object is also not problematic, AgrO moving to I and creating a minimal domain comprising SpecAgrOP and SpecIP. In (6a), the head movement steps taken in the course of a derivation based on the structure in (3) are summarised.

- (6) a. Head movement in (3): (i) Vaux-to-AgrO + (ii) AgrO-to-I  
 b. Head movement in (4): (i) Vptc-to-AgrO + (ii) AgrO-to-Vaux + (iii) Vaux-to-I

The structure in (4) will again straightforwardly accommodate OB-movement to the specifier position of AgrOP, the base position of the subject being freely traversible if the participle moves to AgrO. Movement of the subject to SpecIP, across SpecAgrOP, can proceed in conformity with the minimalist locality theory if we can ensure that SpecIP and SpecAgrOP are *equidistant* from the base position of the subject. The way to accomplish this is to *incorporate AgrO into Vaux*. This will in any event enable SU to reach the specifier position of the auxiliary's VP, where Form Chain can deploy an intermediate trace of the movement chain. No specifier intervenes between the specifier position of the auxiliary's VP and the target of SU-movement, SpecIP. The derivation (which, as far as head movement is concerned, is summed up in (6b), above) converges, as desired.

Having established that both (3) and (4) are compatible with the minimalist framework, let us now proceed to the facts of Romance participial agreement, and see how these can be made to fall out from the analysis.

### 3. Romance participial agreement in perfective constructions

Kayne (1989) and Chomsky (1991) have argued that participial agreement is a strictly local relationship between a participle and an agreeing nominal element, obtaining within the confines of what has come to be known as the AgrOP. More specifically, I argue that:

2 It is presumably not crucial that the subject is base-generated in the specifier position of the auxiliary's VP in the 'high AgrO' structure in (3). This assumption renders it easier to have the object undergo NP-movement to SpecAgrOP in conformity with minimalist assumptions, but even if the subject should turn out to originate in the specifier position of the participle's VP, ways can still be found to legitimate OB-movement to SpecAgrOP. One suggestion that would come to mind is that VP1 and VP2, since they are immediately contiguous and not separated by any functional projection, count as segments of one multi-segment VP, and that the minimal domain of the participle in such a configuration equals the minimal domain of the auxiliary verb (in a way that would have to be made precise; I shall not undertake this here). Movement of Vaux to AgrO would then allow the object to raise to SpecAgrOP across the base position of the subject in the specifier of the participial VP. In order to avoid a lengthy discussion of technicalities arising in connection with this analysis, I have elected to adopt the main text view concerning SU's base position in (3).

3 Contrary to Chomsky (1993:18), I shall assume that it suffices that the verb raises to AgrO at some point in the derivation, rather than requiring of the verb that it raise to AgrO in overt syntax whenever the object undergoes overt-syntactic movement to SpecAgrOP; also cf. Zwart (1993). I do not distinguish between overt and covert movement with respect to minimality. I shall not be concerned here with OB-to-SpecAgrOP movement cases which are apparently contingent on overt V-movement (Scandinavian Object Shift).

- (7) A participle in AgrO agrees with a nominal element in the *checking domain* of the AgrO-node hosting the participle.

This being said, participial agreement is expected to occur in the structure in (4), in which the participle raises to AgrO, but not in (3), in which the participle does not find itself in AgrO at any stage in the derivation.<sup>4</sup>

Consider now the facts of participial agreement in the Romance languages (Kayne 1989), taking French as our key example (and addressing some of the other varieties of Romance in the course of the exposition). In French active transitive perfective constructions, *clitic objects* trigger participle agreement, but full NP objects do not, unless they undergo A'-extraction:<sup>5</sup>

- (8) a. Jean a repeint-(\*es) les tables.  
Jean has repainted-(F.PL) the tables(F.PL)  
b. Jean les a repeint-\*(es).<sup>6</sup>  
Jean them(CL F.PL) has repainted-(F.PL)  
c. Combien de tables a-t-il repeint-(es)?  
how-many of tables(F.PL) has-he repainted-(F.PL)

In the minimalist framework, this distribution of participle agreement is unexpected. After all, *all* objects, be they clitics or full NPs, end up in the checking-domain of AgrO at the end of the derivation, and if participle agreement can be characterised as in (7), as seems plausible, then it is rather surprising to find that full NPs do not trigger it. Note that there is no way, in the minimalist framework, of saying that participle agreement can only be brought about by *overt-syntactic* (S-structure) movement into the checking domain of AgrO. Participle agreement does not involve the addition, in the course of the derivation, of a syntactically independent affix (-es) to the participle; instead, the participle has a lexically listed agreeing form (*repeintes*), whose features must be checked against identically featured elements in the course of the derivation. Even if the features of the agreement affix (-es), or of participles bearing this affix, can be parametrised as being strong (hence being obligatorily checked in overt syntax),<sup>7</sup> this still would not help us explain the facts in (8), for there is no obvious way of ensuring agreement with clitic objects: why must an object clitic (in some dialects) necessarily co-occur with an agreeing participle?

Since we know that transitive perfective constructions are in principle structurally ambiguous between (3) and (4), we can try to exploit this ambiguity to account for the facts in (8). In particular, we can try to force a derivation based on (4) whenever there is a clitic object, prevent such a derivation whenever the object is a full, non-clitic, non-*wh* NP, and allow for both derivations (accommodating the optionality of participle agreement) in constructions involving object *wh*-movement. What follows is a scenario that reaches this objective.

4 In the languages under current discussion, that is; cf. section 4.2, below, for a discussion of Serbo-Croatian and other 'Long Head Movement' languages, and certain Romance dialects (Kayne 1993a), all of which select *be* in transitive perfective constructions.

5 I shall discuss agreement in ergatives with *be* and in passives in section 5, below.

6 Participial agreement with clitic objects is not in fact obligatory in all dialects of French; 'there are many speakers who have past participle agreement neither with object clitics nor with object *Wh*-phrases' (Kayne 1989:94), as in Spanish. On the variation within the Romance language family, cf. Kayne (1989:section 4) and esp. also Bessler (in prep.) and Cummins & Roberge (1994). In spite of all variation, one thing that is clear is that participial agreement with object clitics is more robustly represented than agreement with *wh*-phrases; cf. also Kayne's (1989:94) observation that '[w]hat is to the best of our knowledge lacking ... is a language having the *Wh*-case of object agreement, but not the clitic case', an observation which is confirmed by the table in Cummins & Roberge (1994). I cannot fully address the amazing variation within Romance with respect to participial agreement here; cf. the works cited for details.

7 Which they cannot according to Chomsky's (1993) own assumptions regarding parametrisation; but cf. the final part of fn. 1, above, on the locus of parametrisation.

As a first step in the desired direction, let us postulate the hypothesis in (9):<sup>8</sup>

- (9) Object clitics are adjuncts on AgrO in the *minimal domain* of the chain of their  $\Theta$ -assigners.

Adjunction to AgrO in (3) would never make the clitic end up in the minimal domain of the chain of the participle, since the participle is not raised to AgrO. Clitic adjunction to the AgrO-node in (4), on the other hand, does respect the constraint in (9), after the participle is raised to AgrO. In this way, we can force a derivation based on (4) in clitic constructions, which yields the desired result that participial agreement is obligatory in (8b).

The facts of French participle agreement now lead us to find a way to exclude a derivation based on (4) of the example in (8a), in which participial agreement is barred. To see how this can be accomplished, let us return to the derivational histories based on these structures, discussed in section 2. As far as NP-movement steps are concerned, both are equally costly. Notice, however, that (4) involves *three* head movement steps (cf. (6b), above), while in (3) only *two* head-movement steps are necessary (cf. (6a)). AgrO incorporation (step (ii) in (6b)) is forced in (4) in order to render SU-movement legitimate (cf. section 2 for discussion). We see, then, that, all else equal, (4) yields a *less economical* derivation than (3), and is hence rejected in favour of (3) — if there is a real choice.<sup>9</sup> Now, in (8a) there is a real choice between (3) and (4), hence (3) is selected. In (8b), on the other hand, the requirement that object clitics adjoin to the AgrO-node hosting the participle (9) forces a derivation based on (4), so that hence (3) cannot be selected.

And then there is the *wh*-extraction case in (8c), in which agreement between the participle and the *wh*-phrase is optional. Two questions arise: (i) how can participle agreement be possible at all in (8c), and (ii) how can it be optional? I shall address these questions in turn, starting out from Obenauer's (1992) discussion of *wh*-agreement and specificity in French. On the basis of evidence of the type in (10) Obenauer concludes that agreement between a participle and a moved *wh*-phrase is possible just in case the latter is [+specific] — (10b,c), which involve unquestionably non-specific *wh*-phrases, resist participial agreement.

- (10) a. Dis-moi combien de fautes tu as fait-(es).  
tell me how-many of mistakes(F.PL) you have made-(F.PL)
- b. Jusqu'à combien de fautes ont-ils fait-(\*es)?  
approximately how-many of mistakes(F.PL) have-they made-(\*F.PL)
- c. Combien de fautes *en moins* a-t-il fait-(\*es) cette fois?  
how-many of mistakes(F.PL) at least has-he made-(\*F.PL) this time

8 The surface position of object clitics does not directly concern me here. For concreteness, we may assume that the clitic excorporates from AgrO (in conformity with Kayne 1993b — adjuncts to heads may excorporate) on its way up to its eventual resting place.

It is not immediately clear why the statement in (9) should hold; especially in the light of the analysis of cliticisation of Sportiche (1992), which will be adopted further below. The hypothesis may even seem to be contradicted by such examples as *Je les ai toujours considérées intelligentes* 'I them(CL F.PL) have always considered(F.PL) intelligent(F.PL)', where the object clitic adjoins to the AgrO-node immediately outside the projection of the participle *considérées*, in apparent violation of (9), since the clitic is not  $\Theta$ -marked by the participle. I suggest (cf. Stowell 1991) that in SC-complementation constructions of this type, the predicative adjective (*intelligentes*) is reanalysed with the verb at LF; specifically, the adjective incorporates into the verb, the complex verb eventually moving to the AgrO-node hosting the object clitic. In this way the clitic comes to occupy a position in the minimal domain of its  $\Theta$ -assigner (the adjective) at LF even in this type of construction. (Notice that the fact that the object clitic also agrees with the adjective is then immediately accommodated as well.) Other ways can presumably be found to ensure that in constructions featuring object clitics, the 'low AgrO' structure in (4) must be selected. Johan Rooryck (p.c.) suggests that clitics (functional elements) cannot skip auxiliaries (which may also be looked upon as a kind of functional elements), so that hence (3) is unavailable in object clitic constructions. Such a minimality type approach to the problem, which has the advantage of divorcing the restrictions on object clitic placement from thematic considerations, seems to commit one to a movement-to-AgrO approach to clitics (*contra* Sportiche 1992), and is also perhaps not easily reconcilable with what is said in fn. 17, below. I shall adopt (9) here, leaving questions concerning the precise way of forcing the 'low AgrO' structure in object clitic constructions for future research.

9 One may ask if it is legitimate to compare derivations of a single sentence built on two different structural representations in the light of economy considerations. I maintain that it is, given that derivations based on the two structures in (3) and (4) yield identical LF output representations — the difference between (3) and (4) lies in the hierarchical position of AgrOP (and in the base position of the subject of the clause, but this presumably is not essential; cf. fn. 2 for discussion), a difference that plays an important role in the syntactic derivations to which these structures give rise, but which is completely irrelevant in the LF output representations, from which functional heads like AgrO are absent (cf. Chomsky 1991, and section 1, above).

The obligatorily specific character of the *wh*-phrase in participle agreement constructions in turn is to be related to the *pronominal* status of the variable in object position. This is apparent from the fact that the (non-standard) resumptive pronoun construction in (11b) only allows a specific/D-linked interpretation for the *wh*-phrase, while the standard extraction case in (11a) is ambiguous between a cardinality reading and a specific interpretation of the *wh*-phrase. Obenauer identifies the null pronominal variable bound by [+specific] *wh*-phrases as *pro*, thereby giving substance to a suggestion made in Kayne (1989:fn. 18).

- (11) a. Combien de disques<sub>i</sub> crois-tu qu'il va finir par acheter *t<sub>i</sub>*?  
 how-many of records believe-you that he goes end-up by buy  
 b. ?Combien de disques<sub>i</sub> crois-tu qu'il va finir par *les<sub>i</sub>* acheter?  
 how-many of records believe-you that he goes end-up by them(RESUMP) buy

Participle agreement in French *wh*-extraction contexts is thus grammatical only if the *wh*-constituent receives a [+specific] interpretation, which can be accounted for if it is assumed that the variable left by *wh*-movement in these cases is *pro* (cf. also Cinque 1990 on A'-bound *pro*), an empty resumptive pronoun.<sup>10</sup> How do we link this conclusion up with our earlier, theory-driven conclusion that the element triggering participial agreement in (8c) must be an empty clitic? To accomplish the desired connection, we may resort to Sportiche's (1992) analysis of Romance clitic constructions according to which the clitic is a head base-generated on some functional head position (our AgrO; Sportiche's 'Acc', the head of an Accusative Phrase), and associated with a *pro* that undergoes NP-movement to the specifier position of this functional head (our SpecAgrOP). The analysis of a clitic construction like (12a), then, roughly reads as in (12b) (irrelevant details omitted; *t<sub>i</sub>* = trace of *pro*):

- (12) a. Jean *les* a lus.  
 Jean them(CL-M.PL) has read(M.PL)  
 b. [<sub>IP</sub> Jean ... [<sub>AgrOP</sub> *pro*<sub>i</sub> [<sub>AgrO'</sub> [<sub>AgrO</sub> *les<sub>i</sub>* + AgrO] [<sub>VP</sub> ... lus *t<sub>i</sub>*]]]]

In all of (8b), (11b) and the [+specific] variants of (8c), (10a) and (11a), then, a *pro* starts out in the verb's object position and is raised to the specifier position of the AgrOP whose head harbours a clitic (which may be overt or null) associated with *pro*.

With this in mind, we may now view the variants of (8c) and (10a) with participial agreement as specific instances of the clitic-agreement case in (8b) — all involve movement of *pro* to the specifier of an AgrO-node hosting an object clitic, the difference between (8c)/(10a) (with agreement) and (8b) being that in the former case the clitic is phonetically unrealised.<sup>11</sup> Now what about the non-agreeing variant of (8c)? As Obenauer observes, the *pro*-strategy is not obligatorily employed in French *wh*-movement constructions. In non-agreeing cases, then, 'regular' A'-movement of a *wh*-phrase leaving a trace in the verb's object position takes place. No specificity requirement is involved, hence no *pro* and no abstract clitic — economy considerations then select the structure in (3) rather than that in (4), just as in the case of the non-movement full-NP object construction in (8a). Optionality of participle

10 It seems that this might also accommodate the fact that agreement between a participle and a *wh*-phrase is impossible in expletive *it* constructions (cf. (i), from Kayne 1989:91). Since expletive constructions generally resist [+specific] postverbal subjects, the deviance of (i) with participial agreement might be reduced to Obenauer's observation that in general, participial agreement in *wh*-movement constructions is possible with [+specific] *wh*-phrases only. Obenauer (1992:6; also his fn. 17), however, does not extend his account to examples like (i), essentially because these are felt to be more strongly ungrammatical than some of the cases of participial agreement with a non-specific *wh*-phrase in non-expletive constructions. Notice, however, that not all expletive constructions with participial agreement are equally strongly rejected by all native speakers. As Kayne (1989:fn. 9) points out, for some speakers (ii) with agreement is only mildly deviant.

(i) Je me demande *combien de chaises* il sera repeint-(\*es) cette année.  
 I me wonder how-many of chairs(F.PL) it(EXPL) will-be repainted-(F.PL) this year  
 (ii) *Combien de chaises* sera-t-il repeint-(\*es)?  
 how-many of chairs(F.PL) will-be-it(EXPL) repainted-(F.PL)

11 Obenauer (1992) does not address the possibility that the *pro* that he postulates might be associated with an empty object clitic. In fact, Obenauer is not concerned with the case of participial agreement triggered by object clitics at all (cf. his fn. 1).

agreement in *wh*-extraction constructions thus can be viewed as an immediate consequence of the fact that *wh*-movement can be analysed in two different ways, depending on the specificity of the *wh*-phrase.

I have now furnished an account of the facts of French participial agreement in (8).<sup>12</sup> What a proper theory of participle agreement should also manage to capture, however, is that in *ergative* and *passive* constructions, agreement between the participle and the raised subject is obligatory with *full* NPs as well:

- (13) a. *Les tables/Elles seront repeint-\*(es).*  
 the tables(F.PL)/they(CL F.PL) will-be repainted-(F.PL)  
 b. *Les tables/Elles sont arrivé-\*(es).*  
 the tables(F.PL)/they(CL F.PL) are arrived-(F.PL)

Before I can address (13), I must first clear up a technical point concerning Case-feature satisfaction in perfective constructions and, in relation to this, discuss the important question of auxiliary selection. This will be the topic of section 4.

#### 4. Case-feature checking and auxiliary selection in perfective constructions

##### 4.1. Transitive perfective constructions selecting *have*

I have assumed that transitive verbs possess structural objective Case features, and that *have* in all its various guises counts as a transitive verb, hence has a Case feature which should be checked in the course of the derivation.<sup>13</sup> Apart from an auxiliary verb, transitive perfective constructions also contain a participle which, if it has one, should be relieved of its Case feature. I now address the way in which the verbs' Case features are satisfied in (3) and (4).

Let us begin by investigating the structure in (4), repeated here:

- (4) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I'</sub> I [<sub>VP1</sub> [<sub>V'</sub> Vaux [<sub>Agrop</sub> Spec<sub>2</sub> [<sub>Agop</sub> AgrO [<sub>VP2</sub> SU [<sub>V'</sub> Vptc OB]]]]]]]]]

It is plausible to assume that in this structure, the participle is responsible for Case-licensing the object NP in transitive perfective constructions. That Romance past participles are potential Case assigners, hence are potential possessors of Case features, is evident from Italian examples of the type in (14) (cf. Belletti 1981), in which the participle *conosciuto* 'known/met' is unaccompanied by an auxiliary and is capable nonetheless of assigning objective Case to the object *me*.<sup>14</sup>

12 Only past participles (potentially) agree with the object in Romance; finite verbs or infinitives never show morphological agreement with the object. This is essentially a lexical morphological accident — the lexica of the Romance languages happen to contain object-agreeing participial forms but no other object-agreeing verb forms. No doubt there is a connection here with the similarity of past participles and adjectives, which likewise exhibit morphological agreement. But from a minimalist point of view, according to which surface morphology and (the presence and strength of) morphological features of lexical and functional heads are not related (cf. also the text underneath (8)), any surface relationship between feature presence/strength and visible inflectional morphology can — in general — only be a matter of coincidence. In effect, then, what I am claiming is that in simple sentences like *Jean repeint les tables* 'John repaints the tables' (in which, due to the absence of *Vaux*'s projection, the difference between (3) and (4) evaporates) there is in fact agreement between (the trace of) the finite verb in *AgrO* and the object in *SpecAgrOP*, but this does not result in a visible morphological reflex.

13 Note that I am assuming here that *have* is a verb in its own right, not a derivative of *be* resulting from incorporation into *be* of some element (a dative preposition, as in Den Dikken 1992, or a D/P, as in Kayne 1993a). In this regard I follow Hoekstra (1993). Kayne (1989:88) treats *have* as an independent verb but suggests that, in its guise as an auxiliary of the perfect, it is not a Case assigner (while passive auxiliary *be* is). Kayne bases his suggestion on the distribution of the French predicate clitic *le* and the questionable claim that this clitic needs Case. I reject this argument and assume that all instances of *have* have a Case feature.

14 The object is not necessarily a clitic. Examples such as this are absent from French, but presumably for independent reasons (cf. Kayne 1989:section 6). The fact that they are also not featured by Spanish and Portuguese (Kayne 1989:fn. 4) is more interesting. (Spanish examples like *rotos los vinculos familiares*, ... 'broken the family bonds' or *concluido el experimento*, ... 'finished the experiment', supplied by Luis Lopez, p.c., are irrelevant from my perspective since they involve passive or ergative rather than transitive participles.) I shall have more to say about the absence of (14) from Spanish and Portuguese later in this subsection.



- (14) Conosciuto me, Maria è cambiata molto.  
known/met me, Maria is changed much

Let us assume, then, that the participle in (4) is in the possession of an objective Case feature. This Case feature will be checked by the object NP in SpecAgrOP, after raising of OB to that position and raising of the participle to AgrO.

Apart from the participle, the structure also contains an auxiliary verb, which in transitive perfective constructions generally is a form of *have* (except in the languages and dialects to be addressed in section 4.2). How does *have*'s Case feature get checked in (4)? Even if the object were to move to SpecVP1, it still could not check Vaux's Case feature, for the simple reason that as a result of checking the Case feature of the participle in SpecAgrOP the object has lost its Case feature. Nor can the subject (SU) check Vaux's Case feature, since if it did, the Case feature of Infl would fail to be checked. Now we seem to be in trouble — the empirical facts make it incontrovertible that the auxiliary employed in (4) in transitive perfectives is *have*, yet there does not seem to be a way of checking this verb's Case feature. Since we crucially need this structure (with its 'low' AgrOP) to accommodate participial agreement, however, it would be unfortunate if this problem should force us to abandon (4).

Recall at this point that, in order for the subject to be able to cross SpecAgrOP on its way to the matrix subject position, AgrO obligatorily incorporates into Vaux in the derivation based on (4). I would now like to propose that Case-feature checking of Vaux in this structure is an immediate side-effect of AgrO-incorporation into Vaux. Specifically, I suggest that:

- (15) As a result of AgrO-to-Vaux incorporation, the Case feature of Vaux in (4) is checked.

As a consequence of AgrO incorporating into Vaux, the Vaux position comes to be equipped with a structural objective Case feature — that of AgrO, which is not eliminated through feature checking in AgrOP. Recall from section 1 that I assume that the L-features of *functional* (as opposed to lexical) heads are not eliminated in the course of feature-checking processes. After incorporation of AgrO into Vaux, AgrO's Case feature percolates to the complex Vaux-node created through incorporation, and is checked against the Case feature of the auxiliary verb hosting AgrO. In this way the Case feature of Vaux is eliminated in the structure in (4). Notice that this structure correctly *forces* the selection of *have* in transitive perfective constructions. The only way to eliminate the Case feature percolating from AgrO to the complex Vaux is to make sure that the verb spelling out the Vaux position is lexically equipped with an objective Case feature against which that of the complex Vaux-node can be checked.

Now let us turn to the structure in (3), repeated below, and consider how Case-feature checking proceeds in this case.

- (3) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I'</sub> I [<sub>AgrOP</sub> Spec<sub>2</sub> [<sub>AgrO</sub> AgrO [<sub>VP1</sub> SU [<sub>v'</sub> Vaux [<sub>VP2</sub> [<sub>v'</sub> Vptc OB]]]]]]]]]]

The object moves to SpecAgrOP to get its Case feature checked. In order that AgrO is supplied with an objective Case feature,<sup>15</sup> the auxiliary verb incorporating into it must be in the possession of such a Case feature. In this way, then, we ensure that (3), too, predicts the selection of the auxiliary *have* in transitive perfective constructions.

Two interesting points should be made about the structures for transitive perfectives. One concerns the participle's features. Suppose that the participle were to possess a Case feature in (3). How would it be checked? Clearly, if, as in the languages under discussion in this subsection, Vptc does not move long-distance to AgrO but stays *in situ*, there is no way of ridding this verb of its Case

15 I assume that Agr-heads never have any Case features of their own in the base but are provided with a Case feature through adjunction to them of a head that possesses a Case feature (T or V). For the account of Case-feature checking in (4) in the previous paragraph this means that AgrO acquires a Case feature by percolation from Vptc incorporating into AgrO; the Case feature of Vptc subsequently deletes under feature checking between the AgrO complex and the object in SpecAgrOP; the Case feature of the mother node AgrO, a functional head, survives, and — after AgrO incorporation into Vaux — percolates to the complex Vaux node.

feature.<sup>16</sup> In (3), then, the participle will *not* be lexically equipped with a Case feature — it is more like an adjective in this respect. This allows us to connect two properties of Spanish and Portuguese in which these languages differ from French and Italian.

In contrast to French and Italian, there is no participial agreement at all in Spanish and Portuguese — neither in *wh*-movement constructions nor in object clitic constructions. The absence of agreement between a participle and a fronted *wh*-phrase in Spanish and Portuguese might not cause too many problems, given that even in French and Italian it is never obligatory, and in fact impossible in well-defined contexts (cf. Obenauer 1992 on French, and section 3, above). However, the absence of participle agreement in cliticisation contexts is rather more of a surprise. Recall that clitic constructions employ the structure in (4), and that in this structure the participle must possess a Case feature (or else the object's Case feature — more specifically, the Case feature of *pro* in SpecAgrOP — would fail to be checked). In order to exclude participle agreement with object clitics in Spanish and Portuguese, we should ensure that (4) is unavailable in these languages. There is in fact an independent indication that (4) is absent from the syntax of Spanish and Portuguese. Kayne (1989:fn. 4) suggests that the fact that these languages have no constructions of the type in (14) (*conosciuto me* 'known/met me') is a consequence of the inability of Spanish and Portuguese past participles to assign Case. Put in minimalist terms, what this would mean is that Spanish and Portuguese past participles lack a Case feature (while their French and Italian counterparts optionally do possess such a feature). The structure in (4) (which yields participial agreement) is then straightforwardly excluded as an analysis of transitive perfective constructions in these languages — the participle having no Case feature, the object cannot get its Case feature checked in this structure.<sup>17</sup>

#### 4.2. Transitive perfective constructions selecting *be* — Long Participle Movement

The second point to be made in connection with transitive perfective constructions is that not all languages select *have* in these constructions. Kayne (1993a:3.5) notes that it is a property of many central and southern Italian dialects that transitive perfective constructions take *be*, as the examples in (16) (from Chiominto 1984:179) show. Similarly, in Serbo-Croatian (and other languages of the Balkans) the auxiliary of transitive perfective constructions is always *be*, witness the example in (17a) (from Progovac 1988:60); the example in (17b) is added to show that the auxiliary used in (17a) is identical with the copula.

- (16) a. Maria è magnato. (Corese; Chiominto 1984:179)  
 Maria is eaten  
 'Maria has eaten.'
- b. Ntonio è ròtta la bbròcca.  
 Antonio is broken(F.SG) the jug(F.SG)  
 'Antonio has broken the jug.'
- (17) a. Milan je ubio neko-ga (Serbo-Croatian; Progovac 1988:60)  
 Milan is killed someone-ACC  
 'Milan has killed someone.'
- b. Mira je lep-ša (od bilo koj-è devojk-e) (Serbo-Croatian; Progovac 1988:413, fn. 1)  
 Mira is beautiful-more than be-it which-GEN girl-GEN  
 'Mira is more beautiful than any girl.'

The structure in (4) will consistently yield *have* selection. As I shall show, however, the 'high AgrO' structure in (3) offers us an interesting way of accommodating *be*-selecting languages.

16 Note that if perchance Vptc were to incorporate into Vaux, there would be no Case feature left to be checked by the object in SpecAgrOP. After all, feature checking entails feature elimination in the case of lexical categories, so that both Vaux and Vptc would lose their Case features if Vptc incorporated into Vaux.

17 Since Spanish and Portuguese do have cliticisation, it must be the case that (9) can be relaxed or fail to hold in these languages. If there is no way of complying with it (because there cannot be a local AgrO for independent reasons — Vptc lacking a Case feature), the clitic will have to settle for a more distant AgrO-node. The statement in (9) is not a hard-and-fast rule, then, but a desideratum. Alternatively, it might be looked upon as a parameter, but its status as a parameter is rather obscure at this point.

First recall the conclusion drawn in section 4.1 that in (3) the participle must not possess a Case feature. This conclusion holds true only of languages in which V<sub>ptc</sub> does not move to AgrO across the auxiliary. Suppose that V<sub>ptc</sub> undergoes 'Long Head Movement' (LHM) to AgrO in (3). Then V<sub>ptc</sub>'s Case feature will be checked by the object in SpecAgrOP. The auxiliary verb, as a consequence, cannot possess a Case feature in this case (for otherwise it would fail to be eliminated). In languages featuring Long Head Movement of the participle to AgrO, then, we predict that transitive perfective constructions feature the auxiliary *be* rather than *have*. This correlation between Long Participle Movement and *be*-selection in transitive perfectives is directly confirmed by the Serbo-Croatian facts in (17). Serbo-Croatian is a language featuring LHM constructions of the type discussed in a.o. Rivero (1991). The example in (18b) illustrates this:

- (18) a. Ja sam čitao knjigu. (Serbo-Croatian; cf. Rivero 1991:333)  
 I be-1SG read book  
 'I have read the book.'  
 b. Čitao sam knjigu. (Long Head Movement)  
 read be-1SG book

The fact that Serbo-Croatian can independently be shown to overtly feature long-distance head movement with head-skipping, as in (18), gives credence to the idea that *be*-selection in transitive perfective constructions in Serbo-Croatian results from movement of the participle to AgrO in (3), across the auxiliary verb, as schematised in (19):

- (19) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I</sub> I [<sub>AgrOP</sub> Spec<sub>2</sub> [<sub>AgrO</sub> [<sub>AgrO</sub> V<sub>ptc</sub>+AgrO] [<sub>VP1</sub> SU [<sub>V</sub> Vaux [<sub>VP2</sub> [<sub>V</sub> t<sub>i</sub> OB]]]]]]]]]]

Essentially the same can be said for the other languages of the Balkans (Bulgarian, Czech and Slovak; Romanian is an exception). I even propose to extend it to the central and southern Italian dialects mentioned by Kayne (1993a), for which there are indications that long participle movement to the high AgrO in (3) is involved, too. For one thing, Rivero (1991) notes that medieval Romance featured overt LHM. Secondly, and more importantly, given that the non-locally head-moved V<sub>ptc</sub> in (19) finds itself in a checking relationship with the object (OB) after raising of the latter to SpecAgrOP, the account of *be*-selection in transitive perfectives predicts that in *be*-selecting languages there will be participle agreement even with full-NP objects. This prediction is strikingly borne out by the fact that in (16b) the object *la bbròcca* 'the jug' agrees with the participle *ròtta* 'broken', something which Kayne (1993a:13) mentions but does not account for.<sup>18</sup> In view of observations of this sort, I therefore propose to extend the analysis of Serbo-Croatian transitive perfectives with *be* to the central and southern Italian dialects instantiated by (16).

How can we *force* the languages of the Balkans and the Romance dialects discussed to select *be* in transitive perfectives? Considerations of *economy* ensure that (4) is generally excluded in *be*-selecting languages. A derivation built on (4) involves one more head-movement step than does (3); hence (3) is employed unless (4) is forced. The prime motive for the adoption of (4) that we encountered above was the presence of a *clitic* object — (9) forces the 'low AgrO' structure in languages in which the participle moves locally. However, in the LHM dialects under current discussion, the participle can reach AgrO in the more economical structure in (3) as well. Hence (9) can be complied with in the structure in (3) in languages in which V<sub>ptc</sub> undergoes non-local head movement to AgrO. If, then, (3) consistently yields a converging derivation in these languages, (4) will never be employed, and *be* will be selected in all transitive perfective constructions.

18 The fact that Serbo-Croatian (or more generally, Slavic) past participles do not show morphological agreement with the object does not refute our LHM analysis of Serbo-Croatian *be*-selecting perfective constructions when we bear in mind what was said in fn. 12, above, with respect to the relationship between visible inflectional morphology and feature checking in the minimalist framework — I shall assume that the participle does agree with the object, but that this agreement relationship is not overtly detectable. The fact that the participle in Serbo-Croatian perfectives shows overt *subject* agreement would seem rather more surprising. Notice, though, that the analysis of Serbo-Croatian perfective constructions presented here may accommodate this by capitalising on the fact that in the structure in (3), AgrO (which in Serbo-Croatian hosts the long-moved participle) moves to I in the course of the derivation (cf. (6a)), whereby the subject, which lands in SpecIP, can check its agreement features against the subject agreement features of the participle. (I thank Željko Bošković for discussing the facts of Serbo-Croatian participle agreement with me.)

Closing this discussion of auxiliary selection in transitive perfective constructions, let me repeat the prime results. We have seen that the two theoretically possible structural analyses of periphrastic perfects both ensure the selection of *have* in standard Romance transitive constructions. The independently plausible assumption that participles in Spanish and Portuguese lack a Case feature has been shown to furnish an account for the fact that there is no participial agreement in these languages — since the structure in (4), which yields agreement, requires the participle to be equipped with a Case feature, (4) will be absent from the syntax of Spanish and Portuguese, while (3) is available in these languages since the participle must not have a Case feature in this structure if it does not raise to AgrO. In languages in which Long Head Movement of the participle across Vaux to AgrO obtains in (3), transitive perfective constructions are predicted to feature the auxiliary *be* rather than *have*. This prediction is confirmed by the facts of Serbo-Croatian and other languages of the Balkans (except Romanian), and can plausibly be carried over to the Romance *be*-selecting dialects mentioned in Kayne (1993a).<sup>19</sup>

All that I have said about auxiliary selection in transitive perfectives can be immediately extended to perfective constructions featuring unergative intransitive verbs, for which I assume, with Hale & Keyser (1993), Kayne (1993a:12), Laka (1993), Mahajan (1993), that they should be syntactically represented as transitives featuring a verb and an abstract (*cognate*) object. Ergative perfects are more of a problem, though, both empirically and theoretically.

4.3. Ergative perfective constructions

Let us approach the problem from a structural perspective, and consider what the two structures of perfective constructions, tailored to ergative constructions in (20) and (21), have to say about auxiliary selection.

- (20) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I'</sub> I [<sub>AgrOP</sub> Spec<sub>2</sub> [<sub>AgrO'</sub> AgrO [<sub>VP1</sub> [<sub>V'</sub> Vaux [<sub>VP2</sub> [<sub>V'</sub> Vptc OB]]]]]]]]]]]  
 (21) [<sub>IP</sub> Spec<sub>1</sub> [<sub>I'</sub> I [<sub>VP1</sub> [<sub>V'</sub> Vaux [<sub>AgrOP</sub> Spec<sub>2</sub> [<sub>AgrO'</sub> AgrO [<sub>VP2</sub> [<sub>V'</sub> Vptc OB]]]]]]]]]]]

Consider first the structure in (20). In locally head-moving languages, this structure yields a well-formed derivation for ergative constructions provided that *have* is selected as the perfective auxiliary. At this point, let me be more specific about the analysis of participial constructions. I propose that these involve a subject clitic PM (cf. Baker, Johnson & Roberts 1989 on PM and its role in passive constructions; given Chomsky's 1993 outlook on inflectional morphology, PM is *not* to be equated with actual participial morphology, which is an integral part of the participle). To PM is ascribed the property that it checks Case in AgrO's checking domain, as stated in (22).

- (22) Constructions containing a past participle feature a clitic PM which checks an objective Case feature in the checking domain of AgrO.

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19 One final issue that comes up in the context of *be*-selection in transitive perfective constructions is the reflexive *se/si* construction, illustrated by the Italian example in (i), below. Kayne (1993a) discusses several factors that substantially complicate an analysis of reflexive constructions and auxiliary selection. Most notably, in a range of dialects, *be*-selection in these constructions is sensitive to the *tense* and *person* features of the clause — *be*-selection is generally absent in present tense contexts (Kayne 1993a:17); there is a 'global preference for *be* with first and second person subjects and for *have* with third person subjects' (Kayne 1993a:15). In these respects, reflexive constructions pattern with non-reflexive transitive *be*-perfectives, which likewise tend to show a sensitivity to tense and person features. Kayne makes a serious and interesting attempt to incorporate these morphological sensitivities into his account of auxiliary selection, an attempt that is facilitated by Kayne's postulating a full array of inflectional categories (AgrS, T and AgrO) within the complement of the auxiliary. Even on his account, however, several empirical and theoretical questions remain, which I cannot even begin to address in the context of this paper. (A non-trivial technical question involves feature checking — if the structure of (some) perfective constructions contains *two* AgrS-nodes, how can the features of both these nodes be checked by the single subject NP?) Since the answer to these questions will presumably interfere with the proper analysis of auxiliary selection in reflexive constructions like (i), I shall defer a discussion of these elusive constructions until a fuller picture of them is available.

(i) Maria *si* è comprata un libro.  
 Maria REFL is bought(F.SG) a book  
 'Maria bought herself a book.'

This is a general statement about all constructions featuring past participles — not just passives but other participial constructions as well. In *all* participial constructions, then, there must be an AgrO-node provided with a structural objective Case feature against which PM's Case feature can be checked.<sup>20</sup> Now let us return to (20), in which the pertinent AgrO-node finds itself outside the auxiliary-VP. It will now be clear that in ergative constructions based on this structure and featuring local participle movement, *have* must be selected as the auxiliary of the perfect — only *have* can supply AgrO with the Case feature for PM to check.

For languages like Spanish and Portuguese, this is the end of the story. These languages only have the 'high AgrO' structure of periphrastic perfective constructions (section 4.1), and lack long participle movement to the high AgrO. Spanish and Portuguese are hence correctly predicted to only select *have* in ergative perfects. Languages like Serbo-Croatian and the dialects of Romance of the type illustrated in (16), which likewise only have (20) but this time do feature long participle movement, will consistently select *be*, as before. In these languages, (22) is complied with by participle movement to AgrO, on the assumption that ergative verbs, in spite of Burzio's Generalisation, do possess a Case feature, as argued by Pollock (1985), Guéron (1986) and Hulk (1989), among others. Evidence for this claim comes from impersonal constructions of the type in (23), in which the post-verbal subject *trois hommes* does not trigger agreement on the finite verb, hence does not bear (or check) nominative Case; instead, it arguably is assigned (or checks) objective Case.<sup>21</sup> If ergatives may possess a Case feature, long-distance participle movement to AgrO in ergative perfectives built on (20) will hence satisfy (22).

- (23) Il est venu *trois hommes*.  
it is come three men

It is now easy to verify that the structure in (21) yields *be*-selection. In (21) the participle moves to AgrO. Given that ergative verbs may, as argued in connection with (23), possess a structural objective Case feature, participle movement to AgrO will provide AgrO with the necessary Case feature against which PM's Case feature can be checked, in agreement with (22). In (21), then, we do not have to select *have* to satisfy (22). It can be shown, in fact, that if we choose this structure we *cannot* select *have*. For notice that in (21) incorporation of AgrO into Vaux is not necessary — movement of the base object to subject position proceeds in a strictly local fashion in ergative constructions. In (4) we needed AgrO-incorporation to render movement of the subject across the landing-site of the object possible; in (21), by contrast, no minimality problems will ever arise for all NP-movement is local. Hence AgrO-incorporation into Vaux is not forced by structural considerations, so that economy of derivation will decree that no AgrO-incorporation obtains in a derivation built on (21). As a result,

20 Note that in transitive participial constructions, the objective Case feature present under AgrO is doubly checked — both by PM (cf. (22)) and by the object NP, which raises to SpecAgrOP. This double checking is possible given the assumptions laid out in section 1: the features of *functional* heads are not eliminated in the feature-checking process and can in principle be multiply checked by Case-feature bearing nominal elements in their checking domains. The view that multiple Case-feature checking should be possible is supported by noun incorporation constructions with 'possessor ascension to direct object' (cf. Baker 1988 for discussion and exemplification) — the incorporated noun checks AgrO's Case feature (*contra* Baker) and so does the 'raised' possessor; cf. also Broekhuis (1993b). Another case of multiple Case-feature checking is discussed in Den Dikken & Næss (1993:7–8): in a Norwegian transitive pseudo-passive construction like *Brevet ble klistret frimerker på* 'the-letter be pasted stamps on', the nominative Case feature of Infl is checked simultaneously by *brevet* (which is contained in a beheaded predicative PP fronted to SpecIP) and by *frimerker*; cf. the original work for detailed discussion of the analysis of transitive pseudo-passive constructions.

21 Impersonal constructions also lend empirical support to the distinction that I have made between *be* and *have* with respect to the possession of a Case feature (cf. (5b,c), above). The existential construction in (ia), with *être* 'be', is ungrammatical; to express what (ia) is meant to convey, French employs the construction in (ib), featuring *avoir* 'have' and the locative clitic *y* 'there'. The ill-formedness of (ia) can be ascribed to *être* lacking a Case feature. It is not immediately obvious why the variant of (ia) with the locative clitic *y* — \**Il y est trois hommes* — should be ungrammatical. This does not appear to be a general property of Romance, though: Burzio (1986) notes that Piedmontese sentences like *A ye na ié tarri ntel negosi* 'CL there of-them is many in the store' are well-formed.

- (i) a. \*Il est trois hommes.  
it(EXPL) is three men  
b. Il y a trois hommes.  
it(EXPL) there has three men

the Vaux position is not provided with a Case feature, and *have* insertion under Vaux is impossible. Thus we derive the desired result that in (21) *be* is selected as the auxiliary of the perfect. (Note in passing that, since AgrO-to-Vaux incorporation is not forced in (21) hence does not obtain, a derivation built on (21) is not more costly than one built on (20).)

The account outlined so far correctly correlates *be* selection with participial agreement and *have* selection with lack of participial agreement in unaccusative perfects: whenever (21) is employed, *be* is selected and participle agreement results; whenever we choose (20) and the participle does not undergo long movement to AgrO, *have* occurs and there will be no participial agreement; finally, whenever in (20) the participle moves non-locally to AgrO, as in the languages of the Balkans and the dialects of Romance discussed in section 4.2, above, there will be *be*-selection and participle agreement, a prediction which to the best of my knowledge is correct.

What remains to be done is to address the auxiliary selection problem in 'aux selecting' languages like Dutch and Italian, which vacillate between (20) and (21) depending, as recent research has shown, on the *aspectual* properties of the ergative construction in question. The proper generalisation appears to be that telic ergative constructions select *be* while atelic ergatives take *have* (cf. e.g. Zaenen 1988, 1991; Van Valin 1990; Mulder 1992):

- (24) Auxiliary selection is *aspectually* determined, and based on the notion of TELICITY.

In accommodating (23) with the aid of (20) and (21), let us start out by restating *telicity* as *event delimitation*, in the sense of Tenny (1987). In telic constructions, the event denoted by the predicate is delimited by an NP which, as Tenny argues, finds itself in a particular structural configuration. Specifically, I adopt (25) (for variants of (25), cf. Voskuil & Wehrmann 1990, Den Dikken 1992, among others; their 'small clause' now reads as AgrOP, in conformity with Chomsky's 1993:8 suggestion that SCs are AgrPs):

- (25) Event delimitation is carried out by an NP in the specifier position of the AgrOP complement of a verb denoting (change of) state or location.

With this in mind, consider the structure in (20), which features no AgrOP in the complement of a verb (let alone a verb denoting (change of) state or location). No event delimitation therefore takes place at the auxiliary level in (20) — this structure, which yields *have*-selection, is hence compatible with *atelic* ergatives. *Be*-selection results from a derivation built on (21). Since *be* is a state-denoting verb, the subject of its AgrOP complement (i.e. the trace of the raised object in SpecAgrOP) will delimit the event denoted by the predicate. Consequently, *be*-selection is predicted to be found in *telic* ergative constructions only.

In (26) a summary of the account of auxiliary selection in ergative constructions is given:

- (26) a. (20): Vaux=*have* — no aux-level event delimitation; compatible with *atelic* constructions.  
b. (21): Vaux=*be* — event delimitation; only with *telic* constructions.

Note that (20) is compatible with atelic ergatives, but also with telic ergatives, since the event may be delimited further down the tree: the participle may take a SC complement whose subject will delimit the event. What (26a) should *not* be taken to state, then, is that telic constructions may *only* be assigned the structure in (21). The converse of this statement is true, on the other hand — the structure in (21), which results in *be*-selection, consistently yields telic constructions, as required.

If the account outlined here can be sustained, we have found a structural explanation for the generalisation in (24). This account can also be extended to passive constructions, which normally always select *be* (cf. Kayne 1993a:9). The fact that there is not a choice of auxiliary in passives must be due to the inherent *telicity* of passive constructions. The 'high AgrO' structure is excluded in passives, not because there is anything wrong with the structure as such, but because it does not tally with the aspectual properties of passive constructions.

## 5. Participial agreement revisited: ergatives and passives

Now that we have covered the topic of auxiliary selection, and have reached the conclusion that perfective constructions with *be* (in non-LHM languages) involve a structure in which AgrOP intervenes between the participle and the auxiliary, we can finally return to the examples in (13), repeated in (27):

- (27) a. *Les tables/Elles seront repeint-\*(es).*  
 the tables(F.PL)/they(CL F.PL) will-be repainted-(F.PL)  
 b. *Les tables/Elles sont arrivé-\*(es).*  
 the tables(F.PL)/they(CL F.PL) are arrived-(F.PL).

As (7) states, participle agreement is the result of a specifier-head agreement relationship between the participle in AgrO and a nominal element in the checking domain of AgrO. When we now take the analysis of all constructions with auxiliary *be* into consideration, it turns out that what they have in common is that they all involve participle movement to AgrO (either local or long-distance movement). Given (7), then, the analysis immediately predicts — correctly — that in all *be*-selecting constructions there will be participial agreement. The facts in (27) straightforwardly follow from the analysis, therefore.

In perfects of transitive constructions with a full NP object, participle agreement is blocked (in non-LHM languages) for reasons of economy: the structure in (3) is preferred since it involves one fewer head movement step (cf. above). By contrast, agreement is obligatory in ergative constructions with *be*, in which a structure with a 'low' AgrOP must be selected, as argued in the previous section. Of course, the 'low' AgrOP structure is *not* more costly than the 'high' AgrOP structure in constructions featuring object-to-subject raising — in such constructions, AgrO-to-Vaux incorporation does not obtain, hence both structures are equally costly. All this is an automatic consequence of what has been argued above; no special arrangements are necessary to capture the facts of participial agreement.

## 6. Concluding remarks

I have shown that the minimalist framework offers us two maximally simple structures for periphrastic perfective constructions, (3) and (4). In all constructions featuring participle agreement, the 'low AgrO' structure (4) must be selected, unless the participle has the parametric option of undergoing long movement across the auxiliary in the 'high AgrO' structure in (3), as in the languages of the Balkans, and arguably also in several Romance dialects. Constructions exhibiting no agreement with the participle are consistently derived on the basis of the structure in (3), which in transitive constructions is more economical than (4) since it involves fewer head movement steps. The structure in (3) will hence be selected in transitive perfectives *unless* independent considerations force the use of (4). In ergative constructions of 'aux selecting' languages, (4) leads to the selection of the auxiliary *be*, while (3) yields *have*-selection. The empirical link between auxiliary selection and the delimitedness (telicity) of the event also receives an explanation on the basis of the two structures in (3) and (4). Whenever the 'low AgrO' structure in (4) is employed, the construction in question is necessarily telic.

This analysis of participial agreement and auxiliary selection is structurally highly simple, and draws a number of interesting empirical parallels. The minimalist framework thus turns out to cast new light on the 'classic' problems of auxiliary selection and participial agreement.

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