

On passive as partitive quantification

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1. Introduction: the modular account of passive

In the modular framework of generative grammar, passive is reduced to the interaction of various principles involving Case-theory, movement, and theta-theory (Chomsky 1981). Movement of the object to subject position is dependent on the thematic vacuousness of this subject position, which in turn is obtained by the 'absorption' of the external thematic role by the passive morphology transmitting this thematic role to the *by*-phrase (Jaeggli 1986, Baker, Johnson, & Roberts 1989). Movement is triggered as a consequence of Burzio's (1986) generalization: a verb without an external theta-role has no accusative case to assign. Since no accusative case is available for the object NP in the postverbal position (or in SpecAGR_{OP} in the minimalist framework), the object NP moves to subject position where nominative case is available. If the object stays in object position, it can only do so if provided with inherent partitive case, yielding impersonal passives (1c) with necessarily indefinite (partitive) NPs in object position (Belletti 1988).

- (1) a. Murasaki played the zithern
b. The zithern was played by Murasaki
c. There were various instruments played by the musicians

As a result, there is no rule in the grammar referring to the label 'passive'. Passive arises through the interaction of various syntactic modules which are independently motivated.

2. Empirical adequacy

Although this modular picture of passive is appealing, it is well-known that it is empirically inadequate as it stands. Simply put, the theory overgenerates. It predicts that any transitive verb should be able to enter a passive configuration, irrespectively of its thematic structure. Nevertheless, verbs with a direct object expressing Location, but not only those, display various restrictions on passive (see Lamiroy 1993 for an overview):

- (2) a. This box contains twelve bottles of Meursault
b. *Twelve bottles of Meursault are contained by this box
c. Ce livre comporte cinq chapitres
'That book comprises five chapters'
d. *Cinq chapitres sont comportés par ce livre
'Five chapters are comprised by that book'
- (3) a. Eugénie/ everyone knows Eustache
b. Eustache is known by *Eugénie/ everyone

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In this paper, the limitations on passive illustrated in (2-3) will be derived from nonthematic properties. It will be argued that passive morphology, and especially the role of the copula, should be taken seriously if a modular account of these limitations is to be achieved (see also D'Hulst 1992). I will try to show that passive is even more modular than has been assumed before, and that this modularity offers an elegant and flexible solution to the problem of overgeneration of passives.

3. Partivity: *Be* and Q_p

I would like to argue that the constraints on passive noted above are most crucially determined by partitive properties of the verb *be/ être* that is used as a passive auxiliary. More specifically, the limitations on passive will be related to the following alternation:¹

- (5) a. The whole is its / a number of/ *the parts (be = 'hold, contain')
 b. The parts are *their/ *the/ a whole (be = 'constitute')

The sentence (5a) shows that *be* can be equivalent to 'hold' or 'contain': the whole 'contains' a number of parts. In the sentences in (5b), this part - whole relation is reversed. The only grammatical combination in (5b) involves an indefinite NP in the predicate, and has a meaning closer to 'constitute'. The sentences (5b) where the predicate involves a definite NP are ungrammatical because they are incompatible with both the 'constitute' and the 'contain' meaning of *be*. Assuming that a part - whole relation is a form of quantification, the 'contain' meaning of *be* could be called the quantificational use of *be*. I would like to distinguish this quantificational use of *be* both from the 'constitute' meaning in (5b) and from its predicational use illustrated in (6):²

- (6) a. Polycarpe is sick // in his hometown // his usual self // their/the/a director
 b. The parts are available // in their/the/a box

Following Déchaine (1994), I will assume that the different uses of *be* should not be attributed to the inherent polysemy of *be*. Rather, the different uses of *be*, which does not itself have an intrinsic meaning, are triggered by the syntactic context in which it is inserted (Déchaine 1994, see also Postma 1993).

What is the nature of the alternation in (5)? It seems that quantificational properties are the key to understanding what is going on. Descriptively speaking, (5a) is characterized by a part - whole relation between the subject NP and the predicated NP. The predicated NP has to entertain a partitive relationship with the subject. The definite determiner is excluded because it does not allow for such a partitive reading.

This description can be formally implemented through the licensing of the predicated NP by a partitive operator Q_p . Let us assume that this partitive operator is a functional projection that yields the quantificational reading when it appears in the context of *be*. When Q_p is not

¹ In German or Dutch the imperfective passive auxiliary is a variant of English *become*:

- i. Het boek werd/ is gevonden 'The book became/ was found'
 Importantly, the alternation noted for *be* also applies to *worden* 'become'
 ii. Het geheel wordt zijn/ *de/ een aantal delen (door opsplitsing)
 'The whole becomes its/ the/ a number of parts (through splitting)'
 iii. De delen worden *hun/ *het/ een geheel (door samenvoeging)
 'The parts become *their/ *the/ a whole (by combination)'

² I use the term predicational very loosely here, without making a necessary distinction between predicational and specificational, where predicational refers to a reading of (i) where some property of John is unusual such as his profession, and specificational refers to the reading where John himself is unusual.

i. What John is is unusual
 See Higgins 1979, Williams 1983, Heggie 1988, Verheugd-Daatzelaar 1990, Heycock 1991, Zaring 1993.

present, the predicational reading follows.³ This is the reading of (6) but also of (5b): since a partitive reading cannot be licensed for the predicative NP, only the predicational reading is available. This analysis of quantificational *be* vs. predicational *be* can be formalized along the lines of Kayne's (1993) and Hoekstra's (1993) theory of auxiliary selection in which the notion of selection has been modularly eliminated.

Kayne (1993) analyzes 'possessive' *be* with a dative possessor like Latin *esse* 'be', and English *have* in essentially the same way. The structure of *have/ be* includes a DP, the D° head of which can assign dative case. In Kayne's (1993) analysis, the D° either does not incorporate and assigns dative case to the possessor (Hungarian, Latin), or it incorporates and does not assign case to the possessor which ends up as the subject of *have* (English). The structure in (8) is a simplified version of the structure Kayne assumes for *be* in Hungarian, which has a dative possessive construction like the one illustrated here for Latin. The structure (8b) represents Kayne's analysis of English *have*, which corresponds to *be* with an incorporated D°.

- (7) a. Sunt nobis mitia poma
 Are us_{DAT} many apples_{NOM}
 'We have many apples'
 b. sunt [DP nobis [D°_{DAT}] mitia poma]
- (8) a. e be [DP we D°_{DAT} [DP many apples]]
 b. We have_{be+D°-DAT} [DP t_{D°-DAT} [DP many apples]]
-

Kayne's (1993) analysis of *have* in (8) can now be extended to quantificational *be* in (5a):

- (9) The whole is_{be+Qp°} [QP t_{Qp°} [DP its parts]]
-

As in Kayne's (1993) analysis, the A' position of SpecQp is turned into an A-position by incorporation of Qp°. It is easy to see that the sentence (5a), with the structure in (11), can be considered a partitive *be* variant of the *have* sentence in (10a) which has the dative structure proposed by Kayne (1993) as in (10b). For the most part, partitive (5a-9) and dative (10ab) are equivalent.

- (10) a. The whole has (its) parts (have = contain, have as a property)
 b. The whole has_{be+D°-DAT} [DP t_{D°-DAT} [DP (its) parts]]
-
- c. * The parts have the/ a whole (have = contain, have as a property)

In other words, the interpretation which quantificational *be* (= *be*+ Q_p) establishes between the whole and its parts should be viewed as a relation between quantifier and quantified. We may then assume that adequate interpretive paraphrases for (5a-11), repeated here as (11a), are as in (11b). The sentence (5b), repeated as (11c), cannot be paraphrased in the same way.

- (11) a. The whole is its parts
 b. The whole has/ contains parts as a defining or intrinsic property
 c. * The parts are the whole
 d. * The parts have/ contain the whole as a defining or intrinsic property

³ Alternatively, it might simply be the case that *be* is itself a partitive operator in all cases, including the predicational reading. A sentence such as *Jan is sick* then is to be interpreted as 'sickness is part of Jan'. This calls for a view on predication that goes against a well-established tradition in formal semantics to view this relation in exactly the reverse way, i.e. 'John is part of the number of sick entities'. I will not go into this question here.

The interpretive paraphrases in (11) can be viewed as a way of spelling out the partitive syntactic structure behind (11a) which is exemplified in (9). The importance of these paraphrases will become clear as the passive auxiliary *be* is discussed in section 3.

There is independent evidence for the existence of partitive Q_p. Latin has a construction where *esse* 'be' is constructed with a genitive. The subject of *esse* 'be' expresses a partitive property of the NP marked with genitive:

- (12) a. est adulescentis maiores natu vereri
 is3rd p.sg. of-young-person elders by-birth to respect
 To respect his elders is (should be) one the properties of a young person
 'It behooves a young person to respect his elders'
- b. est sapientiae maiores natu vereri
 is3rd p.sg. of-wisdom elders by-birth to respect
 'It testifies to (is a property of) wisdom to respect one's elders'

In the framework developed by Kayne (1993) which we adopt here, the genitive case assigned by *esse* 'be' must be viewed as a partitive case licensed by Q_p. Kayne's (1993) dative structure for Latin possessive *be* in (7) can now be extended to the partitive construction (12) as in (13a).⁴ The small clause construction of which *sapientia* is the DS subject is motivated by an analysis of *be* as an unaccusative verb (e.g. Heggie 1988, Moro 1990). In this way, there is a minimal contrast between (13a) and the predicational (13b):

- (13) a. est [Q_pP sapientiae_i [Q_{part}-GEN] [SC t_i [maiores natu vereri]]]
 is3rd p.sg. of-wisdom elders by-birth to respect
 'It testifies to (is a property of) wisdom to respect one's elders'
- b. sapientia est [SC t_i [maiores natu vereri]]
 'Wisdom is to respect your elders'

It might be the case that the partitive construction (13a) and the dative construction (7) can be reduced to two sides of the same coin. The trouble is that it is unclear what the coin would be. Importantly, the dative construction can only be used for animate possessors, and indicates alienable possession: the possessor has the object at his disposal (Kühner & Stegmann 1955:I.307). There are no examples of the type **libro sunt multa folia* 'The book has many leaves'. The genitive construction applies to both animate and inanimate⁵ NPs, and can refer to intrinsic possession, an inalienable quality: wisdom *includes* the intrinsic property which is

⁴ The structure in (5a) seems to be restricted to nouns indicating a nonpartitive maximal entity: note the ungrammaticality of **The group is its/ a number of members* vs. *A chain is a number of links*. This restriction is probably related to relation between the NP subject and partitive Q_p: the noun *group* itself is partitive in nature (*a group of 15 members*), while the noun *whole* is not: (** a whole of 15 parts*). It might be that a partitive Q_p^o incorporated into *be* is incompatible with an NP that is lexically specified as partitive. The structure exemplified in (5a) is however less limited than it seems at first sight. Marcel den Dikken reminds me that a similar, although unproductive, construction exists in Dutch:

i. Het is des duivels om te dansen op zondag
 'It is of the devil (devilish) to dance on Sundays'

Rose-Marie Déchaine likewise points out to me that English has an (idiomatic) construction similar to (13):

ii. Sally [was [QP of a mind [CP to leave without warning]]]

Note that *of a mind* must be indefinite, which might be interpreted as an indication of partitive case (Belletti 1988). Moreover, the noun *mind* also refers to an inalienable body part, reproducing a part - whole relation between the subject and the partitive NP.

⁵ Although these inanimate NPs admittedly refer to human qualities: *sapientia* 'wisdom' *stultitia* 'stupidity'. Note that this 'possessive' genitive also refers to alienable possession: *omnia hostium erant* 'everything (the whole city) was in the hands of the enemy', *Plebs Hannibali erat* 'The rabble was on the side of Hannibal'. The translations of these sentences suggest that the sentence is meant to indicate very 'close' possession.

to respect your elders. The partitive reading takes the NP marked with genitive on its property reading, the dative NP seems to be treated as an individual. It might very well be the case then that the dative/ partitive alternation, which is overtly realized in Latin, should be defined as an alternation between expressing possession of properties (inclusion, inalienable, partitivity) and possession characterizing an individual (noninclusion, alienable, comitative).

We can tentatively conclude that the verb *be* can be constructed with two types of possessive-like complements; a quantificational QP complement, and a determinative DP complement. In both cases, the D° and the Q_p° head can either incorporate into *be*, respectively yielding possessive *have* (8) and partitive *be* (9), or they can remain unincorporated, respectively triggering dative (7) and partitive (13a) case on NP.

4. Passive as *be* + Qp: the informal effects of formal partitive quantification

The claim of this paper is that the passive auxiliary *be/ être* involves the quantificational reading of *be*, or rather, the combination of *be* and Q_p . How should this be interpreted? Simply put, it means that passive *be* relates the surface subject to the participial predicate in such a way that the participial predicate is interpreted as a partitive property of the surface subject. This means that the auxiliary *be*, which is traditionally viewed as a fairly neutral part of the passive morphology, compositionally contributes to the meaning of the entire passive configuration. A passive sentence such as *The Aztec empire is destroyed by Cortéz* then receives a structure as in (14a), similar to (11). In the same way as (13a), (14a) can be paraphrased as (14b):

(14) a. The Aztec empire is_{be+Qp[°]} [QP t_{Qp[°]} [destroyed by Cortéz]]

b. 'The Aztec empire has as a defining property the fact that it is destroyed by Cortéz'

This means that we interpret passive as a way of defining an intrinsic property of the internal argument DP moved to subject position. The function of *be* is limited to being a support for passive in the sense that *be* functions as an element incorporating the passive morpheme Q_p . Passive *be* is syntactically complex since it comes with a Q_p attached to it that confers a partitive, 'inalienable' reading to the participial predicate when relating this predicate to the surface subject. The relevant configuration for passive is identical to the one proposed by Kayne for *have* as *be* with an incorporated D° . Instead of an incorporated D° , passive *be* incorporates a partitive Q° , and can be represented as in (15b):

(15) a. DP_i BE+D[°] [DP e_i t_{D[°]} [... [VP e_i V DP]]]

(= Kayne 1993 for HAVE)

b. DP_i BE+Q_p[°] [Q_pP e_i t_{Q_p[°]} [... [VP e V e_i]]] (passive BE)

In this way, the configuration for passive is identical to that of both the partitive and the dative possessive construction with *esse* 'be' in Latin. In the passive configuration, the Q_p incorporated into *be* establishes a partitive quantificational relation between the surface subject and the predicate: by incorporating into *be*, the complex X° *be*+ Q_p° functions as a partitive operator binding the trace of Q_p and hence the entire Q_p P, which is viewed as a 'defining part' of the subject DP.

Clearly, for sentences such as (14a), or any other run-of-the-mill passive, the elaborate paraphrase in (14b) does not make any difference. However, we now want to show that both the partitive structure in (14a) and the paraphrase in (14b) can adequately explain the ungrammaticality of the passive sentences in (2-3) above.

First of all, there is a set of verbs where quantification of the NP contained in the *by*-phrase has an influence on the acceptability of the passive. The paraphrase *have as an intrinsic or defining property* make it clear that in this case partitivity does play a role. Someone can have the socially defining property that everybody knows him or her: this can be viewed as a defining, partitive property of that person. It is much more difficult to imagine that the fact that someone is known by a particular person constitutes a defining property carried by that person. Similarly, Paris cannot be intrinsically defined by Gonzague's living there, although it is intrinsically defined by the fact that nine million people live there. Note that if Paris were to be depopulated by some catastrophic event, with a single person surviving, (3d) would be acceptable in the same way the sentence *Cette maison est habitée par Louis* 'that house is inhabited by Louis' is acceptable: a house, or a depopulated Paris, can be intrinsically defined by the fact that one person lives there.

- (16) a. Eugénie/ everyone knows Eustache
 b. Eustache is known by *Eugénie/ everyone
 c. 'Eustache has as a defining or intrinsic property the fact that *? Eugénie knows him/ everybody knows him'
- (17) a. Gonzague/ neuf millions de personnes habite(nt) Paris
 'Gonzague/ nine million people live in Paris'
 b. Paris est habité par *Gonzague/ neuf millions de personnes
 'Paris is lived in by Gonzague/ nine million people'
 c. 'Paris has as a defining or intrinsic property the fact that nine million people live there/* that Gonzague lives there'
- (18) a. Joséphine/ tous les habitants a/ ont quitté ce village
 'Joséphine/ all the inhabitants left that town'
 b. Ce village a été quitté *par Joséphine/ par tous les habitants
 'That village was left by Joséphine/ by all its inhabitants'
 c. 'This village has as a defining or intrinsic property the fact that all inhabitants left it/ *that Joséphine left it'

In these cases, the pluralization of the *by* phrase allows for the participial predicate of passive *être* 'be' to be turned into an intrinsic property of the surface subject.

Note that these meaning effects cannot be reduced to pragmatics or knowledge of the world: our knowledge of the world only allows us to build interpretations for getting around the specifically syntactic constraints passive sets up. What counts as a distinctive, defining, or intrinsic property thus is often defined with respect to a context which involves knowledge of the world. This is not to be considered a drawback of the analysis, quite the contrary. The quantificational part - whole relation established by passive between the subject NP and the predicate functions as an interpretation algorithm that can be satisfied by various 'real world' situations as long as these situations conform to the part - whole structure set up by syntax. Context and 'real world' knowledge then simply allow us to linguistically 'fit in' situations in such a way that they conform to the basic syntactico-semantic part - whole requirement. If the syntactic partitive structure and the interpretation of the sentence do not match, the sentence is ungrammatical.

The hypothesis developed here is not entirely new. In fact, it was developed in a pragmatic framework by Cureton (1979). Cureton (1979) suggested that a passive sentence expresses something pragmatically 'significant' about the surface subject. The problem with this kind of pragmatic analysis is that it is very hard to determine objectively what is 'significant'.

Nevertheless, I think Cureton's (1979) intuition is fundamentally correct. In the framework developed here, Cureton's (1979) notion of 'pragmatically significant' is viewed as a mere effect of the specific syntactico-semantic partitive constraints imposed by passive.

Let us now take a look at the more difficult nut to crack for this analysis of passive. Verbs such as *contain* and *comporter* 'contain' never enter a passive configuration:⁶

- (19) a. This fine wooden box contains twelve bottles of Meursault
 b. * Twelve bottles of Meursault are contained by this fine wooden box
 c. * Twelve bottles of Meursault have as a defining or intrinsic property the fact that this fine wooden box contains them

No amount of contextual fiddling yields a grammatical passive in these cases. The interpretational paraphrase in (19c), which is only a paraphrase for the quantificational property expressed by *be*+Q_p, explains why: the 'container' property can never be construed as an intrinsic, inalienable property of twelve bottles of wine. Importantly, the fact that good bottles of wine are usually sold by the dozen in a wooden box is not enough to license an inherent relation between the box and the bottles: this remains an 'accidental' alienable property of the bottles. However, this is not always true. The following example suggests that in some cases the paraphrase lets us down:

- (20) a. Ce livre comporte cinq chapitres
 'The book comprises five chapters'
 b. * Cinq chapitres sont comportés par ce livre
 'Five chapters are comprised by this book'
 c. 'Five chapters have as a defining or intrinsic property the fact that this book contains them'

Since chapters usually occur in books, the chapters could be said to be inherently defined by the book. However, the fact that paraphrase (20c) is quite good is due to independent factors. First of all, there is the necessarily approximative nature of the paraphrase. In fact *have* in 'have as a defining or intrinsic property' should be interpreted as *contain*, *comprise*, *hold*. The reason I have not used these verbs in the paraphrase has to do with the fact that it is difficult to say of persons and closely related 'groups of persons' such as cities, villages (cf. supra (16-18)) that they 'hold' a property. Nevertheless, it is this more restrictive meaning of *have* that is intended in the paraphrase. Now if we change the paraphrase in the case of the inanimate subjects in (20c) to *comprise*/*hold* the paraphrase becomes much worse:

- (21) * Five chapters comprise/ hold the defining or intrinsic property that this book contains them

⁶ Interestingly, certain 'container verbs allow for the expression of the 'container' argument in passive sentences as a Location argument.

- i. Several services are included in/ *by that price
 ii. Several interesting articles are contained in/ *by that book

It might be objected that this shows that 'container verbs do have passives and that the *by*- phrase in this case is simply expressed as a Location PP. However, not all container verbs allow for the possibility attested in (i-ii):

- iii. * Several interesting articles are comprised in/ by that book

I would like to argue that the use of the verbs *contain* and *include* exemplified in (i-ii) does not involve a passive configuration, but a predicational 'stative' construction of the type *Ronnie is armed and dangerous*, which can be opposed to the 'eventive' passive *Ronnie was armed by the druglords*. One important argument for this position is that the Location PP allows for Locative Inversion which is otherwise attested for the Location use of *be*, which is certainly predicational, not passive:

- iv. In that price are included several services that will interest you
 v. * By the Spanish have been destroyed many empires of the New World
 vi. In the boat were several slaves who had come from Africa'

We will leave this problem and the problem of 'stative' vs. 'eventive' passives for further research.

The second reason why (20c) is so good has to do with the fact that *chapter* is a relational noun in the same way as nouns such as *sister*, *toe*, etc. Since chapters are intrinsically related to books, the paraphrase in (20c) with *have* starts functioning as an explicitation of this relational property, and not of the partitive property of passive.

Let us now come back to the complete ungrammaticality of passives of 'container' verbs such as *contain* and *comprise*. The fact that *have as an intrinsic property* has to be restrictively interpreted as *contain as an intrinsic property* now yields an explanation for this ungrammaticality. It is impossible to establish a partitive relation between a subject (whole) and a predicate that has to denote an intrinsic property 'contained' by that subject, if the predicate expresses the property of 'containing' the subject itself. In other words, it is impossible for the interpretive containee (*the chapters*), which is the subject of the passive sentence, to syntactically function as a container - whole with respect to a (partitive) predicate (*to be comprised by the book*) that can only be interpreted as the container of the subject (*the chapters*). Something cannot contain an object and at the same time be contained in this object.

This view of the part - whole relation as an intrinsic or defining container - contained relation can also explain a number of differences between passives of 'container' verbs which involve the animacy of the external argument:

- (22) a. This bottle holds five gallons
 b. * Five gallons are held by this bottle
- (23) a. The terrorists hold five hostages
 b. Five hostages are held by the terrorists

A bottle holds five gallons in the sense that it contains five gallons. As a result, five gallons cannot be defined by the passive *be+Qp* as a container/ whole entertaining a partitive relation with respect to a predicate which expresses the quality of containing the gallons. Terrorists however do not usually hold hostages by containing them inside themselves. As a result, the hostages can be described as having/ 'containing' the defining property of being held prisoner, making possible the passive in (23b).

We now have to check whether this analysis can also explain more delicate cases of ungrammatical passives. A first case is exemplified in (24).

- (24) a. Bill was seen *(by Sue/ in the company of Derek)
 b. (There is a social context in which) Bill has the defining or intrinsic property *that someone saw him/ that someone saw him in the company of Derek/ that Sue saw him

In (24a), the presence of any complement is necessary to allow for an interpretation of *seen* as a defining or intrinsic property of the subject. It is important to point out that in this case, the notion of defining property is related to a context. Whether a predicate can be viewed as a defining property 'contained' by the subject is a factor of the backdrop provided. In (24a), the context provided to allow for a 'defining' property is a social one. Within a social context, Bill can be viewed as being defined by the fact that he is seen with Derek, or by Sue, but it is impossible to define Bill socially by the fact that some unspecified person saw him. In more formal terms, the passive part - whole relation serves as a quantificational format for interpretation, and it can only be interpreted if contexts which allow for such a partitive relation are projected onto it. The social context is such a context.

This brings us to another set of cases in which what I will call the 'casual character' of the participial predicate that prevents successful passives.

- (25) a. Les troupes irakiennes ont abandonné/ quitté la ville de Koweit
'The Iraqi troops have abandoned/ left the city of Koweit'
(Lamiroy 1993:(18))
- b. La ville de Koweit a été abandonnée/ *quittée par les troupes irakiennes
'The city of Koweit was abandoned/ left by the Iraqi troops'
(Lamiroy 1993:(18))

There is only a subtle difference between *quitter* 'leave' and *abandonner* 'abandon': dictionaries define *abandonner* as leave permanently. *Quitter* on the other hand can be interpreted as a more 'casual' leaving: you may still come back: if I leave the city today, I may come back tomorrow, but if I abandon the city today, the implication is that I will not return at all. In short, the sentence (25b) is acceptable with *abandonner* 'abandon' because a predicate with permanent qualities can be construed as an inherent, defining property of the city of Koweit. However, *quitter* 'leave' in (25b) is a predicate with a more 'casual' quality of leaving for now, and as such cannot be construed as an inherent, defining property of the city of Koweit.

Let us take an even closer look at a verb such as *quitter* 'leave'. With animate direct objects, *quitter* 'leave' can have an additional meaning to the 'casual' meaning just discussed. More in particular, *quitter* 'leave' can also have the meaning of 'separate from one's partner', clearly a more permanent and defining quality.

- (26) a. Léontine a quitté son collègue à six heures précises
'Léontine left her colleague at six o'clock sharp'
- b. Amélie a finalement quitté Alphonse après 20 ans de mariage
'Amélie finally left Alphonse after 20 years of marriage'

In the passive, the only meaning remaining is the more permanent one:

- (27) a. *Ce collègue a été quitté par Léontine à six heures précises
'That colleague was left by Leontine at six o'clock sharp'
- b. Alphonse a finalement été quitté par Amélie après 20 ans de mariage
'Alphonse was finally left by Amélie after 20 years of marriage'

Again, this difference can only be explained if it is accepted that passive *be+Qp* imposes a partitive interpretation on the subject - predicate relation where the predicate must denote an inherent, defining property of the subject. In (27b), the husband Alphonse can be inherently defined by the property that his wife has permanently left him. In the sentence (27a), the colleague cannot be easily defined by the 'casual' fact that Léontine left her at six. It is no doubt possible to construe a context in which the colleague would be inherently defined by this fact, but my point is clear.

One more example of the 'casual constraint' also involves a verb with a 'Location' direct object. A verb such as *rencontrer* 'meet' can be opposed to the verb *recevoir* 'receive' in a passive sentence:

- (28) a. Plusieurs personnes ont rencontré/ reçu Madeleine à cette réception
'Several people have met/ received Madeleine at that reception'
- b. Madeleine a été *rencontrée/ reçue par plusieurs personnes à cette réception
'Madeleine was met by several people at that reception'
- c. It is a defining property of Madeleine that several people
*met/ received her at that reception

Whence this contrast? The verb *rencontrer* 'meet' does not imply any social definition: people meet people everywhere without necessarily controlling who they meet. If you say *I met a crook, a thief and an attorney at the party*, they are not socially defined by your meeting them. However, if you say *I received a crook, a thief and an attorney at the party*, there is a

sense in which these people are defined by your receiving them. Receiving, then, confers a more socially 'defining' property to the direct object than the more 'casual' *rencontrer* 'meet'. Note, crucially, that the social quality attributed to the subject is defining, but not permanent. The permanent quality of a predicate as in the case of *abandonner* 'leave' is a sufficient, but not a necessary condition for the construal of a successful passive. Coming back to the *rencontrer/ recevoir* contrast, for the sentence (28b), we can say that Madeleine is socially defined with respect to the reception by the fact that she is received by many people. However, the casual quality of *rencontrer* 'meet' cannot be construed as a predicate inherently defining Madeleine in the context of the reception.

Another case that gets a natural explanation in the analysis of passive as a partitive construction is the passive of verbs like *sleep*. It is often observed that these verbs can be passivized, but that the *by*-phrase is somehow restricted to V.I.P.s:

(29) This bed was slept in by *Joe Sixpack/ Napoleon/ Bolívar/ Babe Ruth

Surely, this cannot be a property of beds or of the predicate *sleep* by themselves. However, we have assumed that passive is such that it imposes a partitive quantificational structure in which the predicate *slept* has to become a defining, inherent property for *the bed* in subject position. The only way in which this can be achieved in (29) is to have the predicate denote an important enough event that allows to define the bed as something special. The 'V.I.P. constraint' on the *by* phrase of *sleep* then has exactly the same function as the plurality constraint on the *by* phrase of the sentences in (3) with *habiter* 'live' and *connaître* 'know'.

Context plays an important role in the acceptability of these sentences, since it provides the interpretive backdrop against which the partitive relation between subject and predicate is to be understood.

(30) a. Quand nous avons vu Sophie et Gérard de l'autre côté de la rivière,

*le pont de Jambes a été traversé pour les rejoindre/
plusieurs signes ont été échangés pour les inviter à nous rejoindre
'When we saw Sophie and Gérard on the other side of the river,
the bridge was crossed to go and meet them/
several signs were exchanged to invite them to join us'

b. Quand les troupes ennemies ont cessé le feu de l'autre côté de la rivière,

le pont de Jambes a été traversé pour encercler leur 3^{ème} division de cyclistes
'When the enemy troops had ceased fire on the other side of the river,
the bridge was crossed to encircle their 3rd division of cyclists'

In the context of a meeting between friends, the bridge cannot be defined by the property of our crossing it with a fairly innocent 'casual' purpose. In the context of war, the bridge is inherently defined by our property of crossing it with an 'important' or defining purpose.

The paraphrase 'be an inherent/ defining/ inalienable property of' is only an approximation of the interpretation algorithm provided by *be+Qp*. Discourse factors improve the sentence to the extent that they bring it closer to an interpretation where the predicate can be interpreted as an inherent property of the surface subject. The following sentences, which are a slight adaptation of Lamiroy (1993:(31)), show that a number of factors can be used to establish a partitive property reading for the subject of a passive sentence:

(31) a. La rivière traverse la ville b. La ville est traversée par la rivière
'The river goes across the city' 'The city is crossed by the river'

(32) a. Ce taxi traverse la ville en dix minutes
That cab goes across the city in ten minutes'

b. *? La ville est traversée par ce taxi en dix minutes
'The city is crossed by that cab in ten minutes'

- c La ville a été traversée par ce taxi en dix minutes
'The city has been crossed by a good cab in ten minutes'
- d La ville peut être traversée par un bon taxi en dix minutes
'The city can be crossed by a good cab in ten minutes'

In (31b), it is simply an intrinsic quality of the city that a river runs through it, and therefore the passive is fine. In (32b), the city can in no way be intrinsically defined by one particular cab crossing it in ten minutes. In (32c), the perfective morphology of *être* 'be' presents the predicate as an event which is closed off. This aspectually 'closed' character of the event turns the predicate into a defining property of the city: the fact that the city has been crossed in ten minutes might be a 'new' or exceptional property for the city. The difference between (32b) and (32c) is that in (32b), the predicate cannot be construed as a property, whereas the perfective morphology on the passive auxiliary in (32c) does construe the predicate as a characteristic. In (32d), the generic reading of the sentence, enhanced by the modal, makes the city into one of those cities that have the intrinsic property that they can be crossed in ten minutes by any cab.

Finally, this view of passive also explains the particularities of certain passives which have no equivalent active counterpart (33a) (Postma 1994), or certain passives which allow for a *by*-phrase without having an active counterpart (33bc). In this context, it is also important to note that in (33b), the meaning of *possess* 'own' is changed into a psychological one: the passive participle receives an inalienable property (see Postma 1994). This is not an accidental property of passive participles, but quite a productive one across languages: stative passive participles with new 'psychological' meanings can be coined from existing nouns that bear no transparent semantic relation with the psychological meaning of the participial predicate such as *suiker* 'sugar', *muts* 'cap' in Dutch (33de), or *lune* 'moon' in French (33f).

- (33) a. Jan is breedgeschouderd (Postma 1994)
Jan is broadshouldered 'Jan has broad shoulders'
- b. Sophie is possessed by the devil
- c. * The devil possesses Sophie
- d. Die man was HELEMAAL gesuikerd (nonstandard, overheard in the
That man was entirely sugared speech of a Dutch colleague)
'That man was completely crazy'
- e. I hoop dat de professoren goedgemutst zijn die dag
'I hope that the professors well capped are that day'
- f. J'espère que les profs seront bien lunés ce jour-là
I-hope that the professors will-be well mooned that day there
'I hope the professors will be well disposed that day'

In any case, it is clear that the various passives in (33) are used to express an inherent, inalienable, defining property of the animate subject. If it is accepted that inalienability is a special form of partitivity, the analysis presented here can at least partially derive this meaning as a consequence of the syntactic configuration that imposes a partitive structure. A prediction of this analysis is that all cases of nonstative passives which do not have an active counterpart should involve a partitive relation between subject and predicate in the sense that the predicate expresses an inherent, defining property of the subject. In this way, the productive process of the formation of inalienable predicates can be viewed as the result of a purely syntactic configuration.

5. Impersonal passives

The analysis presented here immediately raises the question as to how the impersonal construction is to be conceived of. How can Q_p establish a partitive relation between an empty subject and a predicate? The impersonal configuration should be thought of as in (34b). The only difference with passive (34a) is that the Q_p° head of Q_pP has not incorporated into *be*. As a result, the impersonal configuration does not partitively relate the surface subject to the predicate, contrary to the passive configuration. The internal argument moves to SpecQP at LF to check partitive case: this is the only function of QP in the impersonal construction. If we compare the impersonal and the passive configuration, there are only two ways in which Q_p° can satisfy its properties. First, Q_p° can incorporate into BE, yielding a 'partitive' passive construction where the QP containing the passive construction is predicated as a defining part of the surface subject (34a). In that case, the Q_p incorporated into *be* enables a partitive quantificational relation between the surface subject and the predicate: by incorporating into *be*, the complex $X^\circ be+Q_p^\circ$ functions as a partitive operator binding the trace of Q_p and hence the entire Q_pP , which is viewed as a 'defining part' of the subject DP. The second way for Q_p° to satisfy its properties is to stay in its base-generated position checking partitive case at LF producing the impersonal construction (34b).⁷ In this way, Belletti's (1988) analysis of partitive 'inherent' case in impersonal constructions is simply reformulated as a property of structural case.⁸ As in Belletti's (1988) analysis, partitive case accounts for the indefiniteness effect on the internal argument.

- (34) a. $[L'empire]_i$ a été+ Q_p° $[Q_pP$ t'_i $t_{Q_p^\circ}$ [... $[VP$ détruit t_i]]
- ▲
- ‘The empire has been destroyed’
- b. Il a été $[Q_pP$ e Q_p° [... $[VP$ détruit [*plusieurs empires*]]]
- ▲ LF-movement
- ‘There have been destroyed various empires’

Following Kayne's analysis, the A' position of SpecQp is not turned into an A position in (34b), since Q_p° does not incorporate. As a result, the partitive DP will be prevented from moving further than SpecQp at LF.

The analysis proposed here is not entirely new. Lasnik (1994) has suggested that the partitive case in impersonal constructions is checked by a passive functional head. The novelty of the approach presented here resides in the claim that passive constructions generally include a partitive functional head that can incorporate (34a) or not (34b). The effects of this partitive quantificational head are quite different in both cases: in the impersonal construction, the partitive head Q_p° licenses partitive case on NPs in its Spec by Spec-Head agreement. When incorporated into *be*, however, the head Q_p° establishes a partitive relation that is more predicational in nature, partitively relating the entire Q_pP complement to the NP subject of the passive sentence.

⁷ Note that partitive case can be checked overtly, as in Latin (13)

⁸ Belletti's (1988) appeal to inherent case in impersonal constructions served as an escape hatch from the Case filter for internal argument DPs: the DP does not have to raise to subject position since it is already case-marked, definite DPs in impersonal constructions cannot receive inherent case and are ruled out by the Case filter since they fail to raise.

Lasnik (1994) explains the difference between Romance and Dutch, where the impersonal passive is very productive, and English, where it is not,⁹ as the result of the fact that Romance (c.q. Dutch) passive checks partitive case while the English passive does not.

- (35) a. È stato messo un libro sul tavolo
 has been put a book on the table
 b. *There has been put a book on the table

In Lasnik's (1994) approach, the question is left open as to how this difference arises. Lasnik (1994) suggests that some optionality in Case-checking must be involved in order to permit the nominative derived subject in personal passives as (35a). In other words: how does the partitive case get out of the way? In the proposal outlined above, the difference between English on the one hand and Romance/ Dutch on the other is due to the fact that the Q_p° head obligatorily incorporates in English, yielding passives as in (34a), while in Romance and Dutch the Q_p° head optionally incorporates yielding both personal and impersonal passives. The incorporation of the partitive AGR head is however not without consequences: a partitive relation between predicate and subject results triggering the effects that have been described in the previous section.

Unlike Chomsky & Lasnik's (1992) and Lasnik's (1992) analysis, the approach advocated here does not invoke further LF adjunction of the indefinite object DP to *there*. Chomsky & Lasnik (1992) propose this adjunction in order to account for the fact that the verb always agrees with the internal argument in English. Nevertheless, this type of adjunction is suspect on principled grounds, since it is not clear why XP adjunction to elements in Spec position should be limited to *there*.¹⁰ Moreover, it remains unclear why in languages such as French, the verb never agrees with the internal argument, but always takes 'default' singular agreement. The structure (34b) allows for a simpler account of the facts. In French, impersonal *il* 'it' is of the category NP and therefore triggers third person agreement of *be* by Spec-Head agreement. In English, *there* is of the category P and cannot trigger Spec-Head agreement on *be*. Since *be* belongs to the same extended projection as QP, only head - head agreement can ensure the 'checking' of agreement features for *be* in AGR_SP. As a result, *be* in AGR_S[°] must have the same features as Q_p° , which gets the features of the internal argument DP by movement of this DP at LF and its subsequent Spec-Head agreement.

As it stands, however, the configurational analysis advanced in generative analyses predicts that personal and impersonal passives should cover the same set of data, apart from case considerations and the 'partitivity constraint' outlined above. However, it seems that the impersonal passive is constrained in a way that is completely different from personal passives. Strikingly, most of the passives discussed above which become acceptable if a contextual partitive relation is projected onto them, are completely ungrammatical in the impersonal construction. Constructions with 'container' verbs, which are always ungrammatical in a passive configuration, are equally ungrammatical in an impersonal configuration.

- (36) *Il a été possédé plusieurs personnes par le diable
 * Er waren verschillende mensen door de duivel bezeten
 'There were many people possessed by the devil'

⁹ The judgment in (49b) is Lasnik's (1994). It seems however that there is a lot of variation with respect to this construction among English speakers. The analysis proposed here also allows for a representation of the impersonal construction in (i), where it can be assumed that the indefinite NP has raised overtly to the SpecQpP position:

i. There were [QpP [various empires]_i Qp[°] [... [VP destroyed t_i]]

¹⁰ See den Dikken (1993) for a full discussion of the problems associated with Chomsky & Lasnik's *there*-adjunction analysis.

- (37) *Il a été contenu du vin dans cette bouteille
'There was contained wine in that bottle'
- (38) a. * Il a été traversé plusieurs villes par cette rivière
'There were crossed many cities by that river'
b. ? Il avait déjà été traversé plusieurs contrées merveilleuses (par Sinbad le marin)
'There had already been crossed several marvelous regions (by Sinbad the sailor)
- (39) a. Il *est/ a été dormi dans mon lit
'There was slept in my bed'
b. *Il a été dormi dans plusieurs lits par Napoléon pendant la campagne de Russie
'There has been slept in several beds by Napoleon during the campagne de Russie'
- (40) a. Plusieurs épouses ont déjà été quittées par ce salaud de Jean-Pierre
'Several spouses have already been left by that asshole of a Jean-Pierre'
b. * Il a déjà été quitté plusieurs épouses par ce salaud de Jean-Pierre
'It has been left many spouses by that asshole of a Jean-Pierre'
- (41) a. Il a déjà été *quitté/ évacué/ abandonné plusieurs villes
par les Irakiens dans le territoire kurde
'There have already been left/ evacuated/ abandoned several cities
by the Iraqis in Kurdish territory'
b. * Il a été rencontré plusieurs personnes par le ministre
'There have been met several persons by the minister'
- (42) * A partir de la seconde moitié du 20ième siècle, il a été habité
de plus en plus de grandes villes par des millions d'habitants
'Ever since the second half of the 20th century, there have been inhabited
more and more cities by several million inhabitants'
- (43) * Il est connu plusieurs personnes par tout le monde
'There are known several people by everyone'
- (44) Il a été vu plusieurs objets étranges dans le ciel nocturne
'There were seen various strange objects in the night sky'

It is clear that the impersonal construction is more restricted than passive is. This is due to the well known fact that the impersonal construction is aspectually constrained to verbs expressing events which include definite bounds, either accomplishments (*build*), achievements (*find*), but also processes which can be viewed as a repetition of bounded subevents (*discuss*). Stative verbs such as *love*, *know*, *like*, *hold* are excluded, as well as the stative Location verbs such as *habiter* 'inhabit' in (42). Similarly, unbounded processes or states such as *amuse* or *love* are generally excluded. Nevertheless, a Stative verb such as *aimer* 'love' can be used in an impersonal passive if the interpretation of the sentence involves several 'countable' instances of the state: (45b) is wellformed because the interpretation of the sentence involves several 'cases' or instances of love on this old planet. The multiplicity of states is a factor which overcomes the lexically unbounded aspectual property of the stative verb *aimer* 'love', since it allows for the sentence to be interpreted as involving at least a certain number of stative situations that are 'closed off' or bounded: the interpretation of (45b) involves a set of 'closed off' situations involving love. Such an interpretation is not available in (45a).

- (45) a. * Il a été aimé/ amusé/ connu un des linguistes par les enfants
'There were liked/ amused/ known one of the linguists by the children'
b. Il a été aimé sur cette vieille terre depuis que le monde est monde
'There has been loved on this old planet ever since the world existed'

Exactly the same factor is argued by Lamiroy (1987) to be relevant for stative verbs complementing aspectual verbs: an aspectual verb such as *begin* can only be followed by a stative verb if there is a multiplication of stative situations:

- (46) a. *Cet ouvrier a commencé à posséder une maison
'That worker began to possess a house'
b. Après la seconde Guerre, les ouvriers ont commencé à posséder des maisons
'After the second World War, workers began to possess houses'

In both the impersonal passive and in aspectual complementation, the 'countability' of situations allows the structure to overcome an aspectual restriction. In aspectual complementation, the 'countability' of the sentence allows for enough aspectual structure so as to allow for an inchoative interpretation. In the impersonal passive, the 'countability' of the sentence enables the unbounded lexical aspect expressed by the verb to be interpreted as 'closed off' or bounded in the sense that the sentence (45b) refers to 'countable' instances of a state.

This aspectual constraint on impersonal passives also extends to grammatical aspect: the process inherent in accomplishments needs to be 'closed off' by perfective aspect, and cannot be modified by durative adverbs such as *for an hour*.

- (47) a. Il *est construit/ a été construit une belle maison près du Parc Monceau
'There *is/ has been built a beautiful house next to the Parc Monceau'
b. Il a été lu plusieurs livres (*pendant une heure)
'There have been read several books (* for an hour)'

Similarly, some Process-like verbs such as *dormir* 'sleep' can only be used in the impersonal construction with perfective aspect as illustrated in (39a). At the same time, however, (39b) show that perfective aspect is not sufficient to consider a Process event as 'bounded'. In (39a), there is a single event of sleeping in my bed, and as a result the Process event can be considered to have been 'closed off', In (39b), however, the beds Napoleon slept in are undefined, and as a result the amount of sleeping events is undefined, hence undelimited, not bound. Notice that this is not the case in (47b), where the Accomplishment verb *read* licenses a bounded reading event including an undefined number of books. The sentences in (39) and (47b) are therefore very illustrative of the fact that the 'bounded' aspect of the sentence has to be calculated on the basis of the lexical and syntactic properties of the sentence (Verkuyl 1972). This aspectual constraint excludes the examples (6-36-39-40-42-44) which include stative verbs, as well as all 'container' verbs, since these are never 'bounded'. It also explains the contrast in (37) between 'stative' and 'dynamic' reading of *traverser* 'cross'. The sentence (38a) involves a permanent property of the river which has no bounds, while the 'dynamic' reading of *traverser* 'cross' in (38b) is aspectually bound, yielding an acceptable impersonal sentence. Note that in the example (44), *voir* 'see' is interpreted with the 'bounded' reading of 'perceive'. The ungrammaticality of the examples (40-41) can also be attributed to the 'boundedness' restriction on the impersonal configuration. This may come as a surprise, since *quitter* 'leave' and *rencontrer* 'meet' seem to be temporally bounded in the same way as *trouver* 'find' and *découvrir* 'discover': all of these verbs are Achievements. Nevertheless, *trouver* 'find' and *découvrir* 'discover' allow for impersonal constructions, while *quitter* 'leave' and *rencontrer* 'meet' in (40-41) do not:

- (48) a. Il a été trouvé plusieurs complexes de temples par Jones
'There were found/ discovered several temple complexes by Jones'
b. * Il a été quitté plusieurs épouses par Jones
'There were left/ met several spouses by Jones'

Why is this the case? Importantly, *meet* and *leave* only specify the starting point of the event, whereas for verbs such as *find* and *discover*, there is a starting point and an endpoint of the event which coincide most of the time.¹¹ This property can be checked by the fact that *meet* and *leave*, but not *find* and *discover*, allow for durative adverbs despite their traditional Vendlerian classification as Achievements.

- (49) a. Sally met/ left Archibald for an hour
 b. Sally found/ discovered a nickel (* for an hour)¹²

Within the class of Achievements, there is a distinction between verbs that can be modified by *for an hour* and verbs that cannot be so modified. The verbs *meet* and *leave* seem to be inherently 'open-ended': they do not impose a lower temporal bound. The impersonal construction requires precisely such a lower bound for the event. As a result, impersonal constructions with *rencontrer* 'meet' and *quitter* 'leave' are ruled out by virtue of the temporal boundedness restriction.

Clearly, the determination of what constitutes a bounded event is determined by both lexical and inflectional aspect.¹³ Despite its complexity, it is a formal property that has precise consequences in impersonal constructions. The question now arises as to whether this 'boundedness' restriction is a property that can be derived in the framework proposed here. I would like to suggest that the 'eventive/ bounded' aspectual constraint derives from the syntactic configuration *be*+QP which is present in both the impersonal and the passive construction.

In the configuration outlined in (34b), impersonal *il* 'there' is not at all coindexed with the internal argument DP, but rather with the entire QP complement. The function of *be* in the impersonal construction is to predicate the existence of the predicate. The predicate therefore functions as the only argument of *be*. In contexts where *be* does not relate a DP subject to a predicate, but is itself the only predicate of the subject, *be* takes on the meaning of 'exist', as in *the universe simply is*. Whatever the syntactic-semantic reasons for this meaning, we would like to suggest that this same meaning is also present in the impersonal construction: *be* simply indicates that its QP complement 'exists' or 'is the case'. This meaning is responsible for the aspectual restrictions on the QP complement: although *be* or *exist* are themselves purely stative verbs, they require from their argument that it has somehow 'come into existence'. This can be seen when *be* or *exist* are predicated of abstract nouns such as *beauty* or *circularity*: Sentences such as *Beauty/ Circularity exists* or *Real beauty simply is, (it cannot be described)* only refer to specific cases of beautiful objects or circular arguments, that are (countable) *instantiations* of the abstract nouns. This 'specific' interpretation does not arise when *be* relates a referential subject to a predicate: *Beauty is undefinable*. If *be* selects a single sentence-like complement as in the impersonal construction, it does not relate a referential

¹¹ Although in general the begin- and endpoints of findings and discoveries coincide, as in *Jones found/ discovered a gold coin*, it is not always the case, as in *Jones slowly found his way through the jungle*, or *Jones slowly discovered the similarity of Greek and Sanskrit/ that the Ark wasn't all that important*. The important point here however is that both points are present in some aspectual representation of *find* and *discover*.

¹² The star refers here to the nonserialized reading of the sentence. Of course, *for an hour* is perfectly possible with a serial reading of *find/ discover* where several coin findings/ discoveries are made within the hour.

¹³ See Verkuyl (1972) for the compositional nature of boundedness. It might be objected that the correlation between *for an hour* and the impossibility of the impersonal construction does not extend beyond Achievements. Accomplishments do allow for modification by *for an hour* and have an impersonal construction. This is precisely the point: Accomplishment verbs are lexically defined with both a beginning and an endpoint. Moreover they are aspectually complex in that they involve a durative subevent and an endpoint. Durative adverbs such as *for an hour* refer to the durative subevent within the Accomplishment, not to the entire event. The interesting thing about the Achievements *meet* and *leave* is that *for an hour* modifies the result of the meeting or the departure.

subject to a predicate. As a result, *be* requires that this complement be a (countable) *instantiation*. A sentence-like complement can only be interpreted as a (countable) instantiation if it does not refer to a state or an otherwise unbounded process. Only bounded events are (countable) instantiations. Therefore, for the impersonal construction to be predicated of *be*, QP needs to be aspectually 'closed off'. This analysis formalizes those functionalist analyses which ascribe an 'existential (Martin 1979), or a 'presentational' (Vet 1980) character to the impersonal subject *il* 'there' in French, and view the impersonal subject as an *image de la situation repère* 'an image of the situation referred to'. In this analysis, the impersonal subject is indeed a syntactic 'image' of the event in QP, since it is coindexed with it. The careful reader will have noticed that the analysis presented here entails a view of both passive and the impersonal passive construction as a special case of complementation (cf. also Hoekstra 1993). We will make an attempt to flesh out this idea in the next section.

6. *be*+Q_p and raising

We have seen in section 4 that context builds an interpretation for the syntactico-semantic 'partitive' property of passive. Passive *be*+Q_p should be viewed as compositional: the Q_pP projection requires an interpretation in which the selected participle is viewed as an inherent, constitutive property of the internal argument NP moved to subject position of BE. The function of *be* is only to provide the subject - predicate structure for the relation between the NP and the participle: in a sense it provides *be* support. The meaning of some verbs does not allow them to be construed as such a property, and in other cases, only certain contexts allow for the predicate to be construed as an inherent property of the surface subject.

In an active sentence, there is no partitive relation between the participle and the subject: in *John destroyed his bike*, John is not intrinsically characterized by his destroying the bike. In *the bike is destroyed by John*, there is an intrinsic relation between the bike and its being destroyed: its destroyed nature is presented as part of the bike.

Importantly, *be*+Q_p has a semantic contents, and hence should be considered a 'real' raising verb, like *seem*, *appear*, and the aspectual verbs such as *begin*, *continue*, *stop* etc. ter Meulen (1990) has shown that a quantificational analysis of aspectual verbs yields farreaching insights in the way they are related to each other. In a sense, ter Meulen (1990) treats aspectual raising verbs as quantifiers over events. For other raising verbs such as deontic and epistemic modals, quantificational properties are also an essential ingredient (see Hoekstra 1993, Barbiers 1993 for a recent analysis). *be*+Q_p now is similar to raising verbs in that it does not have a thematic structure of its own, and adds a quantificational relation to the sentence. The difference is of course that aspectual verbs only modify (quantify) the event interpretation of the IP complement they select, whereas passive *be*+Q_p establish a part - whole relation between the NP moved to subject position and the predicate.

The question now arises as to why the raising verb *be*+Q_p is correlated with a participial predicate in which the external argument is realized obliquely. Why couldn't this raising verb select a fullfledged infinitive? This might have to do with the target variables of the quantifiers involved: *be*+Q_p has no scope over events, but relates NPs to predicates in a partitive sense. *Bona fide* raising verbs such as aspectual and modal verbs do take events as their variables (ter Meulen 1990, Barbiers 1993). Therefore, it simply follows that aspectual and modal raising verbs should appear in a context where there is something for them to have scope over, namely the functional projection associated with temporally specified events TP. This has nothing to do with selectional restrictions *per se*, but with satisfaction of scopal properties: the modal or aspectual verb needs to be in a sufficiently local context with respect to the appropriate event variable. Since passive *be* does not have the same scope as aspectual and

modal raising verbs, the requirement to select an AGR_SP - TP not only does not apply to passive *be*, AGR_SP - TP complementation would prevent *be* from exercising its scopal properties on the participial projection, since that participial projection (*in casu* Q_pP). would not be sufficiently close to *be*: Q_pP must be directly in the context of *be* to allow for incorporation of Q_p^o into *be*, and to allow the resulting *be*+Q_p to quantify over QP.

If this general line of reasoning is correct, we are led to a number of conclusions with respect to Burzio's generalization. Chomsky (1992) admits that PRO has (abstract) case in infinitival CPs (see Vanden Wyngaerd 1993 for extensive arguments to this effect). Now it was generally assumed in the LGB framework that precisely lack of Case, which was related to the [-tense] character of the infinitive, triggers movement of the infinitival subject to the SpecAGR_SP position of the matrix verb in raising contexts. If PRO has case, or, more generally, if infinitives can assign case to NP subjects, there is no trigger for movement of the infinitival NP subject to the matrix SpecAGR_SP of the tensed raising verb. In other words, we would expect structures of the type *It seems John to have a bike* to be perfectly fine, since the infinitival tense can assign Case to the subject in the minimalist framework.¹⁴ The fact that these sentences are ungrammatical, and that the subject needs to move to the subject position of the raising verb, suggests that there is some additional mechanism which removes or suppresses the (abstract) case normally assigned by an infinitival AGR_SP. The same is true in passive configurations: in some way or another, the accusative case of AGR_OP needs to be removed. Notice that if Chomsky (1992) is right in claiming that AGR_SP and AGR_OP are identical, and only differ in labeling as a handy mnemonic device, we would indeed expect that both AGR_SP in raising contexts and AGR_OP in passive contexts are subject to Case removal.

Now let us simply assume that AGR_SP and AGR_OP are never 'neutralized', but that 'neutralized', 'Case-defective' AGR_{S/O}P simply *is* (a specific type of) QP.¹⁵ Simply put, QP is the defective form of AGR_OP sitting on top of the passive participle. This should be less surprising than it seems: AGR projections clearly have very elementary quantificational properties, as they convey features such as person and number. The idea proposed here then is that AGR can host more than just [person, number, gender] agreement and nominative/accusative Case. For passive, we suggest that AGR_OP hosts a partitive quantifier, which assigns partitive case if it is not incorporated as in impersonal passives. If the partitive quantifier incorporates, as in passive, the AGR_OP hosting QP will be 'Case-defective'.

The passive and impersonal configuration arise as they do because *be*, being unaccusative, does not provide an 'active' AGR_O that could assign accusative. This now seems to be in line with Hoekstra's (1984, 1993) proposals regarding the auxiliary *have* as identical to *be*, with the only difference that *have* does have an AGR_OP projection that can license accusative case. *Have* adds on' to the participle what has been 'lost' by the participial 'defective' AGR_OP/QP projection, namely an AGR_OP that can provide accusative case (Hoekstra 1993).

¹⁴ It is fruitless to suggest that the case assigned to PRO by an infinitive would be somehow different from the one assigned to a full NP. This would amount to a stipulation artificially distinguishing empty NPs from full NPs. Rather, the appearance of PRO in controlled infinitives and the concomitant impossibility of full NPs should be ascribed to properties of control, presumably the anaphoric character of PRO (Manzini 1983) or the infinitival AGR_SP. Note there are noncontrol and non ECM infinitives with overt subjects: *En Jan maar lopen* 'And John run'. This suggests that the infinitive can assign case to overt subjects in at least some cases, and that the nonovert character of the infinitival subject in controlled infinitives must be due to independent factors.

¹⁵ Note that this position probably forces us to say that QP is itself followed by a projection accounting for agreement on the participle.

How does QP manifest itself in the context of raising verbs? Recall we suggest that AGR_{SP} in raising verbs also needs to be 'neutralized', since for raising to occur, the infinitival AGR_{SP} should not have a case to assign to its subject. In the terms of the analysis presented here, AGR_{SP} needs to be a QP. It seems that there is some evidence for this radical position. In modal raising verbs in French, QP can be made visible. More in particular, modal verbs in French can cooccur with the adverb *bien* in the 'weak' epistemic interpretation, where *pouvoir* 'can' and *devoir* 'must' do not have the interpretation of 'strong' necessity or possibility, but of 'weak' probability/ eventuality.

- (50) Il doit/ pourrait (bien) pleuvoir un de ces jours
'It should/ might very well rain one of these days'

This 'adverb' *bien* has a concessive meaning close to 'very well' in the English gloss. In combination with the modal, it indicates that the 'strong' epistemic meaning of *pouvoir* 'can/ *devoir* 'must' is 'weakened' in the sense that the opinion of the speaker is taken into account, yielding the meaning of probability/ eventuality instead of the stronger necessity/ possibility. The overt appearance of *bien* is not required to obtain the 'weak' epistemic reading, but when it is present, no other reading can obtain. This suggests that *bien* has a zero allomorph, and that the morpheme corresponding to *bien*/ \emptyset is responsible for the 'weak' epistemic' meaning of *pouvoir* 'can/ *devoir* 'must'.

Importantly, *bien* also functions as a quantifier translating a subjective amount that is considered to be high from the point of view of the speaker.

- (51) Elle connaît bien des personnes/ Il a mangé bien des pommes
'She knows quite some people/ He ate quite a few apples'

In both the modal and the nominal context then, *bien* quantifies in an identical way: in the modal context, it specifies that the probability/ eventuality is high with respect to the position of the speaker, whereas in the nominal context, it specifies quantity with respect to the position of the speaker. It is my contention now that *bien* in a modal context is the head of a QP projection that incorporates into the modal. Independent evidence for incorporation of *bien* comes from other verbs the meaning of which changes in the presence of *bien*. *Bien vouloir* does not mean *vouloir* 'want', but something more close to 'admit', *aimer bien* means 'like' not 'love' as *aimer* does. By themselves, these changes in meaning, which all have a vaguely 'concessive' or 'speaker-related' flavor, do not constitute evidence for incorporation.

However, in some cases the meaning change has syntactic correlates:¹⁶

- (52) Voilà une façon de laquelle Delphine aime *(bien) que Louis prépare le faisan
'This is a way in which Delphine (rather) likes that Louis prepares pheasant'

Aimer'love' is normally a factive verb, and *bien* seems to have the property of suspending factivity. Now, if factivity is a lexical property that is manifested through selectional restrictions of the verb on the embedded C^o (cf. Rooryck 1992), *bien* can only suspend the factive property of *aimer*'love' if it incorporates into that verb. If *bien* simply were an adverb modifying the verb, it would be very hard to explain how this adverb would be capable of changing the selectional properties exercised by a verb.

¹⁶ Another syntactic correlate of the addition of *bien* is the possibility of coreference of the matrix and embedded subjects with *bien vouloir*, which is impossible with *vouloir* 'want':

- i. Je veux *(bien) que je sois le seul à travailler dans ce département
'I want (admit) that I am the only one to work in this department'

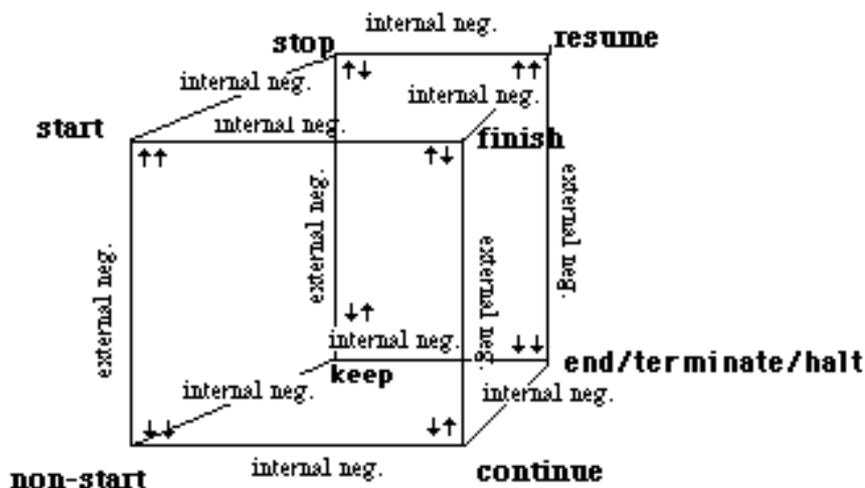
In the terminology of the seventies, *bien* suspends the application of Equi-NP-deletion. This property of *bien vouloir* was first observed by Ruwet (1984).

This QP projection, which is overtly present as *bien*, can be considered to play the role of 'Case-defective' AGR_SP in the infinitival complement of the modal raising verbs *pouvoir* 'can' and *devoir* 'must'.¹⁷

(53) Il_i doit/ pourrait bien [AGR-S-P t_i [AGR-S° t_{bien}] [VP pleuvoir un de ces jours]]

Both passives and modals then have 'case-defective' AGR projections which can be identified as quantifiers.¹⁸

The very same idea can now be extended to aspectual raising verbs. Aspectual verbs have been described by ter Meulen (1990) as Generalized Quantifiers. The relations among aspectual verbs can be represented in a three-dimensional square of oppositions:



(54) Three-dimensional square of aspectual quantifiers (ter Meulen 1990)

This representations relates the logical squares of oppositions inherent in aspectual verbs. It allows for an explanation of various semantic properties of aspectual verbs such as monotonicity and negation. For instance, the 'internal negation' line relating *start* and *stop* translates the idea that *stop doing something* is equivalent to *start not doing something*.

¹⁷ The only difference between the incorporation of *bien* into non raising verbs and *bien* in the context of raising verbs is that in the context of raising verbs, it could be claimed that the Q° *bien* heads the infinitival complement selected by the raising verb. As was pointed out to me by Sjef Barbiers, Latin *posse* 'can', can be analysed as the combination of *esse* 'be' with the morpheme *pot-*, as is obvious in the third person sg. *potest* 's/he can'. The bound morpheme *pot-* seems very close to the Latin invariable comparative quantifiers *tot...* 'quot (there are) as many... as...'

¹⁸ The question might arise as to how *seem* and *appear* can be described as raising verbs with quantificational properties. Intuitively, *appear* translates the fact that one has direct evidence for the truth of the event: *it appears to be raining* involves certainty that the event at hand is a raining event. *Seem* only relates the idea of indirect evidence for the truth of the event: *it seems to be raining* does not require certainty about a raining event, it involves a more subjective impression. At first sight, then, it is not clear how any of this translates as quantificational properties. However, Smessaert's (1993) analysis of comparative quantifiers (*more*, *less*, etc) as Generalized Quantifiers suggests that *seem* and *appear* might be viewed on a par with comparative quantifiers such as *exactly*. In the same way *continue* and *keep* correspond to the universal quantifier in ter Meulen's (1990) analysis, the raising verb *appear* corresponds to the quantifier *exactly*: *it appears to be raining* then should be glossed as *This event is exactly like a raining event*, while *seem* corresponds to *not exactly*: *it seems to be raining* corresponds to *This event is not exactly/ quite like a raining event*. If this correspondence is a real one, there is evidence that *seem* and *appear* can indeed be described as raising verbs with quantificational properties. Note that *seem* is morphologically very close to comparatives in various languages: French *sembler* 'seem' vs. *ressembler* 'resemble. be alike', Dutch *lijken* 'seem' vs. *(ge)lijk* 'like'.

Similarly, *keep doing something* is equivalent to *not stop doing something*, the external negation of *stop doing something*.¹⁹

From a syntactic point of view, the quantificational properties described by ter Meulen (1990) for each aspectual raising verb might correspond to as many different QPs occurring in the complement AGRSP/ QP position of these raising verbs. In all of these cases, it might be proposed that the Q head of this QP incorporates into the aspectual verb. The quantificational properties of aspectual verbs might now be viewed as a result of incorporation of a quantifier into a verbal host (*be*) deriving the corresponding aspectual raising verb. Every raising verb has its own Q°.

In all of these cases, it might be claimed that the Q head of this QP incorporates into the aspectual verb. In its most extreme form, this hypothesis would entail that every raising verb basically involves *be* followed by a QP. Each QP would have a specific quantificational property corresponding to it, and each incorporated Q° head would be responsible for the eventual surface manifestation of the raising verb. Alternatively, and less radically, we might say that modal and aspectual verbs are lexically inserted with their quantifiers already incorporated, and that these quantifiers select an AGRSP whose head is such that it can function as a variable for the quantifier inside the raising verb. This analysis has the same effects as the incorporation analysis: in both cases, the head Q of QP is bound by the quantificational operator.

This analysis of raising verbs would offer the start for an explanation of an otherwise curious property of French raising verbs. Raising verbs in French can express Tense (*aller/ venir de/ risquer/ avoir failli*), Mood (*pouvoir/ devoir*), and Aspect (*tarder, commencer, être en train de, arrêter...*).²⁰ Unlike inflectional elements expressing tense, mood, and aspect, raising verbs expressing tense, mood, and aspect always are accompanied by a quantificational property. For modal verbs, the operators of necessity and possibility, this may be a trivial observation. Similarly, we have already noted that ter Meulen's analysis provides a framework for describing the quantificational properties of aspectual raising verbs. The quantificational properties of raising verbs are however especially striking and rather unexpected in the case of raising verbs expressing future and past tense: these raising verbs always have a modal property of possibility (*risquer, avoir failli*), necessity (*aller, venir de*) or a generic/ habitual reading (*avoir tendance à* 'have a tendency to') associated with them. If this observation is correct, it needs to be explained since a priori there is no reason why raising verbs could not simply express Tenses of the same type as those expressed by inflectional elements, without a modal property.

¹⁹ Interestingly, ter Meulen (1989) has a corner of the square that is not lexicalized in English: *not-start*. Still, it might be argued that the aspectual raising verb *be about* fits in this position:

i. It is about to rain 'it has not yet started raining (but it's going to)'

Similarly, the French aspectual raising verb *tarder* 'await' fits into this position:

ii. Il tarde à pleuvoir

it awaits to rain 'It still does not start raining'

²⁰ We include these verbs in the set of raising verbs because they meet the test of thematic transparency: the subject position of the verbs quoted is selectionally empty and can be filled by any subject of the embedded verb, including meteorological expletives.

Within the set of raising verbs, it might be argued that *seem* and *appear* belong to the class of aspectual verbs: while aspectual verbs modify the internal temporal development of a situation, 'phenomenal' verbs such as *seem* and *appear* modify the atemporal manifestation of a situation. 'Phenomenal' verbs compare an entire situation to a similar situation (cf fn. 16), whereas aspectual verbs relate a situation to one of its subparts. This makes 'phenomenal' verbs into a special subset of aspectual verbs, which are radically different from either Tense and Mood in that Tense and Mood, but not Aspect, relate a situation to resp. the time and the (possible) worlds of the speaker.

We would like to briefly illustrate these modal properties of raising verbs expressing Tense, since they may not be immediately obvious.

- (55) En Alaska, il a tendance à neiger quand on s’y attend le moins
 In Alaska, it has tendency to snow when one self to-it it expects the least
 ‘In Alaska, it generally snows when it is least expected’
- (56) a. Il risque de pleuvoir
 It risks to rain ‘It is possible that it will rain’
- (57) Il a failli pleuvoir
 It has barely-escaped to rain
 ‘There was a possibility of rain/ it almost rained’
- (58) a. Elle va avoir un enfant b. Elle aura un enfant
 ‘She is going to have a baby’ ‘She will have a baby’
- (59) Elle vient d’arriver à Bruxelles
 ‘She comes from to-arrive in Brussels’
 She just arrived in Brussels

Generic or habitual interpretations have been often described as involving some sort of universal quantification (see Krifka 1988). A similar analysis should apply to (55). The epistemic modal ‘possibility’ reading of *risquer* and *avoir failli* is sufficiently clear from the glosses and translations in (56). The necessity reading of the so-called ‘futur proche’ *aller* can be deduced by comparing the contextual implications of the inflectional future in (58b) with those of the periphrastic future *aller* in (58a): (58a), but not (58b), implies that one is pregnant. (58b) can be said of a seven year old (she will have a baby when she is a grown up), but saying (58a) referring to a seven year old would be distinctly odd under normal assumptions about child-bearing age. This shows that *aller* carries the meaning of an ‘inescapable’ future. This interpretation, and the implication in (56a) triggered by it, should be viewed as a result of the epistemic modal necessity inherent in *aller*: If *aller* in (58a) carries not only the meaning of future but also that of necessity, a situation that states the future necessity of having a baby contextually licenses the implication of pregnancy.²¹ Interpretive notions such as ‘inescapable’ future and the traditional term *futur proche* then follow from the combination of the modal and the temporal characteristics yielding a property of ‘future necessity’ inherent in *aller*.

Another indication that modal necessity is involved in *aller* is that as a raising verb, *aller* cannot be used with a perfective aspect (60). This is unexpected because inflectional future tense and the ‘possible’ periphrastic future *risquer* can cooccur with perfective aspect (60): if *aller* simply expressed a future, it should be combinable with perfective aspect, expressing a future perfective.²²

²¹ It might be noted that something similar is the case for English *will* (‘possible’ future, *she will have two girls and two boys*) as opposed to *be going to* (‘necessary’ future: *She is going to have two girls and two boys*). Crosslinguistically, the necessity meaning is nevertheless not always linked up with the counterparts of *go/aller*. In Swedish, the auxiliary *ska* ‘will’ expresses necessary future in the context cited, whereas the auxiliary *kommer att* ‘go’ expresses the ‘neutral’ possible future.

²² Note that perfective aspect for the counterpart of *aller* ‘go’ and of epistemic *moeten* ‘must’ seems to be perfectly possible in Dutch:

i. Het is gaan regenen ii. Het had moeten regenen om de oogst te redden
 However, in these cases the usual perfective participle marked by *ge-* has been replaced by the infinitival form, a possibility that also exists in other complementation - even raising - structures where well-known word order differences are correlated with it:

ii. Jan is begonnen/ beginnen een boek te lezen ‘Jan is begun a book to read’
 iii. Jan is een boek beginnen/ *begonnen te lezen ‘Jan is a book begin to read’ (Southern Dutch)

Importantly, in (i) the perfective participle is impossible:

- (60) a. * Il est allé pleuvoir (demain matin)
It is gone to rain (tomorrow morning)
'It went to rain (tomorrow morning)'
- (61) Il aura plu (demain matin)
'It will have rained (tomorrow morning)'
- (62) Hier soir, il a risqué de pleuvoir à un moment donné
'Yesterday evening, there was a risk of rain for a moment'

Now, it is generally the case that objective epistemic necessity is incompatible with perfective aspect. In (61a), the necessity of a raining event can only involve objective epistemic necessity,²³ and perfective aspect is excluded:

- (63) a. Il doit absolument / *a absolument dû pleuvoir pour
It must absolutely / have must absolutely to-rain in-order-to
assurer les besoins en eau potable
ensure the needs in water drinkable
'Rain is/ was necessary to ensure the needs for drinking water'
- (64) La pluie a été nécessaire pour assurer les besoins en eau potable
'The rain has been necessary to ensure the needs for drinking water'

The sentence (61b) shows that objective epistemic necessity is not intrinsically incompatible with perfective aspect. Therefore, it is not clear to us why there is this aspectual constraint on objective epistemic necessity expressed by *devoir* 'must'. What is clear however is that the restriction that is responsible for ruling out the combination of *devoir* 'must' and perfective aspect can also be invoked to rule out the combination of *aller* and perfective aspect, if it is assumed that *aller* involves a modal epistemic operator of necessity.

The modal epistemic nature of *aller* also shows up in other Romance languages. In Italian, *andare* 'go' can be used as a passive auxiliary with the meaning of epistemic necessity. In the same way as the French raising verb *aller*, *andare* cannot be used with a perfect tense and is restricted to third person and generic contexts (see D'Hulst 1992 for further discussion):

- (65) Questi problemi vanno/ *sono andati ulteriormente esaminati
'Those problems must be examined later'

The relation between raising verbs and passive that we have assumed in this paper might allow for a way of configurationally relating the passive and the raising construction: *aller/ andare* license complementation involving a quantification-like head that does not assign case.²⁴

Finally, coming back to the recent past *venir de* in (59), we would like to suggest that it involves past necessity in the same way *aller* involves future necessity. The argument for this

iv. *Het is gegaan regenen ii. *Het had gemoeten regenen om de oogst te redden

It seems then that the structures in (i) are saved by the switch of participial morphology to infinitival morphology. I have no further explanation for this intriguing fact.

²³ Lyons (1977) makes the distinction between objective epistemic necessity and subjective epistemic necessity: the latter is necessity related to the world of the speaker as in (i)

i. Il doit/ a dû faire chaud dans le Kalahari aujourd'hui
'It must be/ have been warm in the Kalahari today'

Subjective epistemic necessity involves probability. Importantly, this subjective epistemic meaning of *devoir* 'must' can be combined with perfective aspect.

²⁴ In this respect, it is significant that Italian can use *venire* 'come' and *andare* 'go' only as passive auxiliaries and not as raising verbs, while French uses *venir* 'come' and *aller* 'go' only as temporal raising verbs and never as passive auxiliaries. I have no explanation for this fact, but it seems that this distribution could be explained in a framework such as the one sketched here, where passive and raising are both viewed as cases of complementation involving quantificational operators

analysis is harder to make than for *aller*, and needs a little more work. This may be due to the fact that *venir de* also involves an aspectual feature of punctuality as observed by Ruwet (1983). However, like *aller* in (60) and *devoir* ‘must’ in (61), *venir de* cannot be combined with perfective aspect:

- (66) Elle vient/ venait/ *est venu d’arriver à Bruxelles
 She comes/ came/ has come from to-arrive in Brussels’
 ‘She just arrives/ arrived in Brussels’

We would like to suggest that the incompatibility of *venir de* with perfective aspect is due to the same restriction that applies to *aller* in (60) and *devoir* ‘must’ in (61), namely the general incompatibility of perfective aspect with objective epistemic necessity.

The following chart illustrates the combinations of tense and modality in French raising verbs expressing Tense:²⁵

(67)		<i>necessity</i>	<i>possibility</i>
	<i>future</i>	aller	risquer
	<i>past</i>	venir de	avoir failli

These epistemic modal (64) and generic/ habitual (55) properties of raising verbs expressing Tense is rather unexpected: why isn’t it the case that at least some raising verbs simply express a nonmodal Tense similar to those expressed by inflectional bound morphemes in French? For instance, why don’t we have a raising verb with a nonmodal meaning similar to the past or future tense? Under the approach outlined above, there is a partial answer to this question: in order to be licensed, raising verbs must incorporate (or select) a AGR_{SP} with a head that has quantificational properties. Modal operators of necessity and possibility seem to play that quantificational role in the case of raising verbs expressing tense. On its own, the Tense expressed by a raising verb would be insufficient to license the syntactic configuration which is necessary for complementation involving raising. The syntactic configuration of raising seems to require a quantificational element as an essential ingredient for licensing the infinitival complementation of raising verbs.

7. Conclusion

Lamiroy (1993) argues against a view of passive as a purely mechanical counterpart of an active sentence. She notes that Meillet (1938) had already observed that passive were just a counterpart of active, passive would be superfluous in the grammar. Lamiroy (1993) shows that Meillet (1938) echoes Von der Gabelentz (1861) who had described passive as *Ein Luxus der Sprache*. Lamiroy (1993) notes that the idea that active and passive are completely equivalent seems to be contrary to any principle of economy in the structuralist sense. Lamiroy (1993) then goes on to suggest that the originality of passive lies in the suppression of the external argument. The passive then is a ‘recessive diathesis’ (Tesnière 1969).

I do not share this conclusion. First of all, it does not capture why the object moves to subject position. If the essence of passive were suppression of the external argument, it would be sufficient for the grammar to have an impersonal passive construction. Secondly, the suppression of the external argument is not just a property of passive, but it is shared by nominalizations which can realize the external argument as a *by*-phrase in the same way as passive participles (*The destruction of Tenochtitlan by Cortéz*).

²⁵ We leave out the raising constructions of *promettre* ‘promise’, *menacer* ‘threaten’, *avoir toutes les chances* ‘have a chance’. From a temporal and modal perspective, the raising construction of *promettre* ‘promise’ seems to be closely related to *aller* (*Il promet/ * a promis de pleuvoir* ‘It promises/ has promised to rain), while *menacer* ‘threaten’, *avoir toutes les chances* ‘have a chance’ seem to be basically variants of *risquer* ‘risk’ (*Il menace/ a menacé de pleuvoir* ‘It threatens/ has threatened to rain’).

The analysis presented here shows why passive is not at all a 'luxury of language'. It is the only way in which an internal argument NP can be syntactically construed in such a way as to express an essential, constitutive property of that NP. Passive diathesis essentially involves a quantificational part - whole dimension relating the NP in subject position to the participial predicate. The active - passive diathesis in fact reflects a diathesis between a voice in which no inherent or constitutive property is necessarily predicated of the subject (*John destroys his bike*) and a voice in which an inherent, defining property of the subject is predicated (*The bike is destroyed by John*). A quantificational analysis of passive has been developed where no reference is made to thematic roles to explain what has traditionally been viewed as 'exceptions' to passive.

The analysis presented here now allows us to relate partitive passive to Binding. A puzzling property of both Romance and Scandinavian languages is that the element that can be used as a reflexive or a reciprocal (Swedish reciprocal-*s* in *vi ses* 'we will see each other', French reflexive *se* in *Ils se lavent* 'They wash themselves') can also be used as a (medio-)passive morpheme (Swedish *lax serverades klockan fem* 'the salmon was served at five o'clock' French *Le saumon fumé se mange froid* 'Smoked salmon is eaten cold'). The question we would like to address here is why an anaphor should start to function as a passive morpheme in the first place. It seems our analysis of passive as partitive diathesis can offer a tentative answer to this question. Pica (1988) has shown that anaphors in various languages derive from nouns denoting inalienable nouns such as body parts and kinship terms, and that these nouns in turn often syntactically function as anaphors (cf. also Postma 1993). If inalienability can be defined in terms of partitivity, anaphoricity clearly involves partitivity. If this characterization of anaphors is correct, and if our analysis of passive as a partitive structure holds, it should not be surprising that intrinsically partitive anaphoric elements such as Romance *se* and Scandinavian *-s* can start to function as passive morphemes. It is then an interesting question of technical implementation to find out how these functions of *-s/ se* (reflexive/ reciprocal/ passive) can be formally related. We will leave this question for further research.

References

- Baker, Mark, Kyle Johnson & Ian Roberts 1989. Passive arguments raised. *Linguistic Inquiry* 20.219-251.
- Barbiers, Sjef. 1993. Modal verbs in Dutch; an LF analysis of the epistemic-root distinction. (ms. University of Leiden/ HIL)
- Belletti, Adriana. 1988. The case of unaccusatives. *Linguistic Inquiry* 19:1-34.
- Burzio, Luigi. 1986. Italian syntax. Kluwer: Dordrecht.
- Chomsky, Noam. 1981. Lectures on government and binding. Foris: Dordrecht.
- Chomsky, Noam. 1992. A minimalist program for linguistic theory. MIT Occasional papers in linguistics 1. Cambridge: MIT.
- Chomsky, Noam & Howard Lasnik. 1991. Principles and parameters theory. to appear in: *Syntax: an international handbook of contemporary research*, ed. by J. Jacobs, Arnim von Stechow, & Werner Sternefeld. Berlin: Walter de Gruyter.
- Cureton, R. 1979. The exceptions to passive in English: a pragmatic hypothesis. *Studies in the linguistic sciences*. 9.39-53.
- Déchainé, Rose-Marie. 1994. One *be*. Paper presented at the TIN dag (Linguistics in the Netherlands. ms. HIL).
- Dikken, Marcel den. 1993. Binding, expletives, and levels. (ms. Free University of Amsterdam/ HIL)

- D'Hulst, Yves. 1992. La sintassi del passivo italiano nel quadro della Grammatica Universale, doctoral dissertation, KULAK.
- Jackendoff, Ray. 1972. *Semantic interpretation in generative grammar*. Cambridge: The MIT Press.
- Heggie, Lori. 1988. *The syntax of copular structures*. Ph. D. dissertation, Los Angeles, University of Southern California.
- Heycock, Caroline. 1991. Specificational pseudo-clefts and predication. Paper presented at the Annual meeting of the LSA, January 1991.
- Higgins, Roger. 1979. *The pseudo-cleft construction in English*. New York: Garland.
- Hoekstra, Teun. 1984. *Transitivity*. Foris: Dordrecht.
- Hoekstra, Teun. 1993. BE as HAVE plus or minus. (ms. University of Leiden)
- Jaeggli, Oswaldo. 1986. Passive. *Linguistic Inquiry* 17. 587-622.
- Kayne, Richard 1981. On certain differences between French and English. *Linguistic Inquiry*, 12.349-371.
- Kayne, Richard. 1993. Toward a modular theory of auxiliary selection. *Studia Linguistica* 47.
- Krifka, Manfred. 1988. (ed.) *Genericity in natural language: Proceedings of the 1988 Tübingen Conference, Tübingen : SNS-Bericht*.
- Kühner, Raphael & Carl Stegmann. 1955. *Ausführliche Grammatik der lateinischen Sprache*. Gottschalkse Verlagsbuchhandlung: Leverkusen.
- Lamiroy, Béatrice. 1987. The complementation of aspectual verbs in French. *Language*. 63.278-298.
- Lamiroy, Béatrice. 1993. Pourquoi il y a deux passifs. *Langages* 109 Sur le passif, ed. by Gaston Gross, 53-72.
- Lasnik, Howard. 1992. Case and expletives: notes toward a parametric account. *Linguistic Inquiry* 23.381-405.
- Lasnik, Howard. 1994. *Lectures on minimalist syntax*. ms. University of Connecticut.
- Lyons, John. 1977. *Semantics*. Cambridge: Cambridge University Press
- Manzini, M. Rita. 1983. On control and control theory. *Linguistic Inquiry*. 14.421-467.
- Martin, Robert. 1979. *La tournure impersonnelle: essai d'une interprétation sémantico-logique*. Festschrift Kurt Baldinger zum 60-Geburtstag. Tübingen: Niemeyer.
- Meillet, Antoine. 1938. *Linguistique historique et linguistique générale*. Paris: Klincksieck.
- Meulen, Alice ter. 1990. Aspectual verbs as generalized quantifiers. *The proceedings of the ninth West Coast Conference on Formal Linguistics*, ed. by Aaron Halpern, 374-360. Stanford: CSLI.
- Moro, Andrea. 1990. *The raising of predicates: copula, expletives, and existence*. Università di Venezia, Venice.
- Pica, Pierre. 1988. Sur le caractère inalienable de l'être. *Transparence et opacité: littérature et sciences cognitives (Hommages à M. Ronat)*, ed. by Pierre Pica & Tibor Papp, 207-221, Cerf: Paris.
- Postma, Gertjan. 1993. The syntax of the morphological defectivity of BE, HIL manuscripts 3.31-67.
- Postma, Gertjan. 1994. The argumental licensing of the perfect tense, *Proceedings of CGSW 9*, ed. by Höskuldur Thráinsson & Samuel Epstein, Dordrecht: Kluwer.
- Rooryck, Johan 1992. Negative and factive islands revisited. *Journal of Linguistics*, 28.343-374.
- Ruwet, Nicolas. 1983. Montée et contrôle: une question à revoir? *Revue Romane* (numéro spécial) 24.17-37.

- Ruwet, Nicolas. 1984. Je veux partir - * Je veux que je parte. A propos de la distribution des complétives à temps fini et des compléments à l'infinitif en français. *Cahiers de Grammaire*. 7.76-138.
- Smessaert, Hans. 1993. The logical geometry of comparison and quantification. A cross-categorical analysis of Dutch determiners and aspectual adverbs. Doctoral dissertation, K.U.Leuven.
- Tesnière, Lucien. 1969. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- Vanden Wyngaerd, Guido. 1993. PRO-legomena. An investigation into the distribution and the referential properties of the empty category PRO. Berlin: Mouton De Gruyter.
- Verkuyl, Henk. 1972. On the compositional nature of the aspects. Dordrecht: Reidel.
- Vet, Co. 1980. Les constructions impersonnelles en français: une approche dans le cadre de la grammaire fonctionnelle de S.C. Dik. *Travaux de linguistique* 8.49-64.
- Verheugd-Daatzelaar, Els. 1990. Subject arguments and predicate nominals. Amsterdam: Rodopi.
- Von der Gabelentz, H. C. 1861. Über das Passivum. Eine sprachvergleichende Abhandlung. *Abhandlungen der königlichen sächsischen Gesellschaft der Wissenschaft zu Leipzig Klasse* 3.449-546.
- Williams, Edwin. 1983. Semantic vs. syntactic categories. *Linguistics & Philosophy* 6.423-446.
- Zaring, Laurie. 1993. Two 'be' or not two 'be': identity, predication, and the Welsh copula. ms., Carleton College.