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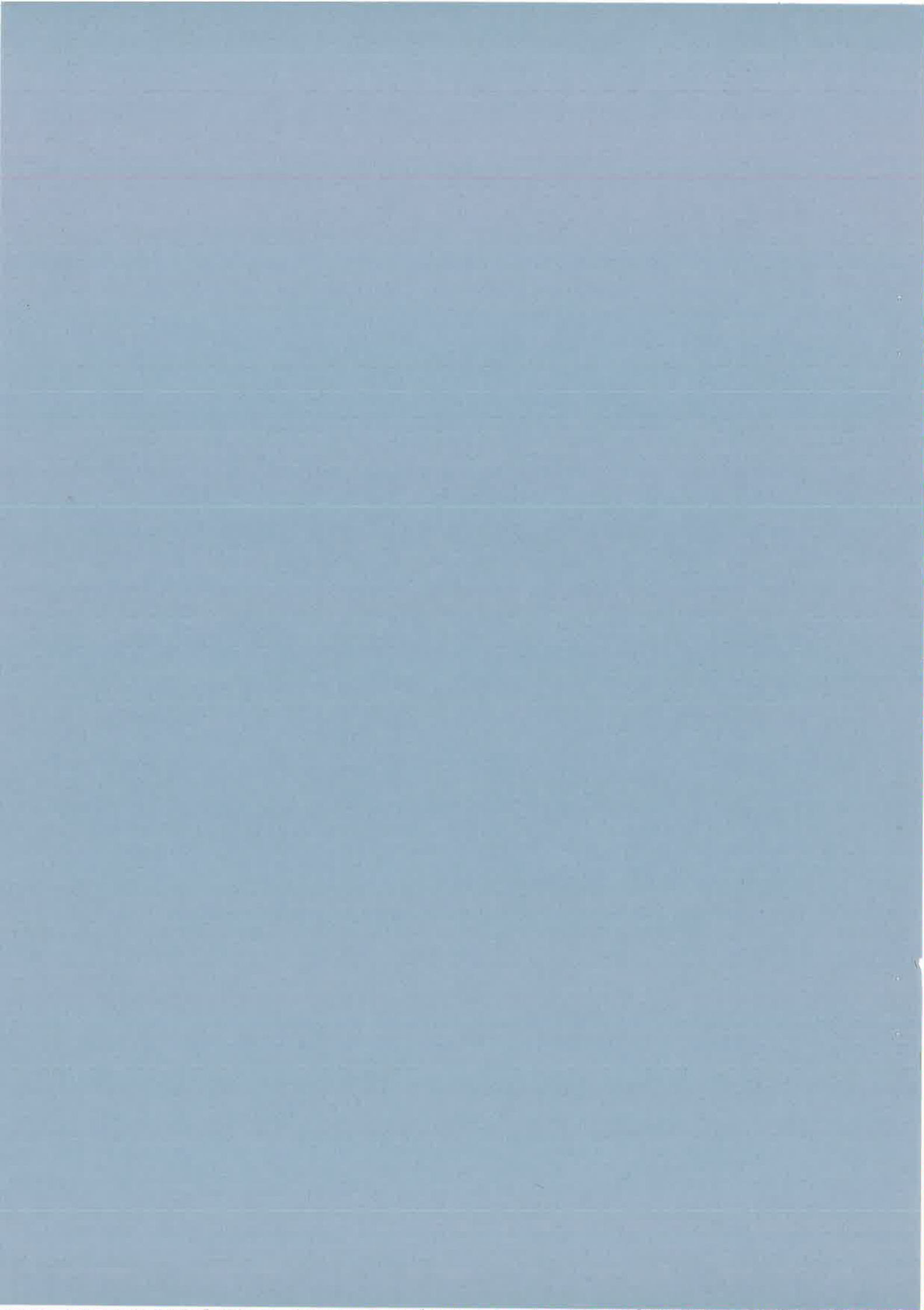
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Copula auxiliarization: how and why?  
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## 5. Introduction

As is well known, many genetically unrelated languages use that verb which primarily functions (or originally functioned) as a copula in a variety of auxiliary functions. Thus, English has the copula *be* as an auxiliary in the passive (1) and the progressive (2):

- (1) John *was* fired
- (2) John *was* reading

Dutch has the copula *zijn* 'to be' in the passive perfect (3), in the active perfect of a subclass of intransitive verbs (4), and in a construction which is more or less equivalent to the progressive (5):

- (3) Jan *is* ontslagen  
John is fired  
'John has been fired'
- (4) Jan *is* geslaagd  
John is succeeded  
'John has succeeded'
- (5) Jan *is* aan het vissen  
John is at the fish (inf)  
'John is fishing'

In some of these languages, we can even get combinations of copulas in different auxiliary functions. Compare:

- (6) John *was being* treated in the hospital
- (7) Jan *is wesen* vissen  
John is been fish (inf)<sup>1</sup>  
'John has been (involved in) fishing'

I will use the term *Copula Auxiliarization* for the diachronic process whereby the copula comes to be used in such auxiliary functions. In this paper I will discuss three questions relevant to Copula Auxiliarization (CA):

- (i) What kind of process is CA?
- (ii) How does CA come about, i.e. what routes or channels does it follow?
- (iii) Why does CA come about, i.e. what factors can explain the occurrence of CA?

1. *What kind of process is CA?*

Meillet (1912: 148) was perhaps the first to introduce the notion (and the term) 'grammaticalization'. By this he meant a process whereby an originally independent word with independent meaning (*mot autonome*) develops into an auxiliary word (*mot accessoire*), and finally ends up as a grammatical marker (*élément grammatical*). This process is characterized by a concurrent weakening of both the meaning and the form of the word in question:

L'affaiblissement du sens et l'affaiblissement de la forme des mots accessoires vont de pair; quand l'un et l'autre sont assez avancés, le mot accessoire peut finir par ne plus être qu'un élément privé de sens propre, joint à un mot principal pour en marquer le rôle grammatical. Le changement d'un mot en élément grammatical est accompli. (*ibid.* 139)

With Heine and Reh (1982) I will use the term *desemanticization* for the weakening of meaning, and the term *erosion* for the formal weakening involved in grammaticalization processes.

According to Meillet, Copula Auxiliatization is a matter of desemanticization. In his view (1912: 131), the copula has less and less specific meaning in the following constructions:

- (8) a. Je *suis* celui qui je suis      *suis* est mot autonome  
       'I am the one who I am'
- b. Je *suis* chez moi                *suis* a encore une certaine autonomie  
       'I am at home'
- c. Je *suis* malade                 *suis* n'est presque plus qu'un élément  
       'I am ill'                                grammatical

- |                         |                                     |
|-------------------------|-------------------------------------|
| d. Je <i>suis</i> parti | <i>suis</i> est tout à fait élément |
| 'I have left'           | grammatical                         |

Of course, the idea that the copula is, in certain occurrences, an independent verb which, in other occurrences, has lost something of its original meaning represents a long-standing view on the nature of the copula. I do not believe that this view is correct, nor do I believe that (8a-d) represent a scale of desemanticization. My reasons are the following:

- (a) it is doubtful whether, even in constructions such as (8a-b), the copula can be said to have independent meaning.
- (b) the auxiliary in (8d) is less far removed from its original function than Meillet would have it.

I will now discuss these two points in somewhat more detail.

### 1.1 *Does the copula ever have independent meaning?*

Within the framework of Functional Grammar (FG) I have analyzed the copula as a supportive verb which in certain conditions is inserted into predications with non-verbal predicates in order to help express those grammatical distinctions which are otherwise coded in the verbal predicate (Dik 1980, ch. 4; 1982). The rule of Copula Support which serves to insert the copula in the relevant conditions is judged to be part of the expression rules, and thus to have no contribution to make to the semantic content of the predication.

The grounds for this view can be explained as follows. Compare the following constructions:

- |                              |                              |
|------------------------------|------------------------------|
| (9) a. John is in the garden | (10) a. John - in the garden |
| b. John is the winner        | b. John - the winner         |
| c. John is ill               | c. John - ill                |

Where certain languages have a copula in constructions of type (9a-c), others do without a copula, as in (10a-c). There is no reason to assume, however, that there is any meaning difference between (9a) and (10a), or between (9b) and (10b). Therefore, the copula in (9a-b)

cannot be said to have independent meaning. If it had, it would be indispensable in (10a-b) as well.

This reasoning does not only apply across languages, it also applies within languages: in most languages, constructions with non-verbal predicates occur without a copula in certain conditions. Compare:

- (11) a. I want John (to be) in the garden by ten  
b. I consider John (to be) the winner  
c. I mean the chairs (which are) in the garden  
d. John was a boy (who was) extremely intelligent for his age

Again, the possible absence of the copula is incompatible with the idea that the copula has an independent semantic contribution to make to the content of the expression. Note that I do not claim that full verbs might not develop into copulas. What I claim is that, as soon as they have acquired copula function as in (9a-c), they function as a purely supportive device without independent meaning of their own. From this it follows that Copula Auxiliariation cannot be a matter of desemanticization.

### 1.2 *Is the auxiliary so different from the copula?*

In Dik (1982) I have shown that copular and auxiliary occurrences of *be* in English can all be described by means of one and the same rule of Copula Support. In other words, even in its auxiliary functions *be* can be treated as a supportive device. The reasoning behind this is as follows. Compare:

- (12) a. the boy is extremely intelligent  
b. the boy who is extremely intelligent  
c. the extremely intelligent boy
- (13) a. some students were invited  
b. the students who were invited  
c. the invited students



- (14) a. some children were crying  
 b. the children who were crying  
 c. the crying children

Just as the absence of the copula in (12c) does not affect the meaning of the expression, so the absence of the auxiliary in (13c) does not make the construction less passive, and the absence of the auxiliary in (14c) does not make the construction less progressive. It may be concluded that the passive character of *be invited* does not reside in *be*, but in the passive participle *invited*; likewise, the progressive character of *be crying* does not reside in *be*, but in the present participle *crying*. If this is correct, then the status of *be* in (13) and (14) is not that different from its status in (12): it is a supportive verb which is inserted into predications with non-verbal predicates in certain conditions. This means that the underlying predications of (12)-(14) may have similar structures, which can be represented as:

- (12)' extremely intelligent (the boy)  
 (13)' invited (some students)  
 (14)' crying (some children)

Similar observations can be made about Latin, in which both the copula and the auxiliary *esse* may in many cases be absent in the same or similar conditions:

- (15) Ciceronem eximium consulem (esse) puto  
 Cicero-acc excellent consul-acc (be) I-consider  
 'I consider Cicero (to be) an excellent consul'  
 (16) Ciceronem victum (esse) puto  
 Cicero-acc defeated-acc (to be) I-consider  
 'I consider Cicero (to be) defeated'  
 (17) Ciceronem cras venturum (esse) puto  
 Cicero-acc tomorrow coming-Fut-acc (to be) I-consider  
 'I think that Cicero will come tomorrow'

Again we find that (16) is no less 'passive perfect' without *esse*;

nor is (17) any less 'future active' for the absence of *esse*. We must conclude that the relevant semantic aspects do not reside in *esse*, but in the participles with which *esse* is combined in these constructions.

### 1.3 *Copula Auxiliarization is a matter of Expansion*

If what is said in 1.1 and 1.2 is correct, then CA can be said to be a matter of Expansion (in the sense of Heine and Reh 1982) rather than of Desemanticization. Heine and Reh define Expansion as the process whereby some grammatical element receives an extra, equally grammatical function. Expansion is involved, for example, when an originally locative preposition acquires the extra function of acting as a Recipient marker, or when an original Direction marker comes to be used as a purposive subordinator. In the case of CA we can say that the copula is used in constructions which are integrated into the Tense-Mood-Aspect system of the predicate. Once this integration is completed, the copula can be said to have auxiliary status, while retaining its basic character of a semantically empty supportive verb.

So far I have made the following two points:

- (a) the copula is a semantically empty supportive verb in all its occurrences;
- (b) the copular auxiliary is not that different from the copula as such. In fact, it can also be treated as a supportive verb, the privileges of occurrence of which are often similar or even identical to those of the copula.

If these two points are correct, they help us understand the process of CA in the sense that the 'distance through grammatical space' covered by CA is less extensive than it would seem to be at first sight. CA is more a matter of gradual expansion into the domain of the verbal paradigm, than a categorical clear-cut acquisition of entirely new functions by the copula.

## 2. *The aspectual origin of CA*

Periphrastic constructions containing a copula may synchronically play different roles in the grammatical system. Very often, they are used to express some *aspectual* distinction. But they may also have a purely temporal value, or be used for the expression of voice distinctions (as in English (1)). I believe that there is room for the view, however, that CA always originates in periphrastic constructions with an aspectual meaning, and only later potentially shift to other uses.

Such a hypothesis is empty, of course, if we do not have a working definition of what distinctions count as aspectual, as opposed to temporal (and modal) distinctions. Without being able to fully motivate this in the context of this paper, I shall here take the following view of this matter. First, I restrict the terms Tense and Aspect to distinctions which are grammatically (rather than lexically) coded. This means that I do not include Aktionsart in the definition of Aspect. By Aktionsart I understand the internal properties of some State of Affairs (henceforth SoA) as expressed by some predicate-frame. In Functional Grammar, the relevant distinctions are captured in a typology of SoAs which I will not discuss here in detail. The relevant parameters for this typology are:<sup>2</sup>

- (18) (a)  $\pm$ Dynamic : whether or not the SoA involves any kind of change
- (b)  $\pm$ Control : whether or not the SoA owes its existence or occurrence to some controlling entity
- (c)  $\pm$ Telic : whether or not the SoA presupposes a natural end-point
- (d)  $\pm$ Momentaneous : whether the SoA lasts only a moment of time (a temporal point) or a stretch of time (a temporal interval).

The resulting typology of SoAs is relevant to Tense and Aspect in the

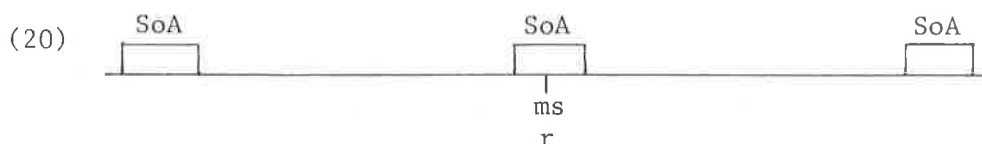
sense that there are complex interactions between SoA types as defined by lexical (or derived) predicates on the one hand, and grammatical distinctions of Tense and Aspect on the other.

Having restricted Tense and Aspect to oppositions which are grammatically rather than lexically coded, I now propose the following definitions for these categories:<sup>3</sup>

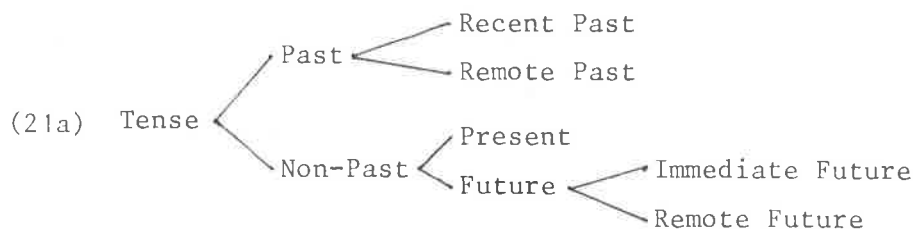
(19) *Tense*: Tense distinctions locate some SoA on the temporal axis in relation to the moment of speaking (absolute Tense) or to a reference point defined by some other SoA (relative Tense).

The relevant parameters are whether the SoA precedes, coincides with, or follows the moment of speaking (ms) of the reference point (r). Secondly, the relative temporal distance between the SoA and ms/r may be relevant to Tense systems. This may lead to such distinctions as between Recent Past and Remote Past.<sup>4</sup>

The relevant Tense relations can be represented as in the following diagram:



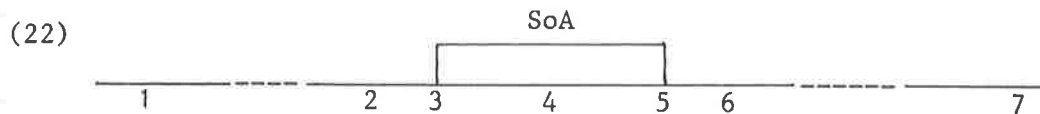
The following schema of progressive articulation of Tense distinctions covers the Tense systems of many languages:



As for Aspect, I will make a distinction between Phasal Aspect<sup>5</sup> and Quantificational Aspect. These two types of Aspect can be defined as follows:

- (21b) a. Phasal Aspect: : Phasal Aspect distinctions serve to describe what is the case at some reference point on the temporal axis in relation to the occurrence of some SoA.
- b. Quantificational Aspect: Quantificational Aspect distinctions express different quantifications over a set of occurrences of some SoA.

The most relevant Phasal Aspect distinctions can be represented as follows:



Suppose that the SoA as considered in (22) is 'John's writing a letter'. I take it that Phasal Aspect distinctions now serve to answer the question: 'what can be said at reference point  $i$  ( $i = 1..7$ ) in relation to the SoA of John's writing a letter?'. As the reference point shifts in relation to the SoA, different Phasal Aspect distinctions are involved. These distinctions can be labelled and illustrated as follows:

- (23)
- |   |                                 |                                   |
|---|---------------------------------|-----------------------------------|
| 1 | Prospective Aspect <sup>6</sup> | : John is going to write a letter |
| 2 | Immediate Prospective Aspect    | : John is about to write a letter |
| 3 | Ingressive Aspect               | : John starts writing a letter    |
| 4 | Progressive Aspect              | : John is writing a letter        |
| 5 | Egressive Aspect                | : John finishes writing a letter  |
| 6 | Immediate Perfect Aspect        | : John has just written a letter  |
| 7 | Perfect Aspect                  | : John has written a letter       |

Note that all the terms in (23) are intended to be taken in their aspectual sense. As we shall see in 4 below, there is a tendency for aspectual forms to be reinterpreted as expressing Tense distinctions. For this reason, terms such as Perfect are often used for expressions

which have already been (partially) integrated into the Tense system.

As formulated above, however, there is always a principled distinction between Tense and Phasal Aspect, even when the same 'constellation' of SoAs is involved. Consider the following examples:



- a. Future: It is stated at ms that
  - the SoA 'John is a rich man' will obtain after ms.
- b. Prospective: It is stated at ms that
  - John is such at ms that
  - the SoA 'John is a rich man' will obtain after ms.

Thus, the Future simply places some SoA in the stretch of time after ms. The Prospective projects a state obtaining at ms into a future SoA. In the same way, we can distinguish between Past and Perfect:



- a. Past: It is stated at ms that
  - the SoA 'John is a rich man' obtained before ms.
- b. Perfect: It is stated at ms that
  - John is such at ms that
  - the SoA 'John is a rich man' obtained before ms.

Again, the Perfect is a projection of a present state into a past SoA.

Quantificational Aspect answers the question: 'How often does SoA occur?', or 'How often is entity x involved in SoA?'. We can here make the following distinctions:

- (26) a. Habitual : SoA occurs (repeatedly) *due to a propensity of x for SoA*
- b. Continuous : SoA occurs *all the time*

- c. Semelfactive : SoA occurs *just once*
- d. Iterative : SoA occurs *several times*
- e. Frequentative: SoA occurs *many times*

As presented here, Quantificational Aspect and Phasal Aspect cannot be subsumed under one unified higher notion of Aspect. As noted by Comrie (1976: 26), this seems to run counter to the fact that in many languages one and the same expression type (the 'imperfective') is used for expressing both Progressive (Phasal) and Habitual/Continuous (Quantificational). According to Comrie this implies that these various distinctions must be thought of as forming one unified concept.

I here take the alternative route of supposing that this type of uniform expression is due to a higher level generalization of the form:

- (27) If x has the habit of/is continuously involved in SoA, then x (in a sense) never finishes SoA-ing.

I thus assume that the imperfective (in the sense mentioned above) generalizes over Phasal and Quantificational Aspect in terms of the common property of 'Non-Completion'. Note, by the way, that there are many languages in which Progressive and Habitual/Continuous are duly distinguished both formally and semantically.

If Tense and Aspect are defined as in (19) and (21a-b), they are in principle independent of each other. Aspect distinctions such as those of (23) and (26) do not by themselves locate the SoA on the time axis. And Tense distinctions *per se* are not sensitive to such reference points as 1 through 7 in (22). Complexities arise, of course, when Tense and Aspect distinctions are combined with each other. As indicated in the following diagram, the product of Tense and Phasal Aspect results in a great number of potential Tense-Aspect combinations:



For example:

- (28) Past4 = PastProgr = John was writing a letter  
Pres5 = PresEgr = John finishes writing a letter  
Fut1 = FutProsp = John will be going to write a letter  
etc.

In a similar way, Tense may combine with Quantificational Aspect into such combinations as:

- (29) PastHab = John used to write letters  
PresCont = The roof leaks (all the time)  
FutFreq = John will often come to visit you

Finally, certain Aspects may combine with each other, and the resulting combinations may combine with Tense into yet further possible combinations such as:

- (30) PresPerfProgr = John has been writing a letter  
PastHabProgr = John used to be waiting for me  
FutProspFreq = This boy is going to frequently cause trouble  
etc. etc.

The present paper is obviously not the place to give a full elaboration of the sketchy outline of Tense and Aspect given above. What must be retained for our present purposes is that Phasal Aspect distinctions can always be regarded as property-assigning expressions. They always allow for paraphrases of the following form:

- (31) (a)  $x$  has the property at reference point  $i$   
(b) of such and such involvement in specified SoA

The fact that Phasal Aspect distinctions can be conceived of as property-assigning makes it understandable that especially copular constructions, being property-assigning constructions *par excellence*, provide a constant source for the innovation of the aspectual system.

#### 4. *Stance of Copula Auxiliation*

There is evidence that the copula can develop into an aspectual



auxiliary along different routes, or 'channels' in the terminology of Heine and Reh (1982). The most important of these channels are the following:

- (i) the Localist channel,
- (ii) the Property channel.

These will be dealt with separately in the following sections.

### 3.1 *The Localist channel*

The Localist origin of periphrastic constructions with a copula acquiring an aspectual meaning is insightfully discussed in Claudi and Heine (1985). Following the theory of Lakoff and Johnson concerning metaphor, they point to an underlying metaphor in which a State of Affairs is conceptualized as a spatial object which one can be close to, enter, be in/on/at, and exit from. According to this metaphor, local expressions can come to be used for expressing aspectual distinctions such as those diagrammed in (22), according to the following pattern:<sup>7</sup>

- (32) a. John is near the building
- b. John is near the going
- 'John is about to go'           (= Immediate Prospective)
- (33) a. John is in the building
- b. John is in the going
- 'John is going'               (= Progressive)
- (34) a. John is on the mountain
- b. John is on the going
- 'John is going'               (= Progressive)

Indeed, many languages have aspectual forms which can be traced back to such a localist metaphor.

A case in point is Welsh, in which we find such forms as the following (Awbery 1976):

- (35) mae ef ar weld y ddrama  
 is he on seeing the play  
 'He is about to see the play' (= Immediate Prospective)
- (36) mae 'r dyn yn gweld y ci  
 is the man in seeing the dog  
 'The man is seeing the dog' (= Progressive)
- (37) mae 'r dyn wedi gweld y ci  
 is the man after seeing the dog  
 'The man has seen the dog' (= Perfect)

As Awbery demonstrates, the complement of the prepositions *ar*, *yn*, and *wedi* has all the criterial properties of a nominalization, so that the relevant constructions can correctly be paraphrased as 'The man is at/in/after the seeing of the dog'. Just as illustrated in (28), these constructions can combine with different Tenses to form such expressions as:

- (38) bydd y dyn yn gweld y ci  
 will-be the man in seeing the dog  
 'The man will be seeing the dog' (= Future Progressive)

And just as illustrated in (30), different aspectual distinctions can also be combined with each other:

- (39) mae Ifor wedi bod yn darllen llyfr  
 is Ifor after being in reading book  
 'Ifor has been reading a book' (= Present Perfect Progressive)

In terms of Functional Grammar we can represent this metaphorical process as follows. First consider a simple locative predication with its underlying structure (as suggested in Dik 1980: ch. 4):

- (40) a. John is in the garden  
 b.  $\text{Pres}^{\{(\text{d}1x_j: \text{garden}_N(x_j))_{\text{Loc}}\}}(\text{d}1x_i: \text{John}_N(x_i))_{\emptyset}$

In the underlying structure the locative term 'in the garden' is applied as a predicate to the term 'John'. In English, the application of such a non-verbal predicate will trigger the rule of Copula Support,

so that (40a) will result from the expression rules.

We can now use (40b) as a model for a construction which literally means:

(41) John is in the reading of the book

In this construction, when analyzed in the same way as (40a), 'in the reading of the book' is applied as a predicate to 'John':

(42)  $\text{Pres}\{(\text{dx}_j: [\text{read}_V(x_i)_{\text{Ag}}(\text{the book})_{\text{Pat}}](x_j))_{\text{Loc}}\}(\text{dx}_i: \text{John}_N(x_i))_{\emptyset}$

Literally, then, John is said to have the property of being inside the entity  $x_j$ , which itself is defined as 'his (i.e., John's) reading the book'. As Awbery convincingly argues, constructions such as (35)-(39) should be analyzed as complex predications which, however, have been integrated into the Tense/Aspect system of Welsh, thus providing expressions for several aspectual distinctions.

Once such constructions as these have been integrated into the Tense/Aspect system through this kind of metaphorical extension, they tend to lose some of their original locative character: they tend to be cut loose from their semantic roots, so to speak, and processes of formal erosion may contribute to the drifting apart of the two constructions.<sup>8</sup> In Welsh this formal erosion is hardly noticeable, except for the fact that the preposition *yn*, in its aspectual usage, lacks the property of the local preposition *yn* of effecting a nasal mutation of the following consonant, and may be reduced to 'n in its aspectual, but not in its locative usage (Comrie 1976: 100).

But in other languages the aspectual construction has drifted further away from its locative model, although the latter can clearly be shown to be the original source. A very interesting example of this is given by Claudi and Heine (1985) from Ewe, a West African language of the Kwa family. Compare the following constructions:

(43) a. me-le tó dzí  
I-be mountain on  
'I am on the mountain'

- b. me-le yi-yi dzi  
 I-be going on  
 'I am on the going' (= Progressive)

In this case, the aspectual construction is fully parallel to the locative one, both having the same postposition *dzi*. But now compare:

- (44) a. me-le xɔ me  
 I-be house in  
 b. me-le yi-yi m̄  
 I-be going  
 'I am going' (= Progressive)

- (45) a. me-le anyf gbé  
 I-be ground at/place  
 b. me-le yi-yi gé  
 I-be going (= Immediate Prospective)

Note that in these cases the original locative preposition has worn down to a reduced form, which now unmistakably signals that the construction has the particular aspectual value indicated. At this point there is no further need to use complex underlying structures parallel to (42) above, because the construction no longer signifies the literal paraphrase 'I am in/at the going'. Rather, a construction such as (44b) can be simply derived from an underlying representation of the form:

- (46) Pres Progr  $yi_V$  (me)<sub>Ag</sub>

where Progressive will be mapped onto the combination of *-le ... m̄* which now acts as a kind of discontinuous Aspect marker.<sup>9</sup>

The Localist metaphor is responsible for major and minor construction types in quite a few languages. In older stages of English we find constructions of the form *he was on fechtunge* 'he was on fighting', which later eroded to *he was a-fighting*, a construction which survives as an archaism in Modern English.<sup>10</sup> Compare also German *Er ist am Singen*, Dutch *Hij is aan het zingen* 'he is at (the) singing' (cf. (5) above), both used for expressing Progressive

Aspect.

### 3.2 *The Property channel*

We saw in 2 above that Phasal Aspect distinctions can be conceived of as property-assigning expressions. A constant source of aspectual forms is therefore provided by expressions of the following form:

- (47) a. Prospective: John is (a person who is) going-to-win  
b. Progressive: John is (a person who is) winning  
c. Perfect: John is (a person who is) having-won

An interesting, rather complex example of this type of construction from Basque is discussed in Shiratsuki (1985). In Basque the original Perfect has already been partially reinterpreted in terms of Tense. For expressing 'Perfect' in the aspectual sense, there is a complex construction type of the following form:

- (48) Liburu hori ni-k irakurri-a d-a  
book that-(abs) I-erg read(perf)-def.sg 3sg.abs-izan (= be)  
'That book is such that I have read it'

As Shiratsuki demonstrates, this construction is only seemingly transitive. If it were really transitive, then (i) the auxiliary would not be *izan* 'be' but *ukan* 'have', and (ii) both Agent and Goal would be coded in the verb through agreement. Compare the transitive parallel to (48):

- (49) Ni-k liburu hori irakurri d-u-t  
I-erg book that(abs) read(perf) 3sg.abs-ukan-1.sg.erg

Construction (48), then, is comparable to property-assigning constructions of the form:

- (50) Koldo handi-a d-a  
Koldo(abs) big-def.sg 3sg.abs-be  
'Koldo is big (a big one)'

Correspondingly, Shiratsuki analyzes (48) as a construction in which the property of 'having been read by me' is assigned to 'the book',

the result being a truly 'Perfect' or 'Resultative' construction.

For another example of exploitation of the Property channel, consider Latin periphrastic forms consisting of a participle + *esse*. In the passive, such combinations provide the standard expression of the Perfect:<sup>11</sup>

- (51) Caesar victus est  
Caesar having-been-defeated he-is  
'Caesar has been defeated'

With *verba deponentia*, such combinations can also have active Perfect value:

- (52) Caesar haec locutus est  
Caesar these having-said he-is  
'Caesar has spoken thus: ...'

The difference between Tense and Aspect comes out most clearly, however, in the opposition between the simple Future and the Immediate Prospective periphrastic form with a participle in *-urus*:

- (53) Proficiscar  
leave-Fut.1sg  
'I will leave'
- (54) Profecturus sum  
going-to-leave I-am  
'I am going to leave' = 'I am on the point of leaving'  
'I intend to leave'

The intentional shade which may attach to the Prospective may be understood as resulting from the meaning 'it is a property of x now that x will SoA later'. One of the ways in which a property of x may be projected into the future is through x having the intention at reference point of doing SoA after reference point. Other such 'bridges' between reference point and SoA after reference point may be that x has the plan or the purpose of doing SoA (cf. Pinkster 1984: 290).

In terms of Functional Grammar, constructions which originally

underlie the creation of aspectual forms through the Property channel can be represented in the following way:

$$(55) \quad \left\{ \begin{array}{l} \text{Pres} \\ \text{Past} \\ \text{Fut} \end{array} \right\} \{ (i1x_j : \left\{ \begin{array}{l} \text{Prosp} \\ \text{Progr} \\ \text{Perf} \end{array} \right\} \text{pred}_V(x_j)) \} (x_1) \emptyset$$

This type of predication expresses that some entity ( $x_1$ ) has (had, will have) the property of being an entity of type  $x_j$  such that  $x_j$  is going to be involved in (is involved in, has been involved in)  $\text{pred}_V$ -ing. For a concrete example, consider the analysis of the Latin example:

(56) Profecturus erit  
'He will be going to leave'

(57) Fut  $\{ (i1x_j : \text{Prosp proficisci}_V(x_j)) \} (d1x_i : 3\text{sg}(x_i)) \emptyset$

The application of the non-verbal predicate will, in appropriate conditions, trigger Copula Support; and the predicate will be expressed in the Prospective participle *profecturus*.

The Property channel will often make use of participles, because these are quite suitable for expressing properties which are defined in terms of verbal predicates, as in (55). If the present analysis is correct, however, participles are only one particular means for expressing term predicates of the form:

(58)  $(i1x_j : \text{pred}_V(x_j))$

Other such means would be headless or headed relatives of such forms as:

(59) a. a person who  $\text{pred}_V$   
 b. one who  $\text{pred}_V$   
 c. who  $\text{pred}_V$

We may thus expect to find other languages which, as in Basque, use expressions such as (59) for the creation of aspectual forms.

### 3.3 *Other possible channels*

The Localist channel and the Property channel no doubt account for the great majority of developments through which copular constructions become integrated into the Tense/Aspect system of the verbal predicate. According to Heine and Reh (1982: 116) there is at least one further channel through which copulas can develop into auxiliaries: the Serial channel. This channel involves constructions of the following type:

- (60) Prospective:  
he go he eat 'he is going to eat'
- (61) Perfect:  
he finish he eat }  
he eat he finish } 'he has eaten'
- (62) Progressive:  
a. he sit he eat 'he is eating'  
b. he is he eat 'he is eating'

Constructions of the form (62b), then, may be a source for CA along this channel.

I have some misgivings, however, about the question whether constructions of type (62b) can truly be classed as serial constructions. It is characteristic of serial constructions that two or more verbs which originally signify separate aspects or 'phases' of one complex SoA later amalgamate into one closely-knit combination within which they may lose something of their concrete meaning. This characterization holds for all the other examples in (60)-(62). But what is the original 'independent meaning' of the copula in (62b)? I suspect that either the verb glossed 'to be' in constructions of the form of (62b) should be traced to verbs other than the copula, or that constructions of this form cannot properly be called 'serial'.

Consider in this respect the structure of the Swahili verbal complex. Swahili simple verbs can contain just one instance of a rather considerable number of Tense/Aspect elements (cf. Ashton 1947), as in:



- (63) a. ni-na-som-a  
           I-Progr-read-Ind           'I am reading'
- b. ni-li-som-a  
           I-Past-read-Ind           'I read (Past)'
- c. ni-ta-som-a  
           I-Fut-read-Ind           'I will read'
- d. ni-me-som-a  
           I-Perf-read-Ind           'I have read', 'I have finished reading'

Swahili allows for a great number of combinations of these Tense and Aspect operators. But whenever such a combination is expressed, the copula *kuw-* is needed as an auxiliary, so that the main verb will still contain only one Tense/Aspect marker. This results in such combinations as:

- (64) a. a-li-kuw-a a-me-lal-a  
           he-Past-be-Ind he-Perf-sleep-Ind  
           'He was in the state of having fallen asleep'  
           = 'He was asleep'
- b. a-ta-kuw-a a-na-som-a  
           he-Fut-be-Ind he-Progr-read-Ind  
           'He will be in the state of being involved in reading'  
           = 'He will be reading'

Again it may be doubted whether constructions such as these can be properly called 'serial'. An alternative view is that the copula is exploited as a supportive device in order to express combinations of Tense/Aspect operators, while still retaining the principle that only one such operator can appear per verb. It remains true, however, that constructions such as (64a-b) consist of two fully inflected verbs, which can each occur on their own in other constructions. In this respect they differ from the combinations of copula + participle which result from developments along the Property channel.

#### 4. *Why does CA take place?*

Now that we have considered the different channels along which copular

constructions can be integrated into the aspectual system of the verbal predicate, we can ask the question of why this process should take place in comparatively uniform ways in the history of quite different types of languages.

An interesting hypothesis about this matter was suggested by Meillet (1909, 1912, 1920). This hypothesis can be formulated as follows:

- (65) (i) Aspectual forms tend to get reinterpreted as temporal forms;  
 (ii) To the extent that (i) is the case, there is a need for new aspectual forms;  
 (iii) These new forms are provided by periphrastic combinations with auxiliary verbs such as 'be', 'have', 'go', 'want' etc.

Meillet is not entirely clear, however, about the exact cause-effect relations implied by hypothesis (65). In one interpretation, the changes implied by (65) could be represented in terms of a drag-chain, as represented in:

(66)

	Aspect	Tense	
	E <sub>1</sub>		stage I
		E <sub>1</sub>	stage II
→	E <sub>2</sub>	E <sub>1</sub>	stage III

According to this interpretation, an original aspectual form, E<sub>1</sub>, is reinterpreted as a purely temporal form; this reinterpretation leaves a vacant aspectual position, which is then filled by the innovative form E<sub>2</sub>. This interpretation is suggested by Meillet's discussion (1912: 141ff.) of the reinterpretation of the Indo-European Perfect as either a simple past or a stative present:

Mais la forme, en disparaissant, laissait un vide. Car on éprouve le besoin de bien marquer l'action achevée dont on envisage le résultat. On y parvient le plus

souvent par le groupement d'une forme nominale rattachée à un verbe accessoire.

In this interpretation, then, the initial event is the reinterpretation of  $E_1$  as a purely temporal form, and the resulting gap in the system is the trigger for the appearance of the innovative form.

Hypothesis (65), however, can also be interpreted in terms of a push-chain of events, as illustrated in:

(67)

	Aspect	Tense	
	$E_1$		stage I
→	$E_2, E_1$		stage II
	$E_2$	$E_1$	stage III

In this interpretation, the first step is the creation of a new periphrastic form  $E_2$ , which then allows  $E_1$  to be reinterpreted in a purely temporal sense. Again, some of Meillet's formulations seem to suggest this push-chain interpretation rather than the drag-chain interpretation represented in (66). See for instance his description of the replacement of the simple past form by the composite, originally aspectual periphrastic construction in a number of different languages (1909: 154ff.).

Both the drag-chain and the push-chain interpretations leave certain questions unanswered. These questions can be formulated as follows:

(68) Drag-chain problem:

If the expression of aspectual distinctions is so essential, why should an aspectual form be fully reinterpreted in terms of Tense before a new aspectual expression is available?

(69) Push-chain problem:

If the original aspectual form is still fully aspectual, why should a new aspectual form be created?

I believe that these problems might be overcome by adopting a third possible interpretation of hypothesis (65), in which drag-chain and

push-chain elements combine into the following sequence of events:

(70)

Aspect	Tense	
$E_1$		stage I
$E_1 \dots \dots \dots E_1$		stage II
$E_2 \quad E_1 \dots \dots \dots E_1$		stage III
$E_2$	$E_1$	stage IV

According to this interpretation, an original aspectual expression  $E_1$  is partially reinterpreted as a temporal form. By partially I mean that it acquires purely temporal interpretations in certain contexts/ occurrences, while retaining its aspectual value in other contexts/ occurrences (Stage II). In such a situation, the need arises for a new, unequivocal expression for the aspectual distinction (Stage III). Once this expression  $E_2$  has been introduced,  $E_1$  is free to fully shift to the temporal dimension (Stage IV).

I believe that (70) is the most plausible interpretation of hypothesis (65), since it avoids both the Drag-chain problem (68) and the Push-chain problem (69). Indeed, (70) can be taken to represent a Drag-push-chain type of development. It is also compatible with the 'Functionality Principle' formulated by Bossuyt (1983), which says that languages cannot develop in such ways as to result in stages in which essential functions cannot be unambiguously expressed. This would be the case if the course of events would be as pictured in (66), in which the aspectual form is first reinterpreted as a temporal one, thus creating a void which is later filled in by the new aspectual expression.

#### 4.1 Temporal reinterpretation of aspectual forms

In any interpretation of hypothesis (65), the temporal reinterpretation of originally aspectual forms plays an important part, either as cause, or as effect, or as both cause and effect of the introduction of innovative aspectual forms. There is, indeed, a vast amount of

evidence for such a reinterpretation from quite different language families.<sup>12</sup>

How does the temporal reinterpretation of aspectual forms come about? I believe that two factors can be held responsible for this process:

- (i) inductive generalization;
- (ii) semantic simplification.

Let us look at these two factors separately.

#### 4.1.1 *Inductive generalization*

I have interpreted Aspect as pertaining to the question: 'What can be said at reference points 1, 2, 3, ... in relation to the occurrence of a certain SoA?'. Since the reference points 1, 2, 3, ... can in principle move freely along the time axis, and take any position with respect to the moment of speaking *ms*, Aspect is basically independent of Tense. However, both within and across languages, the following two principles appear to obtain:

- (71) (i) If the reference point for an aspectual form is specified, it is much more often specified as coinciding with *ms* than as lying in the Past or the Future.
- (ii) If the reference point for an aspectual form is not specified, it is commonly taken as coinciding with *ms* by default.

Through these two principles, the reference point for aspectual forms tends to get anchored in the moment of speaking. Through inductive generalization this may lead to a situation in which *only* the *ms* may be taken as the reference point for an aspectual form. We then have a partial temporal reinterpretation of the originally aspectual form.

Now consider what this means for the position of the relevant SoA on the time axis:

- (72) (i) If the reference point for a (Recent) Perfect coincides with the *ms*, then the relevant SoA lies in the Past.

- (ii) If the reference point for a Progressive coincides with the ms, then the relevant SoA lies in the Present.
- (iii) If the reference point for an (Immediate) Prospective coincides with the ms, then the relevant SoA lies in the Future.

Thus, the anchoring of aspectual reference points in the ms by implication places the relevant SoAs in the Past, the Present, and the Future, respectively.

#### 4.1.2 *Semantic simplification*

Even when the aspectual reference point coincides with the ms, there is still a semantic difference between the relevant Aspect and the corresponding simple Tense. Compare the Present Perfect with the simple Past:

- (73) John kissed Mary
  - 'At ms it is stated that
  - (a) the SoA 'John kiss Mary' took place before ms'
- (74) John has kissed Mary
  - 'At ms it is stated that
  - (a) John is such at ms that
  - (b) the SoA 'John kiss Mary' took place before ms'

From these paraphrases it is clear that the Perfect is semantically more complex than the simple Past even when both are anchored in the ms. The more complex meaning of the Perfect can now be simplified in two ways. First, the element (a) can be dropped, so that the original Perfect fully coincides with the simple Past. Second, the element (b) can be dropped, so that only the present state of John is involved, with no reference to the original SoA which brought him into that state. In this latter case, the original Perfect coincides with a simple (stative) Present. In both ways, the original aspectual form is fully reinterpreted as a simple Tense form. In a similar way, semantic simplification would lead to a reinterpretation of the Progressive as

a simple Present tense, and of the (Immediate) Prospective as a simple Future tense.

This brings us to our final question: if the above account of the temporal reinterpretation of originally aspectual forms is at all valid, how and why is it that semantic simplification comes about? Here, again, some suggestions of Meillet's may lead us to an interesting hypothesis.

#### 4.2 Language acquisition a factor in semantic simplification?

Meillet (1909: 152) cites Stern and Stern (1907) for the statement that the German *Imperfekt* (= simple Past) appears very late in the speech of children, and is of rare occurrence afterwards. This means that periphrastic forms such as *Der Hund hat gebellt* 'the dog has barked' are much more common in the speech of children than *Der Hund bellte* 'the dog barked'. Meillet connects this fact with the supposition that the periphrastic forms, being morphologically more perspicuous, are easier to handle ('plus commode a manier', 155) than the more irregular non-periphrastic forms. We could represent this situation in the following way:

(75)

	form	meaning
simple Past	more difficult	less complex
periphrastic Perfect	less difficult	more complex

Let us now suppose that children in acquiring the verbal system start out with the less difficult forms, associating these with the less complex meanings. This would mean that they wrongly connect form and meaning along the dotted line. If this type of connection were to be maintained into the adult language, then the semantic simplification of the original Perfect would, in fact, have been accomplished.

The following facts on Dutch language acquisition would seem to support the type of development postulated here. From Schaerlaekens (1977) we can derive the following summary of the development of the verbal complex: until the age of about 2.6, Dutch children use almost all verbs in either stem or infinitive form, without any sign of Tense/Aspect morphology. When Tense distinctions become relevant, these are first expressed by periphrastic combinations of a limited number of auxiliaries plus infinitive of the lexical verb. This happens even when such combinations are ungrammatical in adult Dutch, a fact which suggests that children at this stage use the auxiliary + infinitive pattern as a general strategy for the expression of Tense distinctions.

The initial Tense system of Dutch children can be represented as follows:

(76)	(Recent) Past	Present	(Immediate) Future
		hondje bijt/bijten doggie bite	
	hondje heb gebijt doggie has bitten	hondje doet bijten doggie does bite	hondje gaat bijten doggie goes bite

Not that at this stage there is no sign of the Past/Perfect opposition between *beet* 'bit' and *heeft gebeten* 'has bitten'; that *do*-support is ungrammatical in Dutch in all circumstances; and that the auxiliary *gaan* is used for the Future where standard Dutch would require *zullen* 'shall/will'. We can thus say that children at this stage use a system of periphrastic forms, some of their own making, in association with a simplified Tense system, in accordance with (75).<sup>13</sup>

Lalleman (1981, 1983) found a similar overgeneralization of periphrastic patterns in the speech of foreign workers learning Dutch. She relates this phenomenon to the complexities of Dutch word order patterns in which finite verbs (Vf) must take clause-second position, but non-finite verbs (Vi) take final position, thus 'embracing' the Object, as in:



(77)	Subj.	Vf	Obj	Vi
a.	de hond the dog	bijt bites	de man the man	
b.	de hond the dog	heeft has	de man the man	gebeten bitten
c.	de hond the dog	gaat goes	de man the man	bijten bite

The general trend is that patterns such as (77b-c) appear before patterns such as (77a).

We may thus conclude that periphrastic patterns appear to be exploited both by first and second-language learners of Dutch, and that this is due to a desire for simplification in two respects:

- with respect to form, since a limited number of inflected auxiliaries is sufficient for all purposes;
- with respect to order, because when periphrastic forms are used all main clauses can be ordered according to the pattern Subj-Vf-Obj-Vi. Periphrastic forms typically originate as aspectual expressions. The overgeneralization of periphrastic forms by language learners, and their association with a simplified Tense system, may thus be responsible for the temporal reinterpretation of aspectual distinctions.

##### 5. *Conclusion and summary*

By way of conclusion, I summarize the main theses of this paper:

- (i) Copula Auxiliarization (CA) is a less dramatic change than it is often assumed to be, since
  - (a) the copula never has any independent meaning in the first place, so that no desemanticization is involved,
  - (b) both the copula and the copular auxiliary can be treated as supportive verbs, to be inserted into predications under certain grammatical conditions.
- (ii) CA is rather a matter of Expansion (= the acquisition of new grammatical functions by some grammatical element).

- (iii) CA originates in innovative aspectual forms, which may later be reinterpreted in terms of Tense or Voice.
- (iv) Copular constructions are especially suited for the expression of (Phasal) Aspect distinctions, because such distinctions ascribe a property to some entity  $x$  at some reference point  $r$  in relation to the occurrence of some SoA involving  $x$ .
- (v) There are various channels along which CA may come about:
  - (a) the Localist channel, based on the metaphor whereby a SoA is conceptualized as a spatial object;
  - (b) the Property channel, where the property of being involved in such and such a way in some SoA is assigned to  $x$ ;
  - (c) possibly the Serial channel, although it is doubtful whether the relevant constructions can properly be called serial constructions.
- (vi) It is plausible that innovation of aspectual forms (and thus CA) comes about through the tendency of old aspectual forms to become reinterpreted in purely temporal terms.
- (vii) It is plausible that such innovation comes about in a combined Drag-chain and Push-chain fashion.
- (viii) The temporal reinterpretation of aspectual forms can be understood as due to
  - (a) inductive generalization: if aspectual forms are mostly used in relation to the moment of speaking, inductive generalization may lead to a situation in which they can be only so used.
  - (b) semantic simplification: aspectual forms, when used with reference to  $ms$ , have the complex meaning: 'It is stated at  $ms$  that (1)  $x$  is such at  $ms$  that (2)  $x$  is involved in SoA before/at/after  $ms$ '. If (1) is dropped, the result is a purely temporal form; if (2) is dropped, the result is a simple stative Present form.
- (ix) The semantic simplification meant under (viii) (b) may be due to a tendency on the part of language learners to initially associate the formally less difficult periphrastic forms with the semantically less complex Tense system.

NOTES:

- \* This is a preliminary version of a paper to be read during the workshop on Historical Development of Auxiliaries, at the VIIth International Conference for Historical Linguistics, Pavia, 9-13 September 1985.
- <sup>1</sup> *Wezen*, usually a stylistic variant of *zijn*, is in this combination the only possibility.
- <sup>2</sup> For the typology of States of Affairs, see Dik 1978, Vet 1980, Vester 1983, De Groot 1984. For the distinction  $\pm$ Telic, see Comrie 1976.
- <sup>3</sup> This view of Tense and Aspect is partially based on Comrie 1976, 1981. Compare also Vet 1980, Johnson 1981, Shiratsuki 1985.
- <sup>4</sup> Compare Johnson 1981.
- <sup>5</sup> For Phasal Aspect, compare Johnson 1981: 152: 'Verb aspect involves reference to one of the temporally distinct phases in the evolution of an event through time'. Note that both Comrie (1976) and Johnson (1981) reject the distinction between Phasal and Quantificational Aspect as made here, on the ground that many languages have one formal category (the imperfective) which covers both (or at least, Progressive and Habitual).
- <sup>6</sup> The term is from Comrie 1981: 66, where the following definition is given: 'A state is related to some subsequent situation, such that the seeds of that subsequent situation are already present in the earlier state.'
- <sup>7</sup> See also Comrie 1976: 98ff.
- <sup>8</sup> Thus one may well say that desemanticization is involved in this process, but it is desemanticization of the locative predicate, not of the copula.

- <sup>9</sup> Claudi and Heine (1985: 29) note that in some dialects of Ewe, expressions such as (45b) can optionally be further simplified to (i) me-yi-yi m̄, or even (ii) me-yi-m̄. In these reduced forms, there is little that reminds one of the locative origin of the construction.
- <sup>10</sup> For the status of this construction and its alleged influence on the development of the progressive form, see Scheffer 1975.
- <sup>11</sup> Note that according to Pinkster (1983, 1984) the Latin Perfect (including the periphrastic forms) has been largely reinterpreted as a simple Past Tense. See section 4.1 below.
- <sup>12</sup> See the various studies of Meillet's cited above and Comrie (1976, 1981) for various examples of such a development. Heine and Reh (1982) mention various developments of this kind in African languages.
- <sup>13</sup> Schaerlaekens (1977: 71) also notes, however, that constructions with the auxiliary *doen* 'do' and *gaan* 'go' as exemplified in (76) are also characteristic of the 'motherese' spoken to children, e.g. in picture book reading. This means that there is probably an interaction between learner and teacher, where both use the auxiliary + non-finite verb combination as an easy entry into the verbal system.

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