Structural Syntax : The View from Cognitive Grammar

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My purpose is to compare particular facets of Tesnière's **structural syntax** with the contemporary theory of **cognitive grammar** (CG) [Langacker, 1987a, 1990, 1991a]. While I have no intention of labeling Tesnière as the "first cognitive grammarian", it is worth noting the substantial affinity between the two frameworks (as well as certain differences).

A pivotal theoretical issue is the relation between meaning and grammar. On first examination, it appears that Tesnière shares with [Chomsky, 1957] the view that grammatical structure is distinct and autonomous *vis-à-vis* semantics : "Le plan structural et le plan sémantique sont donc théoriquement entièrement **indépendants** l'un de l'autre" (41)[1]. Nevertheless, meaning is for Tesnière the ultimate basis of grammar : "(...) le sens [est] en dernière analyse la raison d'être de la structure" (40). The **structural connections** that constitute for Tesnière the very crux of grammar do not exist independently of the **semantic connections** they express : "(...) **il n'existe jamais de connexion structurale sans connexion sémantique**" (44). Such statements are contrary to the original vision of an autonomous syntax, but perfectly compatible with the central claim of CG, namely that meaning and grammar are indissociable.

Tesnière was not actually inconsistent on this matter. The apparent discrepancy stems from his lack of a comprehensive view of linguistic semantics. He specifically equates semantic structure *(le plan sémantique)* with ideas, thoughts, or concepts that are rich in content and exist independently of linguistic expression. He describes *les mots **pleins***, for example, as "ceux dont la forme est associée directement à une idée, qu'elle a pour fonction de représenter et d'évoquer" (53). A non-linguistic conception of this sort — e.g. the "raw conception" of a horse throwing its rider — is apparently what he has in mind when he emphasizes the independence of semantics and grammar. After all, that same conceived event might be coded linguistically by either an active or a passive.

[1] *Page numbers refer to the 1965 edition of «Eléments de Syntaxe Structurale».*

Yet there is more to meaning than just "raw conceptions", or conceptual "content". Linguistic semantics must also accommodate our multifaceted ability to **construe** such content in alternate ways. We can, for instance, abstract away from specific, detailed conceptions and portray conceived entities at varying levels of **schematicity** (e.g. *computer* > *machine* > *object* > *thing)*. We can also establish **correspondences** between subparts of distinct conceptions, and portray one conception against the **background** of another (as in metaphor). Tesnière was certainly aware of these phenomena : they are simply not what he had in mind when speaking of *le sens* or *le plan sémantique*. They do however figure in his discussion of grammatical elements and syntactic relationships. Semantic correspondence, for example, is one of the notions needed to give an explicit account of his *connexions sémantiques*. Thus, if terms like **meaning** and **semantics** subsume not only conceptual content but also semantic correspondence and other aspects of construal, it follows that meaning and grammar are not at all separate or independent. In fact, Tesnière's vision does not seem incompatible with the basic tenet of CG that grammatical structure *reduces* to conventional patterns for the construal of conceptual content and its phonological symbolization.

CG posits just three kinds of linguistic structures : **semantic**, **phonological**, and **symbolic**, the latter residing in the symbolic linkage between a semantic and a phonological structure (its **semantic** and **phonological poles**). Moreover, permitted structures are limited to (parts of) **overtly occurring expressions**, to **schematizations** of permitted structures, and to relationships of **categorization** between permitted structures (e.g. the relation between a schema and a specific expression that **instantiates** or **elaborates** it). Lexicon, morphology, and syntax form a continuum, comprising only **assemblies of symbolic structures** (form-meaning pairings). Thus all grammatical elements are claimed to be meaningful. By and large, those symbolic assemblies considered "lexical" are fairly specific, whereas those considered "grammatical" are more schematic.

This reduction of grammar to symbolic assemblies requires a **conceptualist** semantics that accommodates construal. On the content it invokes, every symbolic element imposes a particular construal which constitutes an intrinsic and essential aspect of its conventional semantic value. Besides our ability to portray a situation at varying levels of *specificity*, and to conceptualize one structure against the *background* of another, dimensions of construal include **perspective** (e.g. **vantage point**) and various types of **prominence**. Two important kinds of prominence are **profiling** and the **trajector/landmark** asymmetry.

Profiling can be characterized as *reference within a conceptualization*. From the array of conceptual content it evokes — its conceptual **base** — every expression selects a particular substructure to serve as its **profile** *(conceptual referent)*. The word *knuckle* evokes as its base the conception of a finger, within which it profiles a subpart — a joint

(Fig. 1(a))[2]. Likewise, *intermission* has for its base the conception of a scheduled activity extending through time *(t)* and profiles a temporal interval during which that activity is temporarily suspended (Fig. 1(b)). *Knuckle* and *intermission* profile **things** (in an abstract sense of that term). Expressions can also profile **relationships**. Fig. 1(c), for example, depicts one sense of the preposition *across* (as in *the shop across the street)*, where it profiles the spatial relation between two things, as reckoned from a certain vantage point *(V)*. Specifically, the thing being located — termed the **trajector** *(tr)* — lies at the end of a mental path (dashed arrow) that originates at the vantage point and traverses the expanse of another entity, which serves as a spatial **landmark** *(lm)*.

[2]*Heavy lines indicate profiling.*

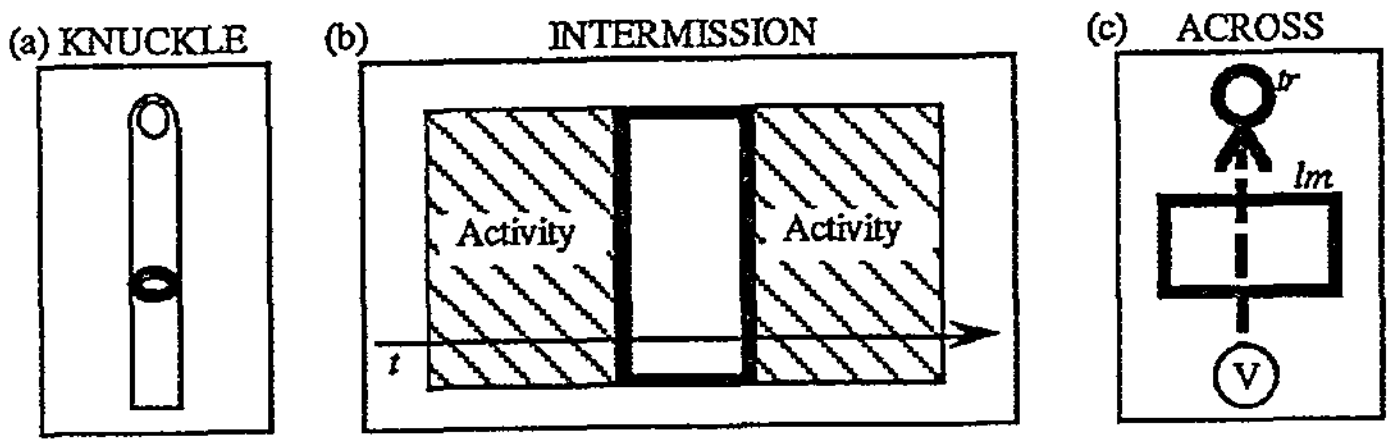

Figure 1

The terms trajector and landmark indicate a kind of prominence involving the participants in a profiled relationship. In a relational expression, one participant stands out as the focus of attention, as the entity the expression is concerned with locating, assessing, or characterizing. This element — the trajector — is described as the **primary figure** within the relational profile. Should the profile include an additional focus of attention, with the status of **secondary figure**, it is called a landmark. Trajector/landmark alignment is sometimes the only conceptual factor to which a semantic contrast is attributable. In Fig. 2, for example, *before* and *after* evoke the same conceptual content — pertaining to the temporal location of two events — and profile precisely the same relationship between them. The semantic contrast is solely a matter of which participant event is construed as a landmark for purposes of locating the other.

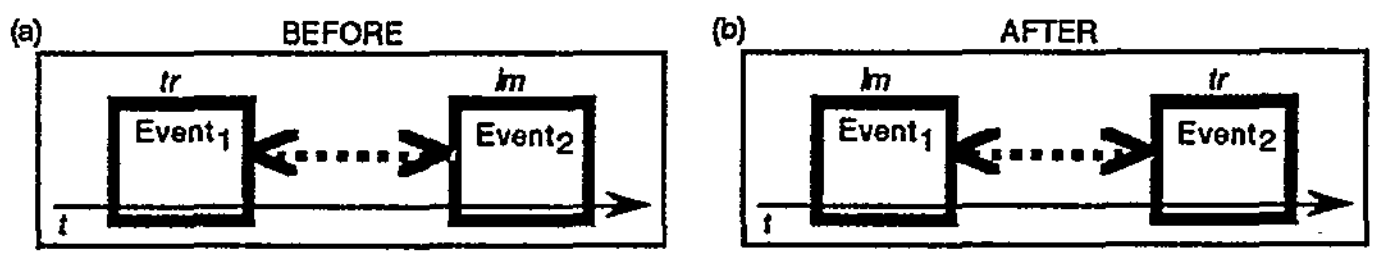

Figure 2

Symbolic structures are considered "grammatical" by virtue of being schematic, so that content is less important than construal. Tesnière's failure to fully appreciate this aspect of meaning is apparent in his discussion of grammatical classes and markers. With respect to categories, he posits "une **opposition** principielle entre le plan catégorique et le plan sémantique" (49). But even as he emphasizes their fundamental difference, Tesnière observes the close connection between "semantic" (i.e. conceptual) and grammatical categories. The latter are abstracted from specific ideas, thereby allowing them to be grasped, arranged, and classified : "Les catégories grammaticales (...) sont les chefs sous lesquels viennent s'ordonner dans chaque langue (...) les **idées** qu'elle a à exprimer (...). Le plan catégorique est celui des **idées générales** susceptibles de servir de **classificateurs**" (49). This reference to "idées générales" is compatible with my own view that grammatical elements are *schematic* with respect to the content of specific expressions.

I claim that basic grammatical classes can be characterized semantically in terms of both a **prototype**, describing *central* category members, and a highly abstract **schema**, valid for *all* class members. The respective prototypes for nouns, verbs, and adjectives, for example, are physical objects, actions, and properties. To accommodate all category members, schematic characterizations must be independent of any specific conceptual *content*, residing instead in ways of *construing* such content. An expression's grammatical class depends on the nature of its profile . A noun profiles a **thing**, defined abstractly as a conceptual "region" [Langacker, 1991b] . A verb profiles a **process**, defined as a relationship followed sequentially in its evolution through time. Such classes as adjectives, adverbs, prepositions, and participles profile various sorts of **atemporal relations**, conceived holistically (i.e. their temporal evolution is not in focus). Abbreviatory notations are given in Fig. 3.

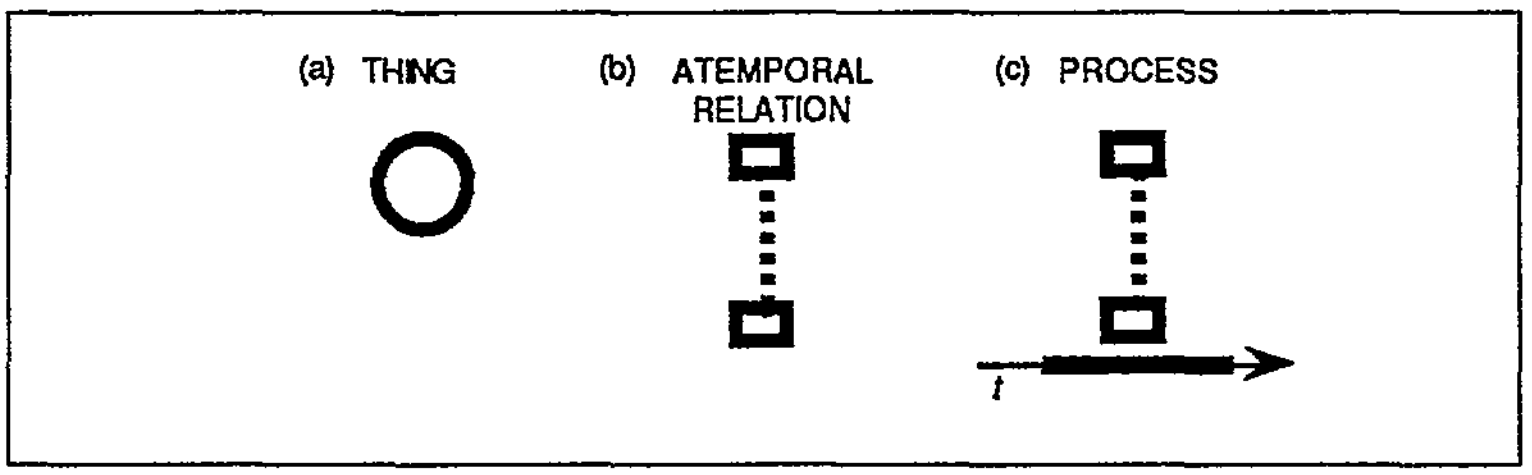

Figure 3

Tesnière likewise distinguishes between specific and more schematic structures — ***mots pleins particuliers*** (such as *cheval*) *vs.* ***mots pleins généraux*** (e.g. *quelqu'un*) — and identifies schematic notions as the basis for categorization. He further defines the class of nouns in terms of physical objects, and verbs in terms of processes (61). There are however

important differences. Tesnière's definitions do not apply to all class members, but just to the prototype. Additionally, he does not explicitly formulate any notion equivalent to profiling or other aspects of construal. The result — e.g. for adjectives (62) — is content-based definitions that are too vague for comfort.

Tesnière's ambivalence between a narrow and a broader conception of semantics is further evident in his discussion of "empty words". While he contrasts them quite sharply with *les mots **pleins***, saying that "les mots **vides** (...) ne sont pas chargés d'une fonction sémantique" and that "ils n'évoquent rien par eux-mêmes" (53), he implicitly recognizes that the distinction is less than absolute. *Les mots vides* are attributed "roles" and "values" that would now be subsumed under *meaning* and *linguistic semantics* : the conjunction *et* (80), the preposition *sur* (81), the past-tense inflection — *a* (92), the negation marker *ne... pas* (218), etc. Tesnière himself observes that these "empty words" develop historically from "full words" by loss of semantic content, and indicates that the result is a matter of degree : "(...) il est très difficile de **vider** complètement de sa valeur sémantique un mot plein et d'arriver à le concevoir comme un mot vraiment vide" (55).

In CG, all such elements are seen as having at least schematic semantic value. As shown in Fig. 4, for example, a past-tense morpheme profiles a fully schematic process. Beyond this abstract conception, its only content resides in an unprofiled relationship of temporal anteriority with respect to the speech event, also schematic ; see [Langacker, 1985, 1990 (ch. 12), and 1991a (ch. 6)].

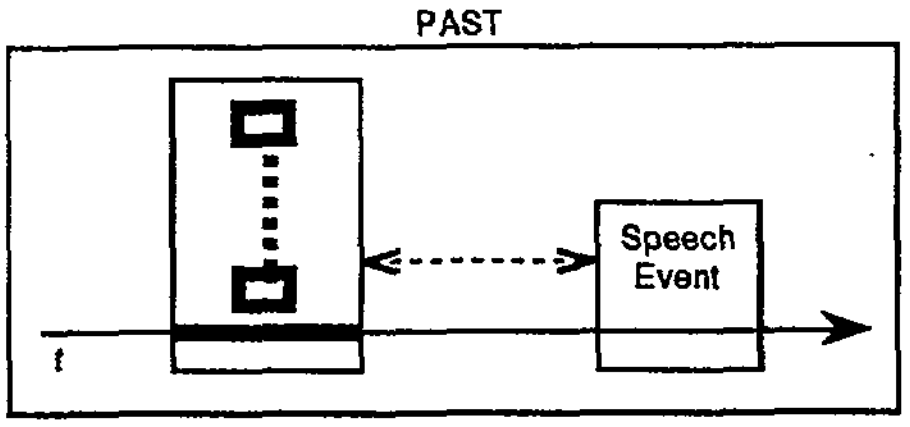

Figure 4

We must next consider grammatical constructions. For Tesnière, the syntactic organization of *Alfred frappe Bernard* is represented by the ***stemma*** shown in Fig. 5(a). The verb *frappe* is the ***régissant***, hence placed at the top, whereas the two nouns are placed below it, each being a ***subordonné***. The solid lines indicate ***connexions structurales***, which are "superimposed" (42) on ***connexions sémantiques***, shown as dashed lines in Fig. 5(b). *Alfred* and *Bernard* are of course ***actants***. Their respective status as ***prime actant*** and ***second actant*** is reflected diagrammatically by

left-to-right ordering, or by labeling the branches with numbers, as in 5(c). Tesnière also presents a more abstract kind of representation, called a ***stemma virtuel.*** The common syntactic structure of *Alfred frappe Bernard* and *Charles voit Daniel* is thus depicted in 5(d), where *I* stands for a verb, and *O* a noun.

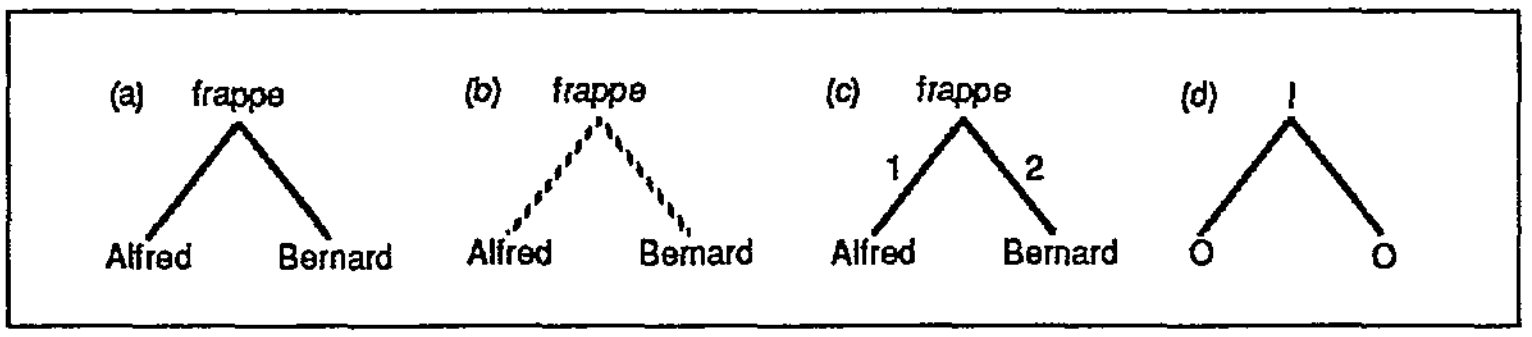

Figure 5

Apart from differences in terminology and notation, this is quite compatible with CG, which is however more explicit about the meanings of elements and the semantic basis of their grammatical connection. Consider *Alfred hit Bernard,* assuming (for sake of comparison) that it has no internal constituency grouping. Fig. 6 displays the relations among the subject, verb, and object. Note first that the diagram contains four elements, not just three. This is because the representation makes explicit, at each level of organization, the nature of the **composite structure** that emerges by virtue of the relationships among the **component structures.** The component structures *Alfred, hit,* and *Bernard* are shown at the bottom. They are **integrated** to form the composite structure *Alfred hit Bernard,* shown at the top. There is nothing analogous to the composite structure in Tesnière's representational system. While he recognizes (e.g. in the notion ***nucleus)*** that multiple elements can function as a group in their relation with other elements, he gives no explicit characterization of a group as an integral whole.

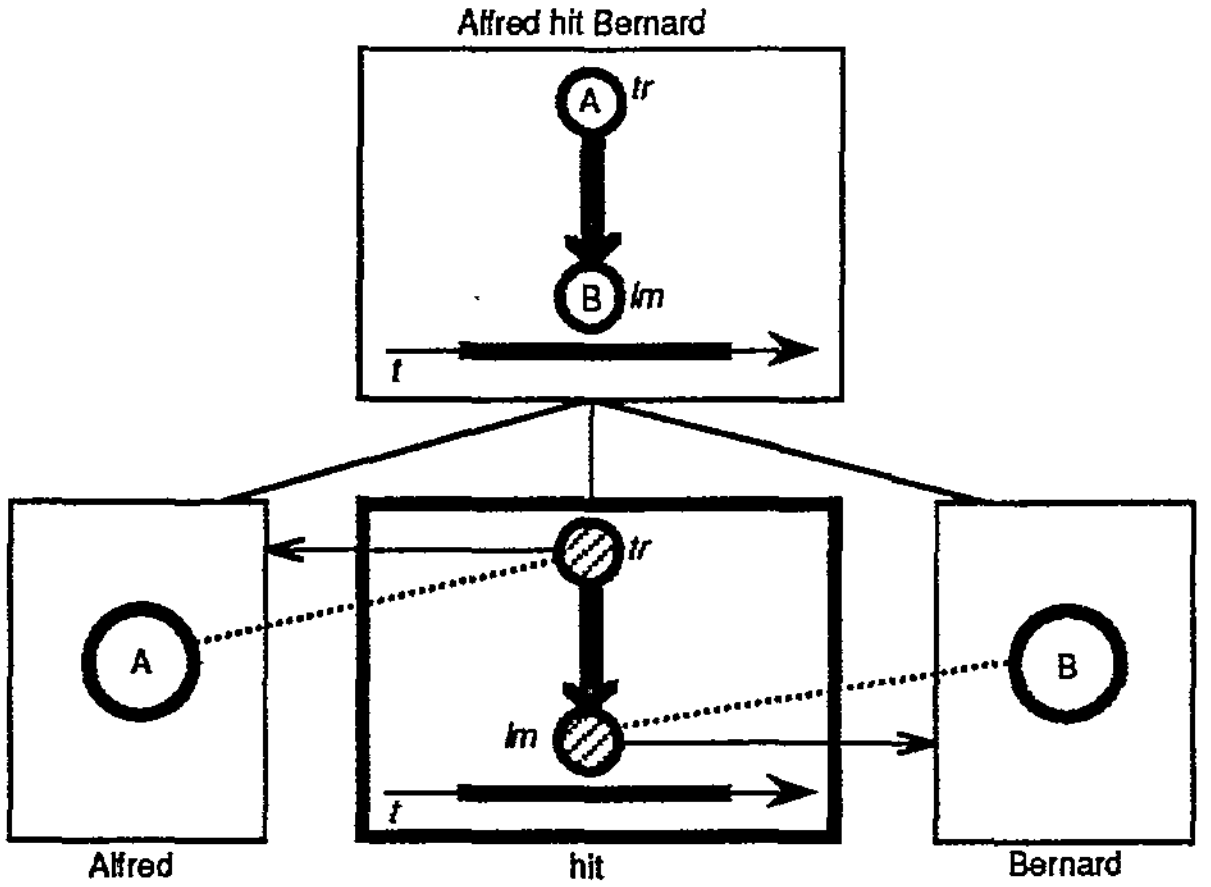

Figure 6

The component and composite structures are *symbolic* (each having a *semantic* and a *phonological pole)* and thus constitute an *assembly* of symbolic structures (or **construction**). Integration takes place at both poles, the phonological integration serving to *symbolize* the semantic integration. The informal diagrams indicate certain basic properties of the semantic structures and their integration. For the component structures *Alfred* and *Bernard*, it is merely shown that each profiles a *thing* ; the letters *A* and *B* abbreviate their other semantic specifications. The notation for the verb also abbreviates a fuller semantic value : it specifies that the designated process has two central participants, and the double arrow represents the transmission of energy.

What shows that *hit* is the **head**, or *régissant*, to which *Alfred* and *Bernard* are subordinated ? As a notational device, the head is enclosed in a heavy-line box. What it means in conceptual and grammatical terms for a component to be the head is that it has the same profile as the composite structure. The composite structure usually inherits its profile from one of the components, which is thus called the **profile determinant**. *Hit* is the profile determinant in *Alfred hit Bernard*, since the process it designates is also profiled by the expression as a whole. The verb is thus the head at this level of organization.

Although Tesnière states that "**le sens du subordonné porte sur celui du régissant**" (42), he does little by way of elucidating this essential notion. The semantic characterizations of CG make possible a reasonably precise account of these relationships. The integration of component structures is based on **correspondences** between their substructures. Represented diagrammatically by dashed lines, these correspondences are indications of the *conceptual overlap* by virtue of which the components merge to form a coherent composite conception. In Fig. 6, we see that the profile of *Albert* corresponds to the trajector of *hit*, and that the profile of *Bernard* corresponds to the landmark. The semantic specifications of *Alfred* and *Bernard* (given as *A* and *B)* are thus superimposed on *hit's* trajector and landmark, respectively, to form the composite semantic structure.

It is usual for components to be linked semantically by correspondences between prominent substructures. It is also typical for one component structure to **elaborate** a schematic substructure of another. In Fig. 6, *Alfred* elaborates the schematic trajector of *hit*, while *Bernard* elaborates its schematic landmark. The trajector and landmark are hatched to signal their status as **elaboration sites**, and arrows represent the elaborative relationship. These correspondences and elaborative relationships make explicit the manner in which "le sens du subordonné porte sur celui du régissant". In particular, the import of *Alfred* being the *prime actant* of *hit*, and *Bernard* its *second actant*, is that their profiles respectively correspond to the verb's trajector and landmark, which they serve to elaborate.

This construction instantiates a general pattern of composition : *Alfred hit Bernard* is structurally parallel to *Charles sees Daniel*, etc. Tesnière represents this by means of the *stemma virtuel* in Fig. 5 (d). The analog in CG is a **constructional schema**, an assembly of *schematic* symbolic structures representing the abstract commonality observable across a set of complex expressions. A constructional schema is parallel to instantiating expressions in terms of such factors as profiling, profile determinance, correspondences, etc., but is more schematic in regard to content. Thus the structure in Fig. 6 instantiates the schematic assembly depicted in Fig. 7. The head is characterized schematically as a transitive verb (i.e. it designates a process with two things as focal participants), and the other two components as nominal expressions (they profile things). *X*, *Y*, and *Z* refer in schematic terms to phonological sequences.

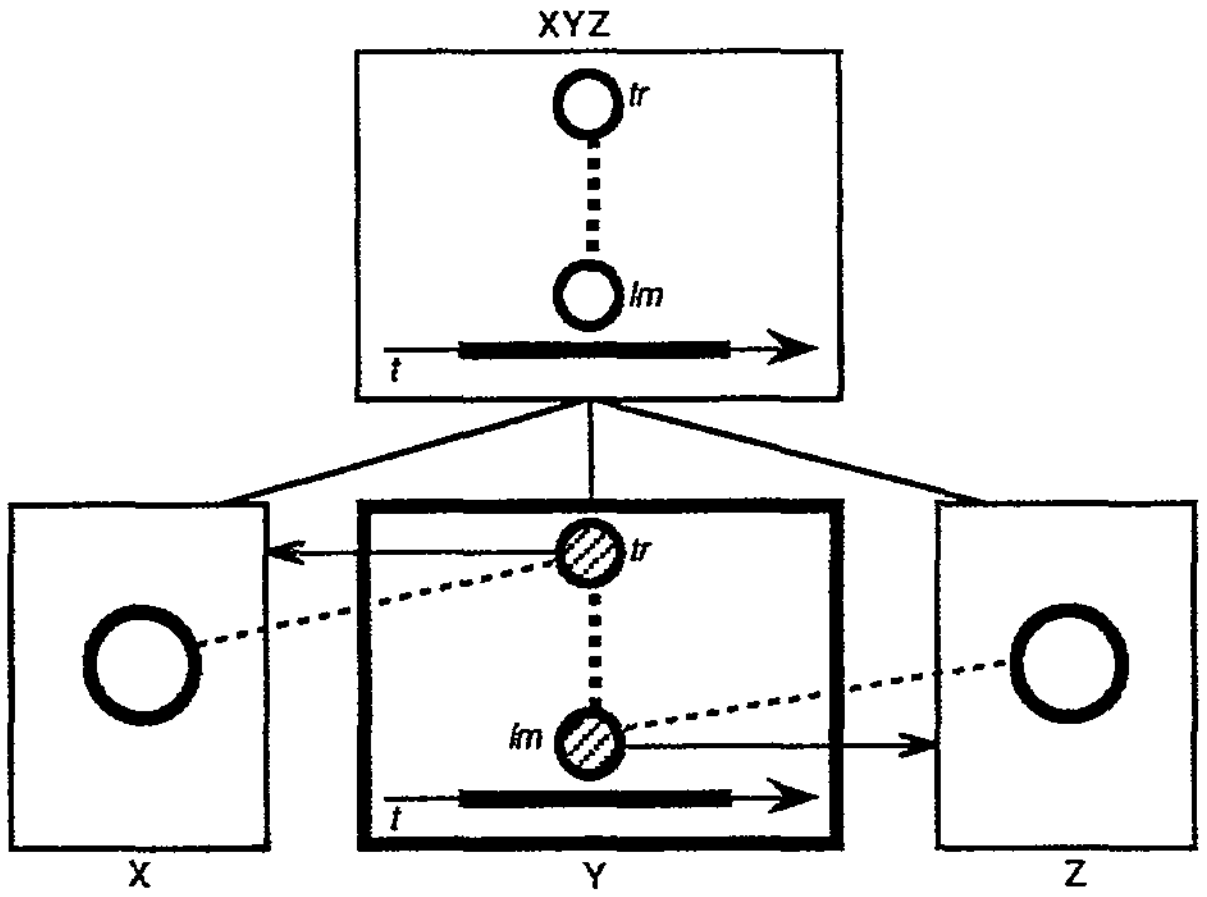

Figure 7

Tesnière's stemmas permit the characterization of diverse structures having any degree of complexity. I believe that all the valid notions and relationships he posits are straightforwardly accommodated in CG. This latter however embodies a more unified conception of various aspects of linguistic structure that Tesnière distinguishes fairly sharply. It makes no principled distinction, for example, between *mots pleins* and *mots vides*, treating them both as meaningful and as comparable in regard to how they form constructions with other elements. Nor does CG recognize ***translation*** as a distinct phenomenon requiring special notations and theoretical constructs.

Consider the sentence *Alfred hit Bernard before Charles arrived.* Tesnière's analysis is shown in Fig. 8. The past-tense forms *hit* and *arrived* each function as clausal nuclei, circled in the second instance to

indicate that the entire complex structure is the *régissant* with respect to *Charles*. The past-tense marker is not itself accorded the status of *nœud*, *régissant*, or *subordonné*. The clause *Charles arrived* gives rise to an adverb *(E)* by the process of ***translation***, and that adverb functions as a dependent of *hit*, specifically a ***circonstant***. *Before* is analyzed as a ***translatif***, an "empty word" which effects the translation of a verb into an adverb.

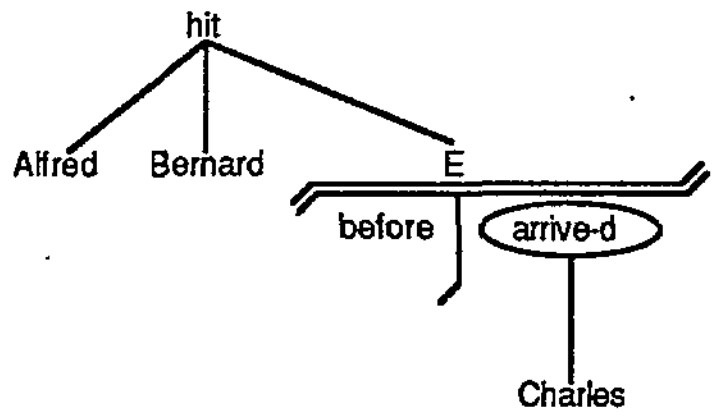

Figure 8

By contrast, the CG analysis does not involve any apparatus beyond that required for *Alfred hit Bernard*. We might begin with the past-tense marker. Zero in the case of *hit*, it is nonetheless a meaningful element. I will assume that a tense marker is the last element to be added in the formation of a finite clause. It thus combines with the remainder of the clausal structure, and is manifested phonologically on the *head* of that structure. The integration of *PAST* with the (tenseless) *Alfred hit Bernard* (Fig. 6) is diagrammed in Fig. 9.

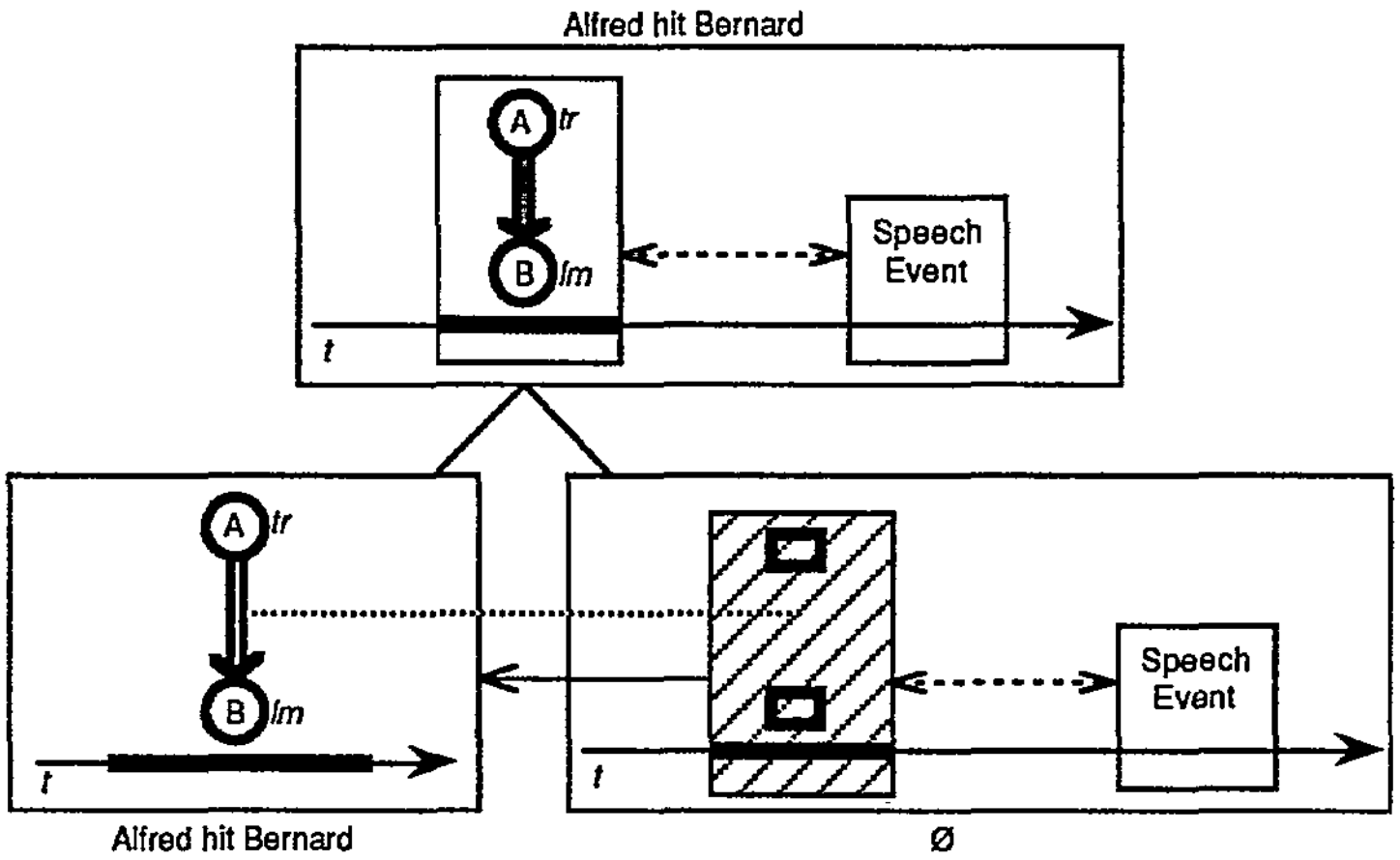

Figure 9

The *composite structure* at one level of organization is capable of serving as a *component structure* with respect to another, "higher" level of organization. Thus the composite structure from Fig. 6 appears in Fig. 9 as one of the two components, where it combines with *PAST* to yield a higher-level composite structure (a finite clause). The integration of *Alfred hit Bernard* and the past-tense element is effected by a correspondence between their processual profiles : the specific process designated by *Alfred hit Bernard* is equated with the schematic process that *PAST* profiles and situates prior to the speech event. This schematic process functions as an elaboration site, being specified in finer detail by *Alfred hit Bernard*[3].

[3]Neither component structure is singled out as the profile determinant, since their profiles both correspond to the composite structure profile.

Fig. 10 depicts *Charles arrived*, which has two levels of grammatical organization : the "lower" level, where *Charles* combines with *arrive* ; and the "higher" level, comprising the integration of *Charles arrive* with the past-tense marker. *Arrive* has only one focal participant, its trajector, which follows a spatial path (represented by a vertical arrow) and reaches a goal. *Charles* profiles a thing with certain properties *(C)*. The integration of *Charles* with *arrive* involves a correspondence between its profile and the verb's schematic trajector, which it elaborates. *Arrive* is the head at this level, so the composite structure *Charles arrive* profiles the process of arriving, with Charles as the trajector. At the second level of organization, *Charles arrive* elaborates the schematic process profiled by the past-tense element. The higher-level composite structure thus designates the process of Charles arriving, temporally prior to the speech event.

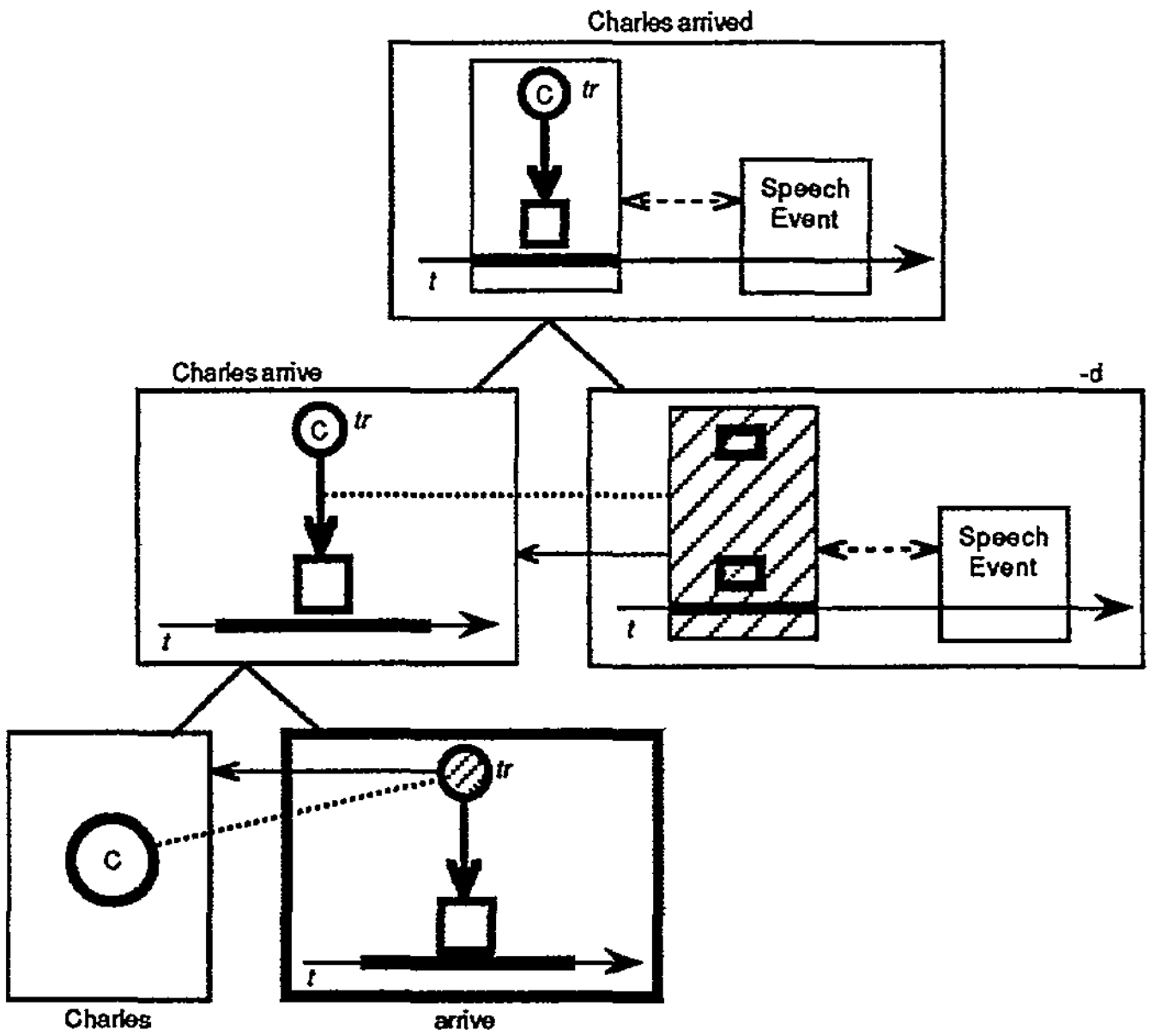

Figure 10

This finite clause combines with *before* to yield the complex adverbial expression *before Charles arrived.* Tesnière would analyze *before* as a *mot vide* and as a *translatif* that derives an adverb from a verb (Fig. 8), but it is clearly meaningful : it profiles a relationship of temporal anteriority between two events, the later event serving as landmark for locating the trajector event. I am happy to agree with Tesnière in referring to *before* as an adverb-deriving *translatif,* but not with his position that *translation* represents a distinct grammatical phenomenon radically different in character from other kinds of constructions. Indeed, the construction in Fig. 11 is quite comparable to any other examined here. *Before's* role as a *translatif* is simply a matter of its functioning as the *profile determinant* in this construction. Because it profiles a relation whose trajector is itself relational, *before* is properly regarded as a *schematic adverb.* It is integrated with a finite clause, such as *Charles arrived,* by virtue of a correspondence between its landmark and the clausal profile. This elaboration of the landmark renders the adverb specific. Conversely, *before* can be thought of as imposing its profile on the content provided by the processual component, thus converting (translating) a finite clause into an adverb.

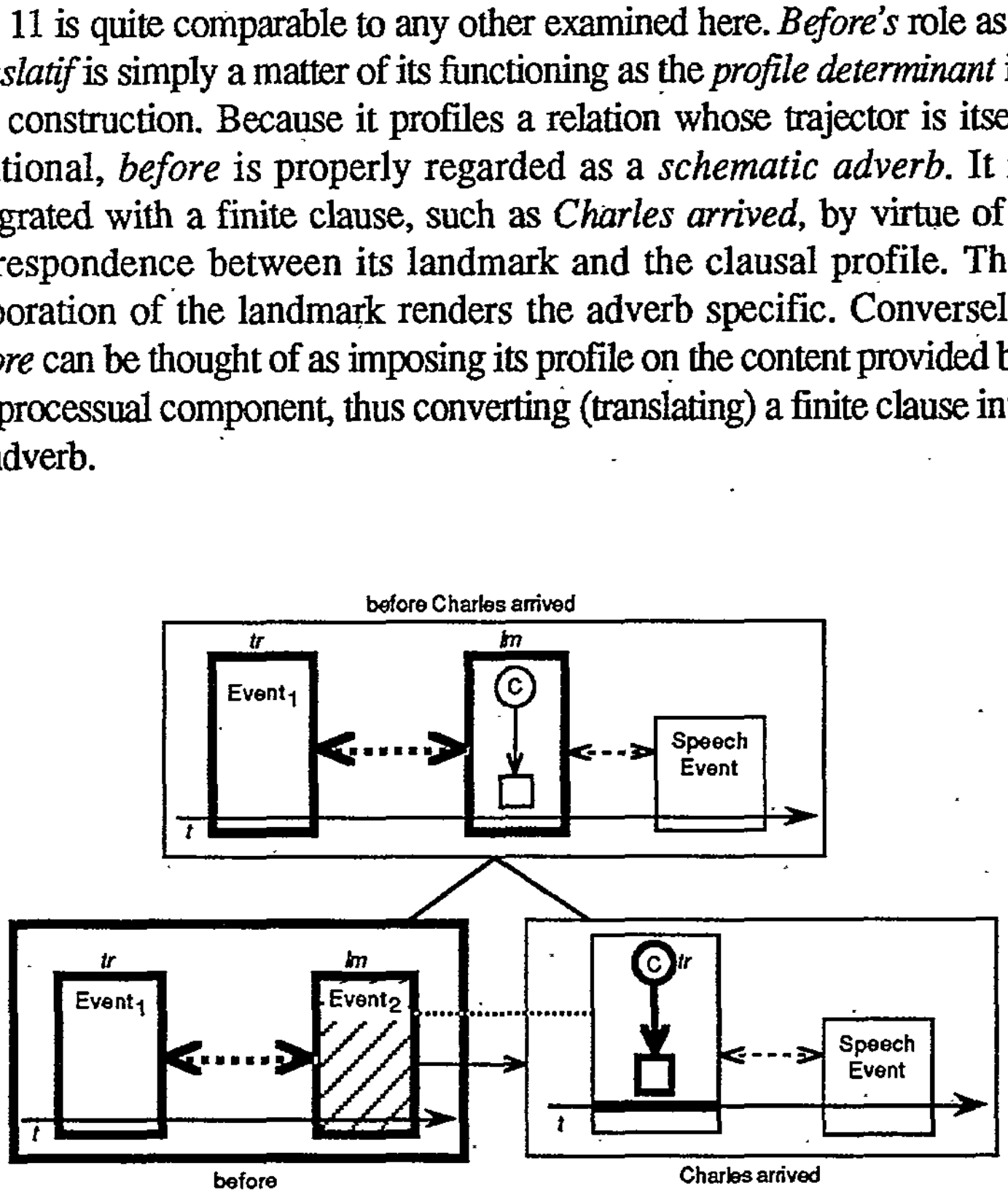

Figure 11

The last step is to integrate the finite clause *Alfred hit Bernard* with the complex temporal adverb *before Charles arrived.* Their composite structures thus function as the two component structures at this final level of organization (Fig. 12). The basic correspondence effecting their integration identifies the processual profile of *Alfred hit Bernard* with the schematic trajector of the adverb, which it elaborates. An additional

correspondence indicates that the speech events referred to by the two components are the same. *Alfred hit Bernard* is the head or profile determinant, since the process it designates is profiled by the sentence as a whole. This amounts to saying that it constitutes the main clause.

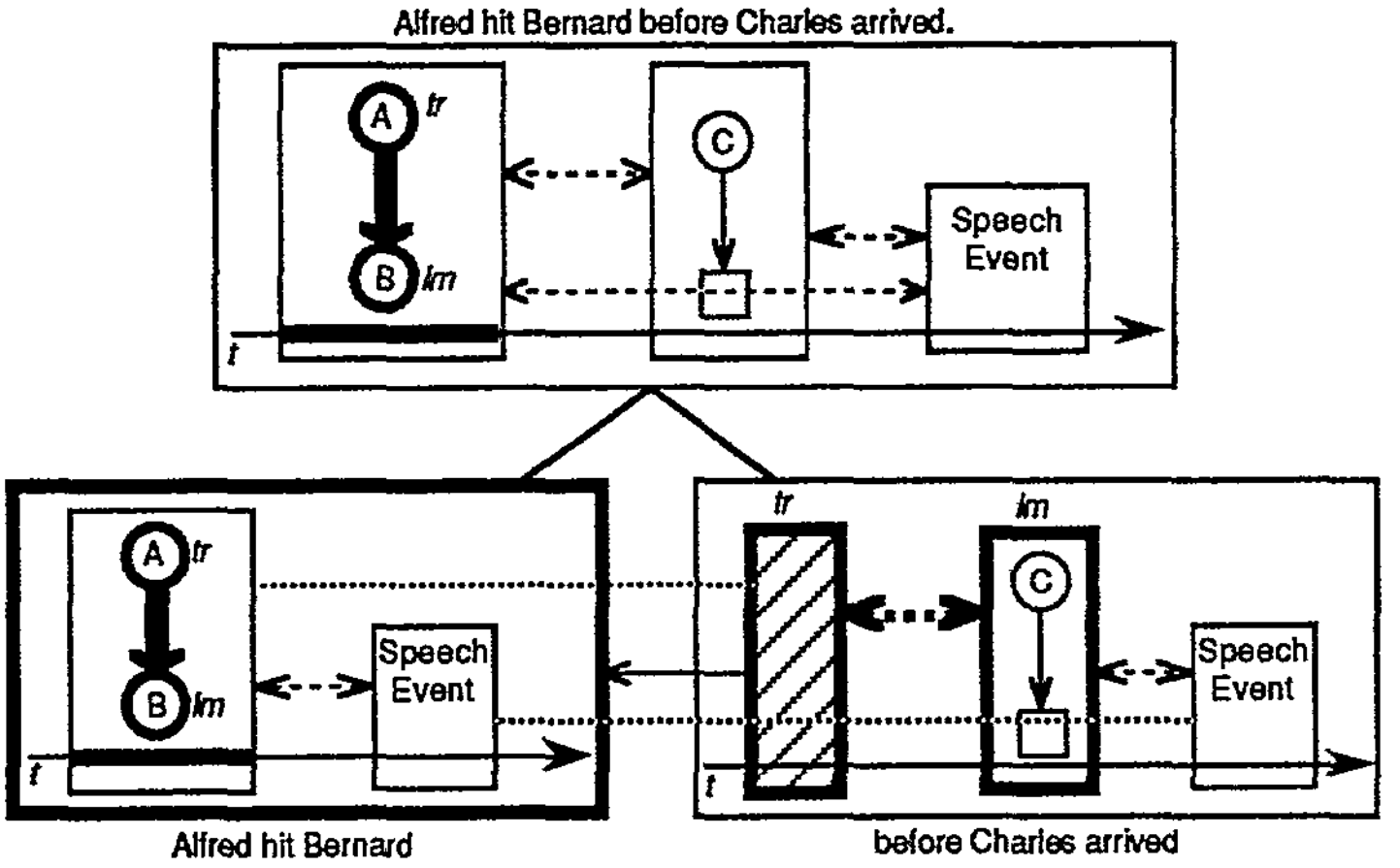

Figure 12

The grammatical organization of the entire complex sentence is summarized in Fig. 13 (see Fig. 13, on the opposite page).

The primary difference between Tesnière's structural syntax and CG is that only the latter attempts the explicit characterization of semantic structure. It describes not only the meanings of individual elements but also the *composite* semantic values arising at every level of organization as simpler symbolic structures combine to form progressively larger ones. I have tried to indicate that these semantic descriptions are necessary for a precise understanding of grammar itself. In the absence of specific descriptive constructs — such as profiling, trajector/landmark alignment, thing *vs.* relation, correspondence, and profile determinance — one cannot provide an explicit account of the *semantic connections* that Tesnière recognizes as being co-extensive with *structural connections*. These same constructs figure in the semantic characterization of grammatical classes, markers, and basic notions like *head*, *main clause*, *subject*, *object*, *complement*, and *modifier*. A comparison of how the two theories deal with these classic notions, involving a discussion of Tesnière's distinctions *régissant vs. subordonné* and *actant vs. circonstant*, unfortunately cannot be undertaken in the space available here[4].

[4]It is provided in the longer version of this paper, available on diskette.

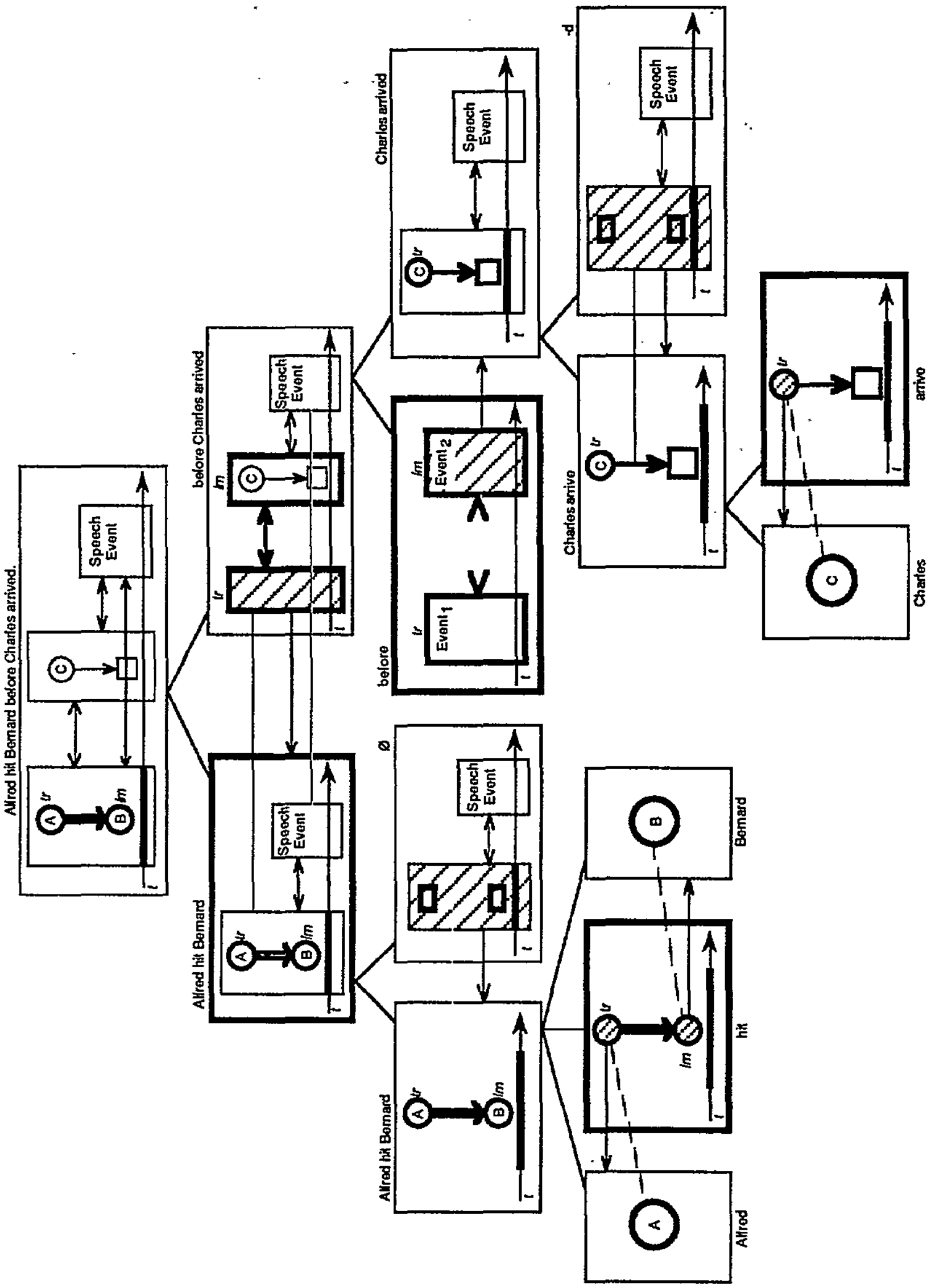
Alfred hit Bernard before Charles arrived.
Speech Event
Alfred hit Bernard
Alfred
Bernard
hit
before Charles arrived
before
Ø
Charles arrived
Charles arrive
arrive
Charles

Figure 13

In a work as rich and comprehensive as Tesnière's, there is bound to be much to criticize from any modern perspective. What is far more surprising, from the standpoint of CG, is how few targets of serious criticism structural syntax offers, and how similar the two frameworks are in their basic mode of thinking about grammatical phenomena. I have tried to make it evident that Tesnière's research program was fundamentally compatible with that of cognitive grammar. Despite the difference in time and intellectual context, I feel we have been engaged in a common enterprise.

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