

A Syntactic Approach to Illusive Event Type-Shiftings*

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1. Introduction

The main purpose of this paper is to show that the current assumption that there is an event type-shifting involved in examples like those in (1a)-(2b), is not well-grounded, and appears to be falsified when a wider typological perspective is taken into account. We will take pains to show that the perspective sketched out in Talmy (1991) forces us to take a different way when dealing with the formation of complex path of motion constructions like that in (1b) or complex resultative constructions like that in (2b).

- (1) a. John danced.
b. John danced into the room.

- (2) a. Mary hammered the metal.
b. Mary hammered the metal flat.

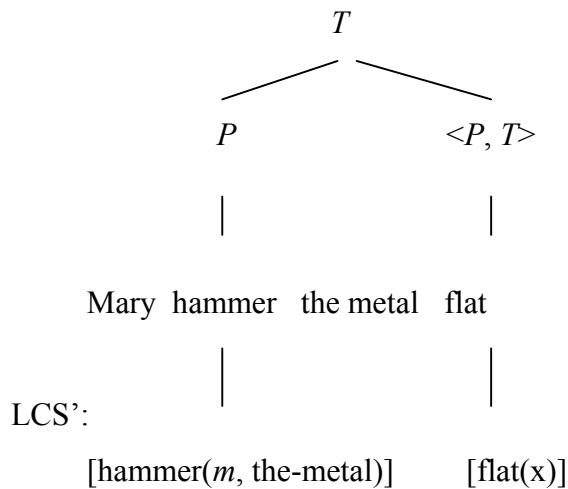
Proponents of Event Structure (e.g., Pustejovsky (1991, 1995), or van Hout (1996)) have claimed that the lexical-syntactic flexibility involved in examples such as those in (1)-(2) must be regarded as a derivative of event type-shifting. According to them, these examples appear to involve a systematic event type-shifting from ‘processes’ ((1a)-(2a)) to ‘transitions’/‘accomplishments’ ((1b)-(2b)): the PP in (1b) and the AP in (2b) are said to be

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“added/attached” to the basic processes in (1a) and (2a), respectively; as a result, they are argued to act like ‘functions’ from processes to transitions. In (3) is depicted Pustejovsky’s (1991: 65) analysis of the event composition involved in (2b).

- (3) a. Mary hammered the metal. (hammer □ process)
 b. Mary hammered the metal flat. (hammer □ transition)

ES:



LCS:

cause(act(*m*, the-metal), become(flat(the-metal)) BY hammer)

Quite importantly, we want to argue that Pustejovsky’s or van Hout’s claim that a process “type-shifts” into a transition/accomplishment by “adding/attaching” a telic directional PP or a resultative AP, cannot receive a principled explanation. Rather, we will show that it is more theoretically and empirically adequate to posit that, despite appearances, the “added/attached element” in (1b)-(2b) is not the PP/AP resultative phrase, but the process verb. In other words, our claim is that the main (i.e., basic) structure of (1b) and (2b) corresponds to an accomplishment, the subordinate process verb being “added” to the abstract motion verb in (1b), or the abstract causative verb in (2b), via a *syntactic* conflation process (see Baker (1988); Hale & Keyser (1993, 1998)).

Semantic explanations of the lexical-syntactic flexibility involved in (1)-(2) run into problems once the crosslinguistic variation is taken into account. For example, it is a well-known (though poorly understood) fact that Romance lacks the Germanic lexical-syntactic flexibility shown in (1b)-(2b). To be sure, one could formulate the following question to proponents of the semantic/logical approach: What is actually meant by saying that the ‘event type-shifting’ involved in (1b)-(2b) is a semantic or logical operation available in English, but not in Romance?

Semanticocentric analyses cannot be said to provide a principled explanation to why some languages (e.g., Romance) appear to lack the relevant LCS operation (Levin & Rapoport (1988), Rappaport Hovav & Levin (1998), Fong & Poulin (1998)), the aspectual operation (Tenny (1994)), or the event type-shifting strategy (Pustejovsky (1991)), which have all been said to be involved in the formation of (1b) and (2b). Be this as it may, we want to argue that the solution of such a problem cannot only be stated in purely semantic or aspectual terms.

Unlike Pustejovsky’s (1991: 65) claim that the resultative construction “participates in a semantic change at the level of event structure”, we posit that the relevant “change” takes place in syntax. As shown below, the relevant syntactic conflation process involved in (1b)-(2b) will be seen to be possible in so-called ‘satellite-framed’ languages like English, but not in so-called ‘verb-framed’ languages like Romance.¹ In this paper, we will show that there is a syntactic reason involved in this typological distinction, which Talmy (1991) characterized in descriptively-oriented semantic terms.

On the other hand, it is important to point out that the key role of syntax has already been vindicated in some recent work which crucially assumes that event structure is licensed via the syntax of functional projections: See Borer (1994) or Ritter & Rosen (1998). However, our work parts ways with them in at least three important respects: First, we do not adhere to their claim that the meaning associated to syntax is licensed through Tenny’s (1994) aspectual constraints encoded into the syntax of functional categories (basically, cf. ‘the

¹ According to Talmy’s (1985, 1991) original distinction, verb-framed languages are those languages conflating the Path element into the verb: For example, consider the Spanish verbs *entrar* ‘go in(to)’, *salir* ‘go out’, *subir* ‘go up’, etc. By contrast, satellite-framed languages like English are those that do not incorporate the Path into the verb but leave it as a satellite around the verb. When the Path remains as a satellite, one option becomes available: the manner component (for example, *dancing* in the example in (1b)) can be conflated into the verb.

One caveat is in order here. As noted by Talmy, English verbs like *enter*, *exit*, *introduce*... should not be taken as real counterexamples for they can be said to be motivated by the verb-framed nature that English

delimitedness/measuring out constraint on direct internal arguments’). For the purposes of the present paper, we will show that the ‘resultativity parameter’ (see Snyder (1995)) accounting for the existence of (1b) or (2b) in satellite-framed languages and for their absence in verb-framed languages, has nothing to do with morphosyntactic properties associated to some functional categories, but with those associated to some lexical categories (see Mateu & Rigau (1999, 2000)). Second, they omit the conflation process involved in the formation of constructions like those in (1b) or (2b). Third, they do not explain the crosslinguistic variation involved in Talmy’s (1991) typological distinction. For example, let us take Borer’s (1994) analysis into account: As it stands, it is not clear what prevents Romance languages from having (1b). Why is it the case that in Romance, *John* in (1b) cannot be generated as the specifier of the functional category $Asp_{Event-Measurer}$? That is, why does the unaccusativization process involved in (1b) appear to be impossible in Romance? As shown in section 3, our solution to such a puzzle will be argued to have nothing to do with aspectual properties associated to functional categories, but with morphosyntactic properties associated to lexical categories.

Before dealing with our syntactic approach, it will be necessary to briefly sketch out the theoretical background which our analysis depends on (section 2). In section 3 we analyze the syntax of the conflation process involved in both path of motion constructions like that in (1b), and complex resultative constructions like that in (2b). Section 4 summarizes the consequences of our analysis and the main conclusions to be drawn from our present paper.

2. Argument structure in a minimalist framework

In this section we will concentrate on offering a general picture of the semantic properties that must be optimally encoded into the lexical entries. Following Chomsky (1995, 1998), we posit that the semantic information to be located in the lexicon is the optimal information required by the computational system.² Lexical entries include semantic features that will

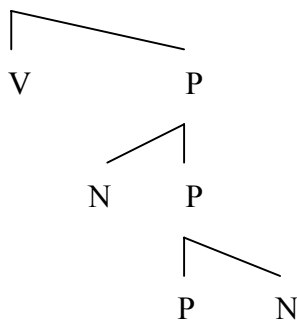
inherited from the lexicalization pattern corresponding to Latin.

² Being inspired by Chomsky (1995, 1998, 1999), we propose that the semantic information can be distributed in three different places in a minimalist model: Firstly, there are certain semantic properties that can be argued to be optimally coded into lexical entries. Secondly, there are other semantic conditions that can be seen as output conditions on LF, such as the Projection Principle, Binding conditions, etc. These conditions are said to act as legibility conditions. Finally, there are semantic properties belonging to systems of thought, which are to be

have to be interpreted at L(ogical) F(orm), the linguistic interface level with the systems of thought. These semantic features are said to entail their corresponding categorial features, this being in accordance with the epistemological priority of semantic selection over categorial selection (Grimshaw (1979)).

Following a similar proposal put forward by Hale & Keyser (1993), we will distinguish two classes of semantic features: ‘non-relational features’ vs. ‘relational features’. The former entail the syntactic category Noun (N), while the latter entail the categories considered as syntactic predicates: Verb (V) and Particle (P). For our present purposes, P is to be regarded as a cover birelational term for Adposition, Adjective, and Adverb. Adpositions are pure Particles, while both Adjectives and Adverbs can be seen as complex Particles that incorporate a non-relational element. This proposal nicely captures the argument structure similarities of sentences like those in (4). All of them share the same lexical syntactic structure, that in (4d). *In* is a simple Particle that selects a non-relational element as its complement (*room*), while both *happy* and *here* are complex Particles incorporating their non-relational complement.

- (4) a. The cat is in the room.
 b. The cat is happy.
 c. The cat is here.
 d. V



Relational features are hierarchically organized. They can express an eventive relation or a non-eventive relation. The eventive relation entails the syntactic category V, while the non-eventive relation entails the syntactic category P. An eventive relation can be instantiated as a

located beyond the interface with LF. With Marantz (1997), we could consider the latter properties as encyclopedic information that enriches the representation of meaning provided by grammar.

causal relation or a transitional relation. In turn, the causal relation can be dynamic (e.g., *dance, kill, shelve*) or static (e.g., *hear, know, love*), and the transitional relation can also be dynamic (e.g., *disappear, go, come*) or static (e.g., *be, belong, remain*). Transitive verbs (unergatives included) are entailed by the causal relation feature, while unaccusative verbs are entailed by the transitional relation feature.

On the other hand, a non-eventive relation can be prototypically regarded as a spatial relation.³ This can express a central coincidence relation (e.g., *with, on, at, ...*) or a terminal coincidence relation (e.g., *to, out of, up to, ...*). See Hale (1986) for an in-depth analysis of these semantic relations, which we assume here.

The relevant properties to be encoded into a lexical entry can be exemplified with those of the unergative verb *dance* in (5).⁴

- (5) *dance*
- | | |
|----|-------------------------|
| a. | phonological properties |
| b. | V (< causal relation) |
| c. | _v [N V] |

What is meant by (5c) is that a N is lexically conflated into the verb *dance*.⁵ This information is clearly idiosyncratic, and hence it must be encoded into the lexical entry. Note that this is coherent with Chomsky’s (1998: 49) claim that it is possible “that an operation takes objects constructed in the lexicon to form from them a new object”.

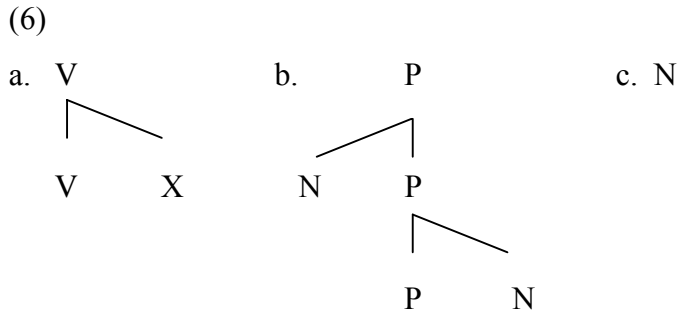
The relation between those three basic syntactic objects depicted in (6) and the syntax-

³ See Mateu (2001, in press) for arguments in favor of decomposing As in two elements: a non-eventive relation similar to a spatial relation *plus* a non-relational element, the latter being conflated into the former (see (23)). Notice then that the resulting complex head involved in As (i.e., _p[N P]) can account for both their ‘nominal’ properties (e.g., in some languages they are assigned morphological case) and their ‘relational/predicative’ status they share with adpositions.

⁴ According to Chomsky (1995: 238), “<the> lexical entry represents in the optimal way the instructions for the phonological component and for the interpretation of the LF representation: a phonological matrix, and some array of semantic properties. It must also contain whatever information is provided by the verb itself for the operations of C_{HL}(= computational system).”

⁵ See Hale & Keyser (1993, 1998) for arguments in favor of considering unergative verbs as denominal verbs.

semantics associations stated in (7), is assumed to be governed by the Projection Principle as a legibility condition. Accordingly, there appears to be a strong homomorphism between the syntax and semantics of argument structure at LF.⁶



- (7)
- a. V is to be associated to an *eventive relation*.⁷
 - b. P is to be associated to a *non-eventive relation*.
 - c. N is to be associated to a *non-relational element*.

The presence of an external argument has been argued to depend on the configuration of v .⁸ Following Chomsky (1999), we will assume that the functional category T can select either a complete v ($= v^*$), or a weak verbal configuration v . The functional category v^* has the EPP feature, and then the presence of a specifier is needed. By contrast, a weak v lacks the EPP feature, and then no specifier is available.⁹

Given this set of assumptions, let us show how the lexical restrictions (those encoded into

⁶ X in (6a) is to be regarded as a variable: it is N in unergative structures, and P in transitive and unaccusative structures. It is important to note that N, V, and P must be regarded as syntactic categories derivable from their associated semantic features, not as their corresponding language-specific *morphosyntactic* realizations (see Hale & Keyser (1998)). Rather the former are to be seen as abstract syntactic categories that turn out to be associated with semantic categories in quite a uniform way. See Bouchard (1995), Baker (1997), and Mateu (1999) for more discussion on the homomorphic nature between syntactic and semantic structures.

⁷ In this sense, our proposal is similar to that developed by Harley (1995). The main difference is that, with Hale & Keyser (1993, 1998), we do not analyze the syntactic head associated to the eventive relation as functional. As shown in (6a), this is a lexical syntactic head.

⁸ As is well-known, the external argument has been argued to be generated outside the VP domain: See Marantz (1984) or Hale & Keyser (1993, ff.), among others.

⁹ According to Chomsky (1998, 1999), there is in principle no restriction on the number of possible specifier positions per functional category. Accordingly, a complete v could be provided with multiple specifier positions.

the particular lexical entry) must be made compatible with the syntactic configurations. Legibility conditions (in particular, the Projection Principle) will be assigned the task of making the lexical restrictions respected. We can exemplify it with the data in (8):

- (8) a. John danced.
b. *John disappeared the glass (cf. The glass disappeared).
c. John broke the glass (cf. The glass broke).

For our present purposes, let us assume that the well-formedness of (8a) is partly due to the fact that the semantic property assigned to the lexical entry of the unergative verb *dance* (i.e., ‘causal relation’; cf. (6)), is compatible with the fact that the functional category v is complete, i.e., v^* . As noted, this functional category has the EPP feature, and the presence of an external argument is required, this argument being then interpreted as *Originator* (see Borer (1994) or Mateu (1999)). Consequently, the Projection Principle will read this syntactic configuration as a structure that expresses a causal eventive relation.

On the other hand, the presence of the external argument *John* in (8b) would also require that the syntactic configuration be interpreted as a causal eventive relation. However, the semantic property assigned to the lexical entry of the unaccusative verb *disappear* is that corresponding to a transitional eventive relation. Consequently, the resulting configuration will be uninterpretable by virtue of the Projection Principle. Concerning causative alternation verbs like *break* (see Levin & Rappaport Hovav (1995), among others), our proposal is that the lexical entry of these verbs has a unspecified eventive relation; if there is a complete v^* , the presence of an external argument in its specifier position will trigger the causative interpretation; if there is a weak v , the absence of a specifier will trigger the transitional one. Notice then that it is precisely the syntactic configuration what will crucially determine the existence of the so-called “causative/inchoative alternation”.

Finally, concerning the non-eventive relation in (6b) (cf. the Particle in (4d)), we will assume that its specifier and complement are always to be interpreted as *Figure* and *Ground*, respectively (see Talmy (1985)). One caveat is in order here: In the present framework, these terms should not be taken as purely conceptual notions, but rather as syntactically relevant

We will not enter into discussing this issue here.

semantic notions (see Hale (1986) and Mateu (1999)). Accordingly, the resulting ‘linking’ appears to be that depicted in (9):¹⁰

- (9) a. Originator ---- specifier of *v*
 b. Figure ---- specifier of P
 c. Ground ---- complement of P

3. A syntactic approach to the illusive elasticity of verb meaning

As an alternative to the semantic/logical account (cf. section 1), the existence of the lexical-syntactic flexibility exemplified in (1)-(2) above, will be shown to be related to a morphosyntactic reason that underlies Talmy’s (1985, 1991) classification of English into the group of so-called satellite-framed languages.¹¹

From the theoretical perspective sketched out in section 2, we claim that the descriptive dichotomy between satellite-framed vs. verb-framed languages can be translated into the following terms: It is the case that in English, but not in Romance, there is a phonologically null verb, whose categorial properties are derived from the eventive relation feature associated to it. Its corresponding lexical entry would be something like (10). With our positing the phonologically null verb *e* in (10), we want to capture the intuitive idea that English is *a non-verb-framed language*.

- (10) $\left[\begin{array}{l} e \\ \text{no phonological properties} \\ V (< \text{eventive relation}) \end{array} \right]$

¹⁰ Quite interestingly, notice that the ‘linking’ in (9) is fully compatible with Baker’s (1997) assumption that there are only three ‘(proto-)roles’: agent/causer, theme/patient, and goal/path/location. With Baker (1997: 121), we assume that something like the strong version of the ‘Uniformity of Theta Assignment Hypothesis’ (UTAH) is “in the spirit of” the Minimalist Program, and that UTAH is an important part of the theory of the interface between LF and systems of thought. This notwithstanding, we agree with Hale & Keyser’s (1993) claim that the status of UTAH in linguistic theory can be argued to be derived, once a strictly configurational account of Baker’s (proto-)roles is provided.

¹¹ Recall that in satellite-framed languages like English, the directional relation is not lexically conflated into the verb, but is said to stand as a satellite around the verb. By contrast, in verb-framed languages like Romance, the directional relation is conflated into the verb. See Snyder (1995) and Klipple (1997) for relevant discussion.

Two cases are then expected under our assumptions given in section 2:

- (11) a. When *e* coappears with the weak verbal configuration *v*, an external argument will not be required. As a result, *e* is to be interpreted as transitional.
b. When *e* coappears with a complete *v* (= *v**), an external argument will be required. As a result, *e* is to be interpreted as causative.

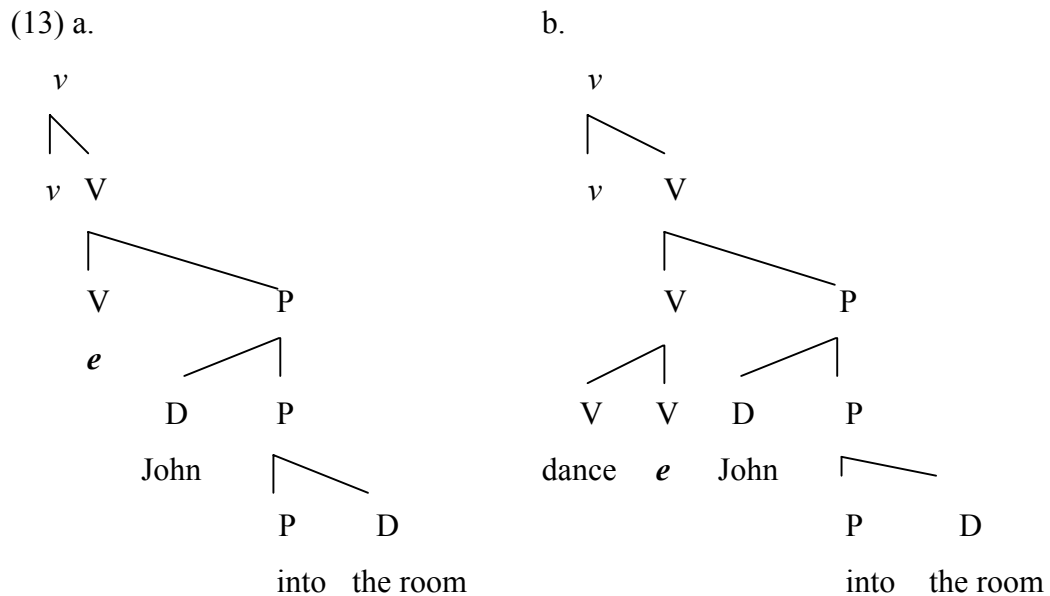
The case in (11a) appears to be involved in examples such as those in (12), which have all been argued to involve an unaccusativization process (e.g., see Hoekstra (1984) or Levin & Rappaport Hovav (1995), among others): Manner of motion verbs like *dance* or *swim* and verbs of sound like *rumble* or *squeal* have been said to be unaccusativized when a directional Path is added.

- (12) a. John danced into the room (=1b).
b. Sue swam out of the castle.
c. The train squealed into the station.¹²
d. The truck rumbled into the yard.

Strictly speaking, we do not want to posit that there is an unaccusativization process involved in the examples in (12). Rather, we claim that the syntactic construction itself is unaccusative (*v* does not force the existence of an external argument), and that it is the phonologically null properties of its verb that force a head with phonological content to be conflated into such a null head.

Let us exemplify our analysis with (12a). In (13a), the eventive relation *e* has been merged with the complex spatial relation *into*, which relates two non-relational elements: *John* (i.e., the Figure) and *the room* (i.e., the Ground). It is clear that (13a) would be interpretable at the interface with systems of thought ('John GO into the room'), but would not be legible at the interface level with sensorimotor systems. To avoid its crashing at PF, it is required that the empty verb be conflated with another element with full phonological properties. The

unergative verb *dance* selected from the lexical subarray necessary to generate (13a) (see (5)), turns out to be adjoined to the empty verb by means of Merge. As a consequence, the conflation of *dance* with *e* is spelled out as “dance” (see (13b)).¹³ Its resulting interpretation would be something like ‘John GO_[DO-dance] into the room’, i.e., ‘John went into the room dancing’.



One caveat is in order here: Our adopting a syntactic approach to explain the data in (12), should not be regarded as incompatible with our recognizing that there are semantic restrictions/constraints associated to the constructions in (12) (see Jackendoff (1990), Goldberg (1995), or Levin & Rappaport Hovav (1995)). Indeed, there are many unergative verbs that do not appear to be conflated with the null verb of the unaccusative construction in (13a):

(14) *John {laughed/cried/belched/...} into the room (cf. ^{ok}John laughed to exhaustion)

To be sure, there appears to be an intuitive conceptual explanation of the contrast between

¹² Example taken from Hana Filip & Greg Carlson (2000).

¹³ See Hale & Keyser (1998) for related discussion on how to avoid empty phonological matrices from morphosyntactic representations. Concerning (13b), our present proposal is that the syntactic operation of conflation allows the unergative verb with phonological content to percolate its phonological features upwards, to the host null unaccusative verb.

(12c-d) and (14): Only the former verbs (*squeal, rumble, ...*) can be argued to partake of an intrinsic relation with the movement involved in the unaccusative construction, while the latter verbs (*laugh, cry, ...*) cannot. This notwithstanding, we claim that restrictions of this sort do not affect the syntactic computation when forming structures like that in (13b). Accordingly, we propose that sequences like those in (14) are freely generated by the computational system, their anomaly being detected in the interpretive semantic component.

This discussion leads us naturally to comment on the following contrasts pointed out by Hana Filip and Greg Carlson (2000):

- (15) a. ??The train's brakes squealed into the station (cf. The train squealed into the station).
b. The train's brakes squealed from Chicago to Detroit (cf. The train squealed from Chicago to Detroit).

First of all, an important structural/syntactic distinction must be drawn. It should be clear that the example in (15a) can be argued to involve a conflation process similar to that depicted in (15b), while that in (15b) cannot. To put it in Hoekstra's (1984) words, there appears to be involved an unaccusativization process in (15a), but not in (15b). As a result, the argumental Path *into the station* partakes of the unaccusative structure corresponding to (15a), while the complex Path *from Chicago to Detroit* is an adjunct to the unergative structure corresponding to (15b). The descriptive paraphrases in (16) may help to understand what we mean:

- (16) a. #The train's brakes GO into the station MAKING A SQUEAL (cf. ^{ok} The train GO into the station MAKING A SQUEAL).
b. The train's brakes MAKE A SQUEAL (from Chicago to Detroit) (cf. The train MAKE A SQUEAL (from Chicago to Detroit)).

Accordingly, it should be clear that the oddity of (15a) has nothing to do with configurational factors, but with conceptual ones (see (16a)). As noted, the latter are assumed to be irrelevant to the syntactic computation (see Marantz (1997) for related assumptions).

Interestingly, an empirical argument which reinforces our argument that (15b) does not involve a syntactic conflation process like that in (13b), is that this sentence is well-formed in verb-framed languages like Romance. By contrast, the conflation process involved in (12c) or (15a) is not possible in these languages.

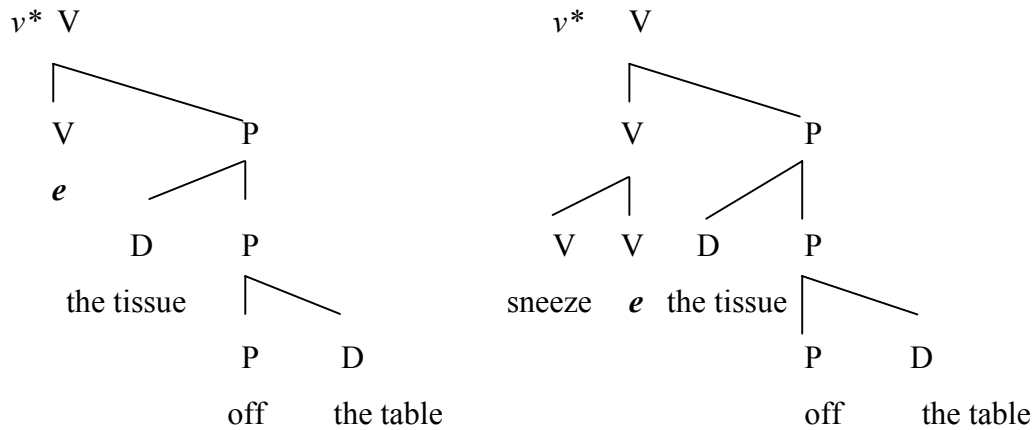
Next let us deal with the second possible case, that in (11b). This case appears to be relevant in explaining transitive constructions like those in (17):

- (17) a. He sneezed the tissue off the table.
 b. John danced Sue across the room.
 c. Peter and John sang the night away.
 d. Sue swam her swimsuit to tatters.

For example, (17a) can be argued to be the result of merging the unergative verbal head corresponding to *sneeze*,¹⁴ into the phonologically null verb of the transitive construction in (18a): See (18b). As noted in section 2, the external argument turns out to be licensed by the presence of a complete *v* (i.e., *v**) dominating the syntactic argument structure. In this case it is the causative interpretation that is to be related to *v** (vs. cf. the transitional meaning assigned to (12)). The resulting interpretation assigned to the syntactic configuration in (18b) would be the following one: ‘He CAUSE_[DO-sneeze] [the tissue off the table]’, i.e., ‘he caused the tissue to get off the table by sneezing’.¹⁵



¹⁴ As noted above (cf. (5)), we follow Hale & Keyser’s (1993, ff.) claim that that unergative verbs are denominal verbs: [_v N V].



Let us now explain why verb-framed languages like Romance lack complex unaccusative constructions such as those in (12). As noted above, our claim is that there is a morphosyntactic reason involved. In particular, we want to claim that the verb-framed nature of Romance languages can be attributed to their lacking a phonologically null verb like that in (10). Interestingly, such a hypothesis can be argued to be related to Talmy's (1985) observation that the Path relation is conflated into the motion verb in verb-framed languages (e.g., cf. the Catalan data in (19) with (12a-b)). Given this, merging an unergative verb with the null verb that has been said to be typical of non-verb-framed languages (i.e., satellite-framed languages), is not a real possibility in Romance, as it is in English.

- (19) a. El John va entrar a l'habitació (ballant). (Catalan)
 The John PAST GO+into loc.prep. the room (dancing)
 b. La Sue va sortir del castell (nedant).
 The Sue PAST GO+out of+the castle (swimming)

Assuming that a unified explanation of Talmy's (1985, 1991) conflation processes can be provided, we argue that our present analysis of these processes can be extended to resultative constructions, those encoding an abstract Path relation (see Jackendoff (1990) or Goldberg (1995)). It is the case that in Romance, the lexical-syntactic element corresponding to the abstract Path relation is lexically conflated into the verb: In (20a), the abstract Path relation is

¹⁵ Notice that the change predicate is not represented in the syntax of those constructions in (16). Our claim is that the change reading is to be obtained from the interpretive effect of associating a causative predicate with a

conflated into the verb; the adjective *pla* ‘flat’ can be argued to correspond to an abstract Place. In (20b), it is the full resultative constituent that appears to be conflated into the verb. Finally, (20c) is ungrammatical for the reason we noted above: Due to their satellite-framed nature, Romance languages appear to lack the phonologically null verb in (10), whence the unavailability of the conflation process involved in (20c).

- (20) a. La Maria va deixar el metall pla (martellejant-lo). Catalan
 The Maria PAST CAUSE+PATH the metal flat (hammering it)
- b. La Maria va aplanar el metall (martellejant-lo).
 The Maria PAST CAUSE+flat the metal (hammering it)
- c. *La Maria va martellejar el metall pla.
 The Maria PAST CAUSE+to hammer the metal flat

An important generalization emerges from our syntactic analysis. There appear to be no ‘Path adjectives’ in Romance, because the lexical-syntactic element corresponding to the abstract Path relation is usually conflated into the verb. Accordingly, there is no direct parallel in Romance for sentences such as those in (21), drawn from Levin & Rappaport Hovav (1998). By contrast, the Path constituent can be stranded in English due to its satellite-framed nature. An unergative verb can then be conflated with the null verb by means of Merge.

- (21) a. She danced/swam/sprinted free of her captors.
 b. However, if fire is an important danger, you must jump clear of the vehicle.

Concerning English resultative constructions, a qualification of Talmy’s (1985, 1991) typology is in order here: As pointed out by Juffs (1996), it should be clear that the distinction between satellite-framed languages and verb-framed ones must not be drawn across the board, but rather it depends on the lexical-semantic domains analyzed. For example, English is said to be satellite-framed with regard to ‘physical motion’ (see (12); but see footnote 1). This notwithstanding, concerning ‘abstract motion’, i.e., ‘change of state’, it is both satellite-framed (cf. (22a)) and verb-framed (cf. (22b)).

terminal coincidence relation (e.g., *off* in (18)).

- (22) a. He hammered the metal flat.
 b. He flattened the metal {by hammering (on) it}/ with a hammer}.

To be sure, the verb-framed nature of English with respect to ‘abstract motion’ is quite indisputable in the light of its large list of change of state verbs.¹⁶ This notwithstanding, what is worth noting here is that the abstract Path constituent involved in resultative constructions, is allowed to be left stranded in English (but not in Romance). Given this latter possibility, satellite-framed languages like English allow those complex resultative constructions involving a conflation process similar to that depicted in (18b). For example, (22a) involves the conflation of the verbal head corresponding to the process/activity verb *hammer* into the null verbal head of the causative resultative construction in (23a).¹⁷

¹⁶ By contrast, Chinese is said to be mostly satellite-framed with respect to ‘abstract motion’/ ‘change of state’ (see Juffs (1996)).

¹⁷ Besides the semantic/aspectual restriction that the conflated verb must denote an activity (see Jackendoff (1990), Hoekstra (1992), among others), there also appears to be a syntactic reason excluding examples like those in (i), which contain unaccusative verbs: The Figure role assigned to *Sue* in (ia-b) could not be structurally licensed in the resultative construction, since this argument would not occupy its corresponding syntactic position (i.e., specifier of P), this position being occupied by *the door* in (ia) and *herself* in (ib).

- (i) a. *Sue came the door open.
 b. *Sue arrived herself silly.

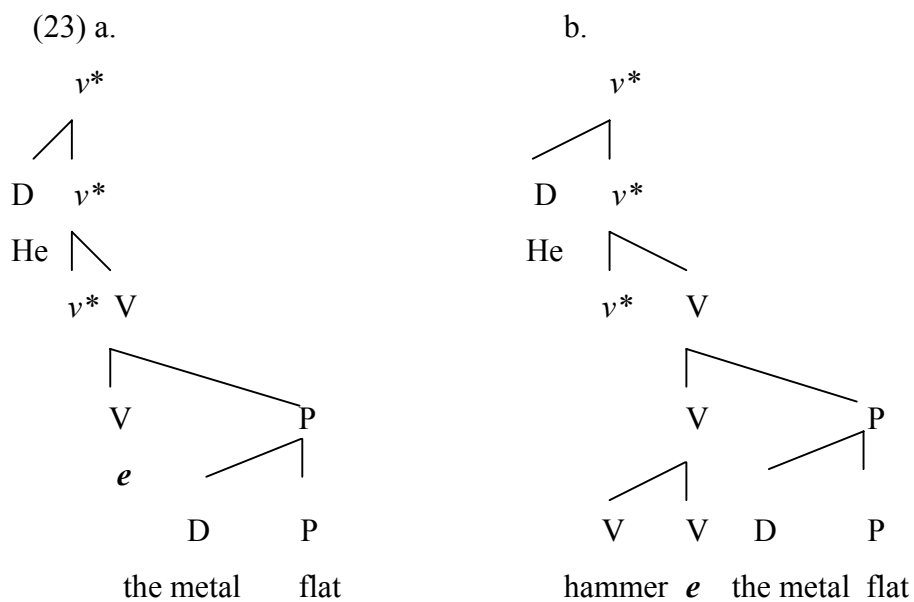
Furthermore, it is interesting to note that our analysis of resultatives is more in tune with Hoekstra’s (1988, 1992) Small Clause (SC) approach, rather than with that adopted by Carrier and Randall (1992) or Levin & Rappaport Hovav (1995). The differences between these two competing approaches come to the fore when analyzing so-called ‘transitive resultatives’ like that in (iia):

- (ii) a. John wiped the table clean (cf. John wiped the table).
 b. John wiped the crumbs off the table (cf. ≠John wiped the crumbs).

Unlike Carrier and Randall (1992) and Levin & Rappaport Hovav (1995), Hoekstra (1988, 1992) claims that in (iia) the direct internal argument of the verb *wiped* is not *the table* but the SC [*the table clean*]. Crucially, it is important to realize that our conflation analysis does not force us to claim that the verb *wipe* directly subcategorizes for a SC. Rather what we are claiming is that there is an empty causative verb selecting this SC that turns out to be conflated with the activity verb *wipe*. Moreover, notice that in our present framework, the SC amounts to the projection of a complex Particle, whose specifier is occupied by *the table*.

To be sure, in (iia) what John was wiping was *the table*, but this mere observation should not force us to consider it as the direct internal argument of *wipe*. In fact, note that what John was wiping in (iib) was *the table* as well, this not implying that it is its direct internal argument. That is, it seems fully unnatural to postulate a syntactically-coded control relation in (iib) to account for this fact, this being left to be stated at a conceptual level.

Furthermore, some tests put forward by Carrier and Randall (1992) to identify direct internal arguments (the middle formation test, the adjectival passive test, and the nominalization test) have been argued to militate against a SC analysis of ‘transitive resultatives’ like (iia). However, these tests have been shown to be non-applicable in German, since in this language they can also hold for resultative constructions containing



As noted in section 2, the formation of adjectives involves the lexical conflation of a non-relational element into a relational one (see (24c)). Recall that N and P are not to be seen as *morphosyntactic* categories, but rather as abstract syntactic categories derivable from their associated semantic features. That is, in (24c) N should not be read as ‘noun’ but as the ‘non-relational element’ denoting an abstract Ground, and P should not be read as ‘preposition’, but as the ‘Path relation’ introducing this Ground.¹⁸

- (24) *flat*
- a. [phonological properties]
 - b. [P (< Path relation)]
 - c. [_P [N P]]

By contrast, in verb-framed languages adjectives appear to lack the lexical entry in (24). Recall that when an abstract Path relation is involved in resultative constructions, it is

unergative verbs (see Wunderlich (1997: 118); moreover, see Goldberg (1995) or Spencer & Zaretskaya (1998: 9f) for a rebuttal of these tests). For reasons of space, we will not review these complex issues here.

¹⁸ Our proposal that the relational semantic feature involved in Adjectives is essentially the same as that corresponding to a spatial relation, should be regarded as quite natural from a ‘localistic’ perspective (Gruber (1965), Jackendoff (1990)). See footnote 3.

lexically conflated into the verb (see (20a)). This explains why the verb-framed nature of Romance languages prevents them from having complex resultatives involving a conflation process like that depicted in (23b). Only simple resultatives (i.e., those where the verb lexically incorporates the Path relation, and the adjective a Place relation: see (20a)) appear to be possible in Romance.¹⁹

4. Concluding remarks

There are some relevant conclusions worth being drawn from the present paper: Semantic or logical approaches to the lexical-syntactic flexibility involved in complex path of motion constructions like *John danced into the room* or in complex resultative constructions like *Mary hammered the metal flat*, cannot explain the crosslinguistic variation in a principled way. Semanticocentric accounts do not address the non-trivial question of what prevents some languages (e.g., Romance) from having those complex constructions.

As an alternative to Pustejovsky's (1991: 65) claim that "the resultative construction participates in a semantic change at the level of event structure", we have just posited that the relevant "change" takes place in syntax. In particular, we have shown that there is a morphosyntactic reason involved in Talmy's (1991) typological distinction between satellite-framed languages and verb-framed languages. Due to their non-verb-framed nature (i.e., the Path relation is *not* conflated into the verb), only the former languages present the syntactic conflation process involved in those complex constructions mentioned above.

Finally, we can conclude that parametric variation is not only to be found in the functional domain (Borer (1984); Chomsky (1995)), but in the lexical-syntactic one as well (Snyder (1995); Mateu & Rigau (1999, 2000)).

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¹⁹ See Mateu (2001) for more discussion.

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