

Two types of locative alternation

Jaume Mateu (CLT-Universitat Autònoma de Barcelona)

Abstract

Talmy's (1991, 2000) well-known typological distinction between satellite-framed languages and verb-framed languages can be shown to be relevant when arguing for two types of locative alternation. In particular, I deal with this typological variation in the light of a formal distinction between incorporation and conflation (see Haugen (2009), Mateu (2012) and Acedo-Matellán (2013), i.a.). According to the Talmian typology, verb-framed languages (i.e., those languages where Path/Result lack independent morphophonological status with respect to the verbal root) are predicted to lack the satellite-framed pattern of locative alternation variants that involve Manner conflation (e.g., *Sue sewed up the entire dress with buttons*; cf. *Sue sewed buttons on the dress*). In contrast, locative alternation variants that only involve Result incorporation (e.g., *The children loaded the stones on the cart / The children loaded the cart with stones*) are expected to be found in verb-framed languages. Special attention will also be paid to the ungrammaticality triggered by the elimination of the satellite in locative alternation variants like *Sue sewed *(up) the dress with buttons* or *John poured the glass *(full) with water*. Their ill-formedness will be shown to run parallel to that of satellite-framed constructions like *John danced the night *(away)* or *John *(out)danced Sue*, which, descriptively speaking, have been said to involve an increase of the verb valency thanks to the presence of a Path/Result satellite.

1. Introduction

In this paper I deal with a prediction that is based on Talmy's (1991, 2000) well-known typology: a certain pattern of locative alternation like the one exemplified in (1b) and (2b) is expected to be typical of so-called "satellite-framed languages" (e.g., English, German, etc.) but not of so-called "verb-framed languages" (e.g., Catalan, Spanish, etc.).¹ The examples in (1) and (2) are taken from Rosen (1996: 206-207; 209/211).

- (1) a. *Gertrude sewed buttons*_{THEME} *on the dress*_{LOCATION}
b. *Gertrude sewed up the entire dress*_{LOCATION} *with buttons*_{THEME}
- (2) a. *John goss Wasser*_{THEME} *über die Blumen*_{LOCATION} (German)
John poured water over the flowers
b. *John {begoss /übergoss} die Blumen*_{LOCATION} *mit Wasser*_{THEME}
John BE-poured/over-poured the flowers with water

In particular, special attention will be paid to the fact that the ungrammaticality triggered by the elimination of the directional particle (i.e., Talmy's *satellite*)² or

¹ According to Talmy's (1991, 2000) well-known typology of motion events, there are two types of languages with respect to the expression of what this cognitive linguist considers the core of the framing event of motion, the *core schema*, which may comprise either the Path or the Path + Ground components (Talmy 2000: 218). In so-called *satellite-framed languages* the core schema is expressed as a non-verbal element that Talmy calls *satellite* (e.g., the Path particle *in* in (ia)); see footnote 2), while the Movement and Manner components are expressed within the same morphophonological atom: the verbal root (e.g., *float-* in (ia)). By contrast, in so-called *verb-framed languages* the core schema and Movement components are expressed within the same morphophonological atom, i.e., the verbal root (e.g., *entr-* in (ib)), while the Manner component is expressed, if any, as an adjunct (e.g., *flotando* 'floating').

(i) a. *The bottle floated in.*
b. *La botella entró flotando.* (Spanish)
the bottle entered floating

² Talmy's (2000: 101-102) definition of satellite is as follows: "[...] the grammatical category of any constituent other than a noun phrase or prepositional-phrase complement that is in a sister relation to the verb root." Talmy (2000:

resultative adjective³ in examples like the ones in (3) can be argued to run parallel to that of cases like (4), which, descriptively speaking, have been said to involve an increase of the verb valency thanks to the presence of satellites encoding Path/Result (e.g., the directional particles *away* and *out-* in (4)): the satellite-framed pattern exemplified in (3) and (4) is typical of Germanic languages, where Path/Result can be shown to be morphophonologically independent from the verbal root, i.e., it is expressed via a prepositional-like or adjectival satellite.⁴

- (3) a. *Sue sewed *(up) the dress with buttons.*
 b. *John poured the glass *(full) with water.*
- (4) a. *John danced the night *(away).*
 b. *John *(out)danced Sue.*

The main goal of this paper is to analyze the Talmian typological variation involved in the descriptive phenomenon known as “locative alternation”⁵ in the light of a formal/syntactic distinction between *incorporation* and *conflation* (see Haugen

104) points out that the verbal prefixes in German, Latin and Russian and also English spatial particles are prototypical examples of satellites expressing a Path component.

³ Talmy (2000: 229) argues that resultative adjectives in constructions such as *I kicked the door shut*, which express an abstract transition into a resulting state, can also be considered to have satellite status. Following Acedo-Matellán (2010), i.a., I use satellite in a sense broader than the one found in Talmy’s work (see fn. 2): e.g., non-adjunct PPs in transition predicates in satellite-framed languages are also satellites. For example, the PP in *John danced Sue across the room* can be considered a satellite (pace Talmy 2000), which expresses the so-called “core schema” (= the Path *across* + the Ground *the room*). As pointed out by Acedo-Matellán (2010), this move allows us to maintain a parallelism between cases such as *Beat someone dead* and *Beat someone to death*, involving the semantically equivalent but categorially different core schemata *dead* and *to death*. Concerning this parallelism, an anonymous reviewer points out that the conflation of both cases into the general category “satellite” is warranted but at the same time considers worth noting that Boas’s (2003) and Weschler’s (2005) results show that adjectival and PP resultative phrases/satellites are subject to distinct acceptability criteria.

⁴ See Mateu (2002: 206-226) for a preliminary analysis of Talmy’s (1991, 2000) typology applied to the locative alternation, which has been further formally developed by Acedo-Matellán (2010: 155-164) and empirically explored via corpus studies by Lewandowski (2014a,b).

⁵ I will not review the very extensive literature on the locative alternation. Such an enterprise would take me too far afield and away from the primary purposes of this paper. For relevant discussion of this argument structure alternation, see Brinkmann (1997), Demonte (1991), Dowty (1991), Goldberg (1995), Iwata (2008), Levin & Rappaport Hovav (1991), Lewandowski (2014a), Mulder (1992), and Pinker (1989), among many others.

(2009), Mateu (2012), and Acedo-Matellán (2013); cf. Baker (1988) and Espinal (this volume) for a different use of the technical term ‘incorporation’). For my present purposes, it will be important to show that the verb in both variants of the locative alternation (i.e., the Figure/Theme-object frame and the Ground/Location-object one) can acquire phonological content in two different ways: via incorporation, as in the Catalan examples in (5) (e.g., the Result root $\sqrt{\text{CARREGA}}$ ‘load’ will be claimed to come from an inner Small Clause predicate position) or via conflation, as in the German examples in (2) (e.g., the Manner root $\sqrt{\text{GOSS}}$ ‘pour’ will be claimed to be directly adjoined to the verb).⁶

- (5) a. *En Ramon carregà els rocs al carro.* (Catalan)
 det. Ramon loaded the stones at.the cart
 ‘Ramon loaded the stones on the cart.’
- b. *En Ramon carregà el carro de rocs.*
 det. Ramon loaded the cart of stones
 ‘Ramon loaded the cart with stones.’

According to Talmy’s (1991, 2000) typology, complex resultative-like constructions like (3) and (4) are expected to be absent from verb-framed languages, i.e., those languages where Path/Result is not morphophonologically independent from the verbal root. These languages will be claimed to lack the conflation type of locative alternation, i.e., the one that involves conflation of a Manner root with the verb. Only

⁶ In this paper I will not deal with the intransitive variant of locative alternation cases: see Mulder (1992) for a syntactic analysis of so-called “swarm-constructions” (e.g., *Bees are swarming in the garden // The garden is swarming with bees*). See also Salkoff (1983) and Dowty (2000), i.a., for two semantic accounts of this alternation.

the type exemplified in (5), which involves incorporation of a Result root into the verb, will be claimed to be found in verb-framed languages.⁷

Before analyzing the two types of locative alternation, it will be useful to provide some theoretical background on so-called incorporation and conflation processes (see Haugen (2009), Mateu (2012), and Acedo-Matellán (2013), i.a). The discussion that follows is based on Hale & Keyser's (1993, 2002) influential syntactic theory of argument structure, which, for reasons of space, I will not review here (see Harley (2011) or Mateu (2014), among others).

2. Incorporation and conflation processes: a syntactic approach

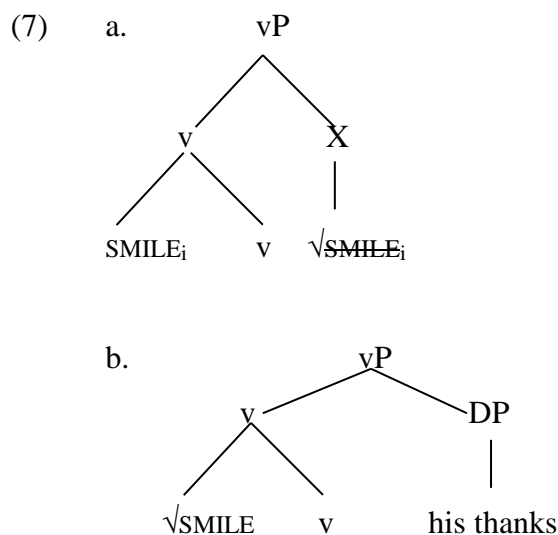
Assuming that all verbal heads in syntactic argument structures are underlyingly light (e.g., cf. Hale & Keyser (1993), Mateu (2002), Harley (2005), Acedo-Matellán (2010), den Dikken (2010), among others), it is indeed desirable to have a restrictive theory of how these verbs can acquire phonological content. Assuming Chomsky's (2001ff) well-known distinction between Internal Merge and External Merge, two options turn out to be available. For example, consider the formation of denominal verbs like *smile* (cf. the examples in (6)) and their corresponding syntactic argument structures in (7):⁸ assuming Hale & Keyser's (1993) transitive analysis of unergative verbs like (6a), the nominal root \sqrt{SMILE} , which can be claimed to come from a complement position, is adjoined to the verbalizing element (*v*) via head-to-head movement, as depicted in (7a). In contrast, in (6b) the root \sqrt{SMILE} is allowed to be *directly* adjoined to the null verbal head, as

⁷ Unfortunately, cases of misinterpretation of Talmy's (1991, 2000) typology are quite frequent, which is partly due to its original lack of formalization. But see Acedo-Matellán (2010), for a detailed formal account; see also Mateu & Rigau (2002, 2010) and Mateu (2008; 2012), among others. For example, surface similarities led Iacobini & Masini (2007) and Beavers et al. (2010) to misanalyze Italian verb-particle constructions as Romance counterparts of the Germanic satellite-framed pattern (but see Mateu & Rigau (2010), for relevant qualifications).

⁸ The external argument is not represented in the *basic* syntactic argument structures of (7a) and (7b). *Additional* arguments enter the syntactic derivation via particular functional heads like *Voice*, which introduces the external argument, or *Appl(icative)*, which introduces datives (e.g., cfr. Hale & Keyser (1993, 2002), Kratzer (1996), Pylkkänen (2008), Harley (2012), and Marantz (2013), i.a.).

represented in (7b), where no movement is involved. Descriptively speaking, the two options depicted in (7a) and (7b) can be referred to as incorporation and conflation, respectively (cf. Haugen (2009) and Mateu (2012)). However, it seems clear that no primitive theoretical status can be attributed to these two formal operations since they can be argued to follow from the abovementioned distinction between Internal Merge (\rightarrow incorporation via Copy/Move) and External Merge (\rightarrow conflation).⁹

- (6) a. *John smiled.*
 b. *John smiled his thanks.*



According to Haugen (2009) and Mateu (2012), incorporation is also involved in denominal and deadjectival verbs like the ones in (8) and (9), respectively: in these examples the nominal and adjectival roots can also be claimed to come from the innermost complement position of the syntactic argument structure (e.g., cfr. Hale and Keyser's (2002) l(exical)-syntactic analyses in (10)).

⁹ An anonymous reviewer points out that there are some non-trivial problems in Haugen's proposal: e.g., how can External Merge target a non-root element? Folli & Harley (2011, 2014) address this problem by building on Matushansky's (2006) theory of head-movement. For reasons of space, I cannot review their interesting proposal and leave this topic for future work (but see footnote 13 for a brief comparison of these proposals).

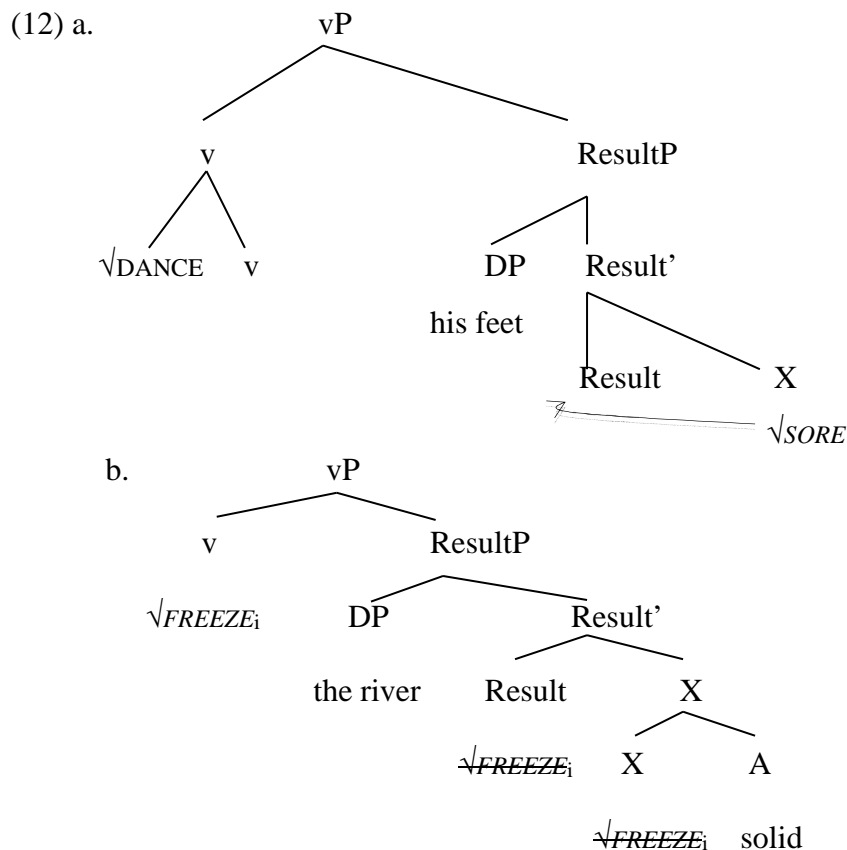
- (8) a. *John shelved the books.*
 b. *John saddled the horse.*
- (9) a. *The strong winds cleared the sky.*
 b. *The cook thinned the sauce.*
- (10) a. John ... [V_{PUT} [the books ON SHELF]]
 b. The strong winds ... [V_{CAUSE} [the sky V_{BECOME} CLEAR]]

The distinction between conflation and incorporation has also been shown to be relevant when analyzing different types of resultative constructions. As argued in Mateu (2012), a bipartite typology of resultative constructions, exemplified by (11a) and (11b), can be posited depending on how the verbal head can acquire phonological content: via conflation (i.e., the manner root is claimed to be directly adjoined to the null verbal head), as depicted in (12a) (see Mateu & Rigau (2002, 2010), Embick (2004), Harley (2005), McIntyre (2004), Zubizarreta & Oh (2007), and Acedo-Matellán (2010), i.a., for similar analyses) or via incorporation (i.e., the result root is claimed to come from an inner predicate position), as represented in (12b), where *solid* does not occupy the predicate position of the Small Clause (cfr. Hoekstra's (1988) *Small Clause Result* with Ramchand's (2008) *ResultP*)¹⁰ but is an adjunct to it. Following Baker's (2003: 221) analysis, Mateu (2012) claims that the SC predicate position is occupied by the result

¹⁰ Following the so-called "localist hypothesis" (see Gruber (1965), Jackendoff (1983), and Talmy (1991), i.a.), whereby Result can be claimed to involve Path, Mateu (2005, 2012) claims that an abstract P(ath) must be represented in the syntactic argument structure of adjectival resultative constructions. See also Acedo-Matellán (2010) for a similar proposal.

root $\sqrt{\text{FREEZE}}$ and that the adjective *solid* is adjoined to it (i.e., specifying the final result).¹¹

- (11) a. *John danced his feet sore.*
 b. *Cold temperatures froze the river solid.*



When dealing with Talmy's (1991, 2000) bipartite typological distinction (*satellite- vs. verb-framed languages*), it has been claimed that the relevant differences do not involve parametrizing syntax but rather have to do with externalization facts like

¹¹ Baker (2003) is silent on which analysis should be posited for unergative resultatives like (11a). Of course, these resultatives cannot be analyzed as (12b), i.e., as involving incorporation: cf. #*John caused his feet to become danced* vs. *Cold temperatures caused the river to become frozen*. To solve this problem and to provide a structural/syntactic account of so-called "strong" vs. "weak" resultatives (Washio 1997), Mateu (2012) adopted Haugen's (2009) distinction between conflation and incorporation: cf. (12a) and (12b). Furthermore, in those resultatives that are often referred to in the literature as 'spurious resultatives' (Washio (1997); Mateu (2000, 2002)) or 'pseudo-resultatives' (Levinson 2010) (e.g., *braid the hair tight; cut the meat thin*), the adjective also behaves like an stranded adjunct. See Levinson (2010) for a very detailed syntactic and semantic analysis of pseudo-resultative constructions.

the morphophonological licensing of some relational elements (cfr. Mateu 2000ff.; Mateu & Rigau 2002; Acedo-Matellán 2010, i.a.). For example, consider the relevant examples in (13) and (15). Null light verbs in English can be saturated via incorporation (e.g., (14a) and (16a)) or via conflation (e.g., (14b) and (16b)). In contrast, in Romance the second option exemplified in (13b) and (15b) is not available because of a morphophonological fact: in Romance languages the obligatorily incorporating status of Path/Result saturates the phonological matrix of the verb, whereby conflation of Manner is not allowed.¹² As a result, the fact that Germanic languages (and, more generally, satellite-framed languages) but not Romance languages (and, more generally, verb-framed languages), have complex path of motion constructions like (13b) and complex resultative constructions like (15b) does not involve parametrizing External Merge (e.g., “conflation languages” (Germanic) vs. “non-conflation languages” (Romance)) but can rather be explained by their different morphophonological encodings of Path/Result.¹³ See Levin & Rappaport Hovav (2015) and Acedo-Matellán

¹² In satellite-framed languages of the Slavic family the incorporation of Path/Result does *not* saturate the phonological matrix of the verb (cf. Slavic prefixed *in-GO* with Romance *enter*), whereby conflation of a manner root with the motion verb (*GO*) is allowed in Slavic but not in Romance. See Talmy (1985, 2000) for some remarks on the “mixed” nature of English: cf. Germanic/satellite-framed *dance in* and Romance/verb-framed *enter dancing*.

¹³See Mateu (2000: 75/89):

The relevant explanation of the parametric issue involved in resultative constructions has nothing to do with the positive or negative application of some *ad hoc* operations over the Lexical Conceptual Structure, the Aspectual Structure, or the Event Structure, but with one empirical fact: i.e., the morphological properties associated to the lexical-syntactic element corresponding to the directional relation are not the same in English as in Romance (...) the lexical-syntactic operation accounting for the so-called lexical subordination processes (...) has been shown to be constrained by the nature of the **morphophonological** properties associated with lexical-syntactic elements (emphasis added: JM).

For further elaboration of this idea, see Acedo-Matellán & Real-Puigdollers (2014: 161):

Verb-framed Romance does not possess a specialised V<ocabulary>I<tem> for the expression of the trajectory-denoting head Path, and Path can only be interpreted in this language when it is fused together with the *v* and a root is inserted therein. This brings about the consequence that only roots which fit well with the semantic import of *v*+Path (“motion event” + “trajectory”) can be insertable. By contrast, in satellite-framed Germanic, Path receives a VI of its own, and the verb can be lexicalised through any root (involving motion).

It is worth noting that an interesting parametric alternative has been put forward in the literature. In particular, Folli & Harley (2011, 2014) have claimed that it is a regular categorical syntactic feature-checking/valuing operation, akin to V-to-T movement, rather than a purely morphophonological one, what appears to be involved. E.g., see Folli & Harley (2011: 1/6):

Here we defend the view that it is a parameter of a well-understood type: a simple head-movement parameter (...) In verb-framed languages, there is a Result-to-*v* parameter which is set to ‘on’: Feature checking between (change-of-state) *v* and Result always requires overt head movement in these languages, while in satellite-framed languages, the same parameter is set to ‘off’ –that is, in satellite-framed languages, checking between a change-of-state *v*^o head and the Result in its complement can occur without triggering movement. In satellite-framed languages, *v*-Result feature checking can occur with Result *in situ*, just as

& Mateu (2015) for two recent overviews of the huge literature on Talmy's lexicalization patterns.

- (13) a. *He entered the room dancing.*
 b. *He danced into the room.*
- (14) a. [_{VP} [_v *enter* (=√IN_i-V_{GO})] [_{RESULTP/SC} he ~~IN~~_i the room]]
 b. [_{VP} [_v √DANCE-V_{GO}] [_{RESULTP/SC} he into the room]]
- (15) a. *He flattened the metal with a hammer*
 b. *He hammered the metal flat.*
- (16) a. [_{VoiceP} He... [_{VP} [_v *flat*_i-V_{DO}] [_{RESULTP/SC} the metal ~~FLAT~~_i]]]¹⁴
 b. [_{VoiceP} He... [_{VP} [_v √HAMMER-V_{DO}] [_{RESULTP/SC} the metal flat]]]

With the previous, admittedly sketchy, theoretical background in mind, let us turn back to the locative alternation.

3. The locative alternation variants as resultative-like constructions

The starting point of this section is the following observation put forward by Mulder (1992: 177):

The verbs involved <in the locative alternation: JM> typically have Small Clause complements (...) the structures involved are just simple **resultative constructions** <emphasis mine: JM>.

feature checking between T and V (in the traditional account of the verb-raising parameter) occurs with V *in situ* in English.

¹⁴ According to Marantz (2005), the event operator corresponding to the light verb in complex resultatives is better understood as *DO* rather than as *CAUSE*. The latter could be claimed to arise *structurally* from merging *v_{DO}* with a Small Clause Result (see also Zubizarreta and Oh (2007), i.a., for similar remarks).

I claim that the locative alternation in (5), repeated in (17), involves two resultative-like constructions, which are not related derivationally: see (18a) and (18b). Accordingly, both (18a) and (18b) can be regarded as two different instantiations of the S(mall) C(lause) Result structure in (19) (see Hoekstra (1988); as for ResultP, see Ramchand (2008), i.a.), where the root $\sqrt{\text{CARREGA}}$ ‘load’ is interpreted as a final Result and the locative PP *al carro* ‘on the cart’ and the PP *de rocs* ‘of stones’ can be regarded as inner modifiers of the final state (cf. Ramchand’s (2008) Rhemes of Result): e.g., cf. (17a/18a) *Ramon caused the stones to become loaded on the cart* with (17b/18b) *Ramon caused the cart to become loaded with stones*.¹⁵

(17) a. *En Ramon carregà els rocs al carro.* (Catalan)

det. Ramon loaded the stones at.the cart

‘Ramon loaded the stones on the cart.’

b. *En Ramon carregà el carro de rocs.*

det. Ramon loaded the cart of stones

‘Ramon loaded the cart with stones.’

(18) a. ... [_{VP} V [_{ResultP} DP_{THEME} [_{Result'} $\sqrt{\text{X}}$ PP_{LOCATION}]]] $\sqrt{\text{X}} = \sqrt{\text{CARREGA}}$ ‘load’

b. ... [_{VP} V [_{ResultP} DP_{LOCATION} [_{Result'} $\sqrt{\text{X}}$ PP_{THEME}]]]

(19) ... [_{VP} V [_{ResultP} DP Result]]

¹⁵ For a similar non-derivational view, see Labelle (1992, 2000) and Moreno Cabrera (1998, 2003), among others. Furthermore, it is important to distinguish the present proposal from Levin and Rappoport Hovav’s (1998: 260-261) non-derivational L(exical)C(ontextual)S(tructure)-based proposal in (i), which only assigns the resultative/change-of-state structure *become loaded* to the variant represented in (ib):

(i) a. [[X ACT] CAUSE [y BECOME P_{loc} z] [LOAD]_{MANNER}] (cfr. (18a))
 b. [[X ACT] CAUSE [z BECOME []_{STATE} WITH-RESPECT-TO y] [LOAD]_{MANNER}] (cfr. (18b))

As depicted in (20), it is the incorporation process that is involved in both variants of the type of locative alternation exemplified in (17). The result root $\sqrt{\text{CARREGA}}$ is not directly adjoined to the verb (i.e., as in conflation cases) but is claimed to be {moved/copied} from an inner embedded position.¹⁶

- (20) a.[_{VP} [_V $\sqrt{\text{CARREGA}}_{i-\text{V}_{\text{DO}}}$] [_{ResultP} rocs [_{Result'} $\sqrt{\text{CARREGA}}_{i}$ al carro]]]
- b. ... [_{VP} [_V $\sqrt{\text{CARREGA}}_{i-\text{V}_{\text{DO}}}$] [_{ResultP} el carro [_{Result'} $\sqrt{\text{CARREGA}}_{i}$ de rocs]]]

Mulder's claim that the locative alternation variants are instantiations of resultative-like constructions directly leads us to put forward the following correlation between (21a) and (21b) in light of Talmy's typology (1991, 2000):

- (21) a. Unlike satellite-framed languages, verb-framed languages lack resultative-like constructions formed via conflation of a root with a null light verb (e.g., see (14b) and (16b)). Resultative-like constructions found in verb-framed languages can only be claimed to be formed via incorporation (e.g., see (14a) and (16a)).
- b. Unlike satellite-framed languages, verb-framed languages lack locative alternation variants formed via conflation of a root with a null light verb (e.g., see (1b) and (2b)). Locative alternation variants found in verb-

¹⁶ An anonymous reviewer is wondering what predictions are made by proposing that the root is contained within the Small Clause predicate in both formations in (20). The same reviewer suggests that one prediction is that an adjectival participle should permit either reading. Interestingly, this prediction is borne out since both examples in (i) are well-formed in Catalan.

- (i) a. Els rocs carregats no són meus. (Catalan)
the rocks loaded not are mine
'The loaded rocks are not mine.'
- b. El carro carregat no és meu.
the cart loaded not is meu.
'The loaded cart is not mine'.

framed languages can be claimed to be formed only via incorporation (e.g., see (5)/(17)).

As pointed out by Mateu (2012), incorporation patterns are more typologically widespread: i.e., the patterns where an embedded inner element (e.g., Path/Result) is incorporated into an upper null light verb can be found in nearly all languages.¹⁷ In contrast, as noted above, conflation patterns (i.e., the ones that involve external merge of a root with a null light verb) are not found in all languages. Accordingly, satellite-framed languages can be found to have resultative-like constructions formed via incorporation and conflation (e.g., cf. (16a) and (16b), respectively), whereas verb-framed languages are expected to have resultative-like constructions that can only be formed via incorporation (e.g., see (16a)). *Mutatis mutandis*, the prediction is that the former languages are expected to have locative alternation variants that involve conflation (e.g., (22b) and (23b)) and incorporation (e.g., (22a) and (23a)), whereas the latter are expected to have variants that only involve incorporation (e.g., (5)/(17)).¹⁸

- (22) a. *The children taped pictures on the wall.*
b. *The children taped up the wall with pictures (cf. *The children taped the wall with pictures).*
- (23) a. *Gertrude sewed buttons on the dress.*
b. *Gertrude sewed up the entire dress with buttons (cf. *Gertrude sewed the dress with buttons).*

¹⁷ Here I concur with Beavers et al. (2010: 20): “since nearly all languages have path verbs, then nearly all languages have at least one verb-framed encoding option”.

¹⁸ The examples in (22) and (23) are taken from Rosen (1996: 206-207; exs. (35)-(37)).

The roots $\sqrt{\text{TAPE}}$ and $\sqrt{\text{SEW}}$ can be claimed to be conflated with the null verb in the syntactic argument structure of the location-object variant in (22b) and (23b): see (24a) and (24b), respectively. Unlike the location-object variant of the other type of locative alternation, i.e., the one that involves incorporation (see (20b)), the examples in (22b) and (23b) involve conflation of the roots $\sqrt{\text{TAPE}}$ and $\sqrt{\text{SEW}}$ with a null verb. The roots in the location-object variant of (22b) and (23b) cannot be claimed to come from the inner/embedded Small Clause Result predicate because this position is already occupied by the directional/resultative particle *up*: see (24). Accordingly, I claim that the conflation analysis of (24) turns out to be parallel to that of (25b).

- (24) a. [VoiceP The children...[_{VP} [_v $\sqrt{\text{TAPE-VDO}}$][_{RP/SC} the wall up with pictures]]]
 b. [VoiceP Gertrude...[_{VP} [_v $\sqrt{\text{SEW-VDO}}$][_{RP/SC} the dress up with buttons]]]
- (25) a. *John worked his debts off.*
 b. [VoiceP John...[_{VP} [_v $\sqrt{\text{WORK-VDO}}$][_{RP/SC} his debts off]]]

Let us now see how the present proposal can account for some well-known contrasts (e.g., cf. *pour* vs. *fill*; see Pinker (1989) and Rosen (1996), i.a.). On the one hand, the English verb *pour* only enters into the theme-object frame (see (26a)). The location-object frame is not possible unless a result satellite like *full* is present (cf. (26b) with (26c)). Interestingly, (26b) is ruled out in adult English but is attested in child English: see the nice example in (27), taken from Bowerman (1982), *apud* Pinker (1989: 26).

- (26) a. *Bill poured water into the glass.*
 b. **Bill poured the glass with water.*
 c. *Bill poured the glass full with water.*
- (27) E, 2;11 *Pour, pour, pour. Mommy, I poured you.* [Waving empty container near M. M: *You poured me?*] *Yeah, with water.*

From the present perspective, (26a) and (26c) can both be analyzed as involving conflation of the manner root $\sqrt{\text{POUR}}$ with a null verb: see (28a) and (28b), respectively. (28b'), which represents the analysis of (26b), is ruled out since the result head is not licensed (i.e., lexicalized) by any element. Finally, (27) can be claimed to involve incorporation of a result root onto the verb (see (28c): 'I caused you to become *poured* with water'). Probably, the fact that (27) is ruled out in adult English has to do with the fact that, unlike in child English, *pour* cannot be lexicalized any longer as a result root in the location-object frame.¹⁹

- (28) a. [VoiceP Bill...[_{VP} [_v $\sqrt{\text{POUR}}$ -V_{DO}]] [_{RP/SC} water into the glass]]
 b. [VoiceP Bill...[_{VP} [_v $\sqrt{\text{POUR}}$ -V_{DO}]] [_{RP/SC} the glass full with water]]
 b'. **[VoiceP Bill...[_{VP} [_v $\sqrt{\text{POUR}}$ -V_{DO}]] [_{RP/SC} the glass RESULT? with water]]*
 c. [VoiceP I...[_{VP} [_v POUR_i -V_{DO}]] [_{RP/SC} you $\sqrt{\text{POUR}}_i$ (with water)]]

On the other hand, as is well-known, the verb *fill* behaves differently from *pour*: cf. (29a,b) with (26a,b). In (29c) is depicted the incorporation analysis corresponding to

¹⁹ An anonymous reviewer raises the interesting question as to what evidence would cause the children to move away from the result root analysis that they initially hypothesized, and which permits them to produce things like (27). The same reviewer provides a plausible hint by relating this fact to the often noted u-shaped learning curve problem (see also Pinker (1989), i.a., for related discussion).

(29b), which is the typical one for ‘causative verbs of change of state’ (cf. *John caused the tank to become full*).

- (29) a. **John filled water into the tank.*
 b. *John filled the tank with water.*
 c. [VoiceP John...[_{VP} [_V FULL_i-V_{DO}] [_{RP/SC} the tank $\sqrt{\text{FULL}_i}$ (with water)]]]

The fact that the verb *fill* alternates in Chinese (see (30)) and in German (see (31)), but not in English (see (29)), is not directly related to Talmy’s typological distinction but to the idiosyncratic properties associated to the particular lexical item at stake.²⁰

- (30) a. *Wo ba shue zhuang zai pinzi li.* (Chinese)
 I BA water fill at bottle inside
 ‘I have filled the bottle with water.’
 b. *Wo ba pinzi zhuang le shue.*
 I BA bottle fill ASP water
 ‘I have filled the bottle with water.’
- (31) a. *John füllte Wasser in das Glass.* (German)
 John filled water in the glass
 b. *John füllte das Glass mit Wasser.*

²⁰ The examples in (30) and (31) are taken from Rosen (1996: 211; exs. (50)-(51)). According to Rosen (1996: 211), “(...) *Zhuang* does not necessarily encode the fullness of the container as does English *fill*. (...) It appears that *füllen* permits either alloframe because its lexical representation lacks a fullness specification on its location argument (...) Languages vary the most in their lexicons, and translation is only approximate”.

As pointed out by an anonymous reviewer, it seems likely that it is because *full* names a result state in English that it cannot operate as a manner-conflated element (but see the example in (32)). I agree with the reviewer that it is an important issue to work out what exact semantic properties permit the alternation in (30) and (31) but typically forbid it in English. I leave this topic for future research.

John filled the glass with water

As far as I can see, no general explanation can be given to the idiosyncratic fact that *fill* alternates in Chinese or in German, but does not in English nor in Romance. One could then speculate that for those English speakers who accept the example in (32) or for those English children who can say (33),²¹ the idiosyncratic semantic restrictions of the verb *fill* are similar to the ones that hold in German. In other words, for these speakers \sqrt{FULL} can act both as a result root (e.g., (29b)) and as a manner root (e.g., (32) or (33)). Accordingly, both (32) and (33) can be claimed to involve the Manner conflation analysis, whereby the root \sqrt{FULL} is directly adjoined to a null verb, as depicted in (34):

(32) *Take a little of the mixture at a time and fill it into the zucchini.*

(33) E, 5;0 *Can I fill some salt into the bear?* [fill a bear-shaped salt shaker with some salt]

(34) a. [VoiceP You...[_{vP} [_v \sqrt{FULL} -V_{DO}]] [_{RP/SC} the mixture into the zucchini]]
b. [VoiceP I...[_{vP} [_v \sqrt{FULL} -V_{DO}]] [_{RP/SC} some salt into the bear]]

Furthermore, it is worth pointing out some interesting facts that are also predicted by Talmy's (1991, 2000) typology. For example, the theme-object variant in verb-framed languages lacks complex directional PP's like the telic ones *into* or *onto* (e.g., see (35a)). A simple locative PP like the one exemplified in (35b) is typically

²¹ The examples in (32) and (33) are taken from Rosen (1996: 210; ex. (49)) and Pinker (1989: 26), respectively.

found in these languages instead: e.g., see the Catalan example in (35c) and the Spanish one in (35d).²²

- (35) a. *John loaded the stones onto the cart.*
 b. *John loaded the stones on the cart.*
 c. *Ramon carregà els rocs al carro.* (Catalan)
 Ramon loaded the stones at.the cart
 d. *Ramón cargó las piedras en el carro.* (Spanish)
 Ramon loaded the stones in the cart

(35a) can be claimed to involve a conflation structure like the one represented in (36a), whereas (35b/35c/35d) can be claimed to involve the incorporation structure in (36b) (cf. (20a)). Roughly, the corresponding semantic paraphrases of (36a) and (36b) would be: *John's loading caused the stones to go onto the cart* and *John caused the stones to become loaded on the cart*, respectively.

- (36) a. [VoiceP John...[_{VP} [_V√LOAD-V_{DO}]] [_{RP/SC} the stones onto the cart]]
 b. [VoiceP John...[_{VP} [_V√LOAD_i-V_{DO}]] [_{RP/SC} the stones √LOAD_i on the cart]]

Here is my present account of why locative alternation is typically more productive in satellite-framed languages than in verb-framed ones (see Mateu (2002);

²² The explanation of why a directional reading is available in (ia), but not in (ib), could also be recruited to explain why a locative PP is possible in (35b): locative PP's in directional contexts are expected to be possible in those cases where the verb does not encode *pure* manner but encodes path/result: see Folli & Ramchand (2005) and Mateu & Rigau (2010) for a lexical-syntactic treatment of the polysemy involved in *run*-verbs. See also Gehrke (2008), Ramchand (2008), Den Dikken (2010), and Real-Puigdollers (2013), i.a., for further discussion on contrasts like (i).

(i) a. *John ran in the kitchen.* (both locative and directional readings available)
 b. *John danced in the kitchen.* (only locative reading available)

In Mateu (2012) I claim that the directional reading of (ia) involves incorporation of a result root, while *John ran into the kitchen* (or *John danced into the kitchen*) involves conflation of a manner root.

Acedo-Matellán (2010); Lewandowski (2014a,b)): the former languages have two types of locative alternation (the ones given by conflation and incorporation), whereas the latter only have one type (the one given by incorporation). For example, a verb-framed language like Catalan lacks locative alternation variants like the one exemplified in (37a) for the same reason it lacks complex prepositional constructions like (37b) or (37c) (cf. (38b) and (38c)):²³ as noted above, the Path/Result head has an obligatorily incorporating status in Catalan (e.g., see the directional verb *tragué* ‘got.out’ in (38a)), which prevents conflation of a manner root with a null light verb. Only the locative alternation variants that involve incorporation of Path/Result into the null verb (e.g., cases like (5)/(17), where the root is claimed to come from an inner complement position), are expected to be found in Catalan.

- (37) a. *Phil swept the crumbs off the floor* (cf. *Phil swept the floor (clean of crumbs)*)
 b. *Phil swept the crumbs onto the floor.*
 c. *Phil swept the crumbs into a pile.*
- (38) a. *Phil tragué [les molles] [del banc] (amb una escombra)* (Catalan)
 Phil got.out the crumbs of.the bench (with a broom)
 ‘Phil swept the crumbs off the bench.’
 b. **Phil escombrà les molles fora del banc.*
 Phil swept the crumbs off of.the bench
 ‘Phil swept the crumbs off the bench.’
 c. **Phil escombrà les molles en una pila.*

²³ The English examples in (37) are taken from Rappaport Hovav & Levin (1998: 120-121).

Phil swept the crumbs in a pile

‘Phil swept the crumbs into a pile.’

The syntactic argument structure of (37a) is represented in (39). In accordance with the satellite nature of Path/Result in English, the phonological content of Path/Result (cf. the satellite *off*) does not saturate the null verb, whereby the manner root $\sqrt{\text{SWEEP}}$ is allowed to be conflated (i.e., externally merged) with it.

(39) [VoiceP Phil...[vP [v $\sqrt{\text{SWEEP}}$ -V_{Do}][RESULTP/SC the crumbs off the floor]]]

A syntactic analysis similar to the one depicted in (39) has been claimed to be the adequate one for Greek examples like (40a) by Alexiadou & Anagnostopoulou (2011). Indeed, since Modern Greek is a verb-framed language (see Acedo-Matellán (2010), i.a.), the well-formedness of (40a) could be said to pose a non-trivial problem for proponents of the Talmian typology. However, there are some reasons for doubting the validity of the Manner conflation analysis in (40a): to start with, the same Greek authors point out that such an analysis cannot be generalized to those cases that involve a preposition different from *apo* ‘from’ (cf. (40b)).

- (40) a. *O Jannis skoupise ta pesmena fila apo to patoma* (Greek)
the Jannis swept the fallen leaves from the floor
- b. *?/*O Jannis skoup-is-e ta pesmena fila ston dromo*
the Jannis swept the fallen leaves up to the street

Interestingly, a contrast very similar to the one exemplified in (40) can be replicated in Spanish, another verb-framed language, which shows that the contrast in (40) is not a mere idiosyncrasy of Modern Greek: see (41).

- (41) a. *Jannis barrió [las migas] [del suelo].* (Spanish)
 Jannis swept the crumbs from.the floor
- b. **Jannis barrió las migas a la calle.*
 Jannis swept the crumbs to the street

Positing a Manner conflation analysis like (39) for both Gr. (40a) and Sp. (41a) would leave it unexplained why such an analysis cannot be extended to Gr. (40b)/Sp. (41b). In contrast, both examples are well-formed in English: see (42).

- (42) a. *Jannis swept the crumbs off the floor.*
- b. *Jannis swept the crumbs into the street.*

Accordingly, there are reasons for doubting about positing a Manner conflation analysis for (40a) and (41a). Rather it seems more adequate to posit a Path/Result incorporation analysis for these examples. At first sight, the incorporation analysis could be said to be quite *ad hoc* but the important contrast between the grammaticality of (43a,b) vs. the ungrammaticality of (43c) gives strong evidence for it.

- (43) a. *O Jannis skoup-is-e ta pesmena fila.* (Greek)
 the Jannis swept the fallen leaves
- b. *Jannis barrió las migas.* (Spanish)

Jannis swept the crumbs

- c. **Phil swept the crumbs.* (ex. Rappaport Hovav & Levin (1998: ex. [40] : 120))

As pointed out by Rappaport Hovav & Levin (1998: 121), “the only interpretation that speakers are able to associate with <43c> is the nonsensical one where the crumbs are the the surface that is being swept. This reading is precisely the expected one if the sentence is associated with the activity event structure <e.g., cf. *Phil swept the floor for five minutes: JM*>”. In contrast, (43a) and (43b) have a natural interpretation that is missing in English: the Greek and Spanish examples are grammatically well-formed on the reading where the direct argument is not the surface but the removed stuff. That is to say, both (43a) and (43b) are grammatical on the reading ‘Jannis removed the leaves/crumbs’. Crucially this reading is missing in the English example in (43c), which explains why Rappaport Hovav & Levin (1998: 120) starred their example **Phil swept the crumbs.* Arguably, a directional particle (*off*) or PP (e.g., *onto the floor/into a pile/off the table*, etc.) is needed in (43c) for the same reason it is needed in an “unselected object construction” like (25) *John worked his debts* *(*off*) (see Mateu (2002), McIntyre (2004), or Acedo-Matellán (2010) for the syntax of so-called “unselected object constructions”). My point is that both involve Manner conflation, as shown in (44):

- (44) a. [VoiceP Phil...[_{VP} [_V√SWEEP-V_{DO}][_{RP/SC} the crumbs {off/into a pile/...}]]]
- b. [VoiceP John...[_{VP} [_V√WORK-V_{DO}][_{RP/SC} his debts off]]]

As noted, the PP can be omitted in the Greek and Spanish examples in (40a) and (41a), whereas such an omission is impossible in English: **John swept the crumbs* (*on the relevant reading). Interestingly, the explanation of this contrast can be found in Talmy's (1991, 2000) typological distinction: it is the case that Gr. *skoupise* and Sp. *barrió* 'swept' in (43) can be interpreted as a Path/Result verb (cf. *Jannis removed the leaves/crumbs*). In English such an interpretation is not possible for (43c), since in this satellite-framed language the Path/Result is not incorporated into the verb but is encoded as satellite: cf. *Jannis swept the crumbs off*. As a result, unlike their Greek and Spanish counterparts, Engl. *sweep* cannot be (re)interpreted as a Result/Path verb. In (45) are depicted the Manner conflation analysis of (42a) and the Result incorporation analysis of Sp. (43b).²⁴

- (45) a. [VoiceP Jannis...[_{VP} [_V√SWEEP-V_{DO}][_{RP/SC} the crumbs *(off the floor)]]]
- b. [VoiceP Jannis [_{VP} [_V√BARRER_i-V_{DO}] [_{RP/SC} las migas √BARRER_i]]]]]

To conclude this section, despite some criticisms and qualifications (e.g., see Beavers et al. (2010) and Alexiadou & Anagnostopoulou (2011), i.a.), the following Talmian generalization can be maintained: [*pure* (i.e., non-directional) manner verb + Small Clause Result] constructions are predicted to be absent from Talmy's verb-framed languages (e.g., Romance, Modern Greek, Japanese, etc.). Accordingly, Romance languages like Catalan or Spanish lack complex path of motion constructions that involve conflation (cf. (46a) with (47a)) for the same reason they lack complex

²⁴ As predicted, the Spanish adnominal participle construction in (ia) is better than its English counterpart in (ib). See footnote 16.

- (i) a. *Jannis eliminó las migas barridas.* (cf. (43b))
 Jannis eliminated the crumbs swept
 b. ??*Phil eliminated the swept crumbs.* (cf. (43c))

resultative constructions (cf. (46b) with (47b)), which also involve a Manner conflation analysis: see (48).

- (46) a. *Phil swept the crumbs into a pile.*
 b. *Phil swept the floor clean of crumbs*
 c. *Phil cleaned the floor of crumbs.*
- (47) a. **Phil escombrà les molles en una pila* (Catalan)
 Phil swept the crumbs in a pile
 b. **Phil escombrà el terra net de molles* (*on the resultative reading)
 Phil swept the floor clean of crumbs
 c. *Phil netejà el terra de molles (amb una escombra)*
 Phil cleaned the floor of crumbs (with a broom)
- (48) [VoiceP He ...[_{VP} [_v√SWEEP-V_{DO}][_{RP/SC} the floor clean]]]

4. The prefixed variants of locative alternation

In this section I make some remarks on the locative alternation in Germanic languages like Dutch and German in light of the conflation/incorporation distinction (cf. Brinkmann (1997); Groot (1998); Hoekstra & Mulder (1990); Laffut (1998); Michaelis & Ruppenhofer (2001); Mulder (1992), i.a.). In the location-object frame of some locative alternation patterns, both Manner/Means and Path/Result are encoded into the verb: the verbal root usually expresses the former, while the prefix expresses the latter (e.g., see (49b) and (50b)).²⁵ However, as pointed out in footnote 12, the affixation of the resultative prefix *be-* onto the verb is not to be equated with the saturation involved

²⁵ The examples in (49) and (50) are taken from Mulder (1992: 180; ex. (43)) and Brinkmann (1997: 69; ex (48)), respectively.

in monomorphemic directional verbs like *enter* or Cat. *treure* ‘get out’: due to the satellite nature of the affix *be-*,²⁶ a Manner component is allowed to be conflated with the null verbal head. In this sense the prefix *be-* can be regarded as a satellite (like the resultative phrase *vol* ‘full’ in (49c)), in spite of its forming a morphological unit with the verb. Such a parallelism between *be-* and *vol* is in tune with Mulder’s (1992) Small Clause analysis in (49e), which accounts for the complementary distribution of the prefix and the resultative phrase shown in (49d).

- (49) a. *hij hangt foto’s op de muur.* (Dutch)
 he hangs photos on the wall
- b. *hij behangt de muur met foto’s.*
 he BE-hangs the wall with photos
- c. *hij hangt de muur vol met foto’s.*
 he hangs the wall full with photos
- d. **hij behangt de muur vol met foto’s.*
 he BE-hangs the wall full with photos
- e. *hij hangt [sc de muur {be-/vol}]*
- (50) a. *Die Vandalen spritzen Farbe auf das Auto.* (German)
 the vandals sprayed paint onto the car
- b. *Die Vandalen besprizten das Auto mit Farbe.*
 the vandals BE-sprayed the car with paint

²⁶ See also Talmy (2000) and Acedo-Matellán (2010) for the proposal that Russian and Latin prefixes are satellite elements.

An interesting problem is the apparent optionality of the resultative prefix in the location-object frame of some verbs (e.g., see (51b) and (52b)).²⁷ My proposal is that the unprefixated variant of the location-object frame is to be analyzed as its Romance counterpart in (20b), i.e., the one that involves Result incorporation (cf. ... [_{vP} [_v \sqrt{LOAD}_i -_{vDO}] [_{ResultP} *the wagon* [_{Result'} \sqrt{LOAD}_i *with hay*]]]), whereas the prefixed variant is to be analyzed as involving Manner conflation: to put it roughly, the unprefixated variant can be paraphrased as *He caused the wagon to become loaded*, while the prefixed variant would be something like *His loading caused the wagon to become totally affected*. This mere description can then account for the fact that a resultative phrase with the meaning of “total affectedness” (e.g., *vol* ‘full’) is not compatible with the prefixed variant (cf. (51c)): *He caused the wagon to become full* (i.e., *totally affected*) *by means of loading*.

- (51) a. *Hij laadde het hooi op de wagen.* (Dutch)
 he loaded the hay on the wagon
- b. *Hij (be-)laadde de wagen met hooi.*²⁸
 he BE-loaded the wagon with hay
- c. *Hij (*be-)laadde de wagen vol met hooi.*
 he loaded the wagon full with hay
- (52) a. *Sie luden Heu auf den Wagen.* (German)
 they loaded hay onto the wagon
- b. *Sie (be-)luden den Wagen mit Heu.*
 they (BE-)loaded the wagon with hay

²⁷ Cf. Mulder (1992: 180f.), Brinkmann (1997: 68f.) or Maylor (2001), i.a., for the optionality of BE-prefixation.

²⁸ De Groot (1998: 68; ex. (24b)) says that the prefixed variant of the verb *load* is ungrammatical in Dutch, whereas Lafut (1998: 138) points out that “the form *beladen* only occurs in the subpart of the corpus containing legal texts”. For my present purposes, I will omit this type of variation (which, by the way, is not found in the literature with respect to German (52b)) and will assume Mulder’s judgements in (51) as correct.

Accordingly, the prefixed variant in (51b) and (52b) can be argued to involve the very same conflation process that corresponds to a complex resultative construction like *He loaded the wagon full of hay* or *He loaded the wagon up with hay*. See (53):

(53) [VoiceP He ...[_{VP} [_v√LOAD-V_{DO}][_{RP/SC} the wagon {full/vol-/be-}]]]

Furthermore, as for those prefixes that lack the grammaticalized character of *be-* (cf. German (2b) *John übergoss die Blumen mit Wasser* lit. ‘John over-poured the flowers with water’), I would like to suggest the syntactic analysis in (54), which involves demoting the Figure/Theme *Wasser* ‘water’ to an adjunct status and raising the complement of PP, i.e., the Ground *die Blumen* ‘the flowers’, to the specifier position of ResultP where it is interpreted as ‘Subject of Result’ (see Ramchand (2008), i.a.). Moreover, the prefix *über-* can be claimed to undergo head-to-head movement from Path° to Res°. ²⁹ This analysis can also be claimed to account for the location-object variant of the Danish examples in (55b) and (56b), taken from Herslund (1995: 44).

(54) [VoiceP John ...[_{VP} [_v√GOSS-V_{DO}][_{RESULTP} die Blumen_i [_{RESULT} über_j] [_{PathP} über_j ~~die Blumen_i~~]]]]]

(55) a. *Han borede kniven gennem gardinet.* (Danish)

he pierced the knife through the curtain

b. *Han gennemborede gardinet med kniven.*

he through.pierced the curtain with the knife

²⁹ The syntactic analysis in (54) is based on or inspired by the one put forward by Svenonius (2004) when dealing with what he calls “unaccusative particle constructions” like *fill in the form* (cf. *fill in the information*). According to Svenonius (2004: 223), “what distinguishes unaccusative particle constructions is the absence of a Figure-introducing *p* head, parallel to the Agent-introducing *v* of much recent work. (...) In <54: JM> no internal case is available, as in the classic Burzio’s Generalization cases, so the complement of P must get case from the verb, and does not surface as a prepositional complement”. See also McIntyre (2007), Mateu (2008), Acedo-Matellán (2010), and Oya (2009), i.a., for further discussion on this type of prepositional structures.

‘He pierced the curtain with the knife.’

- (56) a. *De sjaskede vand over møblerne.*
 they splashed water upon the furniture
- b. *De oversjaskede møblerne med vand.*
 they over.splashed the furniture with water
 ‘They splashed the furniture with water all over.’

Finally, as pointed out above, the so-called *with*-phrase (cf. the {Dutch *met*/ Germ. *mit*/ Dan. *med*}-phrase) turns out to be a structural adjunct with respect to the syntactic argument structure in (54).³⁰ Mulder (1992: 193ff.) provides some relevant arguments in favor of the adjunct status of the PP headed by *met* ‘with’. For example, he shows that in Dutch this phrase can be extraposed, is omissible or can be clefted (e.g., cf. his examples (57a) and (57b)), these facts arguing against its alleged argument status.³¹

³⁰ It should be pointed out that the fact that the *with*-phrase is obligatory in some cases does not invalidate Mulder’s (1992) hypothesis that this PP is a *structural* adjunct since the presence of this modifier can be required for non-structural but information/pragmatic reasons. E.g., cf. the following relevant contrast in (i-ii), taken from Herslund (1995: 49/52). For discussion on so-called “obligatory adjuncts”, see Grimshaw & Vikner (1993) and Goldberg & Ackerman (2001), i.a.

- (i) *Han fyldte kassen (med bøger).* (Danish)
 he filled the box with books
- (ii) *De fyldte ham #(med løgn).*
 they filled him with lies

³¹ As pointed out by Mateu (2002), the preposition introducing the locatum object in the location-object variant in Romance languages can be the preposition corresponding to *with* or the partitive preposition corresponding to *of*. As can be inferred from the Catalan data in (i), the central coincidence relation *amb* ‘with’ is only licensed as a certain kind of adjunct instrumental object, requiring then an implicit or explicit agent. This explains why this preposition is not typically found in adjectival participial constructions where the agent has been eliminated (see (id)), nor is found coappearing with a true instrumental (see (iib)). To put it in structural terms, the *amb*-phrase is an upper adjunct to *v*, whereas the *de*-phrase is an inner adjunct to the Small Clause/PathP/ResultP. For more discussion on the *with*-phrase in the location-object variant in Romance, see Damonte (2006) and Mayoral-Hernández (2010), i.a.

- (i) a. *El Pep carregà el camió de totxos.* (Catalan)
 the Pep loaded the truck of bricks
- b. *El Pep carregà el camió amb totxos.*
 the Pep loaded the truck with bricks
- c. *Aquest camió està {molt carregat/carregadíssim} de totxos.*
 this truck is very loaded/loaded-superlat of bricks
- d. *??Aquest camió està {molt carregat/carregadíssim} amb totxos.*
 this truck is very loaded/loaded-superlat with bricks

- (57) a. *dat hij de tuin beplant (met tulpen).* (Dutch)
 that he the garden BE-plants (with tulips)
- b. *hij beplant de tuin en doet dat met tulpen.*
 he BE-plants the garden and does that with tulips

5. Conclusions

In this paper I have dealt with the typological variation involved in the locative alternation in the light of a formal distinction between incorporation and conflation (see Haugen (2009), Mateu (2012), and Acedo-Matellán (2013), i.a.). In particular, it has been claimed that the null verbal head in both variants of the locative alternation (i.e., the theme-object frame and the location-object one) can acquire phonological content in two different ways: via incorporation (the root comes from an inner complement position and is copied into the empty matrix of the verbal head) or via conflation (the root is directly adjoined to the null light verb).

Talmy's (1991, 2000) well-known typological distinction between satellite-framed languages and verb-framed languages has been shown to be relevant when arguing for two types of locative alternation. As predicted by the Talmian typology, verb-framed languages (i.e., those languages where the Path/Result head lacks independent morphophonological status with respect to the verbal root) lack the locative alternation variants that involve conflation of a Manner root with a null verb. Only the locative alternation variants that can be claimed to involve Result incorporation are

-
- (ii) a. *El Pep carregà el camió de totxos amb la grua.*
 the Pep loaded the truck of bricks with the crane
- b. *??El Pep carregà el camió amb totxos amb la grua.*
 the Pep loaded the truck with bricks with the crane

expected to be found in these languages (for related discussion, see Mateu (2002: 206-227) and Acedo-Matellán (2010: 155-164)).

Assuming the plausible proposal that conflation can be reduced to External Merge and incorporation to Internal Merge, the relevant crosslinguistic differences have been shown not to involve parametrizing the syntax of argument structure but rather have to do with the morphophonological licensing of some relational elements. For example, as pointed out by Mateu & Rigau (2002, 2010), the obligatorily incorporating status of Path/Result in Romance languages prevents them from having complex path of motion constructions and the variety of resultative-like constructions that involve Manner conflation (see also Acedo-Matellán (2010), Real-Puigdollers (2013), and Acedo-Matellán & Real-Puigdollers (2014), for further formal elaboration of this idea).

Acknowledgments

I am grateful to the editors for their patience and assistance and to two anonymous reviewers for very helpful comments and suggestions. I also acknowledge the funding of grants FFI2011-23356 and FFI2014-56968-C4-1-P (Spanish Ministerio de Economía y Competitividad) and 2014 SGR-1013 (Generalitat de Catalunya).

References

- Acedo-Matellán, Víctor. 2010. Argument Structure and the Syntax-Morphology Interface. A Case Study in Latin and Other Languages. Universitat de Barcelona. PhD Dissertation. Downloadable at <http://www.tdx.cat/handle/10803/21788>
- Acedo Matellán, Víctor. 2013. Merging Roots in Bare Phrase Structure and the Conflation/Incorporation Distinction. *NELS* 42: 1-14.
- Acedo Matellán, Víctor & Jaume Mateu 2015. Parameters and argument structure I: motion predicates and resultatives. In Antonio Fábregas, Jaume Mateu and Michael Putnam (eds.). *Contemporary Linguistic Parameters*. 99-122. London & New York: Bloomsbury.
- Acedo-Matellán, Víctor & Cristina Real-Puigdollers. 2014. Inserting roots into (functional) nodes: categories and cross-linguistic variation. *Linguistic analysis* 39(1-2): 125-168.
- Alexiadou, Artemis & Elena Anagnostopoulou. 2011. The locative alternation crosslinguistically. Implications for resultative formation. Handout delivered at the *Workshop on verbal elasticity*, October 3-5, Universitat Autònoma de Barcelona.
- Anderson, Stephen R. 1971. On the Role of Deep Structure in Semantic Representation. *Foundations of Language* 6: 197-219.
- Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing*. Chicago: University of Chicago Press.
- Baker, Mark. 2003. *Lexical categories. Verbs, nouns, and adjectives*. Cambridge: Cambridge University Press.

- Beavers, John, Beth Levin & Shiao Wei Tham. 2010. The typology of motion expressions revisited. *Journal of Linguistics* 46: 331-377.
- Boas, Hans. 2003. *A constructional approach to resultatives*. Stanford: CSLI Publications.
- Boons, Jean Paul. 1974. Acceptability, Interpretation and Knowledge of the World: Remarks on the Verb *planter* ('to plant'). *Cognition* 2: 183-211.
- Bowerman, Melissa. 1982. Reorganizational Processes in Lexical and Syntactic Development". In Eric Wanner & Lila Gleitman (eds.), *Language Acquisition: The State of the Art*. 319-346. New York: CUP.
- Brinkmann, Ursula. 1997. *The Locative Alternation in German. Its Structure and Acquisition*. Amsterdam/Philadelphia: John Benjamins.
- Chomsky, Noam. 2001. Beyond Explanatory Adequacy. *MIT Occasional Papers in Linguistics* 20: 1-28.
- Damonte, Federico. 2006. Classifier incorporation and the locative alternation. In Nicola Munaro, Giuseppina Turano and Walter Schweikert (eds.), *Proceedings of the XXX Incontro di Grammatica Generativa*. 83 - 103. Venezia: Cafoscarina.
- Demonte, Violeta. 1991. *Detrás de la palabra. Estudios de gramática del español*. Madrid: Alianza Universidad.
- Dikken, Marcel den. 2010. Directions from the GET-GO. On the syntax of manner of motion verbs in directional constructions. *Catalan Journal of Linguistics* 9. 23-53.
- Dowty, David. 1991. Thematic Proto-roles and Argument Selection. *Language* 67: 547-619.
- Dowty, David. 2000. 'The Garden Swarms with Bees' and the Fallacy of 'Argument Alternation'. In Yael Ravin & Claudia Leacock (eds.), *Polysemy*. 111-128. Oxford / New York: Oxford University Press.
- Embick, David. 2004. On the structure of resultative participles in English. *Linguistic Inquiry* 35: 355-392
- Folli, Raffaella & Gillian Ramchand. 2005. Prepositions and Results in Italian and English: An Analysis from Event Decomposition. In Henk Verkuyl, Henriette De Swart & Angeliek Van Hout (eds.), *Perspectives on aspect*. 81-105. Dordrecht: Springer.
- Folli, Raffaella & Heidi Harley. 2011. An alternative to deficiency approaches to the manner-alternation parameter. Paper presented at the *Workshop on Verbal Elasticity*, Bellaterra, UAB, Oct. 5th.
- Folli, Raffaella & Heidi Harley. 2014. Against deficiency-based typologies: Manner-alternation parameters in Italian and English. Paper presented at the *Going Romance 28th*, Lisboa, Dec. 4-6.
- Gehrke, Berit. 2008. *Ps in motion. On the semantics and syntax of P elements and motion events*. LOT Dissertation Series 184. Utrecht: LOT.
- Goldberg, Adele. 1995. *Constructions. A Construction Grammar Approach to Argument Structure*. Chicago & London: The University of Chicago Press.
- Goldberg, Adele & Farrell Ackerman. 2001. The Pragmatics of Obligatory Adjuncts. *Language* 77.4: 798-814.
- Grimshaw, Jane & Sten Vikner. 1993. Obligatory Adjuncts and the Structure of Events. In Eric Reuland & Werner Abraham (eds.), *Knowledge and Language: Vol. II Lexical and Conceptual Structure*. 145-159. Dordrecht: Kluwer.
- Groot de, Casper. 1998. How to Butter a Sandwich. On 'spread' in Dutch and Hungarian from a Typological Perspective. In Leonid Kulikov & Heinz Vater (eds.), *Typology of Verbal Categories. Papers presented to Vladimir Nedjalkov on the occasion of his 70th birthday*. 61- 72. Tübingen: Max Niemeyer.
- Gruber, Jeffrey. 1965. *Studies in Lexical Relations*, Doctoral Dissertation, MIT, Cambridge, MA.
- Hale, Kenneth L. & Samuel Jay Keyser. 1993. On argument structure and the lexical expression of syntactic relations. In Kenneth L. Hale & Samuel Jay Keyser (eds.), *The view from building 20: Essays in linguistics in honor of Sylvain Bromberger*, 53-109. Cambridge, MA: MIT Press.
- Hale, Kenneth L. & Samuel Jay Keyser. 1998. The Basic Elements of Argument Structure. In Heidi Harley (ed.), *MIT Working Papers in Linguistics* 32, *Papers from the UPenn/MIT Roundtable on Argument Structure and Aspect*. 73-118. MIT, Cambridge, MA.
- Hale, Kenneth L. & Samuel Jay Keyser. 2002. *Prolegomenon to a theory of argument structure*. Cambridge, MA: MIT Press.
- Harley, Heidi. 2005. How do verbs get their names? Denominal verbs, manner incorporation, and the ontology of verb roots in English. In Nomi Erteschik-Shir & Tova Rapoport (eds.), *The syntax of aspect. Deriving thematic and aspectual interpretation*, 42-64. Oxford & New York: Oxford University Press.
- Harley, Heidi. 2011. A Minimalist Approach to Argument Structure. In Cedric Boeckx (ed.), *The Handbook of Linguistic Minimalism*, 427-448. Oxford, NY: Oxford University Press.

- Harley, Heidi. 2013. External arguments and the Mirror Principle: On the distinctness of Voice and v. *Lingua* 125: 34-57.
- Haugen, Jason D. 2009. Hyponymous objects and late insertion. *Lingua* 119: 242-262.
- Herslund, Michale. 1995. The Applicative Derivation and the “Spray Paint” Alternation in Danish. *University of Trondheim Working Papers in Linguistics* 25: 43-59.
- Hoekstra, Teun. 1988. Small clause results. *Lingua* 74: 101-139.
- Hoekstra, Teun & René Mulder. 1990. Unergatives as copular verbs: Locational and existential predication. *The Linguistic Review* 7: 1-79.
- Huang, C. T. James. 2006. Resultatives and unaccusatives: a parametric view. *Bulletin of the Chinese Linguistic Society of Japan* 253: 1-43.
- Iacobini, Claudio & Francesca Masini. 2007. The emergence of verb-particle constructions in Italian: locative and actional meanings. *Morphology* 16: 155-188.
- Iwata, Seizi. 2008. *Locative Alternation. A lexical-constructional approach*. Amsterdam & Philadelphia: John Benjamins.
- Jackendoff, Ray. 1983. *Semantics and Cognition*. Cambridge, MA: MIT Press.
- Kaufmann, Ingrid & Dieter Wunderlich. 1998. Cross-linguistic Patterns of Resultatives. Manuscript. University of Düsseldorf.
- Kratzer, Angelika. 1996. Severing the external argument from its verb. In Johan Rooryck & Laurie Zaring (eds.), *Phrase structure and the lexicon*. 109-137. Dordrecht: Kluwer.
- Labelle, Marie. 1992. La structure argumentale des verbes locatifs à base nominale. *Linguisticae investigationes* 16.2 : 267-315.
- Labelle, Marie. 2000. The Semantic Representation of Denominal Verbs. In Peter Coopmans, Martin Everaert, and Jane Grimshaw (eds.), *Lexical Specification and Insertion*. 215-240. Amsterdam / Philadelphia: John Benjamins.
- Laffut, An. 1998. The Locative Alternation: A Contrastive Study of Dutch vs. English. *Languages in Contrast* 1.2: 127-160.
- Levin, Beth & Malka Rappaport Hovav. 1991. Wiping the Slate Clean: A Lexical Semantic Exploration. *Cognition* 41: 123-151.
- Levin, Beth & Malka Rappaport Hovav. 1998. Morphology and Lexical Semantics. In Andrew Spencer & Arnold Zwicky (eds.), *The Handbook of Morphology*. Oxford/Malden: Blackwell.
- Levin, Beth & Rappaport Hovav, Malka. 2015. Lexicalization patterns. Ms. Stanford University and The Hebrew University of Jerusalem. Downloadable at <http://web.stanford.edu/~bclevin/lexpat15.pdf>
- Levinson, Lisa. 2010. Arguments for pseudo-resultative predicates. *Natural Language & Linguistic Theory* 28.1: 135-182.
- Lewandowski, Wojciech. 2014a. *La alternancia locativa en castellano y polaco: un análisis tipológico constructional*. PhD dissertation, Universitat Autònoma de Barcelona.
- Lewandowski, Wojciech. 2014b. The locative alternation in verb-framed vs. satellite-framed languages. A corpus study of Spanish and Polish. *Studies in Language* 38.4: 864-895.
- Masini, Francesca. 2005. Multi-word expressions between syntax and the lexicon: the case of Italian verb-particle constructions. *SKY Journal of Linguistics* 18. 145-173.
- Mateu, Jaume. 2000. *Why can't we wipe the slate clean?* A lexical-syntactic approach to resultative constructions. *Catalan Working Papers in Linguistics* 8: 71-95.
- Mateu, Jaume. 2002. Argument structure. Relational construal at the syntax-semantics interface. Universitat Autònoma de Barcelona. PhD Dissertation. Downloadable at <http://www.tdx.cat/handle/10803/4828>
- Mateu, Jaume. 2005. Arguing our way to the Direct Object Restriction (DOR) on English resultatives. *Journal of Comparative Germanic Linguistics* 8. 55-82.
- Mateu, Jaume. 2008. On the lexical syntax of directionality/resultativity: the case of Germanic preverbs. In Anna Asbury, Jakub Dotlačil, Berit Gehrke & Rick Nouwen (eds.), *Syntax and semantics of spatial P*. 221-250. Amsterdam & Philadelphia: John Benjamins.
- Mateu, Jaume. 2012. Conflation and incorporation processes in resultative constructions. In Violeta Demonte & Louise McNally (eds.). *Telicity, Change, and State. A Cross-Categorial View of Event Structure*. Oxford/NY: Oxford University Press.
- Mateu, Jaume. 2014. Argument structure (chap. 2). In Andrew Carnie et al. (eds). *The Routledge Handbook of Syntax*. New York: Routledge
- Mateu, Jaume & Gemma Rigau. 2002. A minimalist account of conflation processes: Parametric variation at the lexicon-syntax interface. In Artemis Alexiadou (ed.), *Theoretical approaches to universals*. 211-236. Amsterdam & Philadelphia: John Benjamins.
- Mateu, Jaume & Gemma Rigau. 2010. Verb-particle constructions in Romance: a lexical-syntactic account. *Probus* 22.2: 241-269.
- Matushansky, Ora. 2006. Head Movement in Linguistic Theory. *Linguistic Inquiry* 37.1: 69-109.

- Maylor, Roger. 2001. On the status of Dutch *vol*. *Durham Working Papers in Linguistics* 7: 81-96.
- Mayoral Hernández, Roberto. 2010. The locative alternation: On the symmetry between verbal and prepositional locative paradigms. *Probus* 22.2: 211-239.
- McIntyre, Andrew. 2004. Event paths, conflation, argument structure, and VP shells. *Linguistics* 42.3: 523-571.
- McIntyre, Andrew. 2007. Particle verbs and argument structure. *Language and Linguistics Compass* 1.4: 350-367.
- Michaelis, Laura A. & Josef Ruppenhofer. 2001. *Beyond Alternations: A Constructional Model of the German Applicative Pattern*. Stanford: CSLI Publications.
- Moreno Cabrera, Juan Carlos. 1998. Las alternancias locativas en el marco de la semántica de los esquemas eventivos. *IV Jornadas de Lingüística* 143-171. Universidad de Cádiz.
- Moreno Cabrera, Juan Carlos. 2003. *Semántica y Gramática. Sucesos, papeles semánticos y relaciones sintácticas*. Madrid: Antonio Machado Libros.
- Mulder, René H. 1992. *The Aspectual Nature of Syntactic Complementation*. Doctoral dissertation. Leiden: HIL Dissertation Series.
- Napoli, Donna Jo. Secondary resultative predicates in Italian. *Journal of Linguistics* 28: 53-90.
- Nwachukwu, P. Akujuobi. 1987. The Argument Structure of Igbo Verbs. *Lexicon Project Working Papers* 18. Center for Cognitive Science, MIT, Cambridge, MA.
- Oya, Toshiaki. 2009. Ground Arguments in German Particle Verbs: A Comparison with Dutch and English. *Journal of Germanic Linguistics* 21.3: 257-296.
- Pinker, Steven. 1989. *Learnability and Cognition: The Acquisition of Argument Structure*. Cambridge, MA: MIT Press.
- Pylkkänen, Liina. 2008. *Introducing arguments*. Cambridge, MA: MIT Press.
- Ramchand, Gillian C. 2008. *Verb meaning and the lexicon. A first phase syntax*. Cambridge: Cambridge University Press.
- Rappaport Hovav, Malka & Beth Levin. 1998. Building Verb Meanings. In Miriam Butt & William Geuder (eds.), *The Projection of Arguments. Lexical and Compositional Factors*. 97-134. Stanford, CA: CSLI Publications.
- Real-Puigdollers, Cristina. 2013. Lexicalization by phase: The role of prepositions in argument structure and its cross-linguistic variation. Universitat Autònoma de Barcelona. PhD Dissertation.
- Rosen, Sara Thomas. 1996. Events and Verb Classification. *Linguistics* 34: 191-223.
- Salkoff, Morris. 1983. Bees are swarming in the garden: a systematic synchronic study of productivity. *Language* 59: 288-346.
- Spencer, Andrew & Marina Zaretskaya. 1998. Verb prefixation in Russian as lexical subordination. *Linguistics* 36: 1-39.
- Stiebels, Barbara. 1998. Complex Denominal Verbs in German and the Morphology-Semantics Interface. In Geert Booij & Jaap van Marle (eds.), *Yearbook of Morphology 1997*. 265-302. Dordrecht: Kluwer.
- Svenonius, Peter. 2004. Slavic prefixes inside and outside VP. *Nordlyd* 32: 205-253.
- Takamine, Kaori. 2007. Resultative predicates in Japanese. In Monika Bašić, Marina Pantcheva, Minjeong Son, and Peter Svenonius (eds.), *Tromsø Working Papers on Language & Linguistics*. *Nordlyd* 34.2: 102-125.
- Talmy, Leonard. 1985. Lexicalization patterns: Semantic structure in lexical forms. In Timothy Shopen (ed.), *Language typology and syntactic description* (vol. 3), 57-149. Cambridge: Cambridge University Press.
- Talmy, Leonard. 1991. Path to realization: a typology of event conflation. *Berkeley Linguistics Society (BLS)* 17: 480-519.
- Talmy, Leonard. 2000. *Toward a cognitive semantics. Typology and process in concept structuring*. Cambridge, MA: MIT Press.
- Tomioka, Naoko. 2006. *Resultative Constructions: Cross-Linguistic Variation and the Syntax-Semantics Interface*. PhD dissertation, McGill University.
- Washio, Ryuichi. 1997. Resultatives, compositionality and language variation. *Journal of East Asian Linguistics* 6: 1-49.
- Wechsler, Stephen. 2005. Resultatives under the 'event-argument homomorphism' model of telicity. In Nomi Erteschik-Shir & Tova Rapoport (eds.), *The syntax of aspect. Deriving thematic and aspectual interpretation*. 255-273. Oxford & New York: Oxford University Press.
- Zubizarreta, María Luisa & Eunjeong Oh. 2007. *On the syntactic composition of manner and motion*. Cambridge, MA: MIT Press.