Arguing our way to the Direct Object Restriction on English resultatives*

JAUME MATEU
Departament de Filologia Catalana, Universitat Autònoma de Barcelona, E-08193 Bellaterra, Spain
(E-mail: jaume.mateu@uab.es)
Estudis d’Humanitats i Filologia, Universitat Oberta de Catalunya, Av. Tibidabo 39-43, E-08035
Barcelona, Spain (E-mail: jmateuf@uoc.edu)

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Abstract. Drawing on Hoekstra’s (1988f) work on so-called ‘small clause results’ and Marantz’s
(1992) work on the way-construction and its relation to resultative constructions, in this article I
argue my way to the conclusion that the so-called ‘Direct Object Restriction’ (DOR) on English
resultatives must be reinstated, despite Rappaport Hovav and Levin’s (2001) claims to the contrary.
First, I review some of the main properties of resultative constructions that appear to motivate
the syntactic approach, whose main descriptive tenet is the DOR. In particular, I show that the present
analysis of the conflation process involved in the formation of complex resultatives allows us to
offer an adequate explanation of their syntactic properties. Second, I put forward a relational
syntactic analysis of the so-called ‘way-construction’. In particular, I show that the present analysis
helps us understand why the DOR holds for this idiomatic resultative-like construction as well.
Finally, I deal with some exceptional cases put forward by Verspoor (1997) and Wechsler (1997),
reviewed by Rappaport Hovav and Levin (2001), which appear to contradict the DOR.

1. The direct object restriction on English resultatives

The basic tenet of a number of syntactic accounts of English resultatives
is an important generalization concerning the distribution of resultative
XPs:1 result XPs in English are invariably predicated of NPs in object
position (cf. Simpson 1983)2 whether or not these NPs are arguments of

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the verb heading the construction. Levin and Rappaport Hovav (1995) called this generalization the Direct Object Restriction (DOR).

For example, the minimal pair in (1) is nicely accounted for by the DOR. Clearly, (1b) cannot mean that John got tired as a result of hammering on the metal. If anything, tired is interpreted as a depictive predicate, i.e., John hammered on the metal when he was tired.

(1)  
   a. John hammered the metal flat. 
   b. *John hammered the metal tired 
      (*on the resultative reading)

More interestingly, Levin and Rappaport Hovav (1995) argued that contrasts like those in (2) support the syntactic encoding of unaccusativity in English.

(2)  
   a. John laughed *(himself)*silly.
   b. The metal was hammered tı flat.
   c. The garage door rumbles tı open.
   d. The river froze tı solid.

The verbs in (2c–d), which may have result XPs predicated directly of their subjects, are argued to be unaccusative, their surface/derived subjects being analyzed as underlying objects. The same holds for the example (2b) since the passive is analyzed as an unaccusative construction. By contrast, those verbs that cannot have result XPs predicated directly of their subjects are unergative, requiring reflexive pronouns as objects to satisfy the DOR (e.g., cf. (2a)). Following Simpson (1983), Levin and Rappaport Hovav (1995) point out that “the fake reflexive NP could be viewed as a syntactic device for allowing a resultative phrase to be interpreted as if it were predicated of the subject of an unergative verb, while still conforming to the DOR” (p. 35).

On the other hand, Levin and Rappaport Hovav (1995) appeal to Case theory in order to explain contrasts like the one between (3a, b) and (3c, d): the postverbal NPs in (3a, b) receive Case from the unergative verb and a semantic role from the result XP (cf. also Hoekstra 1988). By contrast, unaccusative verbs are not found in the ‘nonsubcategorized NP intransitive-based pattern’ as they are not Case assigners (cf. (3c, d)).
(3)  
a. The dog barked the chickens awake.
  
b. They talked us into astupor.
  
c. *The river froze the fish dead.
  
d. *The ice melted the floor clean.

However, Rappaport Hovav and Levin (2001) have recently claimed that all those previous syntactic explanations can be said to vanish into thin air because of the existence of examples like those in (4), where the result XP is said to be predicated of the subject NP. Quite crucially, these examples have led them to abandon the main tenet of their syntactic approach, i.e., the DOR: 6 drawing mainly on data from Wechsler (1997) and Verspoor (1997), Rappaport Hovav and Levin (2001) argue that their 1995 syntactic approach to resultatives must be abandoned in favor of their 2001 non-syntactic event structure account. 6

(4)  
a. The wise men followed the star out of Bethlehem.
  
b. The sailors managed to catch a breeze and ride it clear of the rocks.
  
c. John danced mazurkas across the room.
  
d. The children played leapfrog across the park.

Examples (a, b) from Wechsler (1997); Examples (c, d) from Verspoor (1997), apud Rappaport Hovav and Levin (2001, p.770)

Contra Rappaport Hovav and Levin’s (2001) claims, I will argue that the incompatibility of the exceptional data in (4) with the DOR is merely illusory: the examples in (4) can be argued to involve adjunct XPs. Concerning Wechsler’s (1997) follow-type sentences, I will show that there is evidence for considering the relevant problematic examples as unaccusative constructions.

Moreover, contra Jackendoff (1990f), I will argue that the so-called one’s way-construction (cf. some examples in (5)) can be provided with the same relational syntactic and semantic analysis that can be applied to ‘normal’ resultative constructions: i.e., although the result phrases in (5) are apparently predicated of the subject NP (cf.
Jackendoff 1990f), they can however be shown to be predicated of the *way* NP as predicted by the DOR. All in all, it will turn out to be that the validity of the DOR-based approach to English resultatives must be accepted.

\(5\)

a. Morris joked his way into the meeting.
b. Paco fandangoed his way out of the room.
c. Pat pushed her way through the crowd.

Before providing my analysis of complex resultative constructions, let me make some relevant remarks concerning Hoekstra’s (1988) analysis of small clause results, which is the starting point of my present l-syntactic one (cf. Hale and Keyser 1997, 1998, 2002).

2. Parametrizing Hoekstra’s small clause results

In this section I will not review the main theoretical and empirical advantages of Hoekstra’s analysis of small clause results (e.g., cf. some relevant examples in (6)), which I assume here (see Mateu 2001b).

\(6\)

a. John danced\([_{SC}]i\) into the room]
b. John danced\([_{SC}]i\) his way across the U.S]
c. John danced\([_{SC}]i\) the puppet into the room]
d. John danced\([_{SC}]i\) his feet sore]
e. John danced\([_{SC}]i\) the night away]

Instead I will limit myself to pointing out one problem here: Hoekstra’s theory of SCR <results>, as it stands, cannot be granted explanatory status yet. In particular, notice that Hoekstra did not address the cross-linguistic variation involved: crucially, no explanation is provided for the so-called ‘directionality/resultativity parameter’ (see Mateu 2001a, 2001b; Mateu and Rigau 2002; cf. also Snyder 1995). For example, what prevents Romance speakers from forming SCRs like those in (6)? That is, why is it the case that the Romance verb corresponding to *dance* cannot take a SCR complement? To be sure, those questions could be said to be innocuous for constructionalists like Jackendoff, but they should not be so for followers of Hoekstra’s syntactic approach. For example, according to Jackendoff, it is simply the case that Romance languages
lack the relevant ‘correspondence rule’, in particular his Verb Subordination Archi-construction depicted in (7), which is said to account for resultative(-like) constructions like those in (6).

(7) Verb Subordination Archi-construction
   a. \[\text{VP} V \ldots\]
   b. ‘act (by) V-ing’

   Jackendoff (1997b, example (101), p. 555)

In Mateu (2001b) I argue that Hoekstra’s syntactic approach can be shown to be more explanatory than Jackendoff’s semantico-centric approach if translated into Hale and Keyser’s (1998) l-syntactic terms. For example, I claim that the formation of complex telic Path of motion constructions like the one in (6a) involves two different l-syntactic structures, the main one being unaccusative (e.g., that in (8a) and the subordinate one being unergative (e.g., that in (8b)). The unaccusative structure in (8a) is associated with the directed motion event (e.g., ‘to GO into the room’) while the unergative structure in (8b) is associated with an activity (e.g., ‘to DO dance’).

(8)

\[
\begin{align*}
a. & \quad V_1 \quad \text{GO} \quad \text{N} \quad \text{P} \\
    & \quad \text{John} \quad \text{p} \quad \text{into (the) room}
\end{align*}
\]

\[
\begin{align*}
b. & \quad V_2 \quad \text{DO} \quad \text{dance} \\
    & \quad \text{N} \quad \text{P}
\end{align*}
\]

In particular, Hoekstra’s SCResult constituent is to be translated into Hale and Keyser’s (1998) P projection, headed by a birelational telic ‘Path’ element (in their terms, a ‘terminal coincidence relation’): it relates a ‘Figure’ (e.g., John) to a ‘Ground’ (e.g., the room).7

According to Mateu’s (2000, 2001a, 2001b) and Mateu and Rigau’s (2002) syntactic account of Talmy’s (1991, 2000) typological distinction between verb-framed vs. satellite-framed languages, it is the satellite (i.e., non-conflating) nature of the P(ath) element in (8a) that precisely allows the unergative verbal head in (8b) to be merged into the phonologically null unaccusative verb in (8a). Being inspired by an important insight from Hale and Keyser (1997, pp. 228–229), I argue that the formation of the complex argument structure corresponding to (6a) involves a ‘generalized transformation’; see (9).8
By contrast, in verb-framed languages the conflation of the P(ath) element into the motion V(erb) prevents the conflation process in (9) to be carried out (cf. Sp. *John entró en la habitación bailando* ‘John entered the room dancing’).

Accordingly, the relevant typological distinction put forward by Talmy (1991, 2000) can be expressed in the following l-syntactic terms:

(10) a. *Verb-framed languages* (e.g., Romance languages (‘Romanglish’ included)): the relevant P(ath) is conflated into the motion V(erb): what corresponds to P and what to V cannot be distinguished any longer; cf. *John entered the room dancing*.

b. *Satellite-framed languages* (e.g., Germanic languages): the relevant P(ath) is not conflated into the motion V(erb) (i.e., P = ‘satellite’); cf. *John danced into the room*.

With this theoretical background in mind, in the next section I will show that the validity of the DOR does not necessarily depend on the particular assumptions reviewed in section 1 above.

3. **The l-syntax of complex resultative constructions**

Because I adopt Hale and Keyser’s (1998, 2002) framework, I do not want to argue that examples like *John laughed silly* (on the resultative reading) are to be ruled out by virtue of a descriptive syntactic constraint, i.e., the DOR. Rather it is my claim that those two examples in
(12) involve the very same l-syntactic conflation process of a subordinate unergative verb (cf. \( V_2 \) in (12b)) into a phonologically null main unaccusative verb (cf. \( V_1 \) in (12a)): the resulting complex argument structure is depicted in (13).\(^9\)

\[(11)\]

a. \#John\(_i\) laughed \([_{SC}\_i} \) silly\(_i\)]

(cf. The garage door\(_i\) rumbles \([_{SC}\_i} \) open\(_i\)]

b. \#John\(_i\) laughed \([_{SC}\_i} \) into the room]

(cf. John\(_i\) danced \([_{SC}\_i} \) into the room])

\[(12)\] #John laughed silly. vs. okThe garage door rumbles open.

I claim that the conceptual differences between laugh and rumble are fully opaque to the syntactic operation, i.e., the conflation process, which is conceived as an instance of Merge (Mateu and Rigau 2002). What is linguistically important is that these verbal predicates are unergative.\(^{10}\) Accordingly, in principle I would have no problem with accepting Wechsler’s (1997) semantic explanation of the oddity of an example like #The dog barked hoarse (cf. 14):
a. Canonical Result Restriction (CRR) A control resultative must represent a ‘canonical’ or ‘normal’ result state of an action of the type denoted by the verb.

b. According to Wechsler (1997, p. 310), “*The dog barked hoarse is bad because hoarseness is not the canonical result of barking – indeed there probably is no canonical result of barking. The dog barked itself hoarse is acceptable because it is not a control resultative, so this restriction does not apply”.

<According to his terminology, the latter is an E(xceptional) C(ase) M(arking) resultative: JM>.

This said, one caveat is in order here: to be sure, recognizing that it is not syntax that is involved in explaining the oddity of those two examples in (11) does not prevent me from positing a basic unaccusative structure for them. Notice moreover that the complex syntactic argument structure corresponding to (13) The garage door rumbled open is argued to be the same as that corresponding to (9) John danced into the room. (As expected, both examples are not to be found in Romance languages; cf. Mateu (2000, 2001b) for the relevant morphosyntactic explanation.) It should then be clear that I strongly disagree with Wechsler’s (1997) claim that unaccusativity is not involved in these two examples. For syntactic arguments showing that this phenomenon is involved in them, see also Hoekstra (1984, 1999), among others.

Next I would like to discuss another confusing point related to the DOR, which has to do with the apparent insertion of a so-called ‘fake reflexive object’ (cf. (2a), repeated in (15a)) in order to preserve the DOR.

Contra Simpson (1983), I want to argue that the reflexive object in (15a) cannot be regarded as a mere syntactic placeholder inserted in order to maintain the DOR. Rather I would like to stress the fact that its semantic function is clear since the theta role corresponding to the reflexive object must be drawn from the internal specifier position of the complex argument structure in (16). That is, both direct objects in (15) himself and the Romance actor have the very same Figure/Theme role.

(15) a. John laughed himself silly.

b. The Germanic audience laughed the Romance actor off the stage.
So far we can conclude that the subordinate verb involved in a conflation process like that depicted in (16) must be unergative (the unergative use of transitive verbs included, e.g., *They drank the pub dry*). Let us then see what excludes examples like those in (3c,d), repeated in (17a,b), which contain unaccusative verbs.

(17)  
a. *The river froze the fish dead.*

b. *The ice melted the floor clean.*

Notice that there would be no problem with the independently generated derivations in (18a) and (18b), both being legitimate: the transitive syntactic argument structure in (18a) corresponds to a ‘caused change of state’ (cf. *The river killed the fish* / *The ice cleaned the floor*) while the unaccusative one in (18b) corresponds to a ‘change of state’ (cf. *The river froze* / *The ice melted*).

I argue that the complex argument structure involved in the examples in (17) is not well formed because the inner specifier of (18b) would remain unlicensed. Quite importantly, the conflation operation must always exhaust all the lexical material of the subordinate argument structure, that is, nothing can be left behind. However, in (18b) the specifier *the river/the ice* is not affected by the conflation operation, that NP remaining in the air. (cf. Hale and Keyser 1993, 1998 for the claim that specifiers are not affected by conflation processes.) As a result, there is a principled syntactic restriction against the possibility that unaccusative verbs can act as subordinate predicates in the relevant conflation operation. In contrast, such an ‘exhaustiveness condition’ is accomplished when the conflation operation affects a subordinate unergative argument structure (see (12–13)): crucially, both the unergative verbal...
head *and* its non-relational nominal complement are affected by this operation.

\[(18)\]

\[\begin{align*}
\text{a.} & \quad (\text{the}) \text{ river} & \quad (\text{the}) \text{ ice} \\
\text{b.} & \quad (\text{the}) \text{ fish} & \quad (\text{the}) \text{ floor} \\
\end{align*}\]

Quite interestingly, notice that the subtle contrast between (17) and (19) can be taken as evidence for the present syntactic restriction, namely, only unergative verbs (‘unergativized’ transitive verbs included) can act as subordinate predicates in the relevant conflation operation. Concerning those examples in (19), my proposal is that *roll* and *bounce* are coerced to be used there as unergative verbs (cf. *ok John {rolled/bounced} the markings off the floor deliberately*).

\[(19)\]

\[\begin{align*}
\text{a.} & \quad \text{The wagon rolled the rubber off its wheels.} \\
\text{b.} & \quad \text{The ball bounced the markings off the floor.} \\
\end{align*}\]

Rappaport Hovav and Levin (2001, p. 791)

To be sure, at first sight unaccusative resultatives like those in (20) could be taken as counterexamples to the present syntactic restriction preventing unaccusative verbs from being the subordinate predicate in the resultative construction.

\[(20)\]

\[\begin{align*}
\text{a.} & \quad \text{The potatoes fried crisp.} \\
\text{b.} & \quad \text{The juice froze solid.} \\
\text{c.} & \quad \text{The lobster boiled soft.} \\
\end{align*}\]

Rapoport (1999, example (47), p. 673)
However, following Pustejovsky (1991) and Rapoport (1999), here I will assume that those result XPs in (20) (i.e., crisp, solid or soft) are added to predicates which lexically entail the achievement of a result state and merely modify this state further. That is to say, those resultative XPs in (20) are considered to be adjunct modifiers of the final state encoded in the verb. Accordingly, these examples cannot be considered to be counterexamples to the present syntactic restriction since for example (20a) would be analyzed as involving a basic unaccusative argument structure (i.e., that corresponding to The potatoes fried) plus an adjunct modifying the result state.\textsuperscript{13}

Notice also that the present proposal (i.e., only unergative or unergativized verbs act as subordinate l-syntactic predicates) allows us to explain Rappaport Hovav and Levin’s (1998, p. 103) observation in (21), which is exemplified in (22):

\begin{enumerate}
\item[(21)] “(…)the impressive flexibility of manner verbs with respect to argument expression contrasts with the relative rigidity of result verbs”.
\item[(22)] \textit{Sweep}(manner verb)
\begin{enumerate}
\item Terry swept.
\item Terry swept the floor.
\item Terry swept the crumbs into the corner.
\item Terry swept the leaves off the sidewalk.
\item Terry swept the floor clean.
\item Terry swept the leaves into a pile.
\item \textit{Rappaport Hovav and Levin (1998, example (1), pp. 97–98)}
\end{enumerate}
\end{enumerate}

Rappaport Hovav and Levin (1998, p. 103) point out that manner verbs like \textit{scrub} can readily appear with a wide range of ‘unselected objects’ whereas results verbs like \textit{break} cannot. See the relevant contrasts in (23):\textsuperscript{14}

\begin{enumerate}
\item[(23)]\begin{enumerate}
\item Cinderella scrubbed her fingers to the bone.
\item *The clumsy child broke his knuckles to the bone.
\item The child rubbed the tiredness out of his eyes.
\item *The clumsy child broke the beauty out of the vase.
\item \textit{Rappaport Hovav and Levin (1998, examples (6)–(7), pp. 103)}
\end{enumerate}
\end{enumerate}
The explanation of the contrasts in (23) is to be related to Rappaport Hovav and Levin’s important observation that activity verbs like *scrub* or *sweep*, but not change of state verbs like *break*, can typically be used intransitively (or more accurately, ‘unergatively’): cf. the relevant contrast in (24a)/(25b) vs. (24b)/(25c). Accordingly, the examples in (26) are explained in the present framework as involving a conflation process of the subordinate unergative verb in (27b) into the null main transitive verb in (27a). The resulting complex argument structure is depicted in (28).

(24) a. Phil swept yesterday.

b. *Phil broke yesterday (*on the reading that Phil is Agent)

(25) a. (DP…)\[V[Ø]\]

b. (DP…)\[V(g.25a)[V[Ø]Sweep]] (meaning: (Phil) DO sweep)

c. *(DP…)\[V(g.25a)[V[Ø]Break]] (meaning: (Phil) DO break)

(26) a. Cinderella scrubbed her fingers to the bone.

b. Phil swept the leaves off the sidewalk.

c. Phil swept the floor clean.

(27)
With all this theoretical background in mind concerning the conflation processes involved in complex resultative constructions, let us now show how the present l-syntactic account can shed light on the apparent problem that is involved in some examples that have been said to contradict the DOR on resultative constructions, i.e., in those examples where a result XP is apparently predicated of the subject of a transitive construction. First, in Section 4, I will provide an l-syntactic analysis of the so-called way-construction. Second, in Section 5, I will deal with Wechsler’s (1997) and Verspoor’s (1997) counterexamples to the DOR, reviewed in Rappaport Hovav and Levin (2001).

4. The way-construction and the DOR

The analysis of the way-construction has been argued to yield important conclusions about the lexicon-syntax interface. Some relevant examples of this productive semi-idiomatic construction are those in (5), repeated in (29).

(29)  a. Morris joked his way into the meeting.
  b. Paco fandangoed his way out of the room.
  c. Pat pushed her way through the crowd.
One of the most detailed analyses of the way-construction can be found in Jackendoff (1990, 1992, 1997a,b). He assumes that the way NP is a non-meaningful object, hence it is not represented in the \(C\langle\text{conceptual}\rangle S\langle\text{tructure}\rangle\) in (30). Crucially, notice then that it is (implicitly) assumed that this resultative-like construction violates the DOR. In contrast, here I will argue that the obligatory directional PP of the way-construction is to be better analyzed as being predicated of the way NP.\(^{16,17}\) As a result, the DOR also holds for this resultative-like construction.\(^{18}\)

\[
\begin{align*}
&\text{(30)} \\
&\text{P} S\quad \text{S} \quad \text{C} \\
&\big\langle \text{Wd} \big\rangle \quad \big\langle \text{way} \big\rangle \quad \big\langle \text{V} \big\rangle \quad \big\langle \text{NP} \big\rangle \quad \big\langle \text{PP} \big\rangle \\
&\quad \quad \quad \quad \quad \quad \text{GO} \left( \left[ X \right], \left[ Y \right], \left[ Z \right] \right) \\
&\big\langle \text{NP}^{\text{poss}} \big\rangle \quad \big\langle \text{N} \big\rangle 
\end{align*}
\]

According to Jackendoff (1997a, p. 172), the way-construction can be regarded as a constructional idiom, listed in the lexicon with the structure depicted in (30). He points out that the CS in (30) can be read as “Subject goes along Path designated by PP, by V-ing” [sic].

This said, let me make some critical remarks on Jackendoff’s analysis in (30):

First, notice that, as it stands, Jackendoff’s claim that the V in the S(yntactic)S(трucture) must be linked to the subordinate conceptual event introduced by the operator BY is simply a stipulation (albeit a correct one). That is to say, no explanation is provided as to why this linking should be established this way. In contrast, recall that in section 2 I showed that such a descriptive proposal is motivated by the basic morphosyntactic reason that distinguishes satellite-framed languages like English from verb-framed languages like Spanish (cf. Talmy 1985, 1991, 2000): only the former languages allow the kind of ‘non-canonical linking’ involved in the way-construction, in telic path of motion constructions like John danced into the room, or in complex resultative constructions like Jaume talked us into a stupor.\(^{19}\)

Second, it appears to be the case that Jackendoff proposes a kind of ‘unaccusative semantics’ for the way-construction: GO is posited as the main semantic function. However, I will claim that the way-construction has a causative-like meaning component, hence its being a transitive construction (cf. below).\(^{20}\) Finally, considering the way-construction to be a causative construction will allow us to treat the way NP as a
meaningful element, which Jackendoff wrongly eliminates from his CS analysis in (30).

Keeping the previous critical remarks in mind, next let us show how the present l-syntactic analysis of the conflation processes reviewed in sections 2 and 3 above can be argued to be adequate to explain how the intransitive verb in (29) comes to be integrated into the semi-idiomatic construction under study. In particular, I will emphasize how the conflation operation of two different syntactic argument structures can be shown to account for the ‘non-canonical linking’ alluded to by Jackendoff (1997a, p. 172): cf. (30).

In accordance with my present analysis of complex resultative constructions like *John laughed himself silly* (cf. (15a)–(16)), I will posit that the way-construction in (29a) *Morris joked his way into the meeting* can also be argued to be the result of conflating two syntactic argument structures. Notice then that in the present case we are not dealing with an unaccusative structure expressing a change of location which is conflated with an unergative structure expressing an activity (e.g., *John danced into the meeting*; cf. (8)–(9)) but with a transitive structure expressing a caused change of location, the one depicted in (31a), which is conflated with an unergative structure corresponding to the activity of *making (a) jokes*: cf. (31b). To put it in syntactically-based aspectual terms, the subordinate unergative verbal head depicted in (31b), which is typically associated with an activity, is conflated into the null verbal head of the main transitive argument structure depicted in (31a), the resulting complex argument structure in (32) being interpreted as an accomplishment.

(31)

\[
\begin{align*}
(a) & \quad \text{Morris joked his way into the meeting} \\
(b) & \quad \text{creating a joke(s) into the meeting}
\end{align*}
\]
As noted above, I assume that the conflation process involving two argument structures like those in (31a,b) can be argued to be carried out via the syntactic operation of Merge, which has been said to be similar to a generalized transformation (cf. footnote 8). Crucially, due to the non-conflating (i.e., ‘satellite’) nature of the head into (cf. Talmy 1985, 1991), the phonologically null head of the transitive argument structure in (31a) is allowed to be saturated by another independent argument structure object, e.g., the unergative structure in (31b), which is in turn argued to be formed via the conflation of a non-relational element into a verbal head (cf. Hale and Keyser 1993f). As a result of the adjunction process of V2 to V1 depicted in (32), the phonologically full unergative verbal head provides the empty transitive one with phonological content. Accordingly, notice that my analysis is compatible with Hale and Keyser’s (1998) proposal that the conflation process appears to be motivated by the requirement that “empty phonological matrices must be eliminated from the morphosyntactic representation of sentences” (p. 80).21

Given (32), it is then clear that the present analysis of the way-construction does not violate the DOR since the result phrase is not predicated of the external subject (i.e., Morris) as Jackendoff argues (cf. (30)) but of the internal ‘subject’ (i.e., his way), namely the specifier of the spatial projection encoded by P.

Notice also that the l-syntactic analysis in (32) provides a configurational representation to Marantz’s (1992) insight in (33), which is lacking in his descriptively oriented paper: indeed, the way NP can be interpreted as transversing or reaching the goal NP on the syntactic basis that the former is the specifier of P (i.e., the Figure/Theme) while the latter is the complement of P (i.e., the Ground). Moreover, (despite
appearances!), the external argument (i.e., Morris) is not to be interpreted as Figure/Theme at the syntax-semantics interface (contra Jackendoff’s semantic analysis in (30)) but rather as the agent on the syntactic basis that it is the specifier of v (i.e., the Originator). 22

(33) “The PP that follows the way NP serves as a resultative predicate on the way NP, giving the reading that the way path transverses or reaches the location described by the PP”. Marantz (1992, p. 180)

Moreover, it is important to realize that the non-trivial parallelism between the way-construction and complex resultative constructions like John laughed himself silly, which was already pointed out by Marantz (1992), is nicely accounted for by the present l-syntactic analysis: cf. (32) with (15a/16). Both direct objects (the way NP and himself in (16)) are interpreted as the Theme of the change of {location/state} while both resultative phrases (into the meeting and silly in (16)) are interpreted as encoding the Goal. Finally, the external argument is structurally interpreted as the Originator of the complex event. Accordingly, the unproblematic or well-established causative analysis attributed to so-called ‘fake resultatives’ should apply to the present construction with equal force. (See Marantz 1992 for further relevant discussion on this point.)

Finally, to conclude this paper, let us deal with some counterexamples to the DOR reviewed by Rappaport Hovav and Levin (2001).

5. Regaining the DOR: some counterexamples revisited

As noted in section 1, examples like those in (4), repeated in (34), led Levin and Rappaport Hovav to abandon the main tenet of their 1995 syntactic approach to English resultatives, i.e., the DOR:

(34) a. The wise men followed the star out of Bethlehem.
b. The sailors managed to catch a breeze and ride it clear of the rocks.
c. John danced mazurkas across the room.
d. The children played leapfrog across the park.

Examples (a, b) from Wechsler (1997); examples (c, d) from Verspoor (1997), apud Rappaport Hovav and Levin (2001, p. 770)
In this section, I will argue that the incompatibility of the exceptional data in (34) with the DOR is merely illusory: the examples in (34) can be argued to involve adjunct PPs.

First, let us deal with Wechsler’s (1997, p. 313) follow-type sentences.

I want to argue that these sentences fall into two basic syntactic types: the unaccusative type and the (truly) transitive type. Notice that there is evidence from Dutch showing the unaccusativity of sentences like those in (35), e.g., cf. the auxiliary selection in (35a) and the use of participle in prenominal position in (35b).

(35) a. De politie is de dief tot zijn huis gevolgd (Dutch)
the police IS the thief to his house followed
b. deze mij tot aan de deur gevolgde politieman
this me until the door followed policeman

example (35a) from Lieber and Baayen (1997, p. 791)
example (35b) from Hoekstra (1999, p. 76)

Following den Dikken (p.c.), I will assume that three syntactic configurations can in principle be assigned to a follow-type sentence. On the empirical basis of the data in (35), we can posit an unaccusative configuration like that in (36a): the incorporation of an abstract ‘central coincidence relation’ (AFTER) into the unaccusative verb (GO) would be spelled out as volgen/follow. On the other hand, when hebben (HAVE) is selected (i.e., when the true transitive use is involved), two analyses are possible (details being omitted in (36)): in (36b) the directional PP is an adjunct (e.g., it can be omitted and extraposed in dat-clauses), and in (36c) the PP is the SC predicate.

(36) a. de politie, GO_{SC/pp \text{t1}} AFTER de dief
[adjunctpp tot zijn huis]
b. de politie volgen de dief, [adjunctpp tot zijn huis]
c. de politie volgen[SC/pp de dief tot zijn huis].

With these three structures in place, we can then cover the entire spectrum of ‘follow facts’: Wechsler’s example in (34a) The wise men followed the star out of Bethlehem would be cast into the mould of (36a). Given this, zijn (i.e., BE) appears to be the more natural auxiliary in the Dutch counterpart of this sentence. 

\textsuperscript{23}
Some relevant points are in order here. On the one hand, the impossibility of passivizing Wechsler’s example in (34a) is not to be related to the fact that it involves a subject-predicate result XP (namely, to ‘Visser’s Generalization’, as argued by Rappaport Hovav and Levin 2001) but rather to the fact that it is an unaccusative construction. Moreover, notice that the contrast between (37a) and (37b) is also expected under my present analysis. (37a) is ungrammatical since the most natural interpretation to be assigned to (34a) is that corresponding to an unaccusative construction structurally identical to the one in (36a); Rappaport Hovav and Levin refer to this interpretation as “correlated motion”. In contrast, the well-formedness of (37b) is to be related to the fact that the sentence The police followed the thief to his house has the additional reading that corresponds to a transitive structure. All in all, the relevant generalization appears to be the one stated in (38).

(37)  
  a. *The star was followed out of Bethlehem.  
  b. The thief was followed to his house.

(38)  
  a. Correlated motion sense ↔
      Unaccusative structure (‘BE’ selected)
  b. Detective-suspect/causative sense ↔
      Transitive structure (‘HAVE’ selected)

Furthermore, note that the unaccusative use of the verb follow is not a quirk of Dutch: for example, the German examples in (39) also show the relevant contrast in a more transparent way. While the unaccusative use of the verb follow is related to dative case assignment and BE-selection, the transitive use (the prefix ver- acting as a transitivizer) is related to accusative case assignment and HAVE-selection.

(39)  
  a. Die Polizei ist dem Dieb zu seinem Haus gefolgt (German)
      the police IS de thief_{d} to his house followed
  b. Die Polizei hat den Dieb zu seinem Haus verfolgt.
      the police HAS de thief_{a} to his house VER – followed
      (Heiner Drenhaus, p.c.)

Finally, let us deal with Verspoor’s (1997) apparently problematic examples in (34c, d), repeated below in (40), which also appear to contain result phrases predicated of the subject.
a. John danced mazurkas across the room.
b. The children played leapfrog across the park.

Within the present framework, which combines insights from both Hoekstra’s work on the syntax of predication and Hale and Keyser’s theory of argument structure, there are still the two ways in (41b) and (41e) that would allow us to escape the devastating possibility in (41a), the one adopted by Rappaport Hovav and Levin (2001).

(41) a. Examples like those in (40) contain a result XP predicated of the subject. Ergo, the DOR on English resultatives is incorrect.
b. Examples like those in (40) contain a directional XP predicated of the direct object (e.g., cf. John danced his way across the U.S.).
c. Examples like those in (40) contain an adjunct directional XP (e.g., cf. John swam laps to (the point of) exhaustion).

Essentially, the analysis in (41b) is the one argued for by two of Rappaport Hovav and Levin’s (2001) referees (p. 771):

(42) “Two referees suggest these examples < those in (40) included: JM > only appear to have subject-predicated result XPs and are more appropriately analyzed as having the result XP predicated of the object, consistent with the DOR. They propose that the result XP is felt to be predicated of the subject due to a semantic relation between the subject and the object (…) < In (40): JM > the suggestion is that the performance itself traverses a path as it is created, and since the subject is engaged in this performance, the subject’s own path can be determined from that of the performance”.

As noted above, Rappaport Hovav and Levin (2001) appeal to Visser’s Generalization in order to argue that the possibility in (41b) must be discarded (cf. my footnote 24). Their relevant contrast (p. 771, footnote 9) is exemplified in (43):

(43) a. *Leapfrog can be played across the park.
b. ok*Leapfrog can be played in this park.
This notwithstanding, Heidi Harley (p.c.) pointed out to me that that the facts in (43) are not so clear-cut. Looking on the Internet for ‘naturally produced examples’, one can find relevant passives like the following ones:

(44)  
   a. One recorded Iroquois lacrosse game was played with over 6000 players per team, and was played across miles.  
   b. Field four was played across a wide open slope (dotted with inflatable Speedball targets) and the surrounding woodland.  
   c. There are also cases when Tag was played across a particularly large space.

Accordingly, I do not think that Visser’s Generalization is relevant to the present issue. Be this as it may, the possibility in (41c) is not to be discarded. Indeed, the comment in (42) put forward by these two referees can be granted descriptive validity, but (intuitions aside!) there is no empirical evidence supporting it. Moreover, notice that it is not clear at all that we should follow these two referees by analyzing the examples in (40) the same way as those in (45a,b) below, which can actually be shown to involve a small clause result complement (cf. sections 2–4 above). Given this, I claim that the adjunct analysis seems to be the most natural one for directional phrases like those in (40) as it is for those in (34a,b).

(45)  
   a. John danced his way *(across the US).  
   b. John danced Sue *(across the room).  
   c. John danced mazurkas (across the room).

6. Conclusions

In this paper, I have argued that Hale and Keyser’s (1997, 1998, 2002) theory of argument structure provides one with the adequate tools to analyze the syntax of complex resultative constructions like He talked us into a stupor or John hammered the metal flat. In particular, I have claimed that these constructions involve a conflation process that merges two different l-syntactic structures (Mateu 2001a, 2001b), i.e.,
‘true resultatives’ (in Rapoport’s 1999 sense) involve the conflation of a subordinate activity verb into the phonologically null main verb of a construction expressing a (caused, if v is present) change of location/state.

On the other hand, I have been dealing with complex resultative-like constructions that appear to violate the DOR: in particular, the l-syntactic analysis presented in section 4 helped us understand why the DOR holds for the way-construction. Taking the DOR as one of the main descriptive tenets of the syntactic account(s) of English resultatives, I have argued that such a restriction is not challenged by those apparently problematic data commented on in section 5 above. As a result, unlike Rappaport Hovav and Levin (2001), Wechsler (1997), or Van Valin (1990), among others, I have claimed that unaccusativity must be syntactically encoded in English.

Notes

1. For example, Levin and Rappaport Hovav (1995, p. 34) define a resultative phrase as follows:
   “It is an XP that denotes the state achieved by the referent of the NP it is predicated of as a result of the action denoted by the verb in the resultative construction”.

2. As shown below, such a descriptive statement is to be translated into a more explanatory one in the context of Hoekstra’s (1988, 1992) theory of Small Clauses, i.e., a result XP is invariably predicated of the inner subject of a Small Clause (cf. also Mateu 2001b for relevant discussion).

But see Li (1990), Huang (1992), Kim and Maling (1997), among others, where the DOR has been called into question for other languages (e.g., Chinese, Korean, Finnish, etc.).

3. For other classic syntactic approaches to the resultative construction and its relation to the Unaccusative Hypothesis, see Simpson (1983) or Hoekstra (1984f), among others.

4. The example (2c) is taken from Rappaport Hovav and Levin (2001, p. 768, example (5b)).

5. In their previous syntactic approach, Levin and Rappaport Hovav (1995, p. 35) acknowledged that “we are not aware of any counterexamples to the DOR that involve transitive verbs”.

6. Basically, see Rappaport Hovav and Levin’s (2001, p. 784–790) Section 4 ‘Which argument of a transitive verb is the result XP predicated of’. Their event structure account is based on two important generalizations:

   (i) The result XP is predicated of the NP denoting
       the argument of a transitive verb which is the recipient
       of a transmitted force if there is one.

   (ii) When there is no NP denoting an entity
       which is the recipient of a transmitted force,
       the result XP is free to be predicated of the subject.

   It is then the case that NPs denoting entities which are recipients of transmitted force are usually expressed as direct objects, which is why most resultatives based on transitive verbs involve result XPs predicated of direct objects, as implicitly encoded in the DOR. This notwithstanding, when a transitive verb does not describe the transmission of force towards the entity denoted by its object, a result XP can be predicated of its subject (cf. the examples in (4)).

   Furthermore, they point out that “the force recipient approach receives support from the observation that verbs whose objects are incremental themes, but not force recipients (e.g.,
memorize, study, read, sing) cannot appear with object-predicated result XPs” (p. 790). However, notice that there is an important flaw in their account here: their analysis appears to predict that sentences containing these verbs should be possible with subject-predicated result XPs. For example, as it stands, their analysis appears to predict that examples such as those in (iii) should be grammatical, contrary to fact:

(iii) a. *They read somniferous poems asleep
b. *They sang somniferous songs asleep

Indeed, their following prediction turns out to be not empirically accurate: “(...) with non-canonical transitive verbs, which lack an NP denoting an entity that is the force recipient, the result XP is free to be predicated of the subject” (p. 790). This prediction appears to be correct for the exceptional examples in (4) but not for examples like the ones in (iii).

All in all, the relevant conclusion seems then to be that, despite Rappaport Hovav and Levin’s (2001) insights concerning the event structure semantics of resultatives, the syntactic restriction (i.e., the DOR) turns out to be necessary to avoid cases like those in (iii). This accepted, the next step is to try to explain why the exceptional data in (4) appear to violate the DOR (cf. my Section 5 below).

For expository reasons, I have simplified the analysis of the P projection: into involves conflation of a ‘central coincidence relation’ (i.e., in) with a ‘terminal coincidence relation’ (i.e., to).


“The problem which conflations of this type (<cf. that involved in (9): JM>) represent derives precisely from the fact that they appear to embody two concurrent event-like components. We are used to just one. It is tempting, and perhaps natural, to imagine that the argument structure of <John danced into the room: JM> is in fact, a composite of the unergative structure, as in <(8b): JM>, and the structure associated with change of location, as in <(8a): JM>. (…) Such a composite might, for example, be defined by means of a generalized transformation, substituting <(8b)> for the verb of <(8a)>.”

One comment is in order here: notice that the conflation analysis in (9) does not involve substitution but rather adjunction. It remains to be seen whether Hale and Keyser’s analysis or the present one is more compatible with Chomsky’s actual framework. Be this as it may, I think that the final technical solution should not invalidate Hale and Keyser’s insight above, which I along with them take as a rather natural solution. I am in debt to Luigi Rizzi and Marcel den Dikken for fruitful discussion regarding this point.

On the other hand, following Hale and Keyser (1997), I claim that John in (9) is structurally (i.e., syntactically) interpreted as Figure/Theme (i.e., it is the specifier of P). It is precisely as a result of the conflation process depicted in (9) that John is also to be interpreted as Agent/Originator in the semantic component.

9. See Mateu (2000f) and Mateu and Rigau (2002) for the ‘localistic’ claim that the l-syntactic formation of the non-primitive Adj(ectival) category involves a conflation process of a non-relational element (Y) into a spatial relation (A). Such a conflation process accounts for both its relational or predicative character, which Adj shares with P, and its nominal properties, which Adj shares with N (e.g., note that in some languages Adj’s are marked with nominal morphological case). But see Hale and Keyser (1998, 2002) or Harley (1995), for a different analysis of the argument structure of Adj’s. See also Mateu and Amadas (2001) for some relevant theoretical implications concerning the fixed inventory of lexical categories provided by Universal grammar (UG).

10. There appears to be an intuitive conceptual explanation of the relevant contrast: manner of motion verbs like dance or verbs of sound like rumble can be argued to partake in an intrinsic relation with the inherently directed motion event involved in the unaccusative construction while verbs like laugh cannot (cf. also Levin and Rappaport Hovav’s (1995) descriptive generalization: only manner of motion verbs (e.g., dance, swim, walk, etc.) and verbs of sound (e.g., buzz, click, rumble, etc.) can be ‘unaccusativized’ in the presence of a result XP).
This notwithstanding, I want to claim that semantico-conceptual restrictions of this sort do not affect the syntactic computation of examples like those in (11). When dealing with the (narrow) lexical syntactic analysis of unergative verbs, no distinction is to be made between [manner of motion verbs/verbs of sound] and the rest. Accordingly, I posit that sequences like those in (11) are freely generated by the computational system, their anomaly being detected in the interpretive semantic component.

11. Notice then the happy coincidence between Hoekstra’s (1992) aspectual restriction (quoted below) and Hale and Keyser’s (1998, 2002) l-syntactic analysis of verbs heading complex resultative constructions. Typically, an unergative/’unergativized’ verb expresses a stage level, dynamic, and not inherently bounded predicate. In short, it expresses an activity (cf. Mateu 2001b for more discussion).

“We can isolate the circumstances under which a resultative may be found: the predication must be stage-level ⟨e.g., cf. *This encyclopedia knows ⟨individual level [sc all books superfluous]⟩⟩ and dynamic ⟨e.g., cf. *Medusa saw ⟨dynamic [sc the hero into stone]⟩⟩, but not inherently bounded ⟨e.g., cf. *The psychopath killed ⟨bounded [sc the village into a ghost town]⟩⟩”.

Hoesktra (1992, pp. 161–162)

12. See Levin and Rappaport Hovav (1995) for the proposal that agentive manner of motion verbs are unergative while non-agentive ones are unaccusative.

If my syntactic analysis is on the right track, notice moreover that no further aspectual explanation of the contrast between (17) and (19) is needed (i.e., two delimiter XPs are involved in (17) but only one in (19)); in other words, notice that Hale and Keyser’s syntactic theory of argument structure directly accounts for Tenny’s (1994, p. 68) observation that an event can be delimited only once.

13. Alternatively, examples like those in (20) could be argued to involve a conflation process of an unergative eventive head (cf. Germ. Die Languste hat gekocht, lit. ‘the lobster HAS cooked’) into a null unaccusative one (cf. Germ. Die Languste ist weich gekocht, lit. ‘the lobster IS soft cooked’). That is to say, (20a–c) could be analyzed as (13) above (cf. The garage door rumbles open), where the result XP is a true resultative predicate. Norberto Moreno (p.c.) has reminded me of the non-trivial consequences of Rapoport’s (1999) proposal as far as the cross-linguistic variation is concerned: if those APs in (20) are adjuncts, why are these examples impossible in Romance? Interestingly, notice that the second proposal entertained in this note would explain it: Romance languages do not present conflation processes of the type analyzed in (13) above. I leave this interesting topic for further research.


“in ⟨23a⟩: JM> her fingers is a non-subcategorized object since it is not the surface that is being scrubbed. Although this sentence is understood to describe the scrubbing of a surface, the surface itself is not mentioned. Thus, the sentence means that Cinderella scrubbed something, perhaps the floor, until her fingers were raw; however, ⟨23b⟩: JM> cannot have a parallel interpretation: the child broke many things, and as a result of handling the broken things his knuckles were hurt”.

For different analyses of so-called ‘unselected object constructions’, see Goldberg (1995), Spencer and Zaretskaya (1998), Mateu (2001a), and McIntyre (in press) for different theoretical analyses of this construction. In particular, it is interesting to note the radically different conclusions drawn by Jackendoff (1992) and Marantz (1992) as a result of their pursuing different goals.

15. See Jackendoff (1990, 1992, 1997a), Marantz (1992), Tenny (1994), Goldberg (1995), or McIntyre (in press) for different theoretical analyses of this construction. In particular, it is interesting to note the radically different conclusions drawn by Jackendoff (1992) and Marantz (1992) as a result of their pursuing different goals.

17. Despite initial appearances, note that the directional PP cannot be analyzed as a modifier of the way-NP. Quite interestingly, Goldberg (1995, p. 199) points out that the example in (i) “entails that Frank moved through the created path out of the prison” (cf. (iii)). This motion sense is not necessarily entailed in (ii) (cf. (iv)). Crucially, notice that such an empirical observation is coherent with the fact that the directional PP is a modifier of the direct object in (ii) but not in (i).

(i) Frank dug his way out of the prison.
(ii) Frank dug his escape route out of the prison.
(iii) # Frank dug his way out of the prison, but he hasn’t gone yet.
(iv) Frank dug his escape route out of the prison, but he hasn’t gone yet.

examples (i–iv) from Goldberg (1995, p. 199)

Moreover, the following contrast in (v) points to a parallel distinction (see Jackendoff 1992 for more relevant discussion):

(v) Bill belched his way noisily out of the restaurant (cf. *Bill belched all the way noisily out of the restaurant).
(vi) *Bill belched noisily his way out of the restaurant(cf. #Bill belched noisily all the way out of the restaurant).

examples (v–vi) from Jackendoff (1992, p. 162)

18. Indeed, the result phrase in (29) is felt to be predicated of the subject due to a syntactically transparent semantic relation between the subject and the direct object. In fact, as noted by Goldberg (1995), the way NP can be interpreted as an inalienably possessed NP (cf. the obligatory binding relation between the subject NP and the way NP).

19. An anonymous reviewer points out that, as it stands, the fact that these constructions are absent from verb-framed languages could be taken as a stipulation as well. As noted above, my reply is that Talmy’s (1991, 2000) descriptive typology between satellite- and verb-framed languages derives from the different morphosyntactic properties that are lexically associated to the relevant Path element (cf. (10) above). Following Snyder (1995, 2001), among others, I assume that parametrized variation is not confined to the inflectional system, as is traditionally believed, but that it involves the non-inflectional system as well (cf. Mateu and Rigau (2002) for more discussion on this point).

20. Cf. also McIntyre (in press) for relevant discussion on the causative nature of the way-construction. According to him, the sentence in (i) displays two identical events (or just one event) while the one in (ii) displays two causally related events: “the unaccusative structure in <i> is only possible if the dancing and the traversal of a path into the studio are the same happening. The transitive structure in <ii> is required because the entry into the record books can take place after the dancing, so that there can be no contemporaneous conjunction”. See also Rappaport Hovav and Levin (2001) for similar examples.

(i) Ethel danced into the studio.
   DO (ETHEL, DANCE) &CONTEMP GO
   (ETHEL, TO IN STUDIO)

(ii) Ethel danced her way into the record books.
   DO (ETHEL, DANCE) & CAUSE GO
   (ETHEL’S WAY, TO IN RB)

McIntyre (to in press. example (4c)–(5a))

21. The result of the conflation process depicted in (32) is a complex phrasal idiom: as a complex syntactic object, it is generated by the computational system; as a complex ‘construction’, it is to be licensed if its idiosyncratic restrictions pointed out by Jackendoff (1992) and Goldberg (1995) are respected. See Marantz (1997) for some interesting preliminary remarks concerning
the relation between the generative computational system and the non-generative encyclopedic component.

22. See Mateu and Amadas (2001) for relevant discussion on the relational semantics associated to Hale and Keyser’s l-syntactic structures.

23. Den Dikken (p.c.) pointed out to me that “the result with hebben <HAVE: JM> isn’t exactly impossible, but sounds awkward; there seems to be a sense that one wouldn’t ‘have follow’ a distant inanimate object like a star (...) my suspicion is that ‘have + follow’ is much like “pursued” <(emphasis added: JM)>; just like one wouldn’t pursue a star, one wouldn’t ‘have + follow’ a star either; on the other hand, one can of course be in hot pursuit of a criminal <e.g., cf. (36b-c): JM >”.

24. Cf. Rappaport Hovav and Levin (2001, p. 771): “(...) we introduce a diagnostic that can pinpoint whether a result XP is predicated of the subject or the object and use it to show that the result XP is clearly predicated of the subject in at least some examples (...) verbs with subject-predicated complements cannot be passivized, a generalization which Bresnan (1982: p. 402) attributes to Visser (1963–1973, part III.2: 2118). Visser’s Generalization, as Bresnan calls it, accounts for the ungrammaticality of *Sam was promised to leave the country, where the controller of the missing subject of the embedded clause is the logical subject of the matrix verb”.

25. As pointed out by Rappaport Hovav and Levin (2001, p. 772), follow-type sentences can be passivized only in their causative sense (ergo in their transitive use). “(...) passive sentences with follow are acceptable only on the detective-suspect sense, Kim was followed into the lab is felicitous, but it clearly receives the detective-suspect -and not the correlated motion- interpretation, though its active counterpart is open to both interpretations”.


References