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## Tying events tight: a reply to Iwata (2006)



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## ABSTRACT

The aim of this paper is to offer some counterarguments to Iwata's (2006) claim that Broccias's (2003) analysis of resultative constructions cannot account for the differences between what Iwata calls Type A resultatives and Type B resultatives. Type A resultatives involve non-telic predicates (e.g. *The joggers ran the pavement thin*) while Type B resultatives involve telic predicates (e.g. *He slid the door shut*). Iwata contends that various properties of Type B resultatives – viz. the impossibility of a causal paraphrase, the occurrence of multiple resultative phrases, implicit host predication and the similarity with phrasal verbs – follow from the adjunct and non-path status of the (adjectival) resultative phrase in Type B. Since these assumptions are not made by Broccias (2003), Iwata argues that Broccias's model is unable to capture the peculiar properties of Type B resultatives. In fact, I contend that Iwata's theory is based on questionable assumptions and that Broccias's theory is compatible with Iwata's observations without the need to invoke any of its conceptual machinery. In particular, I argue that (i) the impossibility of a causal paraphrase does not imply the absence of a causal component in the conceptual representation of Type B resultatives, (ii) the similarity with phrasal verbs is not limited to Type B resultatives, (iii) implicit host predication is a by-product of the semantics of (some) of the verbs used in Type B resultatives, (iv) the co-occurrence of multiple telic events within a resultative clause is due to their nature as different but tightly linked facets of a complex event.

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## 1. Introduction

Following in the steps of scholars such as Washio (1997) and Rapoport (1999), Iwata (2006), see also Iwata (2008a), claims that English resultative constructions (see e.g. Beavers (2012) for a useful summary and references therein) come in two major flavours, i.e. what he terms Type A and Type B resultatives, see (1) and (2), respectively. (All examples in (1) and (2) are from Iwata (2006). It should also be pointed out from the very outset that Iwata does not consider prepositional resultative phrases but is only concerned with adjectival resultative phrases.)

- |     |    |                                    |
|-----|----|------------------------------------|
| (1) | a. | He hammered the metal flat.        |
|     | b. | They yelled themselves hoarse.     |
|     | c. | The joggers ran the pavement thin. |
|     | d. | The kettle boiled dry.             |

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- (2)
- a. He tied his shoelaces tight.
  - b. He cut the meat thin.
  - c. He swung open the door.
  - d. The river froze solid.

Both Types can be either transitive, see (1a)–(1c) and (2a)–(2c), or intransitive, see (1d)–(2d). Iwata (2006) contends that the major difference between the two Types is one of causality. Type A resultatives are amenable to a causal paraphrase, roughly “(the referent of the) direct object becomes XP (where XP stands for the resultative phrase) by V-ing” if transitive and “(the referent of the) subject becomes XP by V-ing” if intransitive. For example, “the metal became flat by somebody hammering it” in (1a) and “the kettle became dry by boiling (for too long)” in (1c). In the transitive variant of Type A, the constructional object may be either an object subcategorised by the verb, as in (1a) (cf. *He hammered the metal*), or an un-subcategorised object, such as the “fake” reflexive (see Simpson, 1983) *themselves* in (1b) (cf. *\*They yelled themselves*) or the non-reflexive noun phrase *the pavement* in (1c) (cf. *\*The joggers ran the pavement*).

Type B resultatives, as is argued e.g. by Rapoport (1999), are not amenable to a causal paraphrase. “His shoelaces became tight by somebody tying them” for (2a) and “the river became solid by freezing” for (2d) are, under normal circumstances, infelicitous because they are tautological.<sup>1</sup> The resultative phrase (RP) in Type B simply specifies a change entailed by the RP-less construction (e.g. *He tied the shoelaces*, *The river froze*). Iwata (2006) also points out that the RP in Type B is not always predicated of a syntactically expressed host. For example, the slices of meat, rather than the meat itself, are thin in (2b). In addition, Iwata (2006) argues that Type B resultatives are sometimes similar to phrasal verbs, as the postverbal position of the RP *open* in (2c) shows. Finally, Iwata suggests that Goldberg’s Unique Path Constraint, which prohibits two RPs belonging to two different conceptual landscapes from occurring in the same resultative construction, see (3a), only applies to Type A. Type B resultatives can occur with two RPs, one specifying a property (e.g. *thin* in (3b)) and the other a location (e.g. *on the bread* in (3b)).

- (3)
- a. \* Sam kicked Bill black and blue out of the room. (Goldberg, 1995: 81)
  - b. He spread the butter thin on the bread. (Iwata, 2006: 490)

Iwata (2006) argues that the properties that set apart Type B resultatives from Type A resultatives follow from the adjunct status of the adjectival RP in Type B, which is not conceptualised as a property-path. In what follows, I will contend that neat and tidy as Iwata’s approach may look at first glance, on closer inspection it turns out to be problematic. At the same time, I will argue that Broccias’s (2003) model, which Iwata (2006) picks out for criticism, is in fact a better model for accounting for such properties because it does not rest on Iwata’s (2006) problematic assumptions. My discussion is organised as follows. I will first introduce Iwata’s model (Section 2.1) and Broccias’s model (Section 2.2) and then sum up the most important differences between the two in Section 2.3. In Section 3, I will be dealing with Goldberg’s Unique Path Constraint (Section 3.1), the issue of implicit host predication (Section 3.2) and so-called outcome adverbs (Section 3.3) to conclude that one should rely on the notion of tight links between multiple facets of a complex event in order to account for some of Iwata’s observations. This notion will be further explored in Section 4, where I also show that it can be applied to examples which are not discussed by Iwata. Section 5 draws the conclusions.

## 2. Construction and Cognitive Grammar models for resultative constructions

### 2.1. Iwata’s ASC-based and non-ASC-based resultatives

Iwata (2006) regards Type A resultatives as instances of one of Goldberg’s (1995) (English) argument structure constructions, namely the (transitive) resultative construction, which is reproduced in Fig. 1. He therefore calls Type A resultatives argument structure construction-based (ASC-based, see Iwata, 2008a) resultatives.

The reader is referred to Goldberg (1995) for a detailed explanation of the formalism employed in Fig. 1. Here it will suffice to say that one appealing feature of this analysis, as Iwata (2006) correctly points out, is that it accounts for the occurrence of un-subcategorised objects in Type A resultatives, see (1b)–(1c). The resultative construction can contribute not only a

<sup>1</sup> A reviewer observes that such cases are not necessarily tautological or infelicitous. However, the meaning of *freeze* is explained for example in the *Longman Dictionary of Contemporary English* as follows (see [http://www.ldoceonline.com/dictionary/freeze\\_1](http://www.ldoceonline.com/dictionary/freeze_1)): “if a liquid or something wet freezes or is frozen, it becomes hard and solid because the temperature is very cold”, that is *freeze* is taken to mean “to become hard and solid”, which implies that *The river became solid by freezing* is, strictly speaking, a tautology. The fact that it may not be perceived as such may depend on the fact that *solid* describes the culmination of the event of freezing (i.e. no more freezing is possible) and thus one may construe the verb *freeze* as referring to an activity (rather than an accomplishment) causing the river to become completely solid (see Broccias (2004) on the idea of complete affectedness in resultative constructions). That is, when *freeze* is used in combination with *solid*, the verb may be used to focus on the process leading to the result rather than the result itself. Further, the paraphrases offered in the text may also make sense if one conceives or admits of other hypothetical ways in which rivers can become solid or shoelaces tight. Be that as it may, the reviewer’s observation is not problematic for an approach inspired by Cognitive Grammar (see also note 13) because Cognitive Grammar recognises the importance of construal. Instead, within Iwata’s theory, it seems that resultatives with telic verbs should always be analysed as Type B resultatives (see also Section 4 on cases which look like Type A resultatives but contain verbs that are expected to only occur in Type B resultatives in Iwata’s theory).

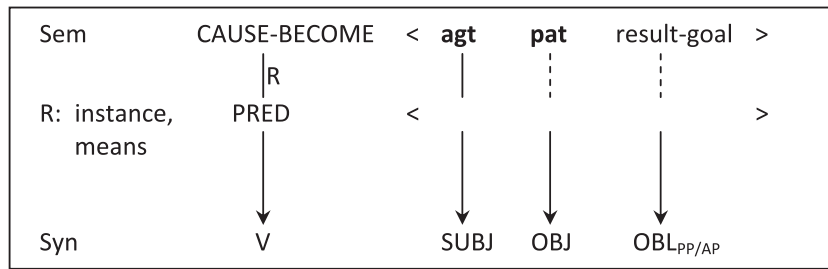


Fig. 1. Goldberg's (1995) English transitive resultative construction.

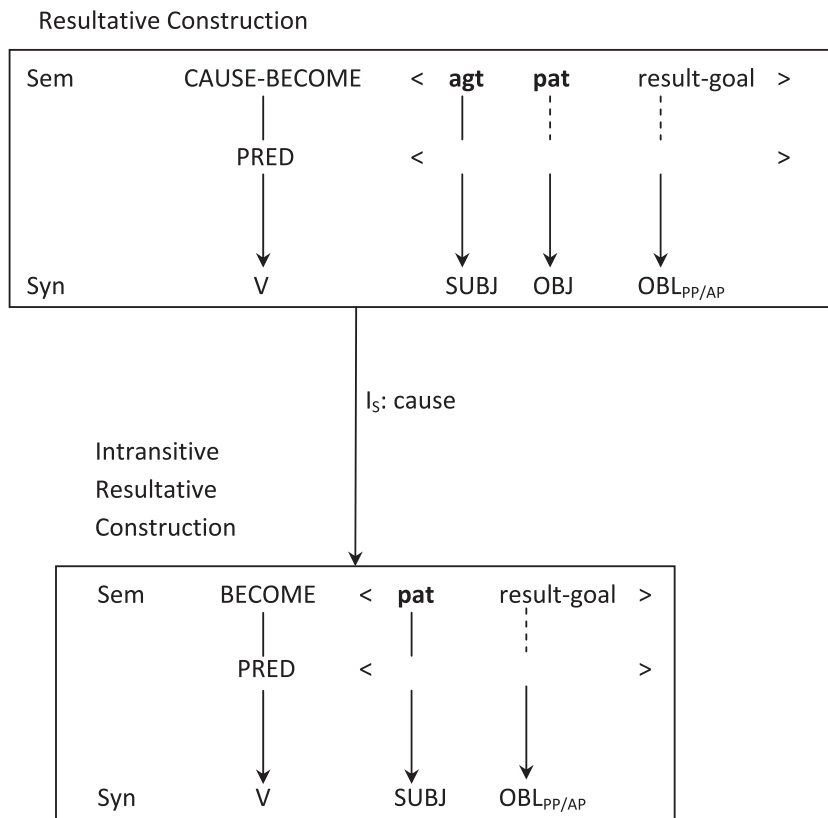


Fig. 2. The relation between Goldberg's (1995) English transitive and intransitive resultative constructions.

result-goal argument role (realised syntactically as an oblique, e.g. *flat* in (1a)) but also a patient argument role, which corresponds syntactically to an unsubcategory object when e.g. intransitive verbs such as *yell* and *run* are merged with the resultative construction.

The intransitive variant of Type A, see (1d), is analysed as an instance of Goldberg's (1995) intransitive resultative construction, which is connected to the transitive resultative construction by a subpart link (I<sub>s</sub> in Fig. 2). That is, the intransitive resultative construction is regarded as noncausal since it lacks a CAUSE component in its semantic (Sem) pole: it only contains a BECOME component. This means that the construction can only contribute a result-goal argument, e.g. *dry* in (1d).

Importantly, Iwata (2006) ignores the fact that in Goldberg's approach the relation between the CAUSE-BECOME constructional predicate and the verbal predicate (VERB) can be of two types, i.e. either instance or means. Although Goldberg (1995) does not elaborate on this,<sup>2</sup> it could perhaps be claimed that when the verbal predicate (PRED) is linked to the construction by a means relation, one would obtain cases that can be paraphrased as Type A resultatives, i.e. "object becomes XP by V-ing". In other words, the construction would contribute at least a result-goal argument and impose a resultative (i.e. CAUSE-BECOME) meaning upon a non-resultative predicate (e.g. *hammer*, *yell*, *run*). When the relation is of the instance type, one would obtain cases that correspond to Type B resultatives. These are instances where the verb (e.g. *tie*, *cut*, *swing*) already codes a resultative (i.e. CAUSE-BECOME) meaning and, hence, it just specifies or instantiates the resultative construction in more detail. In Type B resultatives, the construction does not contribute a result-goal argument because such an argument is

<sup>2</sup> The only example of the instance relation discussed in Goldberg (1995) is *drive (somebody) crazy*, see Goldberg (1995: 79–80).

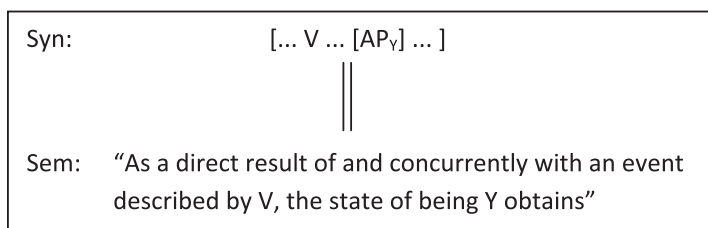


Fig. 3. The AP-adjunct resultative/adjectival “further specifying” result state construction (after Iwata, 2006).

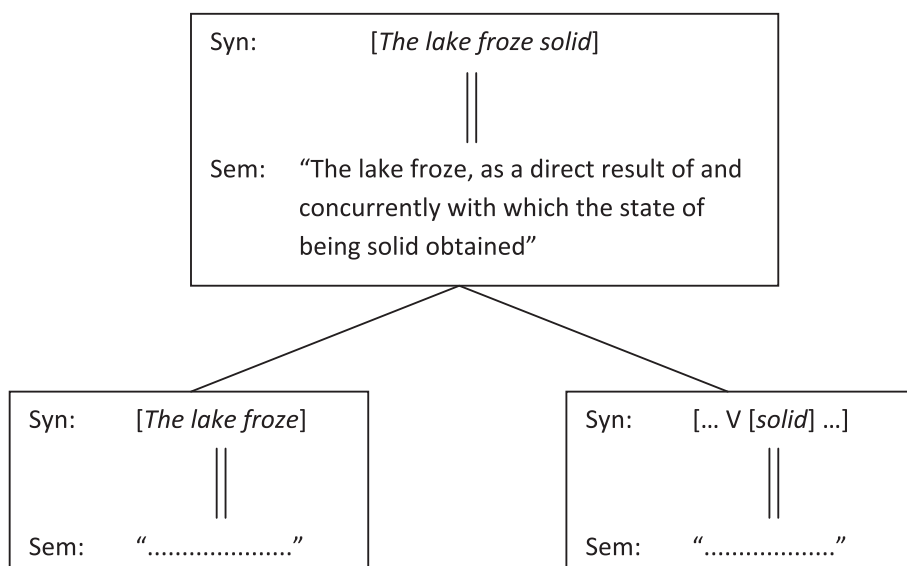


Fig. 4. The composition for *The lake froze solid* (after Iwata, 2006).

already part of the verbal semantics. Rather, the resultative construction would be a more schematic version of the resultative semantics of resultative, i.e. change-encoding or telic, verbs.

Iwata (2006) only seems to admit means-mediated relations between PRED and CAUSE-BECOME and views Type B resultatives as instances of a different construction, which is non-ASC-based and which he terms the “AP-adjunct resultative construction” in Iwata (2006) and the “adjectival “further specifying” result state construction” in Iwata (2008a). The construction is shown in Fig. 3 and the composition for (2d), *The lake froze solid*, is shown in Fig. 4 (see Iwata, 2006: 459).

As was pointed out above, pivotal to Iwata’s analysis is the claim that the AP in Type B resultatives specifies a change of state entailed by the verb (or, rather, Iwata contends, the construction which is combined with the AP, e.g. *The lake froze*).<sup>3</sup> This is probably one of reasons why he treats it as a sort of (semantic?) adjunct in Iwata (2006): the AP is optional and has a specifying function much like ordinary adjuncts such as the locative adjunct *in the garden* in *I read a book in the garden*.<sup>4</sup> In more detail, Iwata (2006), commenting on the nature of the AP in the Type B resultative (3b), *He spread the butter thin on the bread*, writes:

[In *He spread the butter thin on the bread*,] [*thin*] is syntactically not an adjunct. So the adjunct in my sense should not be confused with the adjunct as defined syntactically. Of course, this does not mean that the adjunct in my sense is totally unrelated to the adjunct as conceived in the GB tradition. [...] In this sense, my position is closer to that of Jackendoff (1990) and Goldberg (2002), both of whom admit that there are “argument adjuncts”, which are syntactically adjuncts but semantically similar to arguments [...]. (Iwata, 2006: 462)

Perhaps because Iwata’s notion of adjunct is rather elusive, he drops this label in his (2008a) paper, where he shows that various syntactic tests do not settle the issue (the reader is referred to Iwata’s (2008a) paper for details about the tests):

All I can say, therefore, is that the answer is ultimately dependent upon one’s stance. If one adopts a dichotomous characterisation of arguments and adjuncts, as many GB syntacticians seem to do, then *open* and *shut* [in e.g. *The door swung open/shut*] could be said to be either arguments or adjuncts, in accordance with the diagnostics employed. If, on the other hand, one regards the argument/adjunct distinction as a gradient notion, as in Cognitive Grammar (Langacker, 1987;

<sup>3</sup> For the sake of expository convenience, I will say indifferently that the change of state is entailed by the verb or by the construction.

<sup>4</sup> But notice that optionality is not a reliable criterion since even result-goal arguments in Type A resultatives can be optional (with subcategorised objects), e.g. *He hammered the metal (flat)*, where *the metal* is a subcategorised object, vs. *They run the pavement \*(thin)*, where *the pavement* is an un-subcategorised object.

Taylor, 2002) or Radical Construction Grammar (Croft, 2001), then *open* and *shut* are somewhere between arguments and adjuncts. (Iwata, 2008a: 1096)

For the sake of convenience, in the rest of the discussion I will resort to Iwata's (2006) labelling and call an AP in Type B resultatives an adjunct, with the proviso that Iwata does not solve the conundrum of its syntactic/semantic status and, more importantly, that he views it as being different from a result-goal argument in the argument structure resultative construction (i.e. Type A) because of its specifying function.<sup>5</sup> Since the AP in Type B is not an instance of the result-goal argument role, Type B resultatives are viewed as realisations of a different construction, the AP-adjunct resultative construction.

Alongside the controversial status of the AP in Type B resultatives, there is the issue that the paraphrase employed for the description of the semantic pole of the non-ASC-based resultative (see Fig. 3) is questionable. Fig. 3 claims that the state change and the verbal event co-occur simultaneously. This is problematic, however, under the assumption that Type B resultatives do not code two separate (albeit simultaneous) events; if freezing and becoming solid are indeed the same (but see note 1), then it is nonsensical to claim that the two occur simultaneously. By the same token, it is also rather confusing to say that e.g. the state of being solid obtains as a result of the verbal event if a paraphrase such as "The river became solid by freezing" is impossible (but, again, see note 1).<sup>6</sup>

These observations should already have alerted the reader to the problematic conceptual foundations on which Iwata's theory is built, but before exploring Iwata's approach in more detail, I will first introduce Broccias's (2003) analysis of Type A and Type B constructions since Iwata devotes some attention to it in the Appendix to his (2006) paper, where he criticises it as a model inferior to his own.

## 2.2. Broccias's (2003) model

Within the cognitive linguistic camp, an alternative model to Goldberg's (1995) constructional one is Broccias's (2003). Broccias (2003) views resultative constructions as a convenient label for a variety of constructions (see also Goldberg and

<sup>5</sup> One more reason why Iwata (2006) classified APs in Type B resultatives as adjuncts may be that, as noted by Horrocks and Stavrou (2003), they are questioned using *how*, which is traditionally analysed as a manner interrogative adverb:

- (i) a. How did she cut the onion? – Thin.
- b. \*How did she hammer the metal? – Flat.

Indeed, some adjectival RPs in Type B resultatives can also be replaced with adverbs (the examples are from Washio (1997) and are quoted in Iwata (2006)):

- (ii) a. He cut the meat thick/thickly.
- b. He spread the butter thick/thickly.
- c. He tied his shoelaces tight/tightly.

Iwata (2006: 467) contends that the adverbs occurring in (ii) are instances of what he terms "adverbs of outcome" and are on a par with the "resultative adverbs" in (iii) (see Geuder, 2000; Quirk et al., 1985: 560) because the events in (iii), like those in (ii), have outcomes. By contrast, the adverbs in (iv) are impossible because, in Iwata's view, the verbal events "are pure change of state verbs [and] do not have outcomes" (Iwata, 2006: 467) but only result states.

- (iii) a. They decorated the room beautifully.
- b. She dressed elegantly.
- c. They loaded the cart heavily.
- (iv) a. The lake froze solid/\*solidly.
- b. He painted the wall red/\*redly.

Unfortunately, Iwata's explanation does not stand up to closer scrutiny. First, Iwata does not explain what the difference between "outcome" and "resultant state" is. He simply stipulates that a difference exists in order to capture the contrast between (ii) and (iii), on the one hand, and (iv), on the other. Second, the classification of *paint* as a pure change of state verb is problematic. In note 4 of his (2006) paper, Iwata states that he uses the term "pure change of state verb" to refer to verbs "whose meaning provides no information about how the change of state came about". But the verb *paint* does provide such information. The *Longman Dictionary of Contemporary English*, for example, defines it as "to put paint on a surface", which clearly specifies "how the change of state came about" (i.e. by using paint). Third, and more importantly, if *freeze* and *paint* did not have outcomes, then one would not be able to explain why they can successfully combine with *beautifully*:

- (v) a. The lake froze beautifully.
- b. He painted the wall beautifully.

In other words, why are adverbs of outcome possible in (v) if the verbal events in (v) have no outcomes but only result states, see (iv)? The interested reader is referred to Broccias (2004, 2011), for more details on (resultative) adverbs (in particular the idea that the use of adverbs involves some degree of subjective evaluation on the part of the conceptualiser as opposed to adjectives, which tend to be more "objective").

<sup>6</sup> Another problem is that the state of being Y clearly cannot be coextensive (i.e. occur concurrently) with the event described by V. *Solid*, for example, in *The river froze solid*, describes (or specifies) the culmination of the freezing event: obviously the river was not solid as it underwent the process of freezing. This is probably an unfortunate consequence of the wording chosen to describe the semantic pole of the construction because the text explaining the nature of the non-ASC-based construction avoids this pitfall:

This adjunct construction should specify that as a result of the verbal event, the state of being solid, etc. obtains. Moreover, a crucial fact about sentences like The lake froze solid is that the freezing event and the state change of becoming solid are co-extensive and unfold at the same time, so this characteristic should also be captured. (Iwata, 2006: 458)

In the quotation reproduced above, Iwata clearly states that it is the state change of becoming solid, rather than the state of being solid, which unfolds simultaneously with the freezing event.

<sup>7</sup> Change constructions, in Broccias's (2003) sense, include for example allative *at*-constructions such as *John kicked at the wall* (see Perek and Lemmens (2010) for some recent discussion), sublexical constructions such as *John was weeping into her arms* (where the moving object, John's tears, is not expressed as a noun phrase in the syntax), force-spatial constructions such as *The bullet tore into his leg* (where a forcible action, that of tearing, is portrayed in motion terms), the *one's way* construction (see Jackendoff, 1990; Goldberg, 1995; Israel, 1996) and the time-away construction (see Jackendoff, 1997).





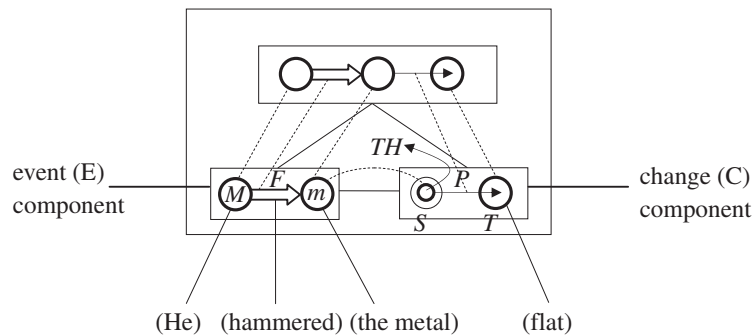


Fig. 6. The FCS for *He hammered the metal flat*.

simplicity, some unprofiled subcomponents in the event and change components are ignored in the blend, e.g. the unprofiled *S* subcomponent in Fig. 6.

Notice also that the predicate *hammered* has only been connected to the event component in Fig. 6. This is intended to capture the fact that *hammer*, unlike *cut*, depicts only a force-dynamic interaction between *M* and *m* rather than an ensuing change of state as well (but see note 13). By contrast, since *cut* entails a change of state, *cut* has been connected to both the force component and the change component in Fig. 7, which represents example (2b) diagrammatically.<sup>11</sup> The change components in Figs. 6 and 7 are not identical because although *m* is the meat in (2b), what is thin is not the meat itself but rather the slices of meat created by the action of cutting it, as was pointed out in Section 1. This has been captured by connecting *m* to *S* rather than *TH*: the meat is the source out of which the slices of meat “come out”, so to speak. Hence, it is only a part of the meat (*TH*) that is transformed into a slice of meat (*T*), which has the property of being thin (cf. *He cut the meat into thin slices*). The dashed correspondence arc between *TH* and *T* is intended to visualise the fact that a piece of the meat has not simply undergone a change relative to some of its properties but has been transformed into a new entity: a piece of meat, *TH*, has become a (thin) slice of meat, *T*. Although I have devoted some time to explaining the diagrammatic conventions capturing the transformation meaning that is part of the conceptual characterisation of (2b),<sup>12</sup> what really matters for our present purposes is to observe that the distinction between Type A and Type B resultatives follows “naturally” from the postulation of the Force Change Schema. The difference between the two types amounts to whether a predicate profiles both the event component and the change component (Type B), as with *cut*, or only the force component (Type A), as with *hammer*.

Interestingly, since much in language is a matter of degree (see Langacker, 2008), one may expect cases which somehow fall between the two, i.e. cases where a predicate profiles the event component and, to a lesser extent, the change component. This occurs in examples such as (4a) (see also Washio, 1997), which implicates but does not entail a change of state, see (4b).

- (4) a. He wiped the table clean.  
b. He wiped the table for hours but it didn't become clean.

<sup>11</sup> A reviewer wonders why the phonological material is linked to the bottom components, the event and change components, instead of the top component, i.e. the blended configuration. In fact, the two options are one and the same. As is implied by the slanting lines connecting the various subcomponents, linking e.g. *hammer* to *F* in the force component means also automatically linking it with *F* in the blended component and vice versa if one had chosen to link *hammer* to *F* in the blended component. Diagrammatically, I have decided to show the phonological material at the bottom of the diagram (and omit it at the top, contrary to what is usually done in Cognitive Grammar, see e.g. Fig. 6.5 in Langacker (2008: 167)) just to highlight how the various lexical items build up to the composite conception.

<sup>12</sup> A reviewer contends that the change component in Fig. 7 should only represent the transformation meaning and “not the property of being thin”. They further claim that “[t]he author tries to hide this shortcoming by linking *thin* rather than *pieces* to the *T* entity, but this line alone cannot possibly explain how the property of being thin arises. Contrary to the author's words, therefore, Fig. 7 actually proves that *cut the meat thin* cannot be represented in terms of a motion over a property path.” The implication of the latter part of the reviewer's criticism is that since *thin* cannot be represented in terms of a property path, then Iwata's analysis is correct. Let us suppose that the diagram is indeed faulty and, hence, that it confirms Iwata's claim that *thin* in this example cannot be analysed in terms of a property path. After all, one could also add that the slices of meat are always (are “created”) thin, i.e. thin has a depictive interpretation with respect to the slices of meat. It is easy to see, however, that the same cannot be said of other Type B examples, whether transitive or intransitive. For instance, the transitive example (2a), *He tied his shoelaces tight*, points to the fact that the shoelaces undergo a change of state, from being somewhat loose to being tight. Similarly, in the intransitive example (2d), *The river froze solid*, the river undergoes a change of state from liquid to solid. In other words, it is straightforward to analyse (2a) and (2d) as involving transitions (“motion”) from state *S* (“loose”/“liquid”) to state *T* (“tight”/“solid”), where *T* and *S* are represented as circles in the change component in the diagrams (see the next subsection for details on (2c)). Hence, the reviewer's objection is inconclusive if it is used as an argument to support Iwata's characterisation because at least some Type B resultatives can easily be described as involving adjectives that point to properties that can be conceptualised in path terms. But what about Fig. 7? Is *thin* perhaps to be analysed as some sort of depictive and the diagram taken only to represent the transformation of a piece of meat into thin slices, as the reviewer argues? An obvious objection is that the reviewer is perhaps attributing too much meaning to the conventions used in the diagrams, probably perceiving them as “formal” objects in their own right – in the same or similar sense of e.g. trees in generative linguistics – rather than considering them as an “exploratory technique” for investigating conceptual structure (see Langacker, 2008: 12). But even if this were not the case, I think that a solution is implicit in the characterisation I have just given of “transformation of a piece of meat into thin slices”. As a source region, *S* in Fig. 7 stands for the meat (and, hence, also its features) before it undergoes a transformation into slices, i.e. *S* stands for an entity which is neither slices nor thin. In this sense, *thin* can be interpreted in terms of a property path. The creation of the slices involves the transition from a “non-thin” state of the meat to the “thin” state of the slices.

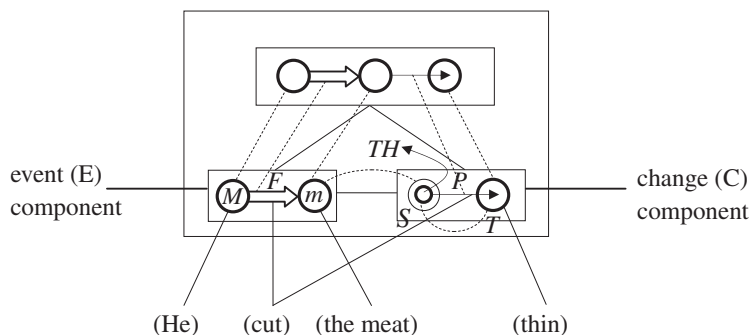


Fig. 7. The FCS for *He cut the meat thin*.

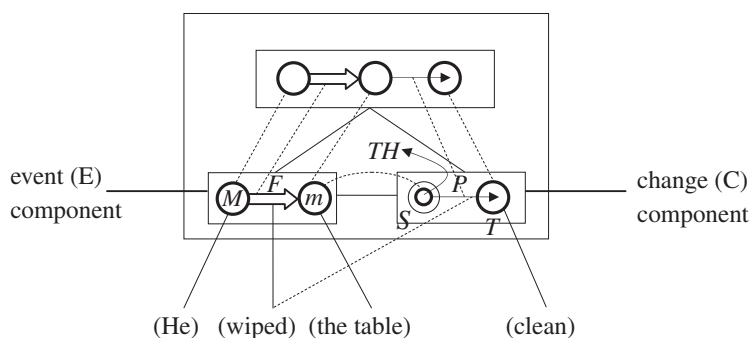


Fig. 8. The FCS for *He wiped the table clean*.

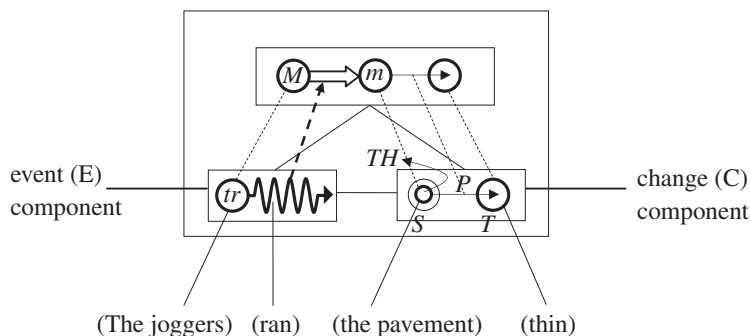


Fig. 9. The FCS for *The joggers ran the pavement thin*.

Such cases can be represented as in Fig. 8, where the solid line departing from *wiped* shows that the event component is an integral part of the meaning of this predicate while the dashed line connecting *wiped* to the change component means that the event component is likely to be activated but need not to.<sup>13</sup> Importantly, this dimension of variation cannot be captured in Iwata's approach because he only seems to distinguish between verbs that entail a change (of state) and verbs that do not: no middle ground is recognised between the two.

Broccias's model also handles cases such as (1c), *The joggers ran the pavement thin*, see Fig. 9. Unlike Goldberg's and Iwata's models, Broccias's model shows explicitly that a construal operation has taken place in such instances. *Run* is construed as a force capable of affecting the pavement so that the pavement becomes thin.<sup>14</sup> *Run* corresponds to the event component and is represented by means of a squiggly arrow to indicate that it is not necessarily conceptualised as a force-dynamic event.

<sup>13</sup> Of course, there may be some degree of activation of the change component also with *hammer* because hammering something often results in that object (or part thereof) being flattened but the point remains that, although ultimately probably most events can result in changes, not all verbs activate the change component to the same degree (see also Washio (1997) for some discussion). For example, the degree of activation of a change component by *run* in *They ran the pavement thin* is obviously much weaker than with *hammer* or *wipe*. For the sake of simplicity, I have simplified things and I say that *hammer* does not activate a change component while *cut* does and *wipe* is somewhere between the two. The important point is that there is no way of accommodating degrees of activation within Goldberg's/Iwata's approach.

<sup>14</sup> A reviewer seems to suggest that there is no force construal with *run* because when one runs one exerts a force onto the pavement anyway. The reviewer, however, ignores the fact that unsubcategoryed object resultatives actually involve an excess semantics interpretation (see e.g. Broccias, 2003; Cappelle, 2011). For example, *to drink oneself to death/silly* or *to work one's guts out* are by default interpreted as involving too much drinking and too much working, respectively. Similarly, in order to *run a pavement thin*, the natural interpretation is that a lot of running is involved. In this (excessive) sense, one can group all the three examples under the label of "force construal".



Crucially, *run* in Fig. 9 is construed as an instance of force (*F*), as shown by means of the dashed arrow connecting the squiggly arrow for *run* to the thick force arrow *F* in the upper box in the diagram (see Langacker (2005) for a similar analysis). Further, the fact that *the pavement* is not an object of *run* independently of the resultative construction is captured (pace Iwata, 2006: 486–487) by linking *m* at the upper level in the diagram, corresponding to the constructional object *the pavement*, with *TH* in the change component. In the previous Figures, the manipulee in the upper box had been connected to a manipulee within the force component to show that the constructional object was also the verbal object, i.e. that the constructional object was subcategorised by the verb in mainstream parlance. Further, *M* and *m* were labelled as such in the event component rather than the blend because the event component already depicted a force-dynamic interaction.

In sum, Broccias's model captures the continuum in the association of specific verbs with the change component (which Iwata's model does not) and distinguishes between Type A and Type B resultatives. Further, pace Iwata (2006), Broccias's model is also able to differentiate between subcategorised and unsubcategorised object cases, thus showing which elements are “contributed” by the construction, using Iwata's terminology (see also Section 2.3.1 for more details).<sup>15</sup>

### 2.2.2. The event change schema

A crucial difference between Broccias's model and Goldberg's/Iwata's models is that the former uncouples causality from force-dynamics. In the FCS, causality is shown by means of the linear arrangement of the event component and the change component while force dynamics is represented by way of a thick arrow (*F*). The force-dynamic event of hammering the metal causes the event of the metal becoming flat as the linear arrangement of the two suggests. The analysis put forward by Goldberg and Iwata (see also Goldberg and Jackendoff (2004), Levin and Rappaport Hovav (1995), and Rappaport Hovav and Levin (2001) for similar views) restricts the presence of causality (CAUSE–BECOME) and the presence of an agent–patient dyad only to transitive (ASC-based) examples (see Figs. 1 and 2). Intransitive (ASC-based) examples are treated as comprising only a BECOME predicate and a patient participant role in their semantic pole. However, this is problematic because even Type A (i.e. ASC-based) intransitive resultatives are amenable to a causal paraphrase as was observed in connection with (1d), *The kettle boiled dry*, in Section 1. The event of the kettle or, rather, the water in the kettle boiling caused the kettle to become dry. However, this causal relation between the verbal event and the event of the kettle's becoming dry cannot be read off any of the representations offered by Goldberg/Iwata (nor is it to be found in other approaches such as those mentioned above). The (incorrect) rationale seems to be that the absence of a force-dynamic interaction, which correlates syntactically with an intransitive pattern, is sufficient to warrant the exclusion of causality from the conceptual representation of the (intransitive) resultative construction. In a similar vein, both Goldberg (1995) and Iwata (2008a) point out that sound emission verbs are used in resultative constructions<sup>16</sup> “when the sound is a *result* [emphasis in the original] of the motion and occurs simultaneously with the motion” (Goldberg, 1995: 62) as in (5) but fail to take the argument to its logical conclusion: causality may also need to be represented in the intransitive resultative construction.

- (5) The car screeched to a halt.

The event of the car moving to a halt caused the screeching sound which unfolded simultaneously with the motion of the car. Still, with the exception of Broccias (2003), these facts are not captured in the semantic representation of any models I am aware of.

As was the case with transitive examples, intransitive Type A and Type B instantiations do not require the postulation of two completely different constructions/schemas. Intransitive instances can be described as instantiations of the Event Change Schema, see Figs. 10 and 11. (For our present purposes, the boxes can be taken to correspond to the semantic pole of the ECS at its most schematic.) Like the FCS, the ECS blends an event component and a change component. The crucial difference between the FCS and the ECS is that the process within the event component in the ECS does not undergo force-construal. In a sense, the ECS can be considered the “complement” of the FCS. In the ECS, the event component is projected onto the path component as is shown in the upper box in Fig. 10. Further, in the ECS the trajector in the change component is put in correspondence with the theme in the change component. This amounts to saying that, in the resultative sentence *The kettle boiled dry*, the event of the kettle boiling and the event of the kettle becoming dry unfolded together.

<sup>15</sup> Referring to the distinction between subcategorised and unsubcategorised objects, Iwata (2006: 487) claims that Broccias's model “cannot explain why [(ia)] is acceptable, but [(ib)] is not [because j] just as B[roccias]'s account allows the theme (the baby), as distinct from the manipulee (the song), to be linked to the direct object position, so it should allow the manipulee (the song), as distinct from the theme (the baby), to be linked to the direct object position”:

- (i) a. She sang the baby to sleep.  
b. \* She sang the song to sleep.

Iwata misses the point that *the song* cannot be a manipulee. The FCS depicts an energetic interaction between a manipulator and a manipulee, as well as the ensuing change of state of the latter. If a force-dynamic predicate is not used (see Fig. 9), then there is no manipulee at the lower level of the conceptual representation. Rather, *TH* is construed as a manipulee thanks to the construal of the process in the event component as a force. But if *the song* is construed as a manipulee, then the string *the song to sleep* must be interpretable (see Broccias, 2003: 89–93, who calls such a string a “change complex”, i.e. what generative grammarians would call a “small clause”). While the string *the baby to sleep* is interpretable (the baby goes to sleep), not much sense can be made of *the song to sleep*.

<sup>16</sup> I am using here the label “resultative construction” as a cover term to also include Goldberg's caused motion construction. Iwata's (2008a) examples are of the type *The door creaked open*, which, in Iwata's analysis, are in fact “proper” resultatives, rather than caused motion cases because the resultative phrase (*open*) can (also) be taken to refer to a state.

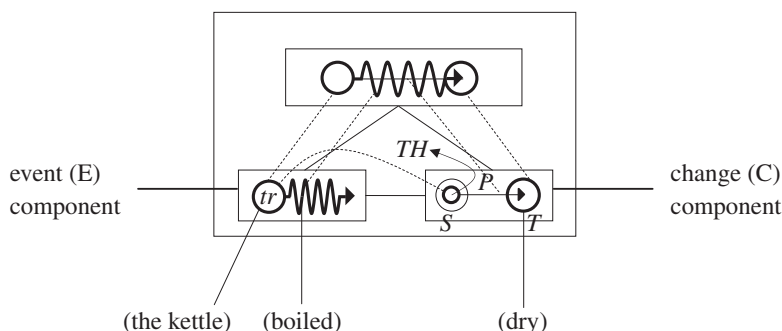


Fig. 10. The ECS for *The kettle boiled dry*.

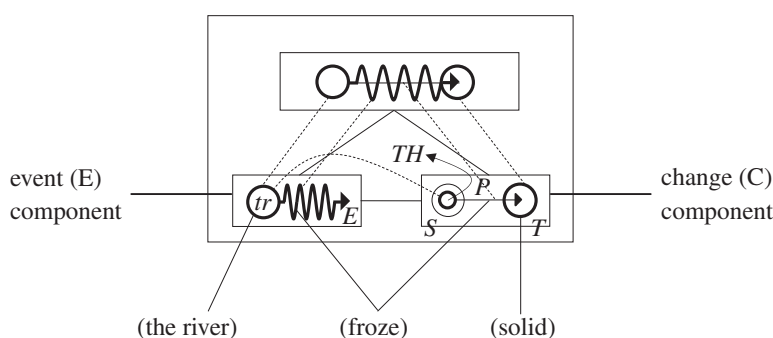


Fig. 11. The ECS for *The river froze solid*.

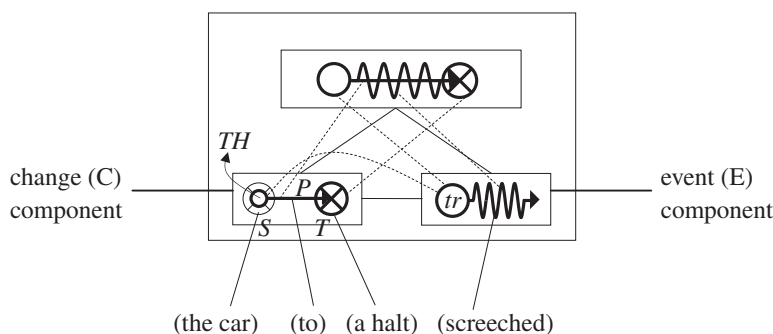


Fig. 12. The ECS for *The car screeched to a halt*.

Importantly, *boiled* has only been connected to the event component and not to the change component because the event of the kettle becoming dry is not entailed by the event of boiling. By contrast, *freeze* entails a change of state; hence, *froze* has been linked to both the event component and the change component in Fig. 11.<sup>17</sup> In both Figs. 10 and 11, the linear arrangement of the event and change components shows that a causal relation exists between the two.<sup>18</sup> As was the case with transitive resultatives, verbs can either only code the event component (*boil*) or both the event component and the change component (*freeze*).<sup>19</sup>

It is also easy, within Broccias's approach, to represent sound emissions cases such as (5) without losing sight of their causal meaning. This has been done in Fig. 12. The difference with Figs. 10 and 11 is the (causal) order of the event

<sup>17</sup> As was observed in note 1, not all speakers may link *freeze* to both a causing event and a caused event, but rather may link it (mainly or only) to the event component. In other words, it may happen that *freeze* is interpreted (at least to some degree) as a process rather than as an accomplishment (see also Broccias, 2003: 38).

<sup>18</sup> It is interesting to observe that the infelicitous paraphrase offered by Iwata (2006) for the semantic pole of his non-ASC-based resultative, see Fig. 3 and the discussion in Section 2.1, seems in reality to point at a conceptual representation along the lines of the one offered in Fig. 11. Fig. 11 captures Iwata's intuition that causality (cf. Iwata's "direct result") and that simultaneity (cf. Iwata's "concurrently") are involved but avoids the pitfalls of Iwata's model which were highlighted in Section 2.1, e.g. Iwata seems to envisage a causal link while at the same time negating its existence because of the implausibility of the paraphrase "The river became solid by freezing".

<sup>19</sup> As is suggested by a reviewer, this distinction could also be addressed in terms of Langacker's notion of active zone (see e.g. Langacker, 2008: 331–334). For reasons of space, I will not pursue this line of enquiry here.

component and change component, which is reversed in Fig. 12 compared to Figs. 10 and 11. Examples such as (5) exhibit “inverted causality”: it is the change (i.e. translational motion) event which causes the event of sound emission (represented as the squiggly arrow in the event component). Both the motion event and the sound emission event are temporally co-extensive as is shown by the fact that the squiggly event arrow is projected onto the path arrow, as was also the case in Figs. 10 and 11.<sup>20</sup>

In sum, Broccias’s model has no difficulty in representing the peculiarities of intransitive resultatives (in particular their causality) and, further, does not postulate the existence of a completely different construction/schema for Type B intransitives. Both Type A and Type B resultatives involve the same conceptual “machinery”, i.e. an event component and a change component. What differs is how the various conceptual (sub)components mesh together. (From now, however, I will not offer any further diagrams mainly because they would not add much to the discussion.)

### 2.3. Taking stock

The presentation of the two models, Iwata’s and Broccias’s, should already have highlighted some critical differences between them. Before I offer a more detailed analysis of Iwata’s model in the next section with reference to Goldberg’s Unique Path Constraint, it is useful to take stock of the issues that have been touched upon, either directly or indirectly, so far.

#### 2.3.1. The reality of high-level constructions and the missing syntax

A preliminary, but major, issue concerning approaches such as Goldberg’s and Iwata’s is that they rely on the postulation of (very) high-level, i.e. schematic, constructions. However, various analysts have voiced concern or at least caution about the existence of such constructions, including, interestingly, Iwata (2008b: Chapter 8.2.3) himself. The following quotation from Croft (2012) explains the point very clearly:

On the basis of [...] exposure, and the context of communication, speakers develop more schematic representations of verbs and constructions, following the usage-based approach to language acquisition and grammatical organization (e.g. Tomasello, 2003; Lieven and Tomasello, 2008). How speakers form more schematic representations of verbs and constructions is a problem that requires psycholinguistic experimentation to fully resolve [...]. (Croft, 2012: 28)

Related to this, it has also repeatedly been observed (see e.g. Boas, 2003; Cappelle, 2011; Ruiz de Mendoza Ibáñez and Mairal Usón, 2011; Verspoor, 1997) that the resultative construction is only partially productive (e.g. *They laughed him off the stage* vs. ??*They snored him off the stage*). Although this is a problem for Iwata’s and Goldberg’s approaches because they postulate the existence of high-level constructions and hence are faced with the issue of how to constrain them, it is not for Broccias’s model. Although, for the sake of convenience, resultatives may be described as instantiations of the FCS and the ECS in Broccias’s approach, these are to be understood as conceptual operations resulting e.g. in the activation of basic cognitive models (such as the billiard-ball model) which are immanent (see Langacker, 2008: 219) in any instance of the resultative construction. In other words, the schemas postulated in Broccias (2003) represent the commonality inherent in various specific resultative constructions but do not exist independently of them. If one is negating the existence of high-level constructions (at least in the mind of speakers rather than in that of linguists) in Iwata’s/Goldberg’s sense, then one has still to account for novel uses. Crucially, novel uses cannot be said to arise from the linking of lexical items with a maximally schematic construction (because this does not have an independent status in Broccias’s approach). This is not a problem, however, because novel uses can easily be motivated as analogical extensions of low-level schemas, i.e. what Boas (2003) calls mini-constructions, i.e. somewhat specific resultative construction (e.g. *They snored him off the stage*, if it were accepted, could be an extension of *They laughed him off the stage*). In sum, Broccias’s model seems to be more plausible psychologically than Iwata’s/Goldberg’s because it does not involve the postulation of schemas existing independently of their realisations.

However, for the sake of the argument, let us assume that high-level constructions such as Iwata’s/Goldberg’s exist as independent units in the language user’s mind. As was pointed out in Section 2.1, Iwata (2006) contends that one of the attractive features of Goldberg’s treatment of ASC-based resultatives is that it can account for the occurrence of fake objects by assuming that the construction contributes arguments which are not arguments of the verb (e.g. \**They drank him* vs. *They drank him under the table*). Iwata (2006) that Broccias’s model is unable to account for the fact the patient in the construction is associated with the direct object position: “[t]he syntactic frame is completely absent. Hence it is impossible to state that the English transitive resultative construction associates a given syntactic frame with its corresponding semantics” (Iwata, 2006: 486). But, of course, these criticisms make sense first and foremost if one makes the same assumptions as Iwata’s, i.e. if one postulates (i) that syntax exists as an autonomous level in the linguistic system, rather than as a network of complex and schematic expressions, and (ii) that constructions are pairs of syntactic and semantic frames, rather than pairings of phonological and semantic poles. But even ignoring this, on closer inspection, the fact that the FCS corresponds to the syntactic pattern (in the traditional/constructional sense) “Subject V Object RP” can also be easily accounted for in Broccias’s model. The subject is defined schematically in Cognitive Grammar as “a nominal that codes the trajector of a profiled relationship”

<sup>20</sup> The circle with a cross in it for the source and the target in the change component is intended to represent the fact that they refer to locations rather than properties. It should also be observed that the simultaneity between the sound emission and motion may obtain only when the motion event culminates. For example, *He clicked the module into place* means that the clicking sound occurred the instant the module ended up in place rather than during the (longer) motion of the module, see Broccias (2003: Chapter 5) for extensive discussion.

(Langacker, 2008: 364), while the direct object is defined schematically as a nominal that codes the landmark (i.e. the second most prominent element) of a profiled relationship (Langacker, 2008: 364). Now consider the FCS in Fig. 6 again. It is easy to see that the FCS, as a pairing of form and meaning, coincides with “Subject V Object RP”. It all boils down to identifying which nominals code the trajector and the landmark in the semantic pole of the schema. Since the import of the FCS amounts to a description of a force-dynamic interaction resulting in the change (of state/position) of the affected entity, the trajector, and hence the subject, is the initiator of the force-dynamic interaction, i.e. *M*, which corresponds to the trajector of the event component. The landmark, and hence the object, corresponds to the affected entity, i.e. *m*. By convention, *m* is equated either directly with the nominal landmark in the force/event component, if present (see Figs. 6–8), or otherwise with *TH* in the change component (Fig. 9). Remember, however, that the landmark in the force/event component may be linked to *TH* by means of a correspondence line (see Figs. 6 and 8), i.e. the two may be identical. The FCS can thus account for the fake cases rather straightforwardly: these are cases where *m* corresponds to a *TH* which, in turn, does not correspond to a nominal landmark in the force/event component. Finally, the (adjectival) RP – recall that Iwata is only concerned with adjectival resultatives – is simply the portion of the schema that includes the *P* and *T* subcomponents, the former of which is unprofiled when an adjective is used.

### 2.3.2. Adjuncts, causality, PPs

Three more preliminary issues are worth bearing in mind when considering Iwata's approach. First, Iwata (2006) uses a notion of adjunction which is rather problematic, amounting essentially to the claim that an adjectival RP in Type B resultatives is not an argument as in Type A resultatives. However, a definition which says what something is not, rather than what it is, is not very useful. In fact, Iwata (2008a) himself avoids the use of the label “adjunct” with reference to Type B resultatives and continues not to clarify the nature of adjectival RPs in Type B resultatives (see Section 3.1). Neither Goldberg (1995) nor Broccias (2003) assumes that adjectival RPs in Type B resultatives are different from adjectival RPs in Type A resultatives. In the latter approach, the difference between Type A and Type B does not correlate with a difference between arguments and adjuncts but is related to the profiling of the (lower) components in the FCS and ECS: Type A resultatives contain predicates that profile only the event component (see e.g. *hammer* and *boil*) while Type B resultatives contain predicates that profile both the event component and the change component (see e.g. *cut* and *freeze*).

The second point that distinguishes greatly Broccias's (2003) approach from Iwata's/Goldberg's approaches is the uncoupling of causality and force-dynamics in Broccias (2003). Despite the causal paraphrases used by Goldberg (1995) and Iwata (2006) for intransitive examples of Type A resultatives, they propose conceptual representations that avoid the postulation of a causal component in the semantic representation. By contrast, Broccias (2003) analyses both Type A and Type B resultatives, whether transitive or not, as causal. To reiterate, Broccias (2003) regards the difference between the two as residing in the profiling of the (lower) components in the FCS and ECS.

Finally, one more issue concerns Iwata's programmatic disregard for resultative prepositional phrases. He just claims that they “need a separate treatment” (Iwata, 2006: note 1) but does not provide any explanation as to why this should be the case, nor does he hint at its nature. In fact, in the next Section I will argue that this move is likely to be an instance of “methodological opportunism” (Croft, 2001): if PPs are also taken into consideration, Iwata's analysis turns out to be rather problematic.

## 3. The importance of tight links

Iwata (2006) contends that it is important to distinguish between Type A and Type B resultatives because the two differ at least in four respects. (i) A causal paraphrase is only possible with Type A; (ii) Type B does not obey Goldberg's Unique Path Constraint; (iii) the RP in some Type B resultatives is predicated of an implicit host; (iv) some Type B resultatives show similarities with verb particles (i.e. the RP can be placed immediately after the verb in transitive cases). I have already shown that the difference between Type A and Type B resultatives can also be easily captured in Broccias's (2003) model and that Iwata's is problematic – it fails to account for the intuition that intransitive cases can be causal – and incomplete – the availability of a causal paraphrase may be a matter of degree, cf. the verb *wipe*. Before dealing with the second and third properties, I would like to point out that the fourth claim concerning the similarity with particle verbs is not limited to Type B resultatives at all. Just one example, see (6), is sufficient to make this point:

- (6) a. She pushed the door shut/closed.  
b. she pushed shut/closed the door.

(6)<sup>21</sup> should be classified as a Type A resultative in Iwata's approach because the construction *I pushed the door* does not entail a change of state (or position). Nevertheless, the RP *shut/closed* can either precede or follow the direct object *the door*, as is the case with some Type B resultatives (e.g. *He swung the door open/He swung open the door*). It is rather trivial to conclude that the behaviour of the RP has to do with its nature: certain APs such as *closed/shut* are ambiguous between a state and a spatial

<sup>21</sup> For actually occurring examples, see for instance: “He picked the boxes from the freezer and pushed shut the door with his elbow.” (Richard Matheson, *I am a Legend*) and “... he pushed closed the door, before they fell into each other's arms again ...” ([www.fanfiction.net/s/6699536/2/The-Zero-Hour](http://www.fanfiction.net/s/6699536/2/The-Zero-Hour)).

reading (as Iwata, 2008a observes) and since phrasal verb particles can code spatial meanings (cf. *She pushed the box up, She pushed up the box*) it is no wonder that the two may behave in the same way. In other words, the affinity between resultatives and particles verbs should be ascribed to the fact that certain adjectival RPs are similar to particles, not to the nature of the predicate employed, as (6) shows. Hence, the correlation between Type B resultatives and particle verbs highlighted by Iwata is spurious. Now I turn to properties (ii) and (iii).

### 3.1. The Unique Path Constraint and the conceptualisation of change

Goldberg's Unique Path (UP) Constraint, see also Tenny (1987) and Levin and Rappaport Hovav (1990) for alternative formulations, is intended to capture the impossibility of examples such as (7) ((7a) reproduces (3a)):

- (7) a. \*Sam kicked Bill black and blue out of the room.  
b. \*Sam kicked Bill out of the room black and blue.

No matter which word order one chooses, the co-occurrence of the property AP *black and blue* and the spatial PP *out of the room* is impossible. Goldberg (1995) claims that this is so because (7) violates the UP Constraint:

[i]f an argument X refers to a physical object, then no more than one distinct path can be predicated of X within a single landscape. The notion of a single path entails two things: (1) X cannot be predicated to move to two distinct locations at any given time t, and (2) the motion must trace a path within a single landscape. (Goldberg, 1995: 82)

(7) codes for two paths, a spatial one (*out of the room*) and a metaphorical one (hinted at by *black and blue*). Since they would compete for the same slot in the ASC-based resultative (the oblique slot, see Fig. 2), the example is ruled out. By contrast, two RPs seem to be possible in Type B resultatives ((8) reproduces (3b)):

- (8) He spread the butter thin on the bread.

(8) contains a property adjectival RP (*thin*) and a spatial prepositional RP (*on the bread*). If both were construed as paths, then (8) would count as a counterexample to the UP Constraint because they would involve changes in two different landscapes, one pertaining to a change of property and the other to a change of position. Iwata (2006) solves this problem as follows:

with Type B resultatives change of state is not conceptualized in terms of translational motion over a property path. Accordingly, the AP-resultative adjunct construction [...] makes no reference to a property path in its semantics, nor is the semantics amenable to a metaphorical understanding. Consequently, it is no wonder that Type B resultatives should be able to co-occur with spatial path PPs. After all, adjuncts do not compete with arguments for the same slot. (Iwata, 2006: 464)

Hence, Iwata's solution rests on the assumption that the change of state hinted at by *thin* in (8) is not conceptualised as a path and does not count as an argument while he seems to suggest that the PP *on the bread* does. An obvious objection is why the PP *on the bread* should be classified as an argument rather than, for example, a (spatial) adjunct. But since, as was remarked in Section 2.1, Iwata himself points out that the categorisation of RPs as adjuncts vs. arguments is a rather murky affair, I will ignore this issue and concentrate, instead, on the claim that the AP in Type B resultatives does not refer to a change (of state) that is conceptualised in path terms.

Unfortunately, Iwata's move seems to be an instance of "methodological opportunism" (Croft, 2001). Firstly, it is not clear why e.g. *thin* in Type B resultatives, see (9b), should be conceptualised differently from *thin* in Type A resultatives, see (9a). To claim that this is so because (some) Type B resultatives allow for multiple RPs is of course fallacious.

- (9) a. She pounded the metal thin. (Type A)  
b. He cut the salami thin. (Type B)

Secondly, consider (10):

- (10) a. He cut the salami thin.  
b. He cut the salami thin into slices.  
c. He cut the salami into thin slices.

(10) shows (i) that *thin* can be accompanied by a PP that specifies what entity was thin, i.e. the slices cut off the salami, see (10b), and (ii) that *thin* can occur within the PP itself, see (10c). Since *thin* and *slices* evoke the same object – the former describes the property of the entity created by the action of cutting the salami and the latter names it – one may want to conclude that the change referred to by the PP in (10b) is conceptualised in the same way as the change referred to by the AP.



This seems very likely since the two can occur together as is shown in (10c). But, unless one claimed that PPs describing the coming into existence of an entity (the effected object *slices* in (10b)) are not conceptualised as paths despite containing a path preposition, which would count as another *ad hoc* solution, the conclusion seems to be that a property path construal for the change of state hinted at by *thin* cannot be excluded (see also the discussion in note 12).

Thirdly, Iwata (2006) ignores an important point that is indirectly made by Wechsler (2005) and is made explicitly by Broccias (2003: 152–155), namely that the choice of PP vs. AP in resultatives may be a matter of construal (iconicity, in particular). Consider the following examples:

- (11) a. He punched him to death.  
b. He punched him dead.

Both the property PP *to death* and the property AP *dead* can be used in (11). The most obvious interpretation of (11a) is that the event of punching was repetitive while the event of punching in (11b) was semelfactive. The choice of the prepositional variant seems to correlate with, or be iconic for, an event that extended over some time, while the choice of the adjective seems to be iconic for a punctual event.<sup>22</sup> Since the change of state is construed as punctual in (11b), one may want to claim that the change of state is not conceptualised as a property path, after all. But the problem with this view for Iwata's theory is that (i) (11b) is an instance of the Type A resultative – no change is entailed by *He punched him* – and (ii) *punch* can be construed as either iterative or punctual. In other words, (i) the lack of conceptualisation of change as a property path, if it indeed occurs, would not necessarily be confined to Type B resultatives and (ii) the event of cutting the salami in (9b) is clearly repetitive, not semelfactive. But I noticed that it may be the semelfactive nature of the verbal process that determines the lack of conceptualisation of change as a property path. Let me discuss one more example:

- (12) a. She froze to death.  
b. The waitress froze dead in her tracks.

The difference between (12a) and (12b) is obviously that the former may be interpreted non-metaphorically while the latter cannot (under usual circumstances, of course). Let me also observe that it is not clear how these examples should be classified in Iwata's system because they contain a predicate which entails a change of state (see (2d)) but include an RP which seems to be linked to it causally rather than in a specifier capacity (the paraphrase "She died by freezing" for (12a) is not a tautology). I will return to this point later (in Sections 3.2 and 4), but for the sake of the argument (i.e. in order not to weaken Iwata's model any further), let us assume that they are instances of the Type B resultative.<sup>23</sup> As with (11), the choice between the PP *to death* and the AP *dead* is a matter of iconicity. Dying as a result of freezing usually involves a non-negligible amount of time, hence the path preposition *to* in (12a). Stopping suddenly (the metaphorical interpretation of (12b)) happens instantaneously, hence the adjective *dead*. But if the resultatives in (12) are an instance of the Type B resultative, then the conceptualisation of change of state as a property path depends on the scenario evoked. If the event is punctual, then an AP is used; otherwise, a PP is used. By contrast, in the case of (9b) not only are we referring to a scenario that is necessarily non-punctual but there is also no room for variation between an AP (*thin*) and a PP (*into thinness*, cf. \**I cut the salami into thinness* vs. *I cut the salami into thin slices*) in the same way as with *dead* and *to death* in (12). That is, one cannot exclude the conceptualisation of the change alluded to by *thin* as a property path since the event is not punctual and since *into thinness* would be infelicitous in any case. (Broccias, 2003: 154 observes that prepositional RPs such as *into thinness* involving nouns derived from adjectives are usually infelicitous in that resultatives prefer short adjectives, all things being equal.)

In sum, if it is correct that change may not be conceptualised as a property path, then this possibility does not seem to be restricted to Type B resultatives, see (11). This observation alone would be sufficient to throw Iwata's explanation into disarray. But even ignoring this possibility, the fact that APs in Type B resultatives may alternate or co-occur with PPs, see (10b)–(10c), makes the hypothesis that e.g. *thin* in Type B is not related to a property path questionable at best.

Iwata's (2006) analysis is in fact reminiscent, and probably of an extension, of Goldberg's (1995):

Moreover, it has not been argued that *all* [emphasis in the original] of even the clear instances of changes of state involve the change-of-state metaphor. There is no evidence I know of that simple causative verbs involve this metaphor. For example, although *break* is a causative verb, we have no reason to think that it is necessarily understood in terms of 'X causes y to move to a broken state'. And if we let the UP Constraint be our guide, then there is good reason to think that in fact it does not involve the metaphor. In particular, we find that *break* can occur with a literal directional:

[(19)] He broke the walnuts into the bowl. (Goldberg, 1995: 85–86)

<sup>22</sup> It should be stressed that I am not saying that all prepositional phrases have to do with non-punctual, i.e. temporally extended, events. Rather, I am claiming that prepositional phrases may have a durative interpretation e.g. when an alternation exists between the prepositional phrase and a related adjective phrase, e.g. *to death* and *dead*.

<sup>23</sup> If they were instances of Type A, the argument would be the same as for (10), i.e. even Type A resultatives may not involve the conceptualisation of change of state as a property path.

Since a telic predicate such as *break* and *cut* is taken not to involve a change of state conceptualised as a property path, it makes sense to conclude that adding an AP to it, e.g. *thin* to *cut* as in (10a), that specifies it in more detail does not alter its non-path conceptualisation. This is probably why Iwata views the specifier AP as not contributing to the metaphorical path interpretation of the depicted process. What I would like to contend, however, is that these assumptions – the impossibility of the conceptualisation of a breaking event in terms of a property path in cases such as Goldberg's [(19)] example and Iwata's Type B *He cut the salami thin* – may not only be debatable but also not necessary. In order to appreciate this point, it is time to discuss the issue of “implicit” hosts. This will shed further light on the UP Constraint and lead me to my proposed solution as far as contrasts such as (3a), \**Sam kicked Bill black and blue out of the room*, vs. (3b), *He spread the butter thin on the bread*, are concerned.

### 3.2. “Implicit” hosts

Iwata (2006, 2008a) observes that certain instances of Type B resultatives contain RPs that can only be predicated of “implicit” hosts, see (13)–(15) ((14) is from Iwata (2006)).

- (13) a. He cut the salami thin.  
 b. # The salami is thin.  
 c. The salami slices are thin.
- (14) a. The door opened wide.  
 b. # The door is wide.  
 c. The aperture is wide.
- (15) a. He piled the cart up high with heavy crates.  
 b. # The cart is high.  
 c. The pile is high.

Iwata's notion of “implicit host” corresponds to the notion of “created, or effected, object” (see Geuder, 2000; Levinson, 2010). In (13), cutting involves the creation of salami slices which are thin. As for (14), Iwata (2006, 2008a) explains that *door* by itself can refer to either a barrier (the door as an object that moves by either rotating on its hinges or sliding) or an aperture (the space resulting from the movement of the door as a barrier). Using *wide* forces us to focus on the aperture meaning of *door*, i.e. the resulting space or “created object”. In (15), the property of being high is predicated of another created object, the pile or stack of crates resulting from loading the crates on the cart. One more example which exhibits created object orientation for the RP is (8) above, which is reproduced here for the sake of convenience:

- (8) He spread the butter thin on the bread.

What is thin is the “slice” of butter, which is on the bread. (8) was mentioned above in connection with the UP Constraint since it contains two RPs referring to two different landscapes and thus apparently violates the UP Constraint. Iwata's solution was to claim that, given the adjunct/non-path status of APs in Type B resultatives, the UP Constraint does not apply; hence the occurrence of multiple RPs in Type B. Iwata thus seems to suggest that the occurrence of multiple RPs and implicit host predication are somehow related by virtue of the adjunct/non-path status of AP. However, implicit host predication simply has to do with the nature of the predicate used, not with the alleged difference in syntactic/constructional status between Type A and Type B. If the predicate describes an event of creation, then the RP by its very nature, i.e. being a phrase that describes the “fate” of an object, can only be predicated of the resultant object (the created object) even though the direct object literally refers to an entity (a physical object) in its “original” state (e.g. the salami before being cut, the butter before being spread). After all, if the RP were predicated of the direct object prior to its change of state, the RP would not be a resultant phrase at all but a depictive phrase. Further, in the previous subsection I showed that, even ignoring the problem of the syntactic status of the AP, the contention that the AP in Type B resultatives does not refer to a path is problematic (at the very least it cannot be excluded for Type A resultatives either). It therefore makes sense to uncouple the issue of implicit host predication, which is a matter of predicate selection, from the issue of the occurrence of multiple RPs as envisaged by Iwata. Importantly, if one rejects Iwata's explanation for the occurrence of multiple RPs, one can still account for cases such as (8).

Let us consider (8) again and the example in (16) below:

- (16) Crack the egg in half into the water.  
(<http://caught-by-your-spouse.blogspot.it/2010/08/this-might-be-weird-question-how-can.html>)

Notice that in (16) the final state the egg is in is expressed by a PP (*in half*) rather than an AP (cf. *thin* in (8)) so (16) is not covered by Iwata's account, which only deals with property APs. Still, the two examples are in essence identical, both containing an RP referring to a new configuration for the effected object (cracked egg in half, spread butter in a thin slice) and an RP referring to the position of the effected object (cracked egg in the water, spread butter on the bread), so it makes sense to treat them in the same way. I would like to contend that the occurrence of multiple RPs here, unlike impossible examples such as \**Sam kicked Bill black and blue out of the room* (see (3a) and the next Section for further discussion), is quite trivially motivated by the fact that the two RPs are tightly linked, i.e. they refer to (or specify) two intrinsic facets of the same common event (see Matsumoto (2006) for a similar idea and Broccias (2008) on the importance of tight links for the relation between transitivity and resultatives).<sup>24,25</sup> In other words, if one considers common (i.e. everyday) actions such as breaking an egg for cooking and spreading butter, one knows that breaking an egg for cooking necessarily involves the broken egg ending up somewhere (one usually breaks eggs into some sort of container) and that spreading butter is not possible without the spread butter being located somewhere. The two locational RPs in (8) and (16) therefore specify the locative facet of the events of breaking and spreading, which is intrinsic to both. The property AP/PP specifies the other intrinsic facet of the event, namely the change of state undergone by the butter and the egg. Alternatively, one could consider the locative PP as referring to the location where the event of cracking/spreading took place, i.e. as some sort of dynamic "adverbial", see e.g. Croft (2012: 306–307), but this does not detract from the fact that the locative dimension is an essential part to the conceptualisation of the events under discussion.

To sum up, I contend that the occurrence of multiple RPs can be motivated even if one ignores both their syntactic/constructional status (argument vs. adjunct) and the issue of the (im)possibility of path conceptualisation of property change. Quite simply, multiple RPs are possible when they are tightly linked, that is when they focus on inherent aspects or facets of events which are highly salient. The intuition behind the UP Constraint is that there seems to be at most one change per clause being predicated of an entity. But one must make allowances for the fact that change can manifest itself in different dimensions if the dimensions are tightly linked. In the case of Type A resultatives, the verb does not entail a change of state, so a change of state can be "added" by means of an RP (i.e. by activating a change component if one adopts Broccias's (2003) model). In the case of Type B resultatives, the verb entails a change of state, which can be elaborated further by means of multiple RPs because the change may involve various inherent dimensions. Notice also that the notion of tight links does not necessitate drawing any (problematic) distinction between property APs (e.g. *thin*) and property PPs (e.g. *in half*) but put them on an equal footing. There are two more cases to be considered alongside Iwata's Type A and Type B resultatives that strengthen the claim that the notion of tight links, even if somewhat fuzzy, is needed and is more satisfactory than Iwata's explanation. These involve RPs that are not specifiers but occur with telic predicates and multiple RPs that occur with non-telic predicates; they are dealt with in the next section.

#### 4. Further cases

In Section 3.2 I put forward the idea that the notion of tight links is crucial for a deeper understanding of how resultatives work. Now I would like to contend that the notion of tight links is compatible with the observation that Iwata's Type A and Type B resultatives do not exhaust all types of resultative constructions. As a preliminary observation remember, for example, that sound emission cases such as (6), *The car screeched to halt*, and *The door clicked open* (see Iwata, 2008a) require reference to the type of causality I have labelled inverted causality, where it is the motion event expressed through the RP that causes the sound emission event coded by the verb (see Section 2.2.2 and Fig. 12 in particular).<sup>26</sup> Still, Iwata (2008a) classifies them as Type B resultatives and claims that the verb stands metonymically for the motion event so as to exclude cases such as \**He whistled down the street*, where sound emission would merely co-occur with, rather than being caused by, motion. The notion of

<sup>24</sup> A reviewer claims that this idea is not original but is, in fact, a rephrasing of Iwata's (2006, 2008a). The reviewer seems to have in mind passages such as the following: "*The door swung open* cannot be analysed in terms of two subevents, at least not in the same way that (37a) [*The kettle boiled dry*] can be so analysed. Rather, the swinging event and the event of becoming open are two aspects of one and the same event" (Iwata, 2008a: 1065). It is quite instructive to quote directly from Broccias (2003) to show that Iwata's wording in fact reproduces Broccias's (2003): "This is the semantic import of the upper box (i.e. the integrated structure or blend) within the Event Change Schema, where the squiggly line and the straight line have been depicted as being projected onto each other. In other words, the two events in question are temporally coextensive [emphasis mine, CB] (see Rappaport Hovav and Levin (2001) for a similar point) because the causal relationship existing between them has been compressed into (the vital relation of) identity. The burning of the mansion and its collapse are different facets of the same event [emphasis mine, CB]" (p. 222) and "Despite the reverse causal ordering for E and C in comparison to (245), (248) shows temporal coextensiveness [emphasis mine, CB] of the two subevents in the same way as (245). Hence, the two arrows for C and E have been projected onto each other in the upper box in the Event Change Schema in Fig. 41. Moving to a halt and screeching are compressed into identity, being two related aspects of the same event [emphasis mine, CB]" (p. 223).

<sup>25</sup> A reviewer point out that the notion of tight links may be related to Langacker's notion of valence. For reasons of space, I will not discuss this point in the paper but will leave it to future research.

<sup>26</sup> Strictly speaking, the label RP for the AP or PP in cases of inverted causality is not accurate because the resultative component is the emitted sound, which is coded by means of the verb. For the sake of simplicity, however, I use the label RP. (But notice that this is one of the reasons why Broccias (2003) prefers the term "change phrase" to "resultative phrase".)

tight links easily accounts for these facts without any need to necessarily resort to a metonymic interpretation. The motion event and the sound emission event are simply two different facets of the same complex event by virtue of the tight link established between the two by causality. If metonymy obtains, metonymy is just a consequence of the existence of tight links (see also note 29 on metonymy).

Even more importantly, Iwata's theory appears to exclude the occurrence of non-specifier RPs with telic predicates. For example, since intransitive resultatives are not analysed causally by Iwata and Goldberg, one would expect an RP which expresses a result obtained causally from a telic predicate to be impossible (unless one more type of resultative construction is posited). However, one can find examples where telic predicates take "genuine" RPs, i.e. RPs that are not specifiers in Iwata's sense, and this is so both with transitive predicates, (17a)–(17b), and intransitive ones, (17c)–(17g)<sup>27</sup>:

- (17) a. I struggled with the window but it was painted shut. (*Corpus of Contemporary American English* (COCA))  
 b. Color Me Beautiful (cosmetic products)  
 c. The curbs held a few inches of water, which froze smooth and black, and there the children skated safely ... (COCA)  
 d. Inside the boxcar is a tangle of limbs, a pyramid of corpses, frozen white. From a distance, a tableau: the boxcar, the workers and ... (COCA)  
 e. The twig froze stuck to the window. (Talmy, 2007)  
 f. this girl had not had mouse-brown hair, dried brittle by wind and sun, but thick chestnut curls which had fallen all around (COCA)  
 g. The tinman rusted stiff. (Talmy, 2007)

In (17a), the window ended up shut because it was painted. (17b) shows that aesthetic adjectives (see the previous Sub-section) are indeed possible in Type B resultatives at least in set phrases. In (17c)–(17e), the APs *smooth and black*, *white*, *stuck to the window* refer to properties that clearly result causally from the event of freezing rather than specifying it as with *solid* in *The river froze solid*.<sup>28</sup> Similarly, the girl's hair in (17f) could have become brittle because of the drying effect of the wind or the sun and, in (17g), the tinman is stiff because it rusted. At the very least, all these examples have no place in Iwata's theory but they can easily be motivated by relying on the notion of tight links. Each RP expresses a facet of a complex event, i.e. a causal consequence which is intimately related to the verbal process. To put it differently, the distance between the various facets of a complex event (e.g. between rusting and becoming stiff) is minimal and both the verb and the RP highlight facets of the complex event. Unfortunately, there is no hard and fast rule that one can appeal to in order to measure such a distance because various factors such as construal (e.g. salience and context) and conventionalisation (e.g. frequency of use) may impinge on it but it seems that the processing cost for cases such as those in (17) must be relatively low. Now consider (18), which are often mentioned in the literature (e.g. Goldberg, 1995) – and are also quoted in Iwata (2008a) – as examples that any theory of resultatives should be able to exclude:

- (18) a. \* The box arrived open.  
 (meaning arrival caused the box to open)  
 b. \* Jill took the child ill.  
 (meaning the child became ill because of the traveling)  
 c. \* She ascended sick.  
 (meaning the ascension made her sick.)

Interestingly, Iwata himself is aware that the problem with these examples is that the conceptual distance between the telic predicate and the hypothetical result phrase is too great:

<sup>27</sup> In fact, one could argue that various examples analysed in Iwata (2008a) may fall under this rubric. Consider (i) for example (see Iwata's, 2008a example (36c)):

(i) The dictionary fell open at meretrix, a harlot.

In general, *fall* can be construed as either a telic or an atelic verb (e.g. *It fell for three seconds before hitting the ground* (atelic construal) vs. *It fell to the ground in three seconds* (telic construal)). Either way, in (i) there is a causal link between the event of the dictionary falling and the event of the dictionary opening at a certain page. This causal link, as was observed for other intransitive examples such as (1d) (*The kettle boiled dry*), is not captured in Iwata's/Goldberg's analysis.

<sup>28</sup> In terms of Broccias's FCS and ECS, such causal cases would involve event components which, unlike those considered in Section 2.2, are telic. As the notion of tight links implies, linking a telic event component, which necessarily involves a change component, with a(nother) change component is not always possible.

Another reason why the examples cited by Goldberg sound so bad comes from the fact that the physical motion and the change of state are so unrelated to each other that they cannot be combined into a single conceivable scene. [...] In contrast, in [*The door swung open inwards into the bedroom, Her robe fell open to the waist, The bonnet fell shut on his fingers, and The dog . . . fell dead on the stones below*] a change of state is a direct consequence of a physical motion, be it translational or internal. (Iwata, 2008a: 1077)

This close relationship or short distance between multiple facets of a complex event is what I mean by “tight links”. Still, it should be observed that the ties between the causing event and the caused event are tighter when the causing event is telic (i.e. with Iwata’s Type B verbs) than they are when non-telic predicates (i.e. Iwata’s Type A verbs) are used. This is probably so because, in general, the processing cost of tying two telic events within a clause would be higher than that of tying a non-telic event with a telic event (as in Type A resultatives). By tying two telic events which are inherent facets of the same complex event, e.g. (17g) vs. (18a), such processing cost is reduced. As was also pointed out at the end of Section 3.2, this is probably the rationale behind Goldberg’s UP Constraint, i.e. that resultative clauses seem to depict changes in only one landscape. Whether one considers all changes as path changes (i.e. not only those expressed by means of an RP) or not, examples such as (17) show that multiple change dimensions can be activated within a clause (e.g. rusting and becoming stiff) provided that the distance between such dimensions is perceived or construed to be minimal.<sup>29</sup>

To reiterate, multiple changes in one single clause are possible if they are tightly linked. They can manifest themselves (i) when a change predicate is linked causally to an RP as in (17), (i) in note 29 and Iwata’s (2008a) examples such as *The bonnet fell shut on his fingers* (see the quotation from Iwata (2008a) above) or (ii) when a change predicate combines with multiple RPs that are not related causally to one another, as in (3b) (*He spread the butter thin on the bread*).<sup>30</sup> (Notice that the former case, when two RPs are present, implies that the two RPs are linked causally to one another, unlike in (ii).) Further, the notion of tightness or short distance between facets of a complex event, although fuzzy, is more attractive than Iwata’s explanation because of the limitations of the latter (e.g. the questionable assumptions that APs in Type B resultatives are adjuncts and do not refer to path properties, and the place of cases such as (17) within the theory). Finally, by advocating the notion of tight links, one can also make sense of examples such as (19):

- (19) a. That .45 should have punched him down and dead on the first shot. (Jonathan Maberry, *Bad Moon Rising*)  
 b. His golden retriever, chained up in the back, somehow fell out and the truck ran him over dead right in front of me!!!  
 (<http://www.tundraheadquarters.com/blog/2009/12/14/dog-safety-tips-truck-owners/>)

<sup>29</sup> This also means that Broccias’s (2003) claim that an example such as (i) violates (a strict reading) of Goldberg’s UP Constraint is not necessarily off the mark, after all:

- (i) The tyrant ordered them to jump to their death off the castle. (Broccias, 2003: 117)

Two paths are involved in (i): the physical movement off the castle and the metaphorical path leading to death. Iwata (2006: 488–489) criticises Broccias (2003) for not recognising that this example is analysed by Goldberg (1991) as involving metonymy. *To their death* would stand metonymically for the place where the unfortunate people jumping off the castle ended up; hence, no violation of the UP Constraint would occur. Iwata claims that a violation would occur only if *to death*, which does not imply motion (cf. *He pushed her to her death*, where motion is implied, vs. *He pushed her to death*, where motion is not implied), were used. Replacing *to death* for *to their death* results however in an unacceptable sentence, *“The tyrant ordered them to jump to death off the castle*. Iwata’s/Goldberg’s analysis obscures the point that it is the fact that the people jumped from high up that caused their death. Two landscapes are involved, one having to do with physical motion and the other with metaphorical motion from life to death, but they are tightly linked by virtue of almost unavoidable causality: falling off a tall building is very likely to result in death. It is a convention of English that *to one’s death*, rather than *to death*, is used to code death resulting from e.g. a fall. The tight link manifests itself overtly by way of the prepositional phrase *to her death*, which, unlike *to death*, presumes a physical path. Hence, Iwata’s objection is not a counterexample to Broccias’s theory but rather provides further substance to it. (Notice also that in Goldberg’s analysis there is no way of capturing the causal relation between falling and dying because intransitive resultatives are analysed as non-causal by default, see Section 2.2.2 above.) Finally, if the metonymic explanation were correct, then one would perhaps not expect the fact that both the metonymic source expression (e.g. *on the ground*) and the metonymic target expression (i.e. *to one’s death*) may be expressed simultaneously. But this is indeed possible as is shown in (ii):

- (ii) . . . the bomber instead chose to leap from the balcony’s rail to his death on the ground below. ([http://starwars.wikia.com/wiki/Bombing\\_of\\_the\\_memorial\\_shrine](http://starwars.wikia.com/wiki/Bombing_of_the_memorial_shrine))

Further, there are cases where appeal to a metonymic link, as conceived by Goldberg/Iwata, does not make much sense. Consider (ii):

- (ii) Wingman daredevil falls from 37,000 feet. . . into the history books  
 (<http://www.dailymail.co.uk/news/article-2161531/Wingman-daredevil-falls-37-000-feet-history-books.html#ixzz1yhLHKwwW>)

Can one really say that the location on the ground reached by the daredevil stands for a place in the history books?

<sup>30</sup> I am using the term “change” predicate rather than “telic” predicate because, strictly speaking, a predicate such as *jump off the castle* is not telic and I am using the term “predicate” instead of “verb” because the change nature of the event is described by the combination of the verb plus the directional phrase, if present. Hence, the label “telic verb”, when used in the text, is an approximation of the more accurate label “change predicate”.

<sup>31</sup> A reviewer wonders why *“Sam kicked Bill black and blue down the stairs* is impossible since there would be a tighter link here between the two resultative phrases under the interpretation that someone ends up black and blue because they are kicked down the stairs. The problem may be that the string *Sam kicked Bill black and blue* is by default interpreted as implying that Bill ends up black and blue as a result of the verbal action (i.e. kicking) and this clashes with the intended interpretation.



Although multiple RPs are in general impossible in Type A resultatives (cf. \**Sam kicked Bill black and blue out of the room*), the occasional example can be found, as in (19). Crucially, the RPs in (19), e.g. *over* and *dead* in (19b), code two results which are tightly linked: *over* in (19) implies that the dog lies on the road and *dead* highlights that the dog is lifeless. The two are tightly linked because of our world knowledge: being run over often correlates with ending up dead whereas no such easy-to-activate correlation is detectable in hypothetical examples such as \**Sam kicked Bill black and blue out of the room*.<sup>31</sup>

I would like to conclude by observing that the notion of tight links is not only more comprehensive than Iwata's theory but can also be used to replace (at least in part) the generalizations previously proposed by Broccias (2003) to account for the selectional restrictions on the occurrence of RPs, which as Iwata (2006: 491–492) correctly shows are sometimes problematic. Consider the contrast between (20a) and (20b):

- (20) a. # She loaded the cart heavy.  
b. She loaded the cart full.

(20b) does not sound as colloquial as (20a), cf. instead *She loaded the cart heavily*. The “problem” with (20a) may simply be that the distance between the event of loading the cart and it becoming heavy is not minimal. The obvious interpretation of (20a) is that the cart has e.g. lots of crates on it, rather than having for example a single and small but very heavy crate on it. In other words, (20a) corresponds to (20b) with the added implication that by being full the cart is also heavy. But since a cart may already be somewhat heavy even before placing crates on it and what counts as a heavy load of crates is a matter of interpretation, the connection between being full and being heavy may be less tenuous than e.g. that between being rusted and being stiff in (17g). Similarly, an example such as (17b), *Color Me Beautiful* in place of *Color Me Beautifully*, which is used as the brand name for a range of cosmetic products, involves a small distance when *colour* refers to the conceptual landscape of beauty products because to become “beautiful” is the expected outcome of their use. By contrast, in the case of e.g. *They painted the wall beautiful*, in place of *They painted the wall beautifully* (see also note 5), additional conceptual work is required on the part of the conceptualiser, who needs to “move” from the landscape pertaining to the colours used to paint the wall to an “aesthetic” landscape. In other words, being beautiful is not necessarily construed as an intrinsic facet of the action of painting a wall or, at least, it is less intrinsic with the action of painting than with actions involving the use of beauty products.

## 5. Conclusions

In this paper I have tried to rebut, both directly and indirectly, Iwata's (2006) criticism of Broccias's (2003) approach to English resultatives. Although Iwata's approach must be commended for the attention devoted to Type B resultatives, I have first of all shown that Iwata's theory is built on questionable grounds. His analysis relies on various controversial assumptions, the most problematic of which are: (i) the postulation of the adjunct or non-argument status (in the same sense as in Type A resultatives) and non-path nature of the AP in Type B resultatives; (ii) the distinction between property PPs and property APs, which is only stated but not justified; (iii) the recognition that causality may also be involved in intransitive resultatives of both Types while failing to represent it in the constructions proposed to account for their behaviour. Importantly, Broccias's theory does not make any of these assumptions. This leads Iwata (2006) to criticise Broccias (2003) because Iwata claims that the properties he highlights for Type B resultatives – the impossibility of a causal paraphrase for Type B resultatives; the fact that Goldberg's UP Constraint does not apply to Type B resultatives; the fact that the AP in Type B resultative is often predicated of an implicit host; the similarity between Type B resultatives and particle verbs – follow from his theory while they cannot follow from Broccias's theory precisely because Broccias fails to make the same assumptions as Iwata's.

I have thus shown that the impossibility of a causal paraphrase for Type B resultatives is accounted for straightforwardly in Broccias's model, which, unlike Iwata's model, does not confuse the impossibility of a causal paraphrase with the absence of causality in Type B resultatives (i.e. Type B resultatives can be interpreted causally and this must be captured in one's conceptual representations). This is done in Broccias's model by linking telic (i.e. Type B) predicates to the two constitutive sub-components in the conceptual representation of the resultative construction, i.e. either the FCS or the ECS. Iwata's Type A resultatives, by contrast, only involve linking an atelic predicate to the causing (or event) subcomponent in the conceptual representation of the resultative construction.

I then pointed out that the correlation between Type B resultatives and phrasal verbs is spurious because Type A resultatives (e.g. *She pushed the box closed/shut*) can also behave like phrasal verbs. Such behaviour by Type B resultatives is due, quite simply, to the nature of certain adjectival RPs such as *open* and *closed*, which are ambiguous between a state and a position reading and, hence, may exhibit verb particle behaviour.

Similarly, I argued that the correlation between Type B resultatives and the issue of implicit host predication as envisaged by Iwata (i.e. as following from the adjunct and/or non-Type A-argument status of the adjectival RP in Type B resultatives) is also spurious because implicit host predication is simply due to the nature of the verb used, rather than the syntactic representation of the AP. The AP may be predicated of an implicit host because verbs describing changes in configuration (as in *She cut the salami thin*) are used. If this were not the case, the AP would be a depictive phrase. There is no need to grant the AP a special syntactic status to justify implicit host predication.

Finally, I have claimed that the occurrence of multiple RPs in Type B resultatives can also be motivated without appealing to the special status of the AP in Type B resultatives. I have put forward the idea that multiple RPs are possible when they highlight inherent, multiple facets or dimensions of common events. Crucially, the distance between such dimensions, which

is a matter of construal, must be minimal. The notion of tight links can also be applied to cases which are difficult to reconcile with Iwata's approach, namely resultative constructions involving change predicates that contain causally related APs (e.g. *The tinman rusted stiff*).

In sum, the properties highlighted for Type B resultatives by Iwata can be accounted for without having to invoke his theoretical apparatus. Further, most of the charges brought against Broccias's model can be either dismissed or used to refine Broccias's model without the need for questionable conceptual assumptions such as Iwata's. Let me summarise some possible replies to these charges. First, Iwata claims that a Cognitive Grammar model such as Broccias's cannot account for what non-Cognitive Grammar practitioners refer to as the linking or interface between semantics and syntax. In fact, in Section 2.3.1 I have argued that this is not the case once one realises that syntax does exist in Cognitive Grammar but is not an autonomous level of linguistic representation. Second, Iwata accuses Broccias of ignoring that, in Goldberg's model, the conflation of verbs into the resultative construction involves construal operations (as in the famous example *She sneezed the napkin off the table*). However, Iwata misses the point that Broccias's model, unlike Goldberg's, shows explicitly when this is the case (see Fig. 8). Third, Iwata argues that cases such as *The tyrant ordered them to jump to their death off the castle* (see note 29) should not be treated as counterexamples to Goldberg's Unique Path Constraint because the PP *to their death* stands metonymically for the place the people who jumped off the castle ended up so that a single motion landscape is involved. Nevertheless, the claim that two landscapes are activated should not be discounted: the physical landscape involving a fall and the metaphorical one involving dying are tightly linked by a causal relation (falling off the castle causes death); this is what allows for the simultaneous occurrence of the two phrases. Fourth, Iwata contends that Broccias's model is incapable of accounting for the differences between Iwata's Type A and Type B resultatives but I have already remarked above that these differences can be motivated without invoking Iwata's model. Fifth, Iwata shows that Broccias's generalizations intended to capture the partial productivity of resultative adjectives are sometimes problematic. Iwata has a point here but I have argued in this paper that the reliance on the notion of tight links may go some way towards solving this problem.

To conclude, the distinction between Type A and Type B resultatives is of course robust, both within English and across languages (e.g. Italian, like Japanese, usually only allows Type B resultatives), but the properties highlighted by Iwata for the latter do not require his theoretical assumptions. Rather, a more conceptually plausible theory such as Broccias's (2003) can account for their properties by relying, for example, on the notion of tight links.<sup>32</sup> Admittedly, this notion, which is quite fuzzy, requires further exploration; it would be interesting for example not only to have more data concerning multiple changes but also to set up psycholinguistic experiments to corroborate or disprove it.

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<sup>32</sup> It is not surprising that languages such as Italian and Japanese have Type B resultatives but (in general) lack Type A resultatives (this is one more point raised by Iwata in connection with Broccias's model, see Iwata, 2006: 490–491). Type B resultatives are less “costly”: they involve the focussing of attention on a complex event which is telic by its very nature. There is no extra processing burden of “calculating” a causal link between a causing event and a caused event as in Type A resultatives. Tellingly, Type B resultatives with non-causally related multiple RPs are sometimes also possible in Italian while causally related multiple RPs are not, see (ia) vs. (ib). The processing cost of the latter is higher since a causal link must be calculated.

- (i) a. Ha rotto l'uovo in due nel piatto.  
has broken the- in two in- plate  
egg the  
'S/he broke in the egg in two into the plate'
- b. \* Il libro è caduto aperto per terra. (ok as a depictive)  
The book is fallen open for ground  
'The book fell open onto the ground'
- (meaning: the falling of the book onto the ground caused the book to become open).

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