

FROM SYMMETRIC TO NON-INHERITING RESULTATIVES: ON GRADIENCE AND CONCEPTUAL LINKS IN RESULTATIVE CONSTRUCTIONS

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ABSTRACT

This paper investigates the relation between the arguments of the English resultative construction (RC) and the arguments (either “optional” or “obligatory”) of the RC verb. Two types of RC are distinguished, inheriting and non-inheriting RCs, although it is pointed out that the distinction between the two may be a matter of degree. It is argued that existing approaches do not handle all RC cases satisfactorily and an alternative analysis is offered which does not rely on the notion of obligatory argumenthood. RCs are claimed to involve the blending of a causing subevent and a caused subevent by way of the existence of tight conceptual links (such as identity and entailment) between the two.

KEY WORDS: Resultative construction, inheriting, non-inheriting, metonymy, Full Argument Realization, blending, tight conceptual links.

RESUMEN

Este artículo explora la relación entre los argumentos de la construcción resultativa (CR) en inglés y los argumentos (opcionales u obligatorios) del verbo en CR. Se distinguen dos tipos de CRs, “heredadas” y “no heredadas”, distinción que se presenta, no obstante, como una cuestión de grado. Se considera el hecho de que los enfoques existentes sobre esta materia no abordan todos los casos de CR de forma satisfactoria y se propone un análisis alternativo que no se basa en la noción de obligatoriedad de argumentos. En este nuevo enfoque, las CRs se consideran como una combinación entre un subevento causante y un subevento causado, combinación que determina la existencia de enlaces conceptuales estrechos entre estos subeventos.

PALABRAS CLAVE: construcción resultativa, “heredado”, “no heredado”, metonimia, “Full Argument Realization”, “blending”, enlaces conceptuales estrechos.

1. INTRODUCTION: GRADIENCE IN RESULTATIVE CONSTRUCTIONS

One of the dimensions of variation in the analysis of so-called Resultative Constructions (e.g. *He hammered the metal flat*, Boas; Broccias, *English*; Goldberg,

Constructions; Goldberg and Jackendoff), RCs for short, concerns the relation between a verb's argument structure and the RC. Consider the following examples:

- (1) (a) The police kicked him [black and blue]_{AP}.
(b) He cut the bread [thick]_{AP}.

Both sentences in (1) are usually regarded as RCs, i.e. constructions which symbolise a causal relation between two constitutive subevents, a causing event and a caused event. The bracketed APs in (1a) and (1b) describe the final state achieved by the referent of the direct object NP as a result of the action symbolised by the verb. For example, the referent of the pronoun *him* ended up *black and blue* because the police kicked him. However, as Rapoport points out in connection with the example *Smith cut the bread into thick slices*, which differs minimally, from a syntactic point of view, from (1b) in that it employs a resultative PP (*into thick slices*) rather than a resultative AP (i.e. *thick*),

[the e]xample [Smith cut the bread into thick slices] ... is not some kind of (double) resultative meaning “Smith caused the bread to go into thick slices by causing the bread to go to a cut state.” What [this example] means, roughly is “Smith caused the bread to go to a cut state and the (final) cut state was (into) thick slices.” The PP *into thick slices* is a modifier of the final cut state [...]. (Rapoport 671)

By contrast, (1a) can easily be paraphrased using a *by*-phrase: “The police caused him to become black and blue by kicking him.” This is so because while *cut* is an accomplishment (causative) verb, i.e. it entails a change of state, *kick* does not entail any change. In other words, *thick* and *into thick slices* are classifiable as **specifiers**—they specify the state achieved by the bread— whereas *black and blue* points to a change which is not lexicalised through the verb (*kick*).

There is one more important difference between (1b) and (1a). The AP in (1b) is not strictly speaking predicated of the direct object, i.e. *bread*, but rather of what Geuder calls the “created object”: the action of cutting the bread results in the creation of slices of bread and it is these slices, i.e. the created object, which are thick.

Observations like these—the impossibility of a causal paraphrase for (1b) and the fact that a predicative relation is established between the AP and the resultant object, rather than the “syntactic” object, in (1b)— have led analysts such as Iwata to contend that examples such as (1b) and (1a) instantiate two different RCs. In the cases at hand, Iwata would claim, among other things, that *thick* in (1b) is an adjunct,¹ and that *black and blue* in (1a) is an argument.

Although Iwata has of course a point in highlighting the difference between the two types, his analysis seems to be a dichotomous one. He seems to claim that

¹ It is far from clear what Iwata means by the term ‘adjunct’ since he does not identify it with the traditional notion of syntactic adjunct (as used, for instance, in generative grammar) and never gives an explicit definition for it.



RCs are either of the (1b) type, which he calls Type B, or of the (1a) type, which he calls Type A. It is beyond the scope of this paper to offer a detailed analysis of Iwata's paper. Suffice here to say that his claim that Type B resultatives do not obey Goldberg's (*Constructions*) Unique Path Constraint —the fact that only one path can be predicated of the resultant object— may be questionable. Iwata points out that one can say, for example, *He spread the butter thick on the bread* but not **Sam kicked Bill black and blue out of the room*. In the former case, one could claim that there are two paths, that of becoming thick and that of ending up on the bread. In the latter example, the two paths are those of becoming black and blue and of ending up out of the door. Iwata contends that the difference in acceptability is to be related to the adjunct status of *thick* in the former example since the "adjunct construction [...] makes no reference to a property path in its semantics" ("Argument" 464). That is, in Iwata's view *thick* is not construed as a path and can therefore co-occur with a truly path-like PP such as *on the bread*. By contrast, *black and blue*, which is not an adjunct, is construable as a path and hence cannot co-occur with the path PP *out of the room*. But this line of reasoning clearly smacks of circularity. Further, although Iwata acknowledges that RCs with prepositional resultative phrases may require a different analysis², I struggle to see why one should not conclude that, given an RC such as *He broke the cookies into small pieces into the bowl, into small pieces* is not an adjunct (in Iwata's sense). But if one takes *into small pieces* as an adjunct, the occurrence of the following PP would be left unexplained because *into small pieces* clearly refers to a metaphorical path, as is signalled by the dynamic preposition *into*. Hence, one would end up with two path phrases, *into small pieces* and *into the bowl*, which contradicts Iwata's analysis. The solution seems rather to be that only one resultative phrase can be added to a given event. If we take *He spread the butter thick on the bread*, the event depicted is that of spreading the butter. Now, either *thick* or *on the bread* (or both) can be regarded as belonging to the event of spreading by default. They simply specify the manner in which the spreading took place (*thick*) and the place where this event occurred (*on the bread*). They are not genuine additions to the spreading event. By contrast, in the case of *kick*, both *black and blue* and *out of the room* constitute genuine additions to the event of kicking somebody since this event only symbolises a causing event in the causal chain.

Iwata's analysis fails to recognise that Type A and Type B are actually opposing endpoints along a continuum. Consider (2), which includes the examples in (1) above:

- (2) (a) The police kicked him black and blue.
 (b) He wiped the table clean.
 (c) He cut the bread thick.

Whereas *kick*, unlike *cut*, does not entail any change of state, it is intuitively clear that *wipe* lies in between *kick* and *cut*. *Wipe* implicates, rather than entails, a

² See note 1 in Iwata's paper.

change of state. It is not contradictory to say *He wiped the table but he didn't manage to clean it*, even if one, by default, expects wiping to lead to cleanness. In other words, if one analyses transitive RCs, following Broccias (*English*), as originating from the (force-dynamic) conflation (or blending) of a causing event and a caused event, then all three examples in (2) are RCs. They all depict a causal chain of events in the sense of Talmy, see also Ungerer and Schmid (226-9). What differs is the relation between the verb and the causal sequence. The causative verb *cut* can be said to symbolize both the causing event and the caused event. *Kick*, by contrast, symbolizes only the causing event. Finally, *wipe* lies between *cut* and *kick* in that it depicts the causing event but also usually implies (i.e. implicates) the caused event. In other words, the three verbs are not on a par in terms of their degree of association with the caused event but can be arranged along a continuum from necessary association (*cut*) through possible association (*wipe*) to no association (*kick*).

So far, I have been dealing with transitive verbs and I have shown that the interaction between such verbs and the RC is a matter of degree. But the issue of the interaction between verbs and the RC needs, of course, to be addressed also in the case of other verb types, such as intransitive verbs. A detailed examination of this question is what this paper is about. I will try to show that the relation between verbs and the RC is a rather complex affair which should be approached using plausible cognitive principles rather than “formal” (i.e. not cognitively motivated) criteria.

2. TRANSITIVITY

Recently, Goldberg and Jackendoff have proposed the Full Argument Realization Principle (FAR) to account for the relation between verbal participants and constructional roles. They claim that:

All of the arguments obligatorily licensed by the verb and all of the syntactic arguments licensed by the construction must be simultaneously realized in the syntax, sharing syntactic position if necessary in order to achieve well-formedness. (Goldberg and Jackendoff 547).³

They contend that “[a]n argument is considered obligatorily licensed by a verb if and only if an expression involving the verb in active simple past tense without the argument is ill-formed” (548). If we consider the verbs *kick*, *wipe* and *cut* and use this test, which I will refer to as “the past tense test”, to establish whether their direct objects are obligatory (i.e. whether they are obligatorily subcategorised by the verb), we would probably contend that they are. See (3) below.

³ See also Goldberg's (*Constructions* 50) Correspondence Principle. Goldberg and Jackendoff observe that “... the correspondence principle is a default principle that can be overridden by the specifications of particular constructions; for example, the passive construction specifically serves to allow a normally obligatory argument to be omitted.” (“English” note 20).

- (3) a. The police kicked.
- b. He wiped.
- c. He cut.

The objectless sentences in (3) are only possible in very specific contexts but probably not out of the blue. For example, Goldberg 2001 (“Patient” 29) observes that causatives can occur without an object when repetition is implied as in (4):

- (4) The chef-in-training chopped and diced all afternoon.

The fact that specific contexts are needed for examples such as (3) to be acceptable probably warrants the conclusion that *kick*, *wipe* and *cut* should be treated as obligatorily transitive verbs. From the obligatory status of the direct objects of *kick*, *wipe* and *cut*, it follows that they must be inherited at the constructional level, i.e. in the RC. Therefore, we would correctly expect RCs with unsubcategory objects such as (5a) to be impossible:

- (5) a. *The police kicked the square empty.
- b. The police kicked the demonstrators.
- c. *The police kicked the square.

(5a), with the intended meaning of “the police kicked the demonstrators (and as a consequence they left the square where they were staging a rally) so that the square became empty” would not be allowed because *the square* is not a possible object for the verb *kick* in isolation, i.e. independently of the RC. To put it differently, the subcategory, obligatory object *the demonstrators* has not been inherited at the constructional level and this results in an impossible RC.

Similar examples can probably be constructed for the verbs *wipe* and *cut*. In fact, the contention that obligatorily licensed arguments must be inherited at the constructional level is also found in Levin and Rappaport Hovav. They claim that the impossibility of (6d) (with the intending meaning of “the bears frightened the hikers and, as a consequence, they left the campground empty”) vs. (6c) can be explained away precisely by appealing to the fact that (6d), unlike (6c), contains an unsubcategory object.

- (6) a. The bears frightened *(the hikers).
- b. *The bears frightened the campground.
- c. The bears frightened the hikers away / out of the campground.
- d. *The bears frightened the campground empty.

Of course, if an argument is not obligatorily licensed, then the previous restriction on the RC does not hold. For example, optionally transitive verbs like *drink* do allow unsubcategory objects in the RC:

- (7) a. They drank (beer).
- b. *They drank the pub.
- c. They drank the pub dry.



Further, in the case of unergative verbs like *shout* an “obviously” unscategorised object is indeed obligatory:

- (8) a. Sally shouted.
 b. *Sally shouted hoarse. (intended meaning as in (8c))
 c. Sally shouted herself hoarse.
 d. *Sally shouted herself.

The objectless (intransitive) RC in (8b) is impossible. A so-called fake-reflexive, which is not subcategorised by the verb (see 8d), is required, as is shown in (8c). Under Goldberg’s (*Constructions*) constructional analysis, the reflexive is contributed by the construction.

Finally, in the case of unaccusative verbs like *dry*, an object is not necessary in the construction (i.e. the construction does not contribute any object):⁴

- (9) a. The clothes dried.
 b. The clothes dried wrinkled.

This is so because unaccusative verbs in Goldberg’s (*Constructions*) and Goldberg and Jackendoff’s analyses are merged with a construction which only describes a change of state. The difference between the transitive and intransitive RC is schematised in Figure 1 and Figure 2 below.⁵

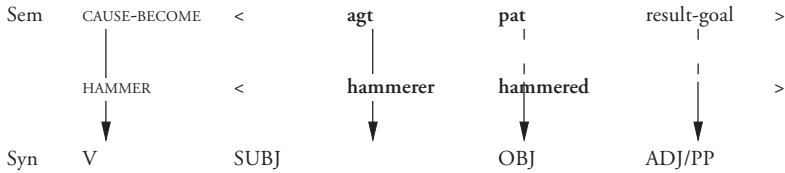


Figure 1

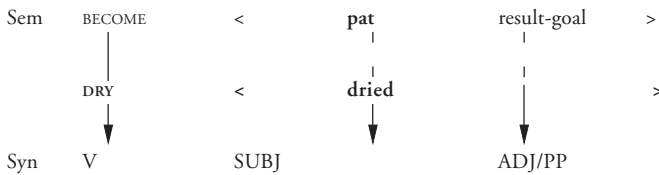


Figure 2

⁴ A fake-reflexive variant like *The clothes dried themselves wrinkled* is indeed possible but the meaning would be slightly different, in that some agentive nuance would be present in its interpretation (see also Rappaport Hovav and Levin on such cases).

⁵ The reader is referred to Goldberg’s *Constructions* for a detailed explanation of the formalism employed.

However, it must be pointed out that although Goldberg (*Constructions*) analyses unaccusative verb based RCs, i.e. intransitive RCs, as non-causal, this is not necessarily correct. A causal paraphrase for (9b) such as “the fact that the clothes dried (too much) caused them to become wrinkle” seems to be acceptable. This observation has lead Broccias (*English*) to suggest that so-called intransitive RCs also depict a causal sequence. The causing event in (9b) is the drying event and the caused event is that of the clothes becoming wrinkled. Further, as was the case with the transitive gradient observed in the previous section, intransitive RCs also exhibit variation in the association between verb and construction. Whereas *dry* possibly symbolises only the causing event (or, at least, has weak connections with the caused event) in (9b), the verb *freeze*, as in the frequently quoted example *The river froze solid*, can be associated both to the causing event and the caused event. This implies that *solid* is interpreted as a specifier, i.e. it specifies that the freezing process was complete or, to put it differently, that the freezing process affected the whole river.

So far I have shown that gradience in the association between verbs and the RC can be observed both in transitive and intransitive RCs and the latter type can also be interpreted causally, *pace* Goldberg (*Constructions*)⁶. Further, I have reported on Goldberg and Jackendoff’s and Levin and Rappaport Hovav’s explanation for the impossible RCs containing unsubcategory objects of “obligatorily” transitive verbs. In the following section, I will try to show that there are important complications which cast doubt on this solution.

3. ASYMMETRIC RESULTATIVES

Levin and Rappaport Hovav observe that, with verbs such as *wash*, *shave* and *rub*, uncategory objects are possible in RCs:

- (10) a. He washed his eyes. (1 He washed)
- b. *He washed the soap.
- c. He washed the soap out of his eyes.

- (11) a. He shaved his head. (1 He shaved)
- b. *He shaved his hair.
- c. He shaved his hair off.

- (12) a. He rubbed his eyes. (cf. *He rubbed)
- b. *He rubbed the tiredness.
- c. He rubbed the tiredness out of his eyes.

⁶ Broccias (*English*, “Construal”) contends that the difference between the (causal) transitive RC and the (causal) intransitive RC involves force-dynamics, which is a necessary notion in the analysis of the former. Force-dynamics in RCs involves the use of verbs which denote or are construed as denoting an energetic interaction or energetic flow between a manipulator and a manipulee. The interested reader is referred to Broccias (*English* Ch. 5) for details.





This is potentially problematic because, for example, *wash* in (10c) is used in the context of somebody washing his eyes. But if this is so, *his eyes* counts as an obligatory object because the objectless version *He washed* means something else, namely that the subject referent washed his whole body rather than a specific part of his body (e.g. his eyes). A similar line of reasoning applies to *shave*. Under the intended reading of (11c), *shave* describes an action carried out on one's head rather than, for instance, on one's beard or one's whole body. Hence, we would expect the unscategorised object *his hair* to be impossible in the RC.⁷ Finally, *rub*, see (12), seems to be an obligatorily transitive verb and yet an unscategorised object like *the tiredness* is possible in the RC (12c).

Faced with such examples, Levin and Rappaport Hovav claim that (10c), (11c), and (12c) should not be considered as instances of the RC. They claim that

Rather, they involve an alternate projection of the arguments of certain verbs into the syntax that comes about because verbs from a variety of semantic classes (usually, but not exclusively, verbs of contact through motion such as *wipe* and *rub*) can also become verbs of removal [...]. (Levin and Rappaport Hovav 66).

This is obviously not a satisfactory move because a causal chain sequence can also be identified in (10c), (11c), and (12c). The events depicted in (10c), (11c), (12c) result, respectively, in the soap coming out of the eyes, the hair being removed from the head, and the tiredness leaving the person concerned. As was the case with *cut* in (1b), however, *wash* and *shave* symbolize both the causing event and the caused event. Washing is basically an event of removal (of some substance from, for example, one's body) and so is shaving. Therefore, they describe both a cause (an energetic interaction with, for instance, parts of one's body) and a result. *Rub*, by contrast, resembles *kick* in (1a) because it only symbolizes the causing event and does not entail a change of state.

It should also be noted that the subcategorised objects of the verbs *wash*, *shave* and *rub* are in fact inherited at the constructional level. They are the (either expressed or understood) prepositions' objects in the RCs. The subcategorised object *his eyes* is the object of the preposition *out of* in both (10c) and (12c), and *his head* is the understood object of the preposition *off* in (11c).

Since the subcategorised objects in such examples are inherited at the constructional level but their position in the RC is not symmetric to the one they have in isolation (i.e. when the verb is used independently of the RC), I call the corresponding RCs **asymmetric RCs** (Broccias "Unscategorized").

It is not obvious whether asymmetric RCs are compatible with Goldberg's analysis. She observes that,

⁷ In fact, the sentence *He shaved his hair* (without *off*) can be found, so this example should perhaps be discounted in the discussion, *pace* Levin and Rappaport Hovav.

[t]he construction itself does not prohibit a hypothetical verb with participant roles which are instances (types) of agent and result-goal from integrating into the construction, since the construction could presumably add the patient argument. (*Constructions* 190).

This scenario seems akin to the case at hand because the RC could be said to contribute the patient argument (e.g. *the soap* in (10c)) and the subcategorised object (i.e. *his eyes* in (10c)) could be taken to correspond to the result-goal in the construction, as shown in Figure 3 for (10c):

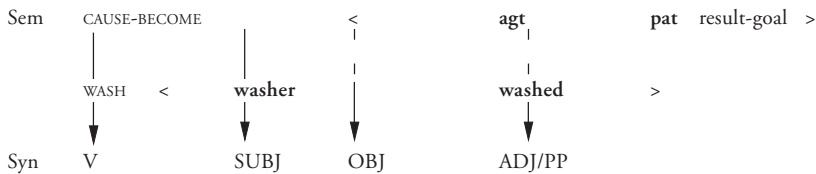


Figure 3

Admittedly, however, the subcategorised object (e.g. *his eyes*) does not necessarily have a result-goal participant role independently of the RC. *His eyes* could simply be classified as having a patient participant role. In fact, Goldberg supplements the hypothetical scenario sketched above with the claim that “[h]owever, the existence of such a verb is disallowed by the general constraint that instances of the result-goal role can only be predicated of patient-like roles.” (*Constructions* 190). Hence, it is debatable whether a representation like the one depicted in Figure 3 for asymmetric RCs is warranted in Goldberg’s theory, after all.

A further complication stems from the fact that the lack of inheritance of obligatorily selected verbal objects as constructional objects (i.e. objects in the RC)—and their occurrence in the oblique (i.e. resultative phrase) slot in the asymmetric RC—is not limited to removal verbs, or verbs construed as such, as the following examples illustrate.

- (13) a. She beat *(her children).
 b. *She beat the Ten Commandments.
 c. *She beat her children into the Ten Commandments.
 d. She beat the Ten Commandments into her children. (Rivière)
- (14) a. She kicked *(a hole).
 b. She kicked the door.
 c. She kicked a hole in the door.

The verb *beat* in (13d) is in no sense construable as a verb of removal, quite the contrary of course. It occurs in an RC which evokes a (metaphorical) ingressive scenario: the Ten Commandments moved metaphorically into the children. Inter-

estingly, the variant in (13c), whose object is identical to the verb's subcategorised object (*her children*), is not possible⁸. (13) therefore shows that obligatorily subcategorised objects “may” not only be used in the resultative phrase slot rather than the constructional object slot but that, sometimes, they “cannot” be used in the constructional object slot at all.

Similarly, *kick* occurs in an RC, (14c), which does not evoke a removal scenario but, rather, a creation scenario: a hole came into existence in the door. Further, (14c) is an asymmetric RC because the obligatorily subcategorised object *the door* appears in the oblique slot as the object of the preposition *in*.

The obvious question is what principles, if any, regulate the distribution of the arguments in the RC. Why is (13c) impossible, for example? The explanation seems to be rather simple. The distribution of the arguments in the RC is regulated by the potential meaning we can assign to what in generative grammar analyses is called the “small clause” in the RC, i.e. the complex made up of the resultative phrase and the entity of which it is predicated. This complex is labelled “change complex” in Broccias (*English*). Since we conceptualise pieces of knowledge, rules and the like as entities which move into us rather than ourselves as moving into them, the change complex *the Ten Commandments into the children* can be easily made sense of, while *the children into the Ten Commandments* cannot. Of course, we can conceptualise ourselves as moving into actions, hence the acceptability of the variant *into following the Ten Commandments* mentioned in note 8. Similarly, the string *a hole in the door* in (14c) is easily interpretable.

To sum up, although the asymmetric cases discussed above are not always compatible with Levin and Rappaport Hovav's approach—they are not limited to the removal scenario but can also evoke ingressive and creation scenarios—they are compatible with FAR, and possibly with Goldberg's (*Constructions*) approach, because the obligatorily subcategorized verbal object still occurs in the RC, albeit as an oblique. It is used not in the constructional object position but, rather, in the resultative phrase slot.

4. NON-INHERITING RESULTATIVES

I will now show that FAR is too restrictive for RCs. I will contend that obligatorily subcategorised objects are not always realised in RCs, not even as “possibly understood” obliques. Consider the following examples:

- (15) a. [He] used a pocket knife to **cut himself free** from his **seatbelt**.
 <www.topix.com/forum/city/laurel-md/TMVSVTLVU1DSOSMCA>
 a'. He cut the seatbelt.

⁸ The RC is possible, however, if instead of *into the Ten Commandments* we have *into following the Ten Commandments*. The analysis of this variant is however beyond the scope of the present paper.

- (16) a. Mallory **cut himself free** from Irvine.
 <www.pbs.org/wgbh/nova/everest/lost/dispatches/990525n2.html>
 a'. *He cut Irvine.
 a''. He cut the rope connecting him with Irvine.
- (17) a. He decided to **cut himself free from so many aspects of modern culture**.
 <www.johnnydeppfan.com/interviews/filmreview03.htm>
 a'. He cut his ties with so many aspects of modern culture.

(15a) is an instantiation of the asymmetric RC. The subcategorised object *seatbelt*, see (15a'), occurs in the oblique slot in the RC. (16a) is similar to (15a) in that it also contains the verb *cut* and the same unclassified object (*himself*). However, there is an important difference between (15a) and (16a). The object of the preposition *from* in (16a) is not, as in (15a), a possible object for *cut*. What Malory cut was not Irvine, of course, but the rope connecting him with Irvine, see (16a''). However, (16a) could still perhaps be classified as an asymmetric RC if the object of the preposition *from* is analysed metonymically as standing for the subcategorised object *the rope*. A similar metonymic analysis can also be applied to (17a), where what was severed were the connections or ties with (the denotation of) the object of the preposition *from* (*so many aspects of modern culture*).

I have therefore shown that there is at least one type of RC where the obligatorily subcategorised verbal object does not appear in the RC at all. Still, one can envisage a metonymic relation between it and the entity which the object of the preposition in the resultative phrase refers to.

Even more interesting, it is possible to find examples where an obligatorily subcategorised object is not used in the RC and yet one cannot envisage a metonymic link between it and the resultative phrase. Consider the following example:

- (18) a. Didier Drogba **headed** Chelsea in front from Frank Lampard's corner seven minutes before half-time. (i.e. Didier Drogba scored a goal by hitting the ball with his head so that his team, Chelsea, went one up against their opponents.)
 (<news.bbc.co.uk/sport1/hi/football/eng_prem/6200073.stm>)
 b. Dimitar Berbatov **nodded** Spurs [i.e. Tottenham Hotspur] in front.
 (<news.bbc.co.uk/sport1/hi/football/eng_prem/7008206.stm>)
 c. {Didier Drogba/Dimitar Berbatov} {headed/nodded} *(the ball).

Using Goldberg and Jackendoff's past tense test for obligatory arguments, see (18c), one would perhaps conclude that both *head* and *nod*—which both denote the hitting of the ball with one's head in the context of a football (soccer) game—take *the ball* as their obligatory object. Still, both (18a) and (18b)—the latter has the same interpretation as (18a)—do not use *the ball* at all. The oblique slot is taken by *in front* (i.e. in front of their opponents), which is not immediately (i.e. metonymically) linkable to *the ball* as was the case in (16a) and (17a) above.

A similar (baseball) example is (19):



- (19) a. The plate umpire roared and **punched** a batter out. (Jonathan Franzen, *Strong Motion*, 2003: 189; Guillaume Desagulier p.c.)
 b. The umpire punched *(the air).

What the umpire punched was, of course, the air, not the batter. Further, using the past tense test, one should perhaps conclude that *punch* is an obligatorily transitive verb. However, the subcategorized object “air” is not linked metonymically to the intended object of the preposition *out* (*out* stands for *out of play*).

In sum, both (18) and (19) seem genuine counterexamples to FAR. The obligatorily subcategorized objects (*ball* and *air*, respectively) are not inherited at the constructional level, not even via metonymic links as was the case in (16a) and (17a). Since FAR cannot be maintained in the face of such examples—and it is at least problematic for metonymic cases such as, for example, (16a) and (17a) since the inheritance link is only indirect—I will use the label **non-inheriting resultative** for all cases where no subcategorized object, either obligatory or optional, appears in the resultative construction. The label non-inheriting resultative therefore also applies to optionally transitive and unergative verb-based cases (see (7) and (8) above).

Such a move is not only a terminological quibble but it amounts to dispensing with the past tense test to decide which arguments should be inherited at the constructional level. RCs which contain obligatorily transitive verbs (given Goldberg and Jackendoff’s past tense test) but do not inherit subcategorized verbal objects are treated on a par with, for instance, RCs whose constructional verb is optionally transitive. In fact, one may also wonder where the past tense test comes from. Since “obligatory” transitivity is a notion which depends on context (see Section 2), I think it is safer to dispense with it. The past tense test only shows that certain verbs, if uttered out of the blue, would tend to combine with certain objects, but such default assumptions can be more or less easily overridden, thus making the notion of “obligatory object” rather murky.

5. TIGHT CONCEPTUAL LINKS

Having dispensed with FAR because of the existence of non-inheriting resultatives, I must now show what principles may regulate their occurrence. This also involves explaining why non-inheriting RCs such as (5a) (**The police kicked the square empty*)⁹ seem to be impossible.

My contention is that all RCs rest on tight conceptual links between their constitutive subevents, i.e. the causing event and the caused event.¹⁰ In the case of

⁹ See also Levin and Rappaport Hovav’s, *Unaccusativity*: **The bears frightened the campground empty*

¹⁰ If one views RCs as stemming from the merger of two subevents (as in Broccias, *English*), then this operation can be considered an instance of Fauconnier and Turner’s conceptual blending

inheriting symmetric RCs, tight links between the two subevents are guaranteed by the sharing of one participant. I will call this type of link an **identity link**. For example, *him* in *The police kicked him black and blue* (see (2a) above), stands for both the patient in the causing event (the event of kicking, which involves the referent of *him*) and the entity which undergoes change (the theme) in the caused event (the event of becoming black and blue, which again involves the referent of *him*). The two subevents are “welded” together thanks to the shared argument *him*. This line of reasoning also applies to intransitive RCs, of course. In *The clothes dried wrinkled* (see (9b) above), *the clothes* is shared, under my bi-componential analysis for intransitive RCs (see Section 1) by the causing event (the event of drying) and the caused event (the event of becoming dry).

If one now considers (inheriting) asymmetric RCs, one also observes that they rely on an identity link between their constitutive subevents. For example, in *She beat the Ten Commandments into her children* (see (13d) above), the causing event (the event of beating) and the caused event (the event of the Ten Commandments moving metaphorically into the children) are “welded” together by virtue of the fact that the affected participant is shared: the patient in the causing event is also the metaphorical spatial target in the caused event. This is schematised in Figure 4, where “ \Rightarrow ” stands for the causal relation between the two subevents.

SUBEVENT₁: She beat her children \Rightarrow SUBEVENT₂: the Ten Commandments moved into the children

Figure 4

Tight links also obviously exist in the case of asymmetric resultatives involving metonymy, as in *Malory cut himself free from Irvine* (see (16a) above). *Irvine* is “activated” both in the causing event via its link to the affected object *rope* and in the caused event, where it corresponds to the landmark Malory moved away from. This type of activation, involving metonymy, could also be subsumed under the notion of identity link. There is also at least one more link between the causing and the caused subevents in this example. Cutting the rope necessarily implies (i.e. entails) that Malory is free from Irvine. This amounts to saying that the conceptual link between the causing event and the caused event is strongest. I will label this type of link involving an entailment relation an **entailment link**. Interestingly, it should be observed that there may be no entailment or necessary link in asymmetric (non-metonymic) cases like (13d), *She beat the Ten Commandments into her children*. The fact that the children followed the Ten Commandments is a possible but not necessary consequence of their mother beating them.

and the notion of tight links I refer to in this section can be related to Fauconnier and Turner’s vital relations. I will not comment any further on this point because it is not essential to the argument put forward here, i.e. the existence of easily retrievable links between the constitutive subevents of a RC.



A similar situation obtains in the non-inheriting examples (18a), (18b) and (19a) above. In (18a) and (18b), there is an identity link between the causing subevent (scoring a header) and the caused subevent (one's team going one up) because the entity undergoing change (*Chelsea, Spurs*) is the team the player mentioned in the subject position (*Drogba, Berbatov*) play for. That is, the identity link is a part-whole relation. Further, as was the case in example (16a), scoring a goal necessarily implies that one's team go in front, given the context of the specific matches (18a) and (18b) refer to. This entailment link guarantees the strongest possible association between the two constitutive subevents of the RC.

(19a) differs from (18a) and (18b) in that there is no identity link between the subject's referent and the object's referent, unless one treats them as being both members of the set of people involved in a game of baseball so that a part-whole relation obtains between such a set, on the one hand, and the umpire and the batter, on the other. To be sure, there is an entailment link because the umpire's punching of the air necessarily signifies, at the stage of the game the sentence refers to, the dismissal of the batter.

By appealing to the conceptual notion of tight links, I think that one can also go some way towards motivating the impossibility of examples such as (5a), **The police kicked the square empty*, or Levin and Rappaport Hovav's **The bears frightened the campground empty* (see (6d) above for that matter). Under the intended interpretation of (5a), "the police kicked the demonstrators, who as a consequence left the square, which then became empty," it is clear that its semantic pole makes reference to an actually more complex causal chain than in the previous examples. The intended caused event is, first of all, the leaving of the square on the part of (all) the demonstrators. This in turn causes the square to become empty. There is an entailment link between the event of the demonstrators leaving the square and the square becoming empty, assuming that only the demonstrators were on the square. But this is not the case when one analyses the link between the causing event of the police kicking the demonstrators and the demonstrators leaving the square. The link between the two events is guaranteed only by the knowledge that square is the place where the demonstrators were based. Even conceding that the police kicked the demonstrators while they were on the square, rather than, say, while the demonstrators were walking in the streets to the square, this is probably too tenuous a link to make the sentence acceptable. Admittedly, however, if the scenario envisaged for (5a) took place often enough, (5a) might turn out to be a possible and very compact way of referring to what the police usually do when rallies are organised in squares. Significantly, the previous examples of non-inheriting resultatives based on transitive verbs had caused events which were entailments of the causing events. But this does not hold for (5a), of course. A similar line of reasoning applies to **The bears frightened the campground empty*, of course, as readers can easily verify for themselves.

The notion that tight links (e.g. identity and entailment links) must be established between the two constitutive subevents of an RC for it to be acceptable ties in well with Felser and Wanner's (106) observation that "[r]esultative constructions [with intransitive verbs] typically involve a reflexive anaphor that is bound by the matrix subject," as in (20):



(20) He drank himself stupid.

This is not surprising because the occurrence of a reflexive anaphor contributes to the creation of a tight “identity” link between the causing event and the caused event. Both subevents share a participant, namely the entity referred to by the subject of the RC. Even if no reflexive anaphors occur in the direct object slot of intransitive verb-based RCs, one can detect the existence of tight conceptual links. Consider the following examples:

- (21) a. They drank me under the table.
- b. Alice cooked Tom and Bill to death.
- c. Penny surfed the night away

In (21a), both *me* and *they* refer to entities which were involved in the same event of drinking. *Tom* and *Bill*, in (21b), are the people for whom *Alice* cooked; hence, there is a tight link between the causing subevent (Alice cooked for Tom and Bill) and the caused subevent (Tom and Bill died) because Tom and Bill are activated in both subevents. Finally, in (21c), *the night* stands for the temporal framework in which the event of Penny’s surfing the net took place. This ensures a tight link between the causing event (Penny surfed during the night) and the caused event (The night went, metaphorically speaking, away), where the temporal framework is treated as a theme.¹¹

To conclude, the notion of tight conceptual links seems promising when non-inheriting resultatives are also analysed. It may be that some of the explanations sketched above need revising. Indeed this paper has elaborated on earlier proposals put forward in Broccias (*English*, “Unsubcategorized”). But I view the notion of conceptual link as preferable to FAR and the past tense test. The combination of the latter two most often than not results in correct predictions as to (im)possible RCs but leaves the question of their psycholinguistic motivation unsolved. By contrast, the tight link hypothesis is more appealing from a psycholinguistic point of view. It simply amounts to saying that we integrate or blend (see note 10) different facets of composite events into compact grammatical structures if their conceptual distance is not too great. This is probably so because, otherwise, the encoding and decoding of information would be too burdensome.

6. CONCLUSION

I have argued that, when one considers the relation between a verb’s arguments and the RC, two types of RC can be identified: inheriting and non-inherit-

¹¹ The construction instantiated in (21c), which I classify as a RC, has been studied in some detail by Jackendoff (“Twistin”).



ing RCs. Inheriting RCs, unlike non-inheriting RCs, contain the verb's object also in the RC. The verb's object can occur either in the constructional object position (symmetric RC) or in the constructional oblique position (asymmetric RC). In between the two are metonymic RCs, where the constructional oblique argument is related metonymically to the "intended" verb's object. This is one more example of gradience in RCs. At the very outset I pointed out that, in the case of inheriting symmetric resultatives, the degree of overlap between verb and RC can be either complete (e.g. with *cut*), limited only to the causing event (e.g. with *kick*) or in between the two (e.g. with *wipe*).

I have also contended that the distribution of arguments in inheriting RCs is regulated by the meaning which can be assigned to the change complex. This implies that resultatives are not simply obtained by adding "some" material at the end of a simpler structure (e.g. *He hammered the metal* à *He hammered the metal flat*) but may involve the positional restructuring of a verb's arguments (Broccias "Unsubcategorized").

Finally, I have tried to show that the blending of the causing and caused subevents in RCs is possibly based on the existence of tight conceptual links between the two. That is, the causing and the caused subevents which describe the semantic import of RCs are "welded" together by virtue of tight connections. They can be established, for example, by the sharing of a participant (identity link) and/or the fact that the caused event is a necessary consequence of the causing event (entailment link). In this way, one can dispense with formal principles and tests like Goldberg and Jackendoff's FAR and past tense test which are difficult to understand from a psycholinguistic point of view.

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