1. INTRODUCTION

Examples like (1) have been argued (Simpson 1983) to involve a small clause that describes a state or location resulting from the action denoted by the verb.

(1) I painted the car yellow. (Simpson 1983:143)

Resultative: “An XP denoting a state or location that holds of the referent of an NP in the construction as a result of the action denoted by its verb.” (Rappaport Hovav & Levin 2001:766)

Generalization in English: “The controller of a resultative attribute must be an object, whether that object is a surface object, as in transitive verbs, or an underlying object, as in passives and intransitive verbs of the unaccusative class, or whether the object is a fake reflexive, as in intransitive verbs of the unergative class.” (Simpson 1983:146)

(2) The car was painted red. (Simpson 1983:144)
(3) The ice-cream froze solid. (Simpson 1983:143)
(4) I ate myself/*him sick. (Simpson 1983:145)
(5) I danced/laughed/worked *(myself) tired.

Simpson's empirical generalization that resultatives can only be predicated of the underlying object (the direct object restriction, DOR (Levin and Rappaport Hovav 1995)) has led to the standard representation of resultatives as small-clause complements of the main verb (Hoekstra 1988, Bowers 1997, Ramchand 2008, etc.), where the subject either projects internally to the small clause (6) or controls its PRO subject.

(6)  

```
VP  
|  
V° SC  
|  
hammer DP AP  
|  
the metal flat  
```

What is a small clause? Stowell 1981, 1983 demonstrates that predication is possible in the absence of a verb, as in (7).

(7) a. Alice became [SC t₁ president/the head of the association].
2. **SUBJECT “RESULTATIVES”**

Simpson's DOR and by consequence the concomitant syntactic analysis is challenged (Wechsler 1997, Verspoor 1997, Rappaport Hovav and Levin 2001) by examples (9)-(13).

(9) She danced/swam **free of her captors**. (Levin and Rappaport Hovav 1995:186)
(10) You must jump **clear of the vehicle**. (Levin and Rappaport Hovav 1995:186)

Levin & Rappaport Hovav (1995) posit a lexical rule that converts unergative verbs into unaccusatives. Wechsler (1997) objects to this rule: ‘Clearly such a rule, if unconstrained, completely demolishes any account based on unaccusativity’ (Wechsler 1997:314).

Furthermore, this rule cannot account for transitive clauses as in examples (11)-(13), where apparent resultative phrases are subject-oriented.

(11) a. The wise men followed the star **out of Bethlehem**.
    b. The sailors managed to catch a breeze and ride it **clear of the rocks**.
    c. He followed Lassie **free of his captors**. (Wechsler 1997:14)
(12) a. John danced mazurka’s **across the room**.
    b. John swam laps **to exhaustion**.
    c. The children played leapfrog **across the park**. (Verspoor 1997:151)
(13) a. Fly American Airlines **to Hawaii** for your vacation!
    b. We took the IRT **from Grand Central to the Brooklyn Fine Arts Museum**.
    c. We drove the Blue Ridge Skyway **from beginning to end**. (Rappaport Hovav & Levin 2001:770, p.c. with D. Dowty)

3. **OUR CLAIM**

There are no subject-oriented resultatives. The boldfaced constituents in (9)-(13) are both syntactically and semantically distinct from true resultatives (cf. Rothstein 2000b) and should be analyzed as vP adjuncts denoting the path of the event (Zwarts 2005, 2006; see Wechsler 2005). Unlike depictive adjuncts, they do not involve a small clause.

Conversely, property-denoting resultatives remain true resultatives with the configuration in (6) and therefore cannot be subject-oriented: the APs in the examples below only function as depictives:

(14) #John hammered the metal exhausted. (Wechsler 1997:308)
(15) #I danced tired.

We will now show that subject ‘resultatives’ are always path-denoting.
3.1. Path versus Property

We will follow Ettlinger 2008 and argue that PPs and APs in object-oriented resultatives may denote a property or a path. Ettlinger claims that only path-denoting constituents can be clefted or topicalized (16)-(19).

(16) a. Mel wiped the table clean. (AP property)
   b. * It was clean that/how Mel wiped the table.
   c. * Clean Mel wiped the table.

(17) a. Joni sang us to sleep. (PP property)
   b. * It was to sleep (that) Joni sang us.
   c. * To sleep, Joni sang us.

(18) a. She pulled the victims clear of the rubble. (AP path)
   b. It was clear of the rubble (that) she pulled the victims.
   c. Clear of the rubble, she pulled the victims.

(19) a. Johnny hit the ball out of the park. (PP path)
   b. It was out of the park (that) Johnny hit the ball.
   c. Out of the park Johnny hit the ball.

This generalization might follow from the fact that (small clause) predicates cannot be clefted (Matushansky 2008).

(20) a. * It was a doctor that John was.
    b. * It was (the) president that Mary was.
    c. * It was in the States that Lucie was. (Matushansky 2008)
    d. * It was go home early that John did.
    e. * It was very angry at me that John was. (Stowell 1981)

Ettlinger’s generalization allows us to distinguish between path and property denoting constituents.

Crucially for us, subject-oriented ‘resultatives’ only allow path-denoting PPs and APs:

(21) a. * The wise men followed the star famous/out of their minds. (AP & PP property)
       b. The wise men followed the star to/*at the stable. (PP direction & location)

(22) a. The wise men followed the star out of Bethlehem/ashore. (AP & PP path)
       b. It was out of Bethlehem/ashore that the wise men followed the star.
       c. Out of Bethlehem/ashore, the wise men followed the star.

Rothstein (2000) claims that all resultatives must be adjacent to their subjects. This claim still holds, and the behavior of the path-denoting APs and PPs in (16)-(19) is according to our expectations, as they are adjuncts rather than true resultatives.

3.2. Directionality

Subject oriented ‘resultatives’ occurring with a preposition always have a directional interpretation; the PPs denote a path ((23)-(24)). Object-oriented PPs have either a directional (25) or a property (26) interpretation.

(23) The wise men followed the star out of Bethlehem. (PP path)
(24) * He followed Lassie into a rage. (PP property)
(25) Johnny hit the ball out of the park. (PP path)
The trial sent Bolton into a rage. (PP property)

Uncontroversial small-clause complements of be and seem are incompatible with PPs headed by the unambiguously directional prepositions to or towards (27). Since directional PPs are not predicates, they cannot form a small clause.

(27) a. Juliana was at the store/*towards the store
    b. Melissa seems at ease/in a rage/*into a rage.

As example (28) shows, directional PPs are sometimes possible with small clauses. These give rise to a resultative, rather than a directional interpretation (Hoekstra and Mulder 1990) and are limited to PPs indicating paths with an endpoint.

(28) The lion is through the hoop.

3.3. Expletive subjects.

The compatibility of expletive subjects with path-denoting PPs (29), but not with property-denoting PPs (30) further demonstrates that these PPs should not be analyzed as resultatives. Since expletive it does not undergo a change, the PP cannot denote a resultant state.

(29) It rained from Boston to New York. (Path)
(30) * It rained cold. (Property)

Example shows that expletives can control PRO.

(31) It rained without PRO snowing.

4. ANALYSIS: PATH PPs ARE ADJUNCTS

We will argue that the subject-oriented ‘resultatives’ are both syntactically and semantically distinct from true resultatives and should be analyzed as vP adjuncts as in (32), denoting the path of the event (Zwarts 2005, 2006). Unlike depictive adjuncts, they do not project a small clause.

(32)

We can now draw a principled distinction between resultatives and path specifications. While every language has path specifications (although their compatibility with motion verbs is not the same for different languages, see Talmy 1975, Filipović 2007, Gehrke 2008, among many others), true resultatives may be unavailable in a given language, cf. Washio 1997.
4.1. Coordination

Independent evidence for two different configurations for path and property PPs comes from the fact that the two cannot be coordinated (33)a. In contrast, two property phrases (33)b and two path phrases (33)c can easily be coordinated if they contain a unique path (Goldberg 1991).

(33) a. *They hammered the metal into an anvil and flat. (Path & Property)
b. They hammered the metal red and flat. (Property & Property)
c. They hammered the metal into an anvil and into pieces. (Path & Path)

Sentence (34) shows that in small clauses, unlikes can be coordinated.

(34) I consider John crazy and a fool. (AP & NP)

Examples like (35) indicate that path-denoting PPs can function as adjuncts.

(35) a. Canada is cheering from one coast to the other. (Locative & Path)
    b. It rained from Boston to New York (and also in Chicago). (Locative & Path)

4.2. Occurrence in NPs

In English, adjuncts, but no small clauses can function inside an NP. In (36)b, the small clause is not licensed. Correspondingly, path-‘resultative’ (37)a, but no property-resultatives (37)b can occur inside an NP.

(36) a. I believe Paul happy
    b. *the belief (of) Paul happy
(37) a. a road to Paris
    b. *a road broken

Kayne 1985 claims that resultatives are unable to nominalize, but Carrier and Randall 1992 show that verbal -ing nominalizations of transitive verbs allow resultatives, differing in this respect from consider-type ECM verbs.

4.3. Long-distance extraction

Carrier and Randall 1992, following McNulty 1988, show that resultatives (38) behave like arguments (39)a instead of adjuncts (39)b and depictives (39)c when it comes to long-distance extraction.

(38) ?How flat do you wonder whether they hammered the metal? (McNulty 1988)
(39) a. ?Which boys do you wonder whether to punish?
    b. *How do you wonder whether to punish these boys?
    c. *How angry does Mary wonder whether John left? (Carrier & Randall 1992)

Crucially for us, path PPs do not behave like complements.

(40) *Where do you wonder whether Johnny hit the ball out of?
4.4. Binding

Wechsler (1997) notes that locative resultatives can contain either a pronoun or a reflexive bound by the subject (Wechsler 1997:315). In (41) the binder is outside of the binding domain, so the pronoun is preferred, although the anaphor is accepted.

(41) Lancelot, placed the sword beside him/%?himself, (Wechsler 1997:315)

Now Reinhart and Reuland 1993 demonstrate that in adjuncts, as opposed to complements, binding relations are different. In adjuncts, pronouns as well as anaphors are allowed.

(42) *Maxi speaks with himi.
(43) Max saw a gun near himi. (Reinhart & Reuland 1993:664)

In (44)-(45), the binding relations in the path phrases indicate that they behave like adjuncts. The object-oriented path-denoting PP in (44) shows different behavior from the complement in (45). In (44) both the anaphor and the reflexive are allowed, while in (45) only the pronoun is allowed.

(44) Max, rolled the carpet over himi/himselfi,
(45) Luciei heard Max praise heri/*herselfi,(Reinhart & Reuland 1993:688)

We can now determine the exact position of the subject-oriented adjuncts, as subjects, but not objects can bind a reciprocal inside them. This indicates that the path specification cannot be c-commanded by the object:

(46) The wise meni followed the starik away from [each other’s]ik reflections.

Sentence (47) demonstrates that in object-oriented path specifications only the reflexive, but not the pronoun is allowed. Sentence (48) shows that other adjuncts behave the same.

(47) Max rolled the carpeti over itself/*it,
(48) At Madame Tussauds I saw Ringo Starri next to himselfi/*himi.

4.5. Iteration

Goldberg and Jackendoff (2004) observe that there cannot be two resultative states connected to one agent.

(49) *He wiped the table clean crumb-free. (AP property)
(50) *The dog barked him awake past. (AP path)
(51) *The trial sent Bolton into a rage into a depression. (PP property)
(52) *He drove the car into the street towards the bridge. (PP path)

Goldberg and Jackendoff’s generalization also explains why normally, a resultative cannot be combined with a path specification:

(53) a. *He hammered the metal red into an anvil.
b. #He hammered the metal into an anvil red.

Path specifications can in fact combine if they specify the same path (Goldberg 1991). If the path PP is a further specification of the resultative, the sentence is well-formed (54)a. The
ordering restriction in (54) suggests that the path PP is an adjunct, just as the depictive in (55).

(54) a. He pounded the dough flat into a pancake-like state. (Goldberg 1991:371)
   b. *He pounded the dough into a pancake-like state flat.

(55) a. You can rub the clay smooth wet. (Goldberg 1991:370)
   b. *You can rub the clay wet smooth.

As expected for adjuncts, path PPs can be stacked; the apparent limitation on their number is semantic.

(56) He drove the car out of the garage onto the street. (PP path)

4.6. Fictive motion

“There exist stative sentences that are indistinguishable from path resultatives in both syntactic structure and argument-structure properties.” (Goldberg & Jackendoff 2004:543).

(57) The road zigzagged down the hill. (Goldberg and Jackendoff 2004)
(58) The crack widens towards the gate. (Krifka et al. 1995:71)

As the verbs are stative, no resultant state can be argued to exist.

Under our approach fictive motion involves path PPs rather than result small clauses; thus we correctly predict the impossibility of AP resultatives in fictive motion.

The behavior of path specifications under inversion confirms this hypothesis:

(59) a. Down the hill, the road zigzagged.
   b. Towards the gate, the crack widens.

Among the various interpretations available for fictive motion (Talmy 1996) are co-extension path (clearly directional) and access path (sort of locative). As expected, both interpretations are available with inversion.

Once postulated to exist, the structure introducing path PPs should in principle be available also for alleged subject-oriented resultatives; Occam’s razor would then exclude the treatment of the latter as resultatives.

Furthermore, path specifications do not have to be PPs:

(60) a. Wolves get bigger as you go north from here. (Carlson 1977)
    b. Jonas backed away as I advanced.

There is no way to analyze these CPs as result states.

5. CONCLUSION

We have argued for the following points:

- Path specifications can (perhaps must) be adjuncts.
- Empirically, subject-oriented ‘resultatives’ are always path phrases.
- Subject-oriented 'resultatives' are always adjuncts.
Why are subjects incompatible with small clause resultatives?

Under the assumption that resultatives are projected as complements to V°, they can only be object-oriented:

If resultative small clauses contain a PRO subject, it cannot be controlled by the subject of a transitive verb, because the object would intervene.

Unergatives would have to be assumed to also contain an underlying object.

Finally, small clauses are not allowed in subject position:
The core assumptions are therefore that true resultatives have the distribution of small clauses and that control is by the closest antecedent.

Next question: path PPs in object-oriented resultatives.

6. Extensions

6.1. Spurious resultatives

Levinson 2010 claims that spurious resultatives as in (65) are true complements. Therefore, they cannot be path-denoting (66).

(65) She braided her hair tight. (Property)
(66) *She braided her hair to the ground. (Path)

Goldberg and Jackendoff (2004) make a similar claim about verbs of bodily emission, substance emission, and verbs of ingestion; since the objects in sentences (67)-(69) are not overtly expressed, they are implicit arguments.

(67) John spit out of the window.
(68) The toilet leaked through the floor into the kitchen below.
(69) Bill ate off the floor. (Goldberg and Jackendoff 2004: 537)

These sentences seem to violate full argument realization, and therefore, Goldberg and Jackendoff analyze these phrases as PP-adjunct path phrases rather than as resultatives. This analysis fits well within our claim.

6.2. Bare resultatives

According to Rappaport Hovav and Levin (2001), there is a semantic difference between bare (70)-(72)a and reflexive (70)-(72)b resultatives.

(70) a. A man grabbed and groped her and tried to get under her clothing, but she kicked free and fled.
   b. Laughing uproariously, Beckett lunged around the office with one leg of his pants on fire, trying to kick himself free.

(71) a. One woman gets up to leave, but Red-Eyes grabs her roughly by the arm and pulls her into his lap. She wriggles free but remains seated obediently beside him.
   b. ‘Mr Duggan became alarmed about being caught in the door of a lift which was about to begin its descent and wriggled himself free.’

(72) a. … one of his race cars wriggled loose inside the transporter and caused damage to both of his cars.
b. ‘I had it [the snake] pinned and when I lifted it up into the bag, it wiggled itself loose and just sank its fangs on my knuckle. (Rappaport Hovav & Levin 2001: 774)

Although bare ‘resultative’ are subject-oriented, and fake reflexive ‘resultatives’ are object-oriented, the limited set of adjectives possible in both configurations all denote locations.

Further evidence for the special status of free, loose and clear is that they can be modified by the PP modifiers straight and right.

(73) She went right into the shop.
(74) *Johnny bought a right red carpet
(75) You should steer right clear of these ideas.

Ettlinger’s cleft-test points towards a non-path-denoting interpretation:

(76) a. She kicked free. (Bare)
    b. *It was free that she kicked.

(77) a. She kicked herself free. (Reflexive)
    b. *It was free that she kicked herself.

But to be sure, these examples are marked to begin with.

6.3. Subject resultatives with a property interpretation

Goldberg and Jackendoff found ‘dozens’ of subject-oriented AP resultatives with a property interpretation with verbs of bodily emission (Goldberg & Jackendoff 2004:551):

(78) a. He coughed awake and we were all overjoyed, especially Sierra. www.diabloii.net/tdl/stories/destiny2.shtml.
    b. the kittens yawned awake and played with the other young ...
    www.geocities.com/mistacorjellicle/lifelove.html
    c. Zoisite sneezed awake, rubbing his nose and cursing under his breath.
    www.geocities.com/Tokyo/Dojo/9951/vaults/love1.html

These sentences are ‘highly marked’. Furthermore, the adjective awake, like asleep and ashore, has a special status: It does not denote a property but is a reminiscent of a path-denoting adjective.

7. Notes

7.1. Visser’s generalization

Visser’s generalization was used by Rappaport Hovav and Levin (2001:771) to support the thesis of the subject ‘resultatives’ being truly subject oriented: No verbs with subject-predicated complements can be passivized (Bach 1979, 1980, Bresnan 1972, 1982):

(79) a. *The star was followed out of Bethlehem.
    b. *The breeze was ridden clear of the rocks.
    c. *Lassie followed free of his captors.

(80) a. *Mazurka’s were danced across the room.
    b. *The dog was walked to the store.
    c. *Laps were swum to exhaustion.
d. *Leapfrog was played across the park.

Visser’s generalization is thus not about resultatives but about adjacency. The control dependent need to be adjacent to the controller (82). For depictives (83), the same generalization holds: After passivization, one cannot continue control.

(82) a. I promised Sam to leave the country.
   b. *Sam was promised to leave the country.  (Control)

(83) a. Mary struck me as smart.
   b. *I was struck by Mary as smart.  (Depictive)

7.2. Verbs of sound emission

Verbs of sound emission look like subject-oriented ‘resultatives’ but they express a different semantic relation: In (84), the verbal event is the result of the motion of the object, while the resultative is the cause (Goldberg and Jackendoff 2002:540).

(84) The trolley rumbled through the tunnel.
(85) The line clicked dead.

Here also AP resultatives are much more constrained than path specifications.

7.3. Unselected resultatives

The so-called ‘unselected resultatives’ in sentences (86)-(88) are formed by unergative verbs, obligatorily followed by two arguments, an NP and an XP. As such, they seem complements rather than adjuncts. Compare with (89)-(91).

(86) Miss Kitty Perkins, who talked seven warts off my hands…
(87) She winked us past…
(88) The dog barked him awake… (Rappaport Hovav & Levin 2001:769)
(89) *Miss Kitty Perkins, who talked seven warts.
(90) *She winked us.
(91) *The dog barked him. (Rappaport Hovav & Levin 2001:769)

Rappaport Hovav and Levin 2001 give a syntactic explanation of unselected resultatives, while Goldberg and Jackendoff (2004) claim that the unselected resultatives are semantically restricted. The semantic requirement is that the causal relationship is pragmatically plausible, as in (92)-(93) (Goldberg and Jackendoff 2004:547).

(92) They drank the pub *(dry).
(93) The professor talked us *(into a stupor). (Goldberg & Jackendoff 2004:536)

Since property-denoting PPs can be small clauses, the complementary status is not surprising to us. This analysis concerns Wechsler’s (1997) ECM resultatives.

An argument against a path interpretation in these unselected resultatives is that they cannot be clefted ((94) - (96)).

(94) *It was off my hands that Miss Kitty Perkins talked seven warts…
*It was past that she winked us…
*It was awake that the dog barked him…

Furthermore, verbs combining with unselected resultatives do not nominalize (Carrier and Randall 1992), patterning with consider-type verbs rather than transitive resultatives:

*The drinking of oneself sick is commonplace in one's freshman year.

We leave further investigation of unselected resultatives for future research.

8. Bibliography

Bresnan, Joan. 1972. Theory of complementation in English syntax, Doctoral dissertation, MIT.


