

## Result XPs and the argument-adjunct distinction

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Result XPs in phrases such as *hammer the metal flat* are typically treated as arguments of the verb. For example, based on how it combines with intransitive verbs, Rappaport Hovav and Levin (2001) argue that the result phrase is an argument of the verb; and, based on evidence from long-distance extraction, Carrier and Randall (1992) argue that result phrases are arguments. However, Ernst (2002: 498) points out that the argument-status of result XPs is far from clear. Furthermore, Iwata (2006) and Mateu (2011) argue that the results in some classes of resultatives are arguments, whereas others are adjuncts. This paper examines the argument-status of result phrases in depth, based on a number of tests previously proposed in the literature. We find that resultatives pattern with arguments according to most traditional argument-adjunct tests, except in two cases: (1) speakers do not classify resultatives as core arguments of the relevant verbs (e.g., *hammer*); and (2) resultative XPs are optional. We argue that this follows from Simpson's (1983) classical Lexical Functional Grammar (LFG) treatment of resultatives. We further argue that the parallel architecture of LFG can help explain why the argument-adjunct diagnostics sometimes yield seemingly conflicting results.

We adopt the classification of resultatives outlined in Goldberg and Jackendoff 2004. They divide resultatives into four classes: causative property (1), noncausative property (2), causative path (3) and noncausative path resultatives (4). In causative resultatives ((1) and (3)) the subject of the verb, *Kelly*, is an active agent that causes the result state. However, in noncausative resultatives ((2) and (4)) the subject is not an agent causer. In property resultatives, the result phrase denotes a state (eg., *flat* in (1) or *solid* in (2)). In path resultatives, the result phrase denotes a source, path or goal (eg., *down the hill* in (3 – 4)).

We examine each class of resultative in turn based on twelve argumenthood diagnostics from the literature: optionality, verb specificity, extraction out of the XP, long-distance extraction of the XP, core participant status, prepositional content, fixed preposition status, iterativity, VP anaphora, word order, VP preposing, pseudoclefting, and wh-word conjunction. These tests are adapted from Baker (1978), Bresnan (1982), Carnie (2002), Hedberg and DeArmond (2009), Huang (1982), Koenig et al. (2003), Kroeger (2004), Lakoff and Ross (1966), Needham and Toivonen (2011), Pollard and Sag (1987), Wechsler (1995) Zaenen and Crouch (2009), and others. Some of these tests have previously been applied to resultatives (e.g., Halliday 1967, Simpson 1983).

We conclude that the result phrase patterns overwhelmingly with arguments, as shown in Table 1. However, the two most commonly applied diagnostics (core argument and optionality) classify the result as an adjunct. We argue that these mixed results can be explained if we assume that the result phrase is not part of the verb's basic argument frame. Instead, we follow Simpson (1983, Chapter 5) in analyzing the result XP as an xCOMP argument added by a lexical rule. In other words, we argue that the core argument and optionality tests differentiate between basic or initial arguments and other phrases. Many other tests, however, differentiate between core argument functions (at functional structure) and non-argument functions.

We also find that path resultatives pattern with adjuncts according to the two tests that concern the choice of preposition (fixed preposition and prepositional content). We relate this observation to the generalization that arguments that refer to locations typically pattern like adjuncts with respect to these two tests.

- (1) Kelly hammered the metal flat.
- (2) The river froze solid.
- (3) Kelly rolled the ball down the hill.
- (4) The ball rolled down the hill.

**Table 1:** A summary of the results of 12 Argumenthood tests

	Causative Property	Non-Causative Property	Non-Causative Path	Causative Path
Core Participant	<i>adjunct</i>	<i>adjunct</i>	<i>adjunct</i>	<i>adjunct</i>
Optionality	<i>adjunct</i>	<i>adjunct</i>	<i>adjunct</i>	<i>adjunct</i>
Verb Specificity	Argument	Argument	Argument	Argument
Extraction out of XP	Argument	Argument	Argument	Argument
Long Distance Extraction	Argument	Argument	Argument	Argument
Fixed preposition	Argument	Argument	<i>adjunct</i>	<i>adjunct</i>
Prepositional Content	Argument	Argument	<i>adjunct</i>	<i>adjunct</i>
Iterativity	Argument	Argument	Argument	Argument
VP anaphora	Argument	Argument	Argument	Argument
VP preposing	Argument	Argument	Argument	Argument
Pseudoclefting	Argument	Argument	Argument	Argument
Wh-word conjunction	Argument	Argument	Argument	Argument

## References

- Baker, C. L.** 1978. *Introduction to Generative Transformational Syntax*. **Bresnan, J.** 1982. Control & complementation. *L.I.* 13(3), 343–434 **Carnie, A.** 2002. *Syntax*. **Carrier, J. and Randall, J.** 1992. The Argument Structure & Syntactic Structure of Resultatives. *L.I.* 23(2), 173–234. **Ernst, T.** 2002. *The syntax of adjuncts*. **Goldberg, A. and Jackendoff, R.** 2004. The English Resultative as a Family of Constructions. *Language* 80, 532–568. **Halliday, MAK.** 1967. Notes on transitivity and theme in English. *JL*. **Hedberg, N. & DeArmond, R.** 2009. On complements & adjuncts. *Snippets* 19, 11–12. **Huang, C.T.J.** 1982. *Logical relations in Chinese & the theory of grammar*. PhD thesis, MIT **Iwata, S.** 2006. Argument resultatives & adjunct resultatives in a lexical constructional account. *Language Sciences* 28, 449–496. **Koenig, J.P., Mauner, G. & Bienvenue, B.** 2003. Arguments for adjuncts. *Cognition* 89, 67–103. **Kroeger, P.** 2004. *Analyzing Syntax*. **Lakoff, G. & Ross, J.** 1966. Criterion for Verb Phrase Constituency. Tech Report NSF-17, Harvard. **Mateu, J.** 2011. Conflation & incorporation processes in resultative constructions. In Demonte, D.V. & McNally, L. (eds.), *Telicity, Change, & State*, 252–278. **Needham, S., & Toivonen, I.** 2011. Derived Arguments. In Butt, M & Holloway King, T. (eds), *LFG '11 Proceedings*, 401–421. **Pollard, C. & Sag, I.** 1987. *Information-based syntax & semantics*. **Rappaport Hovav, M. & Levin, B.** 2001. An Event Structure Account of English Resultatives. *Language* 77(4), 766–797. **Simpson, J.** 1983. Resultatives. In Levin, L., Rappaport, M. & Zaenen, A. (eds). *Papers in Lexical-Functional Grammar* 143–58. IU Ling Club. **Wechsler, S.** 1995. *The Semantic Basis of Argument Structure*. **Zaenen, A. & Crouch, D.** 2009. OBLs hobble computations. In Butt, M. & Holloway King T. (eds), *LFG '09 Proceedings*, 644–654.