

Rescuing Manner/Result Complementary from Certain Death*

E. Matthew Husband
University of South Carolina

1 Introduction

Constraints on the meanings of words, if any at all, are of central interest to the field of lexical semantics. They define the space of possible word meanings, determine the meaning a word contributes to an expression, and constrain the path of language acquisition. One way constraints have been motivated is by observing systematic gaps in the distribution of meaning components. Over a series of papers in the last twenty years, Levin & Rappaport Hovav have motivated such a constraint from the complementary distribution of two components of verbal meaning: manner and result.

Cross-linguistically, eventive verbs can be divided into two broad classes: those which express a manner and those which express a result. The following examples from each class are given in Rappaport Hovav & Levin (2010:21) and can be characterized as follows: manner verbs specify the manner of carrying out an action; result verbs specify the resulting state of carrying out an action.

- (1) a. MANNER VERBS: nibble, rub, sweep, flutter, laugh, run, swim, ...
b. RESULT VERBS: clean, empty, fill, freeze, kill, melt, arrive, die, ...

Levin & Rappaport Hovav (1991, 1995, 2006) have argued that manner and result verbs are found in complementary distribution. Given the uniformity of this complementary distribution, they proposed a constrain on verbal root meaning, manner/result complementary, which is given in (2).

- (2) *Manner/Result Complementary*: Manner and result meaning components are in complementary distribution: a verb lexicalizes only one. (Levin & Rappaport Hovav 2010)

The core of this hypothesized constraint is the *lexicalized* components of meaning. These are components that are lexical entailments (Dowty 1991) which “must be entailed in all uses of (a single sense of) a verb, regardless of context” (Rappaport Hovav & Levin 2010:23).

Distributional arguments for manner/result complementary ultimately rest on negative evidence; it is the lack of verbs expressing both manner and result mean-

*I would like to thank Terje Lohndal, the Michigan State Semantics Group, and the audience of the 47th Chicago Linguistics Society for useful discussion and comments which have helped develop the analysis presented here. This paper is also in debt to Polly Jacobson and her lexical semantics class which first got me thinking about the presuppositions carried by “every day” lexical items.

ings which supports the hypothesis.¹ Thus, one way to falsify manner/result complementary is to find verbs which express both a manner and a result component in the same sentence context and argue that these two components are lexicalized by the verbal root. A recent claim for the existence of such a class of verbs comes from Koontz-Garboden & Beavers (2011).² They observe that *manner of death* verbs, given in (3), have both a manner and result component to their meaning, as was previously noted in Dowty (1979:203–204),³ and argue that the existence of these verbs is evidence that manner/result complementary “does not ultimately yield a truth conditional fact about possible verb meanings” (4).

- (3) MANNER OF DEATH VERBS: asphyxiate, behead, crucify, hang, decapitate, disembowel, drown, electrocute, eviscerate, gas, guillotine, gut, hari kari (seppuku), immolate, impale, poison, quarter, smother, strangle, . . .

Evidence that *manner of death* verbs do express a manner and result meaning pose a problem with the manner/result complementary hypothesis as it is currently understood; however, one point of debate concerns the status of these manner and result meanings. Indeed, while the manner/result complementary hypothesis can be taken to be a constraint over meanings as such, another way to understand the constraint is as a constraint on a particular level of meaning. One major distinction between levels of meaning is whether a meaning is asserted or presupposed. We might suspect that manner/result complementary operates differently on these levels instead of being a constraint on these levels simultaneously.

This paper continues in the following way. Section 2 reviews Koontz-Garboden & Beavers’s (2011) proposal that *manner of death* verbs are counterexamples to manner/result complementary. Section 3 explores the aspectual properties of *manner of death* verbs and argue that there are two classes: Class I verbs which form achievement predicates and Class II verbs which form activity/accomplishment predicates. I argue that only Class I verbs are potential counterexamples to manner/result complementary as presented in (2). In Section 4, I observe that the manner and result components of *manner of death* verbs operate at different levels of meaning. In brief, I argue that the manner component is asserted while the result

¹ Of course, other evidence could be brought to bare on the hypothesis. Artificial word learning paradigms, for instance, could seek to “fill the gap” by providing positive evidence of verbs with a manner and result component to see if subjects can learn the meaning of these words.

² Other potential counterexamples to manner/result complementary have been noted in Férez (2007), Goldberg (2010), and Zlatev & Yangklang (2004). See Levin & Rappaport Hovav (2010) for arguments against each of these cases.

³ *Manner of death* verbs form a subclass of verbs of killing (Levin 1993:230–232). Some debate, driven in part by speaker variation, can be made for which particular verbs are to be included in this class. For instance, some speakers accept *assassinate* as expressing both a manner (assassination) and a result (death), placing *assassinate* in with other *manner of death* verbs. Other potential cases are given in (ia). Also, the verbs in (ib) are similar to *manner of death* verbs, though they assert some magnitude of death meaning instead of a manner of meaning.

- (i) a. assassinate, dispatch, murder, sacrifice, slay, . . .
 b. annihilate, decimate, eradicate, exterminate, extirpate, massacre, obliterate, slaughter, . . .

As a precise and exhaustive list of potential *manner of death* verbs is not directly at issue here, I will set aside the treatment of these cases for future research.

component is presupposed. Section 5 applies these observations to a restatement of manner/result complementary. Finally, Section 6 summarizes the paper and offers some conclusions.

2 Manner of Death Verbs

Koontz-Garboden & Beavers (2011) observe that *manner of death* verbs seem to have both a manner and a result component to their lexical meaning. Intuitively, they express a particular manner of action happened to an individual and that the action resulted in the death of that individual. For example, (4) expresses that drowning/hanging/electrocution/crucifixion happened to Sandy and that Sandy died.

(4) Shane drowned/hanged/electrocuted/crucified Sandy.

While the meaning of a *manner of death* verbs's manner component is fairly clear,⁴ the meaning of its result component is more debatable. Certain contexts like those in (5) allow the result of death itself to be delayed or to not obtain at all.

- (5) a. The chicken was beheaded but continued to run around the yard.
b. The starfish was quartered and grew into four little starfish.
c. Jason decapitated the hydra but it continued to fight.
d. The asbestos monster immolated itself but it did not die.

Koontz-Garboden & Beavers (2011:9) argue correctly that the exact meaning of a *manner of death* verb's result component is not important, only that it has some result component because some result does obtain. For instance, they note that the verb *guillotine* may not always entail death, but "does entail loss of the head, and therefore a result", and that *crucify* has at least a change of location result, since "one has to be hung upright in a particular configuration in order to be crucified". Indeed, this type of argument can be made for *behead* and *decapitate* in (5); both result in the loss of a head. And perhaps a case can be made that the result of

⁴ Determining the primitive components of meaning is a particularly difficult issue which I side step throughout this paper. Certainly manner meanings and result meanings have intuitive differences. But knowing what a particular manner meaning or result meaning is is not always, or even often, clear. Considering the manner verbs *saunter* and *walk*. Since sauntering seems like a more elaborate type of walking and both seem to require moving, we could ask whether the manner meaning of *saunter* contains *walk* or even *move* as part of its meaning. Interestingly, with respect to questions in (i) and negation in (ii) *saunter* and *walk* share the same status as assertions, whereas *move* behaves like a presupposition. This suggests that the manner components of *saunter* and *walk* are on the same level of meaning and compete with each other even though one seems to intuitively contain the other, while *move*, which is intuitively required for both, indeed is some kind of presuppositional component for both *saunter* and *walk*.

- (i) Did Sally saunter/walk down the street?
a. No, Sally walked/sauntered down the street.
b. #No, Sally moved down the street.
(ii) Sally didn't saunter/walk down the street.
a. She walked/sauntered down the street.
b. #She moved down the street.

quarter in (5) is the creation of four pieces. Less clear is *immolate* in (5) where immolation may be argued to cause no necessary change to an asbestos monster. Indeed, these arguments seem to be heavily reliant on particular world knowledge, something we may not want our analysis to capture.

We must, of course, also be careful with these arguments as they may threaten any coherent grammatical notion of lexically entailed result. As we push the result meaning further and further from something intuitively verb specific, all kinds of unintended result meanings can be inferred. Consider some of the ‘hard-core’ manner verbs which, when pushed, certainly obtain some kind of result. *Nibble* in (6a) entails some resulting consumption or ‘biting off’, *wipe* in (6b) entails some resulting friction, and even *run* in (6c), which is a paragon example of a pure manner meaning, requires calories to be burned. To my mind, these results all meet the definition of result as a scalar change given in Rappaport Hovav & Levin (2010) and thus present potential problems for a clear delineation of manner and result meanings. Indeed, determining whether there is a result component and what that component actually is is a non-trivial (and at present, unclear) process.

- (6) a. The squirrel nibbled at the apple #but the apple remained whole.
b. Mary wiped the table #but no friction resulted.
c. John ran in place #but he burned no calories.

Returning to Koontz-Garboden & Beavers’s (2011) account, they adopt the tests for manner and result components laid out in Rappaport Hovav & Levin (2010), arguing that *manner of death* verbs display positive behaviors for both manner and result and thus have both manner and result components in their meanings. For the manner component, *manner of death* verbs show selectional restrictions on the types of subjects they permit, cannot have their action denied, and have a complex manner. For the result component, *manner of death* verbs cannot have their result denied, do not allow object deletion, and are restricted in the types of resultatives they permit.

Given these characteristics, *manner of death* verbs do appear to be counterexamples to manner/result complementary. However, in the following section, I explore the aspectual properties of *manner of death* verbs and observe two different types of behavior, suggesting that *manner of death* verbs form not one but two classes and that only one class expresses both manner and result components consistently with different aspectual constructions.

3 Aspectual Classes within *Manner of Death* Verbs

The aspectual properties of *manner of death* verbs are particularly important when accounting for their result component. I argue here that *manner of death* verbs constitute two classes which have different aspectual properties: Class I *manner of death* verbs which form achievement predicates and Class II *manner of death* verbs which form activity/accomplishment predicates. Evidence for these two classes comes from their different behaviors with *for x time* modifiers and *to death* resulta-

tives.⁵ The verb *kill* is used for comparison in the following examples since it has a result component (as a result verb) with a meaning similar to the result component shared by *manner of death* verbs.

3.1 Interruptivity

Telic predicates admit an iterative event interpretation of *for x time* modifiers in which the event described is repeated over and over for the specified duration. These modifiers also may admit an interruptive event interpretation with accomplishment predicates in which the process component of the accomplishment was initiated, but not completed within the specified duration (Husband 2010; Piñón 2008; Smollett 2005).⁶ Interruptive event interpretation only requires a single event to have taken place, while iterative event interpretation requires multiple events to have happened.

To begin with, the verb *kill* can only be interpreted iteratively and does not permit an interruptive interpretation. The only available interpretation of (7) (which is available only because of the indefinite interpretation of *two civilians*) is one in which multiple killings of two civilians occur over the course of two hours.

(7) North Korea killed two civilians #for an hour.

⁵ Speakers may vary in their judgments concerning the aspectual properties of particular *manner of death* verbs. For instance, *hang* behaves like a Class I verb for some speakers and a Class II verb for others with respect to interruptivity and *to death* resultatives.

(i) Saddam Hussein was hung %for a minute/%to death.

⁶ Accomplishment predicates carry a process component which can be isolated with the progressive. Classically, achievement predicates block the progressive, as in (ia), but some have well formed progressives, though these are distinguishable from accomplishment progressives. As shown in (ib), progressive achievements have a paraphrase with *about to* which denotes a detached process that is not found for progressive accomplishments, given in (ic) (Rothstein 2004).

- (i) a. ??John is finding a penny on the ground.
 b. The train is arriving. → The train is about to arrive.
 c. The boy is painting a picture. ↗ The boy is about to paint a picture.

Class I verbs follow this same pattern that, when well formed, have a detached process as in (ii); however, there are some ill-behaved Class I verbs which lack this paraphrase given in (iii), suggesting that their process component is not detached and that they may be somehow better characterized as accomplishment forming verbs. I leave a full account of these ill-behaved Class I verbs here for future research.

- (ii) a. ??Herennius is decapitating Cicero.
 b. ?Terrorists were beheading Daniel Pearl. → Terrorists were about to behead Daniel Pearl.
 c. King Louis XVI was being guillotined. → King Louis XVI was about to be guillotined.
- (iii) a. Dafydd ap Gruffydd was being quartered. ↗ Dafydd ap Gruffydd was about to be quartered.
 b. Thích Quảng Đức is immolating himself. ↗ Thích Quảng Đức is about to immolate himself.

Similar to (7), Class I *manner of death* verbs block an interruptive interpretation. The only available interpretation of (8b) is one in which multiple events of beheading Cicero occur, an interpretation difficult to reconcile with our world knowledge of decapitations and the definiteness of *Cicero*.

- (8)
- | | | |
|----|-----------------------------------|--------------------|
| a. | King Louis XVI was guillotined | #for 30 seconds. |
| b. | Cicero was decapitated | #for 10 minutes. |
| c. | Dafydd ap Gruffydd was quartered | #for several days. |
| d. | Thích Quảng Đức immolated himself | #for an hour. |
| e. | Terrorists beheaded Daniel Pearl | #for 3 minutes. |

Unlike (7) and (8), Class II *manner of death* verbs allow an interruptive interpretation.⁷ A person can be electrocuted or strangled for short durations as a single event which, interestingly, does not result in death. With an interruptive interpretation, the result component is absent for Class II *manner of death* verbs, suggesting they do not lexicalize a result component.⁸

- (9)
- | | | |
|----|---|--------------------|
| a. | The state of Florida electrocuted Ted Bundy | for 30 seconds. |
| b. | Joe Delaney drowned | for 5 minutes. |
| c. | Richard Montague was strangled | for a minute. |
| d. | Michael Hutchence asphyxiated himself | for half a minute. |
| e. | Napoleon was poisoned | for years. |

⁷ Since interruptive interpretations are only found with telic predicates, the quantization of the internal argument must be kept in consideration. This is especially necessary for those verbs such as those found in Class II in (i) which form activity or accomplishment predicates depending on whether their internal argument is homogeneous or quantized, respectively. Verbs which form achievement predicates such as those found in Class I in (ii) carry telic interpretations regardless of their internal argument's quantization (Borer 2005; Krifka 1992; Mittwoch 1991; Verkuyl 1972).

- | | | | |
|------|----|---|--------------------|
| (i) | a. | The state of Florida electrocuted murderers | *in 3 days. |
| | b. | Rescuers drowned | *in 5 minutes. |
| | c. | Linguists were strangled | *in a minute. |
| | d. | Singers asphyxiated themselves | *in half a minute. |
| | e. | Generals were poisoned | *in several years. |
| (ii) | a. | Royals were guillotined | in 30 minutes. |
| | b. | Politicians were decapitated | in 10 minutes. |
| | c. | Traitors were quartered | in several days. |
| | d. | Monks immolated themselves | in an hour. |
| | e. | Terrorists beheaded reporters | in 3 minutes. |

⁸ Since alive/dead (or having/not having a head) is a two-point scale of change, the result found with Class II verbs is strongly tied to the telicity of the event. Of course, verbs whose result component is a multiple point scale do not carry such strong ties to telicity. The result verb *cool* for instance entails that some amount of cooling results from the process of cooling being applied, even if it does not reach a contextual standard considered 'cool' or 'cold'.

3.2 Resultatives

Verbs which result in death also show different patterns of acceptability with *to death* resultatives.⁹ Koontz-Garboden & Beavers (2011) propose that the resultative *to death* with *manner of death* verbs is acceptable as redundantly expressing the resulting state of death. However, beginning again with the verb *kill*, *to death* resultatives are unacceptable.

(10) North Korea killed two civilians #to death.

Similarly, Class I *manner of death* verbs are also unacceptable with the resultative *to death* as seen in (11), while Class II *manner of death* verbs allow the resultative *to death* as seen in (12).

- (11) a. King Louis XVI was guillotined #to death.
b. Cicero was decapitated #to death.
c. Dafydd ap Gruffydd was quartered #to death.
d. Thích Quảng Đức immolated himself #to death.
e. Terrorists beheaded Daniel Pearl #to death.
- (12) a. The state of Florida electrocuted Ted Bundy to death.
b. Joe Delaney drowned to death.
c. Richard Montague was strangled to death.
d. Michael Hutchence asphyxiated himself to death.
e. Napoleon was poisoned to death.

This ban on *to death* resultatives may be a particular case of a more general restriction on resultatives noted by Tenny (1987): Only one result is possible per (complex) event. By hypothesis, as a result verb *kill* lexicalizes a result, and thus resultative phrases are blocked. Following this line of reasoning, Class I *manner of death* verbs must also lexicalize a result which blocks resultative phrases, while Class II *manner of death* verbs do not lexicalize a result which permits resultative phrases.

To summarize this, *manner of death* verbs form two aspectually distinct classes. Class I *manner of death* verbs are achievement forming verbs. Class II *manner of death* verbs are activity/accomplishment forming verbs. Since the result component of Class II verbs is not constant across all contexts, Class II verbs are not counterexamples to manner/result complementary. That said, Class I verbs still appear to be counterexamples to manner/result complementary as stated in (2).¹⁰ In the next section, however, I will observe a key distinction between the manner and result components of *manner of death* verbs.

⁹ The distribution of *to death* resultatives was noted in passing in Levin (1993) as part of the distinction between her *murder* and *poison* verb classes.

¹⁰ Depending on one's theory of achievement predicates, even Class I verbs may not count as true counterexamples to manner/result complementary. A syntax approach to event structure such as that found in Borer (2005), for instance, analyzes achievement predicates as two separate syntactic heads, the verbal root and an aspectual phrase present in telic predicates, which form a kind of idiom. Given this analysis, the result meaning is not a part of the verbal root itself, but occurs as part of the aspectual phrase, similar to a compositional analysis of Class II verbs and activity/accomplishment forming verbs more generally, but lacking the idiomaticity of achievements. For the purposes of this paper, however, I set this possibility aside to focus more directly on the issues raised in Section 4.

4 Assertions and Presuppositions of Manner of Death Verbs

Class I *manner of death* verbs appear to have a lexical entailment for both a manner and a result, regardless of event structure. Here, I attempt to demonstrate that although Class I *manner of death* verbs carry both a manner and a result component, the kind of meaning each of these two components expresses is different. The manner component is an assertion, the result component is a presupposition. Importantly, both assertions and presuppositions can be lexical entailments (Dowty 1991), and as such, Class I *manner of death* verbs are counterexamples for the original specification of manner/result complementary given in (2).

The classic tests for asserted versus presupposed meanings are their behavior with questions and negation: assertions can be questioned and negated; presuppositions cannot (Levinson 1983). Consider the case of a sentence with the aspectual verb *stop* given in (13) which bares two meanings given in (13a) and (13b).

- (13) John stopped beating his wife
a. John had been beating his wife.
b. John does not beat his wife now.

When a polarity question is asked of (13) as in (14), the question being asked is not about whether any beatings ever took place, but about whether the beatings have stopped. In fact, a response to the question that attempt to deny that any beatings ever occurred seems like an unacceptable continuation of the discourse. Similarly, when negating *beat his wife* as in (15), the negation cannot target the beatings, but only the stopping of the beatings. A continuation of the discourse which attempts to argue that no beatings ever took place is unacceptable.

- (14) Did John stop beating his wife?
a. #No, John hasn't ever beaten his wife!
b. No, John still beats his wife.
(15) John didn't stop beating his wife
a. #He hasn't ever beaten his wife ever!
b. He still beats his wife.

The following two sections demonstrate that the manner and result components of Class I verbs behave differently under questions and negation. This establishes that the manner and result components of *manner of death* verbs are different kinds of meaning.

4.1 The Manner Component is Asserted

The manner component of *manner of death* verbs does not project out of questions, as seen in the discourses given in (16). When speaker A asks a polarity question, speaker A is asking about the manner in which the individual died. This can be seen in that the responses by speaker B which affirm the manner or deny it and propose a different manner are acceptable continuations for discourse.

- (16) a. A: Was King Louis XVI guillotined?
 B: Yes, he was killed by a guillotine.
 b. A: Was Cicero decapitated?
 B: No, he was stabbed.
 c. A: Was Dafydd ap Gruffydd quartered?
 B: Yes, he was cut up into four pieces.
 d. A: Did Thích Quảng Đức immolate himself?
 B: Yes, he set himself on fire.
 e. A: Did terrorists behead Daniel Pearl?
 B: No, he was shot in the back of the head.

The manner component of *manner of death* verbs also does not project out of negation, as seen in the discourses given in (17). When a speaker negates these sentences, he can be negating the particular manner being asserted by the verb. Proposing a different manner in light of this negation is, thus, acceptable when continuing a discourse.

- (17) a. King Louis XVI wasn't guillotined. He was strangled to death!
 b. Cicero wasn't decapitated. He was stabbed!
 c. Dafydd ap Gruffydd wasn't quartered. He was drawn and hung.
 d. Thích Quảng Đức didn't immolated himself. He died in his sleep.
 e. Terrorists didn't beheaded Daniel Pearl. He was killed by firing squad.

4.2 The Result Component is Presupposed

The result component of *manner of death* verbs projects out of questions, as seen in the discourses given in (18). By asks a polarity question, speaker A is not questioning whether the individual died. This can be seen in that the responses by speaker B which affirm or deny the individual's death are unacceptable continuations for discourse.

- (18) a. A: Was King Louis XVI guillotined?
 B: #No, he didn't die.
 b. A: Was Cicero decapitated?
 B: #No, he didn't die.
 c. A: Was Dafydd ap Gruffydd quartered?
 B: #Yes, he was killed.
 d. A: Did Thích Quảng Đức immolate himself?
 B: #No, he didn't die.
 e. A: Did terrorists behead Daniel Pearl?
 B: #Yes, he died.

The result component of *manner of death* verbs also projects out of negation, as seen in the discourses given in (19). When a speaker negates these sentences, he cannot be directly negating the individual's death. Thus, expressing that the individual continued to live immediately after negated the Class I *manner of death* verb sentence is unacceptable when continuing a discourse.

- (19) a. King Louis XVI wasn't guillotined. #He remained King of France for years.
 b. Cicero wasn't decapitated. #He lead the revolution against Caesar.
 c. Dafydd ap Gruffydd wasn't quartered. #He escaped to France.
 d. Thích Quảng Đức didn't immolate himself. #He's alive in Vietnam.
 e. Terrorists didn't behead Daniel Pearl. #He's an active journalist in the Middle East.

5 What for Manner/Result Complementary?

Class I *manner of death* verbs lexicalize both a manner and a result component; however, these components have different behaviors: the manner component is asserted, and the result component is presupposed. Considering the implications of this observation more broadly, verbs seem to always assert only one component of their meaning, with other meanings forming some kind of presupposition. For instance, *acquiesce* has at least three components to its meaning, given in (20), but only one appears to be asserted as observed with questions in (21) and negation in (22). Questioning or negating an *acquiesce* sentence can only question or negate the acceptance part of the meaning. The reluctance and lack-of-protest meanings cannot be directly questioned or negated.

- (20) Bill acquiesced to our demands.
 a. Bill accepted our demands.
 b. Bill was reluctant to accept our demands.
 c. Bill did not protest our demands.
 (21) Did Bill acquiesce to our demands?
 a. No, Bill did not accept our demands.
 b. #No, it was easy for Bill to accept our demands.
 c. #No, Bill protested our demands.
 (22) Bill did not acquiesced to our demands.
 a. He did not accept a single one.
 b. #He found it easy to accept our demands.
 c. #He protested our demands.

It appears that verbal roots only get to assert one component of their meaning. If they lexicalize other components, those components must be presupposed. In light of these observations, a revision to the initial hypothesis for manner/result complementary is proposed in (23) which provides sensitivity to the different levels of meaning.

- (23) *Manner/Result Complementary (revised)*: Manner and result meaning components are in complementary distribution with respect to an asserted level of meaning: A verb can assert only one.

This revised version of manner/result complementary generates several consequences which I would like to briefly explore. First, given (23) we would expect to find classes of verbs which assert their result and presuppose their manner, though

at present no cases are known to me.¹¹ While this possibly suggests a further refinement of manner/result complementary, another potential explanation coming from event structure differences between manners and results should be explored involving the interplay of manner/result complementary and event structure. These cases may be unattested because of the way event structure interacts with the process of lexicalization which prevents certain meaning combinations from easily arising. While not currently worked out in detail, consider the following sketch of a theory of this interaction. The event structure characteristics of manner and result are thought to be different; manner is a modifier of event structure whereas result is an argument (Rappaport Hovav & Levin 1998). Modifiers and arguments have a different status in the grammar. Modifiers are always optional elements. They are not inferred when omitted and are typically not covert. Arguments, however, can in certain cases be inferred when omitted and may be covert. Thus when a modifier is present, it may take on a more central role in meaning since its presence is always optional and, thus, unpredictable.¹² It may be, then, that manner as a modifier must be asserted if present, while result as an argument can be presupposed.

Another potential issue concerns the limits, if any, on the number of presuppo-

¹¹ The other two verb classes which Koontz-Garboden & Beavers (2011) cite as expressing both a manner and a result are *throw* verbs and *cooking* verbs. Briefly, *throw* verbs, while expressing a manner, do not appear to entail a change-of-location result when the location is broad enough to actually include throwing events given our world knowledge. For instance in (i), the ball's location begins and ends with the football team, and Koontz-Garboden & Beavers's (2011) contradiction diagnostic fails to reveal a contradiction.

- (i) The football team threw/tossed/flipped the ball to each other (and it is not somewhere else).

Cooking verbs fair much better, having both a manner component expressing the way something is cooked and a result component expressing that something was cooked. However, here, like *manner of death* verbs, the manner component is asserted, as seen in (iia) and (iiaa), and the result component is presupposed, as seen in (iib) and (iibb).

- (ii) Did Shane poach the egg?
 a. No, Shane boiled it.
 b. #No, Shane didn't cook the egg.
- (iii) Shane didn't poach the egg.
 a. He fried the egg.
 b. #He didn't cook it.

Thus neither of these two cases gives us a verb asserting a result and presupposing a manner.

¹² Consider briefly the case of adjectival modification and depictive secondary predicates, which are two types of optional modifiers. Without either of these modifiers, questions and negation can target the meaning of the main predicate as in (i).

- (i) Sue cut his hair.
 a. A: Did Sue cut his hair? B: Yes, Sue cut his hair.
 b. A: Sue didn't cut his hair. B: Actually, Sue did cut his hair.

When present, adjectival modifiers and depictive secondary predicates add a second meaning to the sentence in addition to the main predicate. When we probe this second meaning with questions and negation as in (iib, ivb) and (iiib, v) respectively, we find them to be asserted. The main predicate meaning may also continue to be asserted as it is given adjectival modification as seen with questions and negation in (iia) and (iiaa), though it may also be forced out of the assertion as it is given depictive secondary predicates as seen with questions and negation in (iva) and (va).

sitions a word can lexicalized. Looking beyond verbs for the moment, the much discussed noun *bachelor* is known to have many components to its meaning, but when probed we find that it only asserts one: the unmarried meaning component. As seen with questions in (24) and negation in (25), all other components (human, male, of-marrying-age, not-divorced, and possibility-of-marriage) are found to be presupposed (P. Jacobson, p.c.).

- (24) Is Jessie a bachelor?
- No, he's married to Clare.
 - #No, he's a humpback whale!
 - #No, Jessie's a girl!
 - #No, he's a five year old!
 - #No, he's a divorcée!
 - #No, he's the catholic priest!
- (25) Jessie's not a bachelor
- He's married to Clare.
 - #He's a humpback whale!
 - #Jessie's a girl!
 - #He's a five year old!
 - #He's a divorcée!
 - #He's the catholic priest!

Given *bachelor* and the like, it seems that the number of presuppositions a root can encode may be potentially large. Indeed, even if the upper bound were discovered to be five as found with *bachelor*, it would seem that this limit would to be more of an issue for research on memory than a constraint coming from within the grammar, though we cannot decide this division of labor *a priori* and further research will surely be necessary.

Finally, there is a wider question as to why languages seem to have few verb classes which lexicalize both a manner and a result component. One possibility, again drawing on some kind of economy of memory, is that languages may prefer to minimize the number of meaning components within a single root if allowed by the morphology of the language. We may see evidence of this in Dutch where some Class I *manner of death* verbs require a resultative prefix that has a clear compositional relationship with its stem, as given in (26).¹³ Greek, which has resultative

- | | |
|---|---|
| <p>(ii) A: Did Sue cut his wet hair?</p> <ol style="list-style-type: none"> B: No, Sue didn't cut his hair. B: No, his hair was dry. <p>(iii) A: Sue didn't cut his wet hair.</p> <ol style="list-style-type: none"> B: Actually, Sue did cut his hair. B: His hair wasn't even damp. | <p>(iv) A: Did Sue cut his hair wet?</p> <ol style="list-style-type: none"> B: #No, Sue didn't cut his hair. B: No, his hair was dry. <p>(v) A: Sue didn't cut his hair wet.</p> <ol style="list-style-type: none"> B: #Actually, Sue did cut his hair. B: His hair wasn't even damp. |
|---|---|

Modifiers seem to always be “at issue” meanings and are favored when competing with other meanings. This, again, may follow from their optionality – a question for future research.

¹³ The verb *wurgen* ‘strangle’, however, does not require this prefix, and additionally, the verb pair *ophangen* ‘hang’/ *hangen* ‘hang’ seem to both be used in cases of hanging (though they may differ in the case of hanging a portrait versus hanging a man). Many thanks to an anonymous reviewer for these observations.

prefixes on certain verbs, may also have a similar morphological characteristic for *manner of death* verbs (A. Giannakidou p.c.).

(26)	<i>verdrinken</i>	‘drown’	<i>drinken</i>	‘drink’
	<i>verstikken</i>	‘asphyxiate’	<i>stikken</i>	‘choke’
	<i>onthoofden</i>	‘decapitate/behead’	<i>hoofden</i>	‘head’

Since these morphologically rich languages typically encode results through a verbal affix, a verbal root expressing both a manner and a result without using a resultative morpheme may be dispreferred. English, on the other hand, as a more morphologically poor language, may provide more opportunities for lexicalizing several components of meaning into a verbal root.

6 Conclusions

Constraints on possible word meanings are an important issue for lexical semantics. Arguments for such constraints are, however, fraught with difficulty as they empirically rest on negative evidence and potential counterexamples may exist just over the next horizon. However, these counterexamples are useful in that they point towards avenues for refining our hypotheses. In the particular case explored here, *manner of death* verbs push the manner/result complementary hypothesis in an interesting direction. I argued that while a certain aspectual class of *manner of death* verbs lexicalize both a manner and a result component, these components are distinguished at different levels of meaning. The manner component is asserted while the result component is presupposed. This led to a reformulation of manner/result complementary which constrains a verbal root to only assert one of its meaning components. Ultimately, consideration of the insights of formal semantics here has improved our understanding of the scope of the constraints on word meanings and enabled further pursuit of a proper formulation of these constraints.

References

- Borer, Hagit. 2005. *The Normal Course of Events*. Oxford: Oxford University Press.
- Dowty, David. 1979. *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTQ*. Springer.
- . 1991. Thematic proto-roles and argument selection. *Language* 67.547–619.
- Férez, Paula C. 2007. Human locomotion verbs in English and Spanish. *International journal of English studies* 7.117–136.
- Goldberg, Adele E. 2010. Verbs, constructions and semantic frames. In *Syntax, Lexical Semantics, and Event Structure*, 21–38. Oxford University Press.
- Husband, E. Matthew, 2010. *On the compositional nature of stativity*. Michigan State University dissertation.
- Koontz-Garboden, Andrew, & John Beavers, 2011. Manner and result in the roots of verbal meaning.

- Krifka, Manfred. 1992. Thematic relations as links between nominal reference and temporal constitution. In *Lexical Matters*, ed. by I.A. Sag & A. Szabolcsi, 29–53. Cambridge University Press.
- Levin, Beth. 1993. *English Verb Classes and Alternations*. The University of Chicago Press.
- , & Malka Rappaport Hovav. 1991. Wiping the slate clean: A lexical semantic exploration. *Cognition* 41.123.
- , & ———. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. The MIT Press.
- , & ———. 2006. Constraints on the complexity of verb meaning and vp structure. In *Between 40 and 60 puzzles for Krifka*, ed. by S. Gärtner, R. Beck, R. Eckardt, R. Musan, & B. Stiebels. Berlin: ZAS.
- , & ———. 2010. Lexicalized meaning and manner/result complementarity. In *Subatomic Semantics of Event Predicates*, ed. by B. Arsenijević, B. Gehrke, & R. Marín.
- Levinson, Stephen C. 1983. *Pragmatics*. Cambridge University Press.
- Mittwoch, Anita. 1991. In defense of Vendler's achievements. *Belgian Journal of Linguistics* 6.71–84.
- Piñón, Christopher. 2008. Aspectual composition with degrees. In *Adjectives and Adverbs: Syntax, Semantics, and Discourse*, 183–219.
- Rappaport Hovav, Malka, & Beth Levin. 1998. Building verb meanings. *The projection of arguments: Lexical and compositional factors* 97–134.
- , & ———. 2010. Reflections on manner/result complementarity. In *Syntax, Lexical Semantics, and Event Structure*, ed. by Malka Rappaport-Hovav, Edit Doron, & Ivy Sichel, 21–38. Oxford University Press.
- Rothstein, Susan D. 2004. *Structuring Events: A Study in the Semantics of Lexical Aspect*. Blackwell Publishing.
- Smollett, Rebecca. 2005. Quantized direct objects don't delimit after all. In *Perspectives on Aspect*, ed. by H.J. Verkuyl, H. de Swart, & A. van Hout, 41–59. Springer.
- Tenny, Carol L., 1987. *Grammaticalizing Aspect and Affectedness*. Massachusetts Institute of Technology dissertation.
- Verkuyl, Henk J. 1972. *The Compositional Nature of the Aspects*, volume 15 of *Foundations of Language Supplementary Series*. Dordrecht: Reidel.
- Zlatev, Jordan, & P. Yangklang. 2004. A third way to travel: The place of Thai in motion-event typology. In *Relating Events in Narrative 2: Typological and Contextual Perspectives*, ed. by S. Strömquist & L. Verhoeven. Lawrence Erlbaum, Mahwah, NJ.