

The division of labor between grammar and the lexicon: A middle ground between lexicalism and neoconstructionism

Josep Ausensi

Universitat Pompeu Fabra

josep.ausensi@gmail.com

<https://josepausensi.wixsite.com/ausensi>

Monthly lecture, Debrecen Committee of the Hungarian Academy of Sciences

University of Debrecen, October 14

1 Introduction

- A prominent question in generativist (mainstream) linguistics (cf. [Chomsky, 1957](#)) relates to how the semantic content of lexical items interacts with the syntactic structures that lexical items occur in.
- Such a question has spiked a lot of interest mostly because of [Chomsky's \(1981; 1986\)](#) proposal regarding the role the lexicon plays in the building up of linguistic structure.
- Although it is a common assumption that the lexical items of the syntactic structure are provided with semantic content, linguists do not agree with whether such a semantic content comes from the lexicon or instead semantic content is provided by the syntactic structure.
- What are generally known as **lexicalist approaches** (cf. [Jackendoff, 1983, 1990](#); [Pinker, 1989](#); [Levin & Rappaport Hovav, 1995](#); [Rappaport Hovav & Levin, 1998](#)) hold that the semantic content of lexical items constrains or determines syntactic structure, i.e., lexical information is taken to be prior to syntax.
- The lexicon thus holds a privileged status insofar as it is the component that governs word formation. A consequence of this view is that the lexical information lexical items carry is said to be *projected* from the lexicon into the syntactic structure.
- Lexical items thus carry semantic content prior to syntax which is taken to determine the syntactic structures they can be associated with.
- In contrast, **neoconstructionist approaches** (cf. [Halle & Marantz, 1993](#); [Harley, 1995](#); [Marantz, 1997](#); [Borer, 2003, 2005a,b, 2013](#)) propose that syntactic structure is not determined by the semantic content of lexical items. On this view, the semantic interpretation of lexical items is derived from the syntactic structure that lexical items occur in.

- Syntax is thus the only engine that derives linguistic structure. In contrast to lexicalist approaches, structural meaning is provided by the syntax, as there is no need to posit an additional generative engine such as the lexicon to derive word formation.

THIS TALK

- In this talk, I explore the validity of the theoretical postulates as described above. In particular, I provide evidence that calls for a middle ground between neoconstructionism and lexicalism.
- The evidence that I provide shows that verbal classes appear to be more elastic regarding the types of syntactic structures they can be associated with, in contrast to what lexicalist approaches have been arguing for.
- However, I show that there are still clear incompatibilities between certain verbal classes and syntactic structures in that semantic content seems to impose clear restrictions on the syntactic structure verbal roots can be associated with.
- The main goal of this talk is thus to reconcile and make clearer the roles that syntax and the lexicon play in the building up of linguistic structure.

ROADMAP

- Section 2: I provide a detailed overview of what probably is the most influential lexicalist approach, i.e., that developed by [Levin & Rappaport Hovav](#).
- Section 3: I discuss a radical approach within neoconstructionism which proposes that lexical items are never constrained regarding the types of syntactic structures they can be associated with.
- Section 4: After discussing data that challenge both lexicalism and neoconstructionism, I discuss how such data call the need for a middle ground between lexicalism and neoconstructionism.

2 Lexicalism: Grammatically relevant components of meaning

- Within lexicalist approaches, [Rappaport Hovav & Levin \(1998, 2010\)](#) have influentially proposed that the lexicalization of a manner or result component determines syntactic structure.
- In particular, [Rappaport Hovav & Levin](#) argue that verbs fall into two semantic classes, i.e., manner verbs (1-a), which encode a manner of carrying out an action, and result verbs (1-b), which encode a result state, i.e., a change of state or location.
 - (1) a. Manner verbs: *wipe, run, poison, scrub, sweep, etc.*
 - b. Result verbs: *clean, arrive, kill, clear, remove, etc.*
- [Rappaport Hovav & Levin \(1998, 2010\)](#) have influentially proposed that the lexicalization of a manner or result component has grammatical consequences for syntax as it determines the types of syntactic structures verbs can be associated with (further see [Levin & Rappaport Hovav, 1991, 1995, 2005, 2006, 2013, 2014](#); [Rappaport Hovav, 2014, 2017](#); [Levin, 2017](#)).

- For instance, canonical manner verbs such as *sweep* (2) and *scrub* (3) permit object deletion, whereas canonical result verbs like *break* (4) and *dim* (5) do not.

(2) a. John swept the floor.
 b. All last night, John swept.
 c. Cinderella outswept her stepsisters.
 (Rappaport Hovav & Levin, 2002: 275)

(3) a. John scrubbed the floor.
 b. All last night, John scrubbed.
 c. Cinderella outscrubbed her stepsisters.
 (Rappaport Hovav, 2008: 23)

(4) a. John broke the vase.
 b. *All last night, John broke.
 c. *Kim outbroke the other vase-smasher.
 (Beavers & Koontz-Garboden, 2012: 339)

(5) a. John dimmed the lights.
 b. *All last night, John dimmed.
 c. *Our stage-hand outdimmed your stage-hand.
 (Rappaport Hovav, 2008: 24)

- In addition, canonical result verbs appear to disallow so-called nonselected objects (7), whereas nonselected objects are permitted by manner verbs (6).

(6) a. Kim scrubbed her fingers raw.
 (Rappaport Hovav & Levin, 2010: 21)
 b. The joggers ran the pavement thin.
 (Levin & Rappaport Hovav, 1995: 53)
 c. The child rubbed the tiredness out of his eyes.
 (Rappaport Hovav & Levin, 1998: 7)

(7) a. *The toddler broke his hands bloody.
 (Rappaport Hovav & Levin, 2010: 22)
 b. *Kim dimmed her eyes sore.
 (Beavers & Koontz-Garboden, 2012: 340)
 c. *We cooled the people out of the room with the air-conditioner on too high.
 (Rappaport Hovav, 2008: 23)

- The logic behind this is that in nonselected object constructions, the verb is a modifier of the event as it provides the manner of action with which a result state is brought about. Thus, only manner verbs are expected to occur in these constructions, as they lexicalize a manner of action.

- For instance, (6-a) can be paraphrased as *Kim caused her fingers to become raw by scrubbing*. Since result verbs lexicalize a result state, but not a manner of action, result verbs are predicted not to permit nonselected objects.¹

3 Neoconstructionism: A free distribution approach

- A very influential approach within neoconstructionism which is at odds with lexicalism holds that lexical items do not have semantic content that is grammatically relevant.
- [Rappaport Hovav \(2017\)](#) calls these approaches Free Distribution approaches and are significantly represented in works by [Arad \(2003, 2005\)](#); [Borer \(2003, 2005b, 2013\)](#); [Acquaviva \(2008, 2014\)](#); [Harley \(2009\)](#); [Mateu & Acedo-Matellán \(2012\)](#); [Acedo-Matellán & Mateu \(2014\)](#); [Dunbar & Wellwood \(2016\)](#); [Acedo-Matellán \(2016\)](#).
- On this view, lexical items such as verbs are not constrained in terms of the syntactic contexts they can occur in since in principle any verb can appear in any syntactic context.
- This line of approaches strongly argues in favor of a view of verb meaning in which the syntactic and semantic properties of the verbs are exclusively determined by the syntactic structure.
- The overall picture then is that the same lexical item, a verb in the present case, can be associated with distinct semantic interpretations as well as distinct syntactic properties depending on the syntactic structure the verb occurs in.
- For instance, on this view, that the same verb *whistle* can appear in a variety of distinct syntactic contexts is unsurprising, as the verbs are predicted to have this verbal elasticity, in contrast to lexicalist approaches such as [Levin & Rappaport Hovav's](#).

- (8)
- a. Kim whistled.
 - b. Kim whistled at the dog.
 - c. Kim whistled a tune.
 - d. Kim whistled a warning.
 - e. Kim whistled me a warning.
 - f. Kim whistled her appreciation.
 - g. Kim whistled to the dog to come.
 - h. The bullet whistled through the air.
 - i. The air whistled with bullets.
- ([Rappaport Hovav & Levin, 1998](#): 2)

- Similarly, the fact that the lexical item *siren* can be both a noun and a verb is naturally accounted for since the interpretation of *siren* as a noun or a verb is derived when this lexical item is integrated into a nominal or verbal syntactic structure.

¹Note that this explanation is a simplification of the approach that [Rappaport Hovav & Levin](#) develop, since I just provide a brief overview of their claim that manner and result verbs have distinct syntactic properties. See [Rappaport Hovav & Levin \(1998, 2010\)](#) for their formal implementation of manner and result regarding the architecture of event structure.

- (9) a. The factory horns sired throughout the raid.
 b. The factory horns sired midday and everyone broke for lunch.
 c. The police car sired the Porsche to a stop.
 d. The police car sired up to the accident site.
 e. The police car sired the daylight out of me.
 (Borer, 2003: 40)

- The fact that *siren* as a verb has different uses, as illustrated in the example above, is also accounted for since it follows from the fact that *siren* can be associated with distinct verbal structures, e.g., intransitive, transitive, causative etc.
- Borer (2013: 403-17, 436-70) for instance argues that lexical items are phonological indices without any content insofar as content is only introduced when lexical items appear together with some specific grammatical context.
- Similarly, Acedo-Matellán & Mateu (2014) (also Borer, 2005b; Acedo-Matellán, 2010; Mateu & Acedo-Matellán, 2012) assume that lexical items have idiosyncratic content, yet it is not taken to be grammatically relevant.
- Consequently, lexical items are predicted to appear in any context and cases of apparent ungrammaticalities are incompatibilities between the semantics introduced by the syntactic structure and the idiosyncratic content of the lexical items.
- For instance, Acedo-Matellán & Mateu (2014: 20) argue against Rappaport Hovav & Levin's (1998; 2010) claim that result verbs like *break* can only be interpreted as result, i.e., as providing the result state of the event, by showing that result verbs can also be structurally interpreted as manner.

- (10) a. The strong winds broke the glass.
 b. The glass broke.
 c. The hammer head broke off.
 d. The boy broke into the room.
 (Acedo-Matellán & Mateu, 2014: 20)

- Namely, whereas in (10-a)-(10-b) the verb *break* provides the result state of the event, i.e., in (10-b) it is the case that *the glass* becomes broken, (10-c) and (10-d) do not entail that the subject referent becomes broken, but rather the verb provides the manner of the event, e.g., in (10-c) the *breaking* is the means by which *the hammer head* gets separated, as *break* is structurally interpreted as manner, according to Acedo-Matellán & Mateu (see also Embick, 2004; McIntyre, 2004; Harley, 2005; Mateu, 2012; Mateu & Acedo-Matellán, 2012).
- In short, Free distribution approaches strongly reject the assumption that lexical items can have content that is grammatically relevant.
- On this view, there is thus a strong division of labor between the lexicon and syntax insofar as only syntax determines the semantic and syntactic properties of the lexical items.

4 The need for a middle ground

- I show, however, that neither lexicalism nor neoconstructionism successfully capture the syntactic distribution of (result) verbs.
 - In particular, I note that neoconstructionist approaches overgenerate, as there is a class of verbal roots that are highly constrained regarding the types of syntactic structures they occur in.
 - In contrast, I note that lexicalist approaches, in particular [Rappaport Hovav & Levin](#)'s, undergenerate, as a class of verbal roots appear to be more elastic regarding the types of syntactic structures they can be associated with.
 - Recall that [Rappaport Hovav & Levin](#) argue that only manner verbs can provide the manner of the event, e.g., *John scrubbed his fingers raw*. This is because manner verbs encode a manner of carrying out an action, and therefore occur in structures in which they provide the manner of event.
 - In contrast, insofar as result verbs encode a result state, but not any manner of action, [Rappaport Hovav & Levin](#) argue that this class of verbs do not appear in structures in which they provide the manner of the event, as in nonselected object constructions, e.g., **John broke his fingers bloody*.
 - In this way, the lexicalist approach by [Rappaport Hovav & Levin](#) highly constrains the types of syntactic structures verbal classes occur in depending on their semantic content.
 - I note, however, that a class of result verbs do appear in nonselected object constructions, contra [Rappaport Hovav & Levin](#). This shows that some result verbs can provide the manner of the event, despite not encoding a manner of action.²
- (11) a. Samson, who **ripped** him free of his bindings and pulled him to safety. (Web)
b. Six times we **broke** her loose from the rocks only to have her catch again. (GBooks)
c. With a few slices of her claws, she **tore** him free. (GBooks)
- (12) a. The power of the wind was used to move water [...] to **crush** the oil out of linseed and rapeseed. (COCA)
b. Rigaut **tore** a piece off one of the letters. (COCA)
c. Solar energy can be used [...] for **splitting** hydrogen out of water molecules to create a fuel for vehicles. (COCA)
- (13) a. Scientists just **melted** a hole through 3,500 feet of ice. (Web)
b. I stuck my GoPro under some ice and then **shattered** a hole right above it. (Web)
c. A discharge of those energies **burned** a hole in his forehead and killed him. (COCA)
- These data show that result verbs can be associated with syntactic structures in which they are structurally interpreted as providing the manner of the event. This provides evidence in favor of

²Unless explicitly indicated, the examples in this presentation are extracted from *Google Books* (GBooks), *Corpus of Contemporary American English* (COCA) and *Corpus of Web-Based Global English* (GloWbE).

a neoconstructionist approach, i.e., that the interpretation of lexical items depends on the syntactic structure lexical items occur in (cf. [Acedo-Matellán & Mateu, 2014](#)).

- However, I also provide data that strongly suggest that the syntactic distribution of verbal classes in the syntactic structure is not completely unconstrained, as one would expect under a neoconstructionist approach (cf. [Borer, 2003](#); [Arad, 2003](#); [Acedo-Matellán & Mateu, 2014](#)).
- In other words, the data I analyze show that it is not the case that any class of verbs can in principle appear in any syntactic context. My point of departure is [Embick's \(2009\)](#) observation that not all classes of result verbs can provide the manner of the event, as illustrated below.

- (14) a. Mary broke the package open.
b. Mary cut the package open.
c. Mary split the package open.
([Embick, 2009](#): 7)

- (15) a. *John opened + DP + Result XP.
b. *John darkened + DP + Result XP.
c. *John blackened + DP + Result XP.
([Embick, 2009](#): 7)

- In particular, [Embick](#) observes that the roots of deadjectival result verbs, e.g., *open*, *darken*, *blacken*, do not appear to function as event modifiers, i.e., they do not seem to be able to provide the manner of action of the event. Further consider the additional examples provided below.

- (16) a. *The kid opened the ball into the garden.
CANNOT MEAN: the kid caused the ball to go into the garden by opening (a door).
(Alessandro Bigolin p.c.)
b. *The sky darkened the city hard to see.
CANNOT MEAN: The sky caused the city to become hard to see by darkening.
(Louise McNally p.c.)
c. *The dentist whitened his teeth clean.
CANNOT MEAN: The dentist caused the teeth to become clean by whitening.
d. *We cooled the people out of the room with the air-conditioner on too high.
CANNOT MEAN: We caused the people to be out of the room by cooling (the room).
([Rappaport Hovav, 2008](#): 23)
e. *Kim dimmed her eyes sore.
CANNOT MEAN: Kim caused her eyes to become sore by dimming (the lights).
([Beavers & Koontz-Garboden, 2012](#): 340)
f. *I thinned the soup tasteless.
CANNOT MEAN: I caused the soup to become tasteless by thinning (the soup).
([Rappaport Hovav, 2014](#): 276)

- These examples show cases of deadjectival result verbs in constructions like the ones in (11)-(13):

the deadjectival result verbs are intended to be inserted into structures in which they are interpreted as providing the manner of the event.

- The intended reading is thus that the result state denoted by the result phrases (e.g., *clean, into the garden*) is brought about by the action the verbs denote.
- These data thus show that the roots of deadjectival result verbs such as *open, darken, whiten, dim, thin* cannot function as event modifiers, contra what one would expect under a neoconstructionist approach (e.g., [Borer, 2005b, 2013](#); [Mateu & Acedo-Matellán \(2012\)](#); [Acedo-Matellán & Mateu, 2014](#)).
- In other words, this class of result verbs cannot be structurally interpreted as providing the manner of the event that brings about a result state.
- In short, these data strongly suggest that syntactic distribution of lexical items such as verb classes is not completely unconstrained, since some classes of verbs do not allow certain association patterns with the syntactic structure.
- These data thus show that, in contrast to lexicalist approaches as the ones developed in [Rappaport Hovav & Levin](#) which have been shown to undergenerate, neoconstructionist approaches overgenerate, since under these approaches, the data in (16) should in principle be possible.
- Namely, neoconstructionist approaches predict that any class of verbs should be able to function as event modifiers and provide the manner of action of the event. This is because the semantic interpretation of lexical items depends on the syntactic structure lexical items occur in.

4.1 A more nuanced view of verb distribution

- The data provided in the previous section seem to provide evidence in favor of an approach in which the contributions of the lexicon and syntax need not be mutually exclusive, but can complement each other.
- Namely, the data that challenge both lexicalism and neoconstructionism provide evidence in favor of an approach that needs to recognize the role that both the lexicon and syntax play in the building up of linguistic structure.
- In particular, while certain lexical items appear to be more elastic regarding the types of syntactic structures they occur in, contra what lexicalist approaches argue, there are still clear incompatibilities between some classes of verbs and the types of syntactic structures they can be associated with, contra what one would expect under a neoconstructionist approach.
- Here, I tentatively propose that the data that challenge lexicalist and neoconstructionist approaches can be accounted for if one assumes an approach whereby the distinct semantics that classes of verbs can have heavily bears on their distribution in the syntactic structure.

- In particular, the semantics of verbal roots determine syntactic distribution, and therefore whether a certain class of result verbs can provide the manner of the event is largely determined by the semantics of such a class of verbs.
- I argue that broadly speaking there are two classes of result verbs with respect to their association with the syntactic structure.
- On the one hand, there are result verbs derived from roots of the $\sqrt{\text{BREAK}}$ sort that involve what [Beavers & Koontz-Garboden \(2020\)](#) have called Result Roots, i.e., roots which predicate a state of a unique participant but require that such a state must be the result of a change, e.g., $\sqrt{\text{BREAK}}$, $\sqrt{\text{SPLIT}}$, $\sqrt{\text{MELT}}$, $\sqrt{\text{FREEZE}}$, $\sqrt{\text{CRUSH}}$ etc.

$$(17) \quad \llbracket \sqrt{\text{RESULTR}} \rrbracket = \lambda x \lambda s [state'(x, s) \wedge \exists e' [become'(e', s)]]$$

- I propose that Result Roots can be structurally interpreted as manner or as result, i.e., they can provide the result state or the manner of action.

- (18) a. John broke the vase.
b. John broke him free.

- On the other hand, there are result verbs derived from roots of $\sqrt{\text{OPEN}}$ sort that involve what [Beavers & Koontz-Garboden \(2020\)](#) have called Property Concept Roots, i.e., roots which predicate a pure, simple state of a unique participant without entailing that an event gives rise to the state, e.g., $\sqrt{\text{OPEN}}$, $\sqrt{\text{COOL}}$, $\sqrt{\text{WIDE}}$, $\sqrt{\text{THIN}}$, $\sqrt{\text{DARK}}$, $\sqrt{\text{BLACK}}$.

$$(19) \quad \llbracket \sqrt{\text{PROPERTYR}} \rrbracket = \lambda x \lambda s [state'(x, s)]$$

- I propose that Property Concept Roots always provide the result state of the event, and therefore coercion into event modifiers is not possible, contra what one expects under a neoconstructionist approach.

- (20) a. John opened the door.
b. *John opened the ball into the garden.

- I argue that the difference between Result Roots and Property Concept Roots regarding their association patterns with the syntactic structure boils down to the different semantics these two classes of roots have.
- Both classes of roots are predicates of states, but only Result Roots introduce an entailment of change that gives rise to the state they denote.
- It naturally follows that Property Concept Roots are therefore prime candidates for providing the result state of the event, as they denote simple, pure states with no eventive properties.

- The fact that Result Roots can function as event modifiers can be explained if this class of roots has eventive properties as part of their semantic denotation, i.e., an entailment of change. In particular, the eventive properties allow them to associate with the syntactic structure as event modifiers.
- In contrast, I propose that Property Concept Roots are never associated with the syntactic structure as event modifiers as they denote pure, simple states, i.e., the root is completely stative with no eventive properties.

5 Conclusion

- The present proposal is critically different from lexicalist approaches since I acknowledge that some meanings are constructional, i.e., syntax does indeed determine the semantic interpretation of some classes of lexical items (e.g., when result verbs provide the manner of the event).
- The present proposal, however, sides with lexicalist approaches in sharing the assumption that some lexical information can indeed be grammatically relevant as it can determine or constrain the syntactic structures certain lexical items can be associated with.
- Further, the present proposal is also critically different from neoconstructionist approaches since I assume that syntactic distribution of lexical items is grammatically constrained, i.e., not all verbs appear in the same syntactic structures. In this respect, syntax is not taken to be the sole engine to derive linguistic structure.
- I have proposed that it is the distinct semantics that classes of verbs have which need to be compatible with the semantics of the syntactic structure. The locus of ungrammaticalities should be sought in terms of clashes between the semantics of the lexical items and the semantics of the syntactic structure.
- The take-home message of this approach is that one should analyze the restrictions lexical items impose on the syntactic structure while acknowledging at the same time that syntactic structures can also impose restrictions on the types of semantic interpretations they generate.
- Thus, the ultimate goal one should aim for is to analyze in detail how such an interaction between the restrictions imposed by lexical items and the syntactic structure exactly works in order to successfully derive linguistic structure.

References

- Acedo-Matellán, Víctor. 2010. *Argument structure and the syntax-morphology interface. A case study in Latin and other languages*. Bellaterra (Cerdanyola del Vallès): Universitat Autònoma de Barcelona dissertation.
- Acedo-Matellán, Víctor. 2016. *The morphosyntax of transitions: A case study in Latin and other languages*. Oxford: Oxford University Press.
- Acedo-Matellán, Víctor & Jaume Mateu. 2014. From syntax to roots: A syntactic approach to root interpretation. In Artemis Alexiadou, Hagit Borer & Florian Schäfer (eds.), *The syntax of roots and the roots of syntax*, 259–281. Oxford: Oxford University Press.
- Acquaviva, Paolo. 2008. *Lexical plurals: A morphosemantic approach*. Oxford: Oxford University Press.
- Acquaviva, Paolo. 2014. The roots of nominality, the nominality of roots. In Artemis Alexiadou, Hagit Borer & Florian Schäfer (eds.), *The syntax of roots and the roots of syntax*, 259–281. Oxford: Oxford University Press.

- Arad, Maya. 2003. Locality constraints on the interpretation of roots: The case of Hebrew denominal verbs. *Natural Language and Linguistic Theory* 21. 737–778.
- Arad, Maya. 2005. *Roots and patterns: Hebrew morpho-syntax*. Dordrecht: Springer.
- Beavers, John & Andrew Koontz-Garboden. 2012. Manner and result in the roots of verbal meaning. *Linguistic Inquiry* 43(3). 331–369.
- Beavers, John & Andrew Koontz-Garboden. 2020. *The roots of verbal meaning*. Oxford: Oxford University Press.
- Borer, Hagit. 2003. Exo-skeletal vs. endo-skeletal explanations: Syntactic projections and the lexicon. In John Moore & Maria Polinsky (eds.), *Explanation in linguistic theory*, 31–67. Stanford, CA: Center for the Study of Language and Information.
- Borer, Hagit. 2005a. *Structuring sense: In name only*, vol. 1. Oxford: Oxford University Press.
- Borer, Hagit. 2005b. *Structuring sense: The normal course of events*, vol. 2. Oxford: Oxford University Press.
- Borer, Hagit. 2013. *Structuring sense: Taking form*, vol. 3. Oxford: Oxford University Press.
- Chomsky, Noam. 1957. *Syntactic structures*. The Hague: Mouton de Gruyter.
- Chomsky, Noam. 1981. *Lectures on government and binding*, vol. 9 Studies in Generative Grammar. Dordrecht: Foris Publications.
- Chomsky, Noam. 1986. *Knowledge of language: Its nature, origin and use*. New York, NY: Praeger.
- Dunbar, Ewan & Alexis Wellwood. 2016. Addressing the “two interface” problem: Comparatives and superlatives. *Glossa: A Journal of General Linguistics* 1(1). 1–29.
- Embick, David. 2004. On the structure of resultative participles in English. *Linguistic Inquiry* 35(3). 355–392.
- Embick, David. 2009. Roots, states, stative passives. Talk given at the 2009 Roots Workshop, University of Stuttgart.
- Halle, Morris & Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In Kenneth Hale & Samuel Jay Keyser (eds.), *The view from building 20*, 111–176. Cambridge, MA: MIT Press.
- Harley, Heidi. 1995. *Subjects, events, and licensing*. Cambridge, MA: Massachusetts Institute of Technology dissertation.
- Harley, Heidi. 2005. How do verbs get their names? Denominal verbs, manner incorporation, and the ontology of verb roots in English. In Nomi Erteschik-Shir & Tova Rapaport (eds.), *The syntax of aspect: Deriving thematic and aspectual interpretation*, 42–64. New York, NY: Oxford University Press.
- Harley, Heidi. 2009. The morphology of nominalizations and the syntax of *vP*. In Monika Rathert & Anastasia Gianakidou (eds.), *Quantification, definiteness, and nominalization*, 320–342. Oxford: Oxford University Press.
- Jackendoff, Ray. 1983. *Semantics and cognition*. Cambridge, MA: MIT Press.
- Jackendoff, Ray. 1990. *Semantic structures*. Cambridge, MA: MIT Press.
- Levin, Beth. 2017. The elasticity of verb meaning revisited. In Dan Burgdorf, Jacob Collard, Sireemas Maspong & Brynhildur Stefánsdóttir (eds.), *Proceedings of Semantics and Linguistic Theory* 27, 571–599.
- Levin, Beth & Malka Rappaport Hovav. 1991. Wiping the slate clean: A lexical semantic exploration. *Cognition* 41(1-3). 123–151.
- Levin, Beth & Malka Rappaport Hovav. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. Cambridge, MA: MIT press.
- Levin, Beth & Malka Rappaport Hovav. 1999. Two structures for compositionally derived events. In Tanya Matthews & Devon Strolowitch (eds.), *Proceedings of Semantics and Linguistic Theory* 9, 199–223. New York, NY: CLC Publications.
- Levin, Beth & Malka Rappaport Hovav. 2005. *Argument realization*. New York, NY: Cambridge University Press.
- Levin, Beth & Malka Rappaport Hovav. 2006. Constraints on the complexity of verb meaning and VP structure. In G Hans-Martin, S Beck, R Eckardt, R Musan & Barbara Stiebels (eds.), *Between 40 and 60 puzzles for Krifka*, Berlin: ZAS.
- Levin, Beth & Malka Rappaport Hovav. 2013. Lexicalized meaning and manner/result complementarity. In Boban Arsenijević, Berit Gehrke & Rafael Marín (eds.), *Studies in the composition and decomposition of event predicates*, 49–70. Netherlands: Springer.
- Levin, Beth & Malka Rappaport Hovav. 2014. Manner and result: The view from *clean*. In Rob Pensalfani, Myfany Turpin & Diana Guillemin (eds.), *Language description informed by theory*, 337–358. Amsterdam / Philadelphia: John Benjamins Publishing Company.
- Marantz, Alec. 1997. No escape from syntax: Don’t try morphological analysis in the privacy of your own lexicon. In *University of Pennsylvania Working Papers in Linguistics*, vol. 4 2, 201–225.
- Mateu, Jaume. 2012. Conflation and incorporation processes in resultative constructions. In Violeta Demonte & Louise McNally (eds.), *Telicity, change, and state: A cross-categorical view of event structure*, 252–278. Oxford: Oxford University Press.
- Mateu, Jaume & Víctor Acedo-Matellán. 2012. The manner/result complementarity revisited: A syntactic approach. In M. Cristina Cuervo & Yves Roberge (eds.), *The end of argument structure? Syntax and semantics*, 209–228. New York, NY: Academic Press.
- McIntyre, Andrew. 2004. Event paths, conflation, argument

- structure, and VP shells. *Journal of Linguistics* 42(3). 523–571.
- Pinker, Steven. 1989. *Learnability and cognition: The acquisition of argument structure*. Cambridge, MA: MIT Press.
- Rappaport Hovav, Malka. 2008. Lexicalized meaning and the internal structure of events. In Susan Rothstein (ed.), *Theoretical and crosslinguistic approaches to the semantics of aspect*, 13–42. Amsterdam: John Benjamins Publishing Company.
- Rappaport Hovav, Malka. 2014. Building scalar changes. In Artemis Alexiadou, Hagit Borer & Florian Schäfer (eds.), *The syntax of roots and the roots of syntax*, 259–281. Oxford: Oxford University Press.
- Rappaport Hovav, Malka. 2017. Grammatically relevant ontological categories underlie manner/result complementarity. In Noa Brandel (ed.), *Proceedings of the Israeli Association for Theoretical Linguistics* 32, 77–98. Cambridge, MA: MIT Working Papers in Linguistics.
- Rappaport Hovav, Malka & Beth Levin. 1998. Building verb meanings. In Miriam Butt & Wilhelm Geuder (eds.), *The projection of arguments: Lexical and compositional factors*, 97–134. Stanford, CA: CSLI Publications.
- Rappaport Hovav, Malka & Beth Levin. 2002. Change of state verbs: Implications for theories of argument projection. In Julie Larson & Marie Paster (eds.), *Proceedings of the annual meeting of the Berkeley Linguistics Society*, vol. 28, Linguistic Society of America.
- Rappaport Hovav, Malka & Beth Levin. 2010. Reflections on manner/result complementarity. In Malka Rappaport Hovav, Edit Doron & Ivy Sichel (eds.), *Syntax, lexical semantics, and event structure*, 21–38. Oxford: Oxford University Press.