# REVIEWS

**John Beavers & Andrew Koontz-Garboden**, *The roots of verbal meaning*. Oxford: Oxford University Press, 2020. Pp. xvii + 255

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This monograph presents a novel approach to the types of meaning that roots (in the Distributed Morphology sense; see Halle & Marantz 1993) can have in terms of truth-conditional content. The focus of the monograph is on the so-called division of labor between functional structure and roots, i.e. the assumption in current (syntactic) theories of event structure that the meanings contributed by event templates – what John Beavers and Andrew Koontz-Garboden (hereafter, BKG) call templatic meaning – and the meanings contributed by roots are mutually exclusive. In this vein, roots are assumed not to introduce templatic meanings such as change or causation (e.g. Embick 2004, 2009; Borer 2005a; Folli & Harley 2005; Ramchand 2008; Alexiadou, Anagnostopoulou & Schäfer 2015), insofar as this type of meanings is introduced by functional heads in the syntax, e.g. by projections such as little *v*. The authors strongly argue against theories of event structure assuming such a division of labor by convincingly showing that there are some classes of verbal roots that appear to have templatic meanings as part of their truth-conditional content. Their main piece of evidence comes from contradiction tests and sublexical modification with modifiers such as *again*, which are able to target specific parts of the event structure (Dowty 1979). BKG show that while theories of event structure that assume such a (strong) division of labor make some interesting (and sound) predictions about the architecture of event structure, they also make some crucial false predictions about the possible meanings that roots can have, and in turn, about possible verb classes.

The theory that BKG lays out regarding root meaning is of particular theoretical relevance since the role that roots play in meaning composition has generally been neglected. In this respect, previous research has mostly focused on the meanings that event templates contribute. Roots, in turn, have been assumed to simply provide idiosyncratic information (also called encyclopedic information or conceptual content) about the state or action they denote, but such information is assumed not to be grammatically relevant (e.g. Mateu & Acedo-Matellán 2012; Acedo-Matellán & Mateu 2014), namely, it does not have an impact on syntactic structure. This view is taken to the extreme in more radical approaches (e.g. Borer 2003, 2005a, 2013), since under such approaches roots are argued to lack any type of information, i.e. content is only introduced when roots appear in some specific grammatical context. Concomitantly, an influential approach classifies roots into ontological types and the type a root bears is argued to determine their syntactic

distribution, i.e. how they associate with the event structure (Marantz 1997; Rappaport Hovav & Levin 1998; Harley & Noyer 2000; Alexiadou, Anagnosto-poulou & Schäfer 2006; Ramchand 2008). Despite these differences, a common assumption among syntactic approaches to event structure is that it is the event template into which the root is inserted that determines the grammatical properties of the surface verb. BKG show that roots play a bigger role in grammar as the meanings that some classes of verbal roots can have are more complex than previously assumed. BKG convincingly show that these root-specific entailments are grammatically relevant insofar as they can constrain syntactic structure and determine a verb's grammatical properties. By doing so, BKG ultimately lay out a theory of verb meaning that has predictive power with regards to possible verb classes.

In Chapter 1, BKG provide the basic theoretical backdrop and an overview of the different theories of verb meaning. BKG adopt an event structural approach to verb meaning whereby verbs are assumed to consist of an event structure that decomposes into event templates and roots. The focus of Chapter 1 is thus on providing a general overview of the theory of verb meaning entertained in the book and, in turn, in justifying why an event structural approach is preferable to theories that hold that the grammatically relevant aspects of verbs involve a set of thematic roles speci-fying the role of the participants in the event that the verb describes (Gruber 1965; Fillmore 1968, 1970; Jackendoff 1972).

In Chapter 2, BKG present their main case against the influential view among syntactic approaches to event structure that take templatic meanings to be intro-duced solely by functional heads in the syntax (see Harley 1995; Embick 2004; Borer 2005a, b, 2013; Folli & Harley 2005; Pylkkänen 2008; Ramchand 2008; Alexiadou et al. 2015, among others). More specifically, BKG argue against the so-called Bifurcation Thesis for Roots laid out in Embick (2009: 1), defined as follows.

(1)   *The Bifurcation Thesis for Roots*
      If a component of meaning is introduced by a semantic rule that applies to elements in combination [= by a functional head; JA], then that component of meaning cannot be part of the meaning of a root.

BKG convincingly argue that the Bifurcation Thesis for Roots needs to be aban-doned by analyzing two classes of roots, one of which inherently comprises templatic meanings as part of their truth-conditional content. The first class, i.e. Property Concept roots, includes roots from which de-adjectival verbs encoding change of state are derived, e.g. *cool, widen, thin, open.* The second class, i.e. Result roots, includes roots from which monomorphemic verbs encoding change of state are derived, e.g. *break, kill, melt, crack.* BKG argue that Result roots come with entailments of change, namely, they predicate a state of a unique participant but crucially require that such a state must be the result of a change – there must be an event that gives rise to that state. In contrast, Property Concept roots simply predicate a simple state of a participant with no event entailments. BKG argue in

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short that Result and Property Concept roots differ in the nature of the state they predicate: 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.

(2)  (a)  $[\![\sqrt{\text{BREAK}}]\!] = \lambda x \lambda s[broken'(x,s) \wedge \exists e'[become'(e',s)]]$
     (b)  $[\![\sqrt{\text{cool}}]\!] = \lambda x \lambda s[cool'(x,s)]$

Such an analysis of Result roots argues against the Bifurcation Thesis for Roots insofar as entailments of change are uncontroversially assumed to be introduced by functional heads, e.g. by projections such as the verbalizing little *v* head in the verbal domain (see D'Alessandro, Franco & Gallego 2017 for a general overview). By making use of contradiction tests and sublexical modification with modifiers that are able to target subparts of the event structure, e.g. *again* (see Dowty 1979; Von Stechow 1995, 1996; Beck & Snyder 2001; Beck & Johnson 2004), BKG convincingly show that Property Concept roots and Result roots are two well-defined classes of roots denoting states that differ in whether they come with an entailment of change themselves. More importantly, BKG show that the fact that Result roots inherently comprise, as part of their truth-conditional content, entailments of change, crucially has further grammatical consequences on the morphological forms of the surface verbs and adjectives that are derived from this class of roots. Namely, adjectives derived from Property Concept roots come in two types, i.e. morphologically basic (e.g. *open, wide, thin*) and deverbal (e.g. *opened, widened, thinned*), whereas adjectives derived from Result roots only come in one type, i.e. morphologically deverbal (e.g. *broken, killed, cracked*).

In Chapter 3, BKG focus on English ditransitive verbs of caused possession (Pinker 1989; Goldberg 1995; Beck & Johnson 2004; Rappaport Hovav & Levin 2008; Beavers 2011), e.g. *give, throw, send.* Such a verb class is usually associated with two distinct event structures denoting caused motion or caused possession respectively. Caused motion is usually associated with the *to* frame, i.e. *John sent a letter to Tom*, whereas caused possession is associated with the *indirect object* frame, i.e. *John sent Tom a letter*. Drawing on Rappaport Hovav (2008) and Beavers (2011), BKG argue that the two event templates of ditransitive verbs of caused possession are underspecified, i.e. it is the roots of ditransitive verbs that are associated with these two distinct event templates which determine the grammatical properties of the surface verb. More specifically, BKG argue that ditransitive verbs of caused possession are derived from roots that entail possession and co-location, i.e. notions that are generally assumed to be introduced by the event templates of the two distinct structures with which the roots of ditransitive verbs are associated. In this respect, the *to* frame is usually associated with a $P_{LOC}$ projection entailing co-location, and the *indirect object* frame with a $P_{HAVE}$ projection that introduces the templatic notion related to possession (see Harley 2003). In line with the verbs derived from Result roots, BKG note that the truth-conditional content of the roots of ditransitive verbs of caused possession can have an impact on whether the surface verbs permits the dative alternation (e.g. *John sent a letter to Tom/sent Tom a letter*).

In Chapter 4, BKG explore the recurrent question in lexical semantics whether there are limits on the idiosyncratic meaning that a root can entail (see Lakoff 1965; Dowty 1979; Grimshaw 2005). Their main case study involves the so-called Manner/Result Complementarity, i.e. the claim by Rappaport Hovav & Levin (2010) that the idiosyncratic meaning of roots can only make reference to a manner of action or a result state, but never both.

(3)  *Manner/Result Complementarity of Roots*
     A verb can either have a root modifying a manner predicate and introducing only manner entailments, or root acting as the argument of a change predicate and introducing only state entailments, but not both. (from Beavers & Koontz-Garboden 2020: 28)

BKG focus on what they call manner-of-killing verbs (i.e. *drown*, *guillotine*, *hang*, *electrocute*, and *crucify*) in order to make their main case against Manner/Result Complementarity. BKG also analyze two other root classes, namely ballistic motion (i.e. *flip*, *throw*, and *toss*) and manner of cooking (i.e. *braise*, *poach*, and *sauté*), and arrive at the conclusion that there exists a third class of roots, i.e. manner-result encoding roots, thereby showing that manner and result entailments can be part of the meaning of some roots. To this end, BKG first develop several manner and result diagnostics following the definitions of result and manner by Rappaport Hovav & Levin (2010) and show that the roots of manner-of-killing verbs, as well as ballistic motion and manner of cooking, pattern as both manner and result when subject to relevant diagnostics. In addition, BKG make use of sublexical modification with *again* and *re-* prefixation (see Von Stechow 1995, 1996; Beck & Snyder 2001; Beck & Johnson 2004; Marantz 2007, 2009) in order to show that sublexical modifiers cannot pick manner and result entailments apart since they are encoded in a single undecomposable root. Lastly, BKG argue that the same classes of roots that defy Manner/Result Complementarity also provide another argument contra the Bifurcation Thesis for Roots insofar as such classes entail the templatic notion of causation, a notion assumed to be introduced structurally in the syntax by projections such as $v_{\text{CAUSE}}$.

This monograph represents an important contribution to the study of possible verb/root classes regarding the types of meanings they can entail. BKG's overall conclusion is that there are no templatic meanings that are not entailed by a class of roots. This strongly suggests that the Bifurcation Thesis for Roots needs to be abandoned. BKG convincingly show that the truth-conditional content of roots can have an impact on the grammatical properties of the surface verbs. By doing so, BKG lay out a theory of possible verb classes according to their truth-conditional content which in turn can determine grammatical properties, e.g. argument realization or the morphological forms of the verbs and adjectives that are derived from these classes of roots. Similarly, in terms of idiosyncratic meaning, BKG note that there do not appear to be limits in how much idiosyncratic meaning roots can entail, recapping Grimshaw (2005). Although BKG strongly argue against theories of

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event structure that assume Bifurcation, they note that event templates are still necessary. Namely, whether lexical or syntactic in nature, event templates are necessary insofar as they capture structural phenomena such as the fact that agents are subjects in the presence of an object because agents are less embedded in the event structure.

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**Caroline Féry,** *Intonation and prosodic structure* (Key Topics in Phonology). Cambridge: Cambridge University Press, 2017. Pp. ix + 374.

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Caroline Féry's *Intonation and Prosodic Structure* is a state-of-the-art survey of the relationship between prosody, morphosyntax and information structure. The book contains highly didactic introductions to the relevant topics such that it can also serve as a textbook for graduate-level courses, and possibly for advanced undergraduate courses. Each chapter is complemented with discussion questions and