

Grammatically relevant aspects of meaning and verbal polysemy

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Abstract

The debate over the relation between grammatically relevant (specifically, what we term *event referential*) and idiosyncratic aspects of verb meaning has produced a considerable literature. Some authors, such as Levin and Rappaport Hovav, have appealed to figurative uses of verbs as a source of data when the analysis of their literal uses has been controversial, a move that has sometimes been criticized. However, the question of whether figurative uses of verbs preserve the event referential properties of their literal counterparts and are therefore a valid source of data has not, to our knowledge, been systematically explored. We offer two detailed cross-linguistic case studies of Spanish and English verbs to provide an argument that figurative verb uses indeed are a reliable source of evidence for identifying event referential components of meaning: In each case study we find clear evidence for the preservation of these components across uses, indicating that these aspects of meaning both constrain and facilitate figurative uses of verbs.

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1 Introduction

In a recent paper, Rappaport Hovav (2017) uses examples like (1b) (her (47)) to argue that *drown* lexically describes a state of submersion, rather than an event of dying in a particular manner. She specifically claims that the inchoative use of *drown* in (1a) (her (50b)) is derived from the stative use and that the inference of death is purely pragmatic; relatedly, she takes (1c) (her (21)) to describe at most metaphorical submersion, not a metaphorical process of dying.

- (1) a. John drowned in water
b. The lettuce is drowning in oil
c. She is drowning in fabric

This argument belongs to an ongoing debate over the viability of Levin and Rappaport Hovav's (1991: 147) Manner/Result Complementarity hypothesis, namely, that "there do not seem to be verbs in English that lexicalize both manner/means and result/direction components."¹ Since at least their 1998 paper "Building Verb Meanings," Levin and Rappaport Hovav have consistently characterized these components of meaning as "grammatically relevant" (as opposed to "idiosyncratic"). Although, as a reviewer notes, many kinds of meaning are arguably grammatically relevant, Levin and Rappaport Hovav's discussion is clearly circumscribed to certain event referential aspects of meaning, and our use of the term 'grammatically relevant' in what follows is similarly restricted.²

¹For different views on Manner/Result Complementarity, see, a.m.o., Goldberg 2010, Rappaport Hovav & Levin 2010, Mateu & Acedo-Matellán 2012, Beavers & Koontz-Garboden 2012, Levin & Rappaport Hovav 2013, and Beavers & Koontz-Garboden 2017.

²We use 'event reference' rather than the more familiar 'event structure' because the former more precisely reflects the sort of meaning we consider the grammar to reflect. Referring to events involves individuating them in a particular way, including recognizing possibly heterogeneous internal parts (see e.g. Casati & Varzi 1999 and references cited there for relevant discussion). Although some self-described theories of event structure, such as Pustejovsky's

33 In order for (1b) to bear on (1a) or (1c), there must be reason to assume that the aspects of
34 meaning relevant for Manner/Result Complementarity are preserved across these uses. However,
35 we have not been able to find any explicit argument that this assumption is, in fact, justified. Rap-
36 paport Hovav and Levin (1998: fn. 5), commenting on the “semantic bleaching” of verbs (which
37 they exemplify with the examples *the news broke* and *the baby fell asleep*), simply note without any
38 citation or argument that bleaching only ever involves “the loss or weakening of the idiosyncratic
39 aspect of verb meaning...and...never involves removal of grammatically relevant aspects of verb
40 meaning.” But the correctness of this claim cannot be considered self-evident, among other rea-
41 sons because there has been disagreement about whether distinctly grammatically relevant aspects
42 of meaning even exist (see, for example, Taylor 1996), and, if they do, how they are connected
43 to the lexical entries for verbs (see, for example, references and comments in Rappaport Hovav
44 2017).³

45 Our goal in this paper is to offer an explicit argument that grammatically relevant – specifically,
46 event referential – aspects of verbal meaning *are* distinctly traceable in figurative polysemy.⁴ Our
47 evidence will come from two case studies comparing patterns of polysemy for pairs of verbs in
48 English and Peninsular Spanish that we consider to be reliable translation equivalents, as explained
49 in Section 3. The content associated with the members of these pairs is so similar that they overlap
50 not only in uses that describe physical actions with concrete objects, but also significantly in their
51 figurative uses. Crucially, however, the pairs also strikingly diverge in certain figurative uses. We
52 will make the case that these latter differences reflect grammatically relevant, event referential
53 aspects of meaning, including differences in entailments about participants such as whether they
54 undergo change with a specific result, whether any change is incremental, and if so, how.

55 (2) and (3) offer one example of the sort of data that we will discuss. We observe that simple
56 transitive *cut* and *cortar* ‘cut,’ can both describe not only changes in physical objects but also
57 changes in flow-like activity, for example, traffic. However, *cut* quite generally describes reduction
58 in these latter uses, rather than stopping (unless the particle *off* is added), while *cortar* entails
59 stopping, as shown by the oddness of adding a modifier equivalent to *by n%*.⁵

60 (2) a. They used a ceremonial sword to cut the cake [COCA]

(1991), are fundamentally concerned with (at least some aspects of) event reference, the term ‘event structure’ also covers a host of other ways of approaching the relation between grammar and event description that we do not necessarily endorse. For example, some approaches to event structure decompose verb meanings into semantic primitives considered to encode grammatically relevant entailments of event predicates, but nonetheless do not involve specific commitments regarding the internal part structure of the described events themselves; Parsons (1990) offers arguably just one example. Readers who are more familiar with the term ‘event structure’ can mentally substitute it for ‘event reference,’ with the caveat that we understand event structure in a very specific way. See also Section 2 for additional comments.

³A similar controversy exists in the literature on idioms (see e.g. McGinnis 2002, Glasbey 2007, Espinal & Mateu 2010 for different positions). We comment briefly on the relation between idioms and the data discussed in this paper in Section 4.

⁴We do not rule out that other sorts of grammatically relevant meaning might show this same traceability, but we do not have space to explore this possibility here. We thank an anonymous reviewer for emphasizing the complexity involved in delimiting what constitutes grammatically relevant meaning.

⁵English examples are from a local installation of the Corpus of Contemporary American English (flagged ‘COCA,’ Davies 2008, random 5% of text removed by the provider for copyright reasons), the Corpus of Global Web-based English (GloWbE, Davies 2013), or internet searches, as indicated. Spanish examples are from a local installation of the Web/Dialects portion of the Corpus del Español (CdE, Davies 2016, again random 5% removed), a corpus consisting of 250 million tagged, lemmatized words of the Spanish newspaper *El País* between the years 1976 and 2007 (El País), or internet searches. The Appendix lists the URLs for the internet examples. We have used only examples that are identifiably written in Peninsular Spanish or are considered acceptable on the relevant interpretations by speakers of Peninsular Spanish. Unattributed examples have been constructed by us. For compactness we only informally gloss gender, person, number, and tense, except in null subject contexts, where person, number and tense morphology are indicated. We uniformly gloss the morpheme *se* as SE, avoiding any commitments on the complex issue of its interpretation; other abbreviations follow the Leipzig glossing rules.

- 61 b. Sergio Ruiz cortó la tarta nupcial
 Sergio Ruiz cut the cake nuptial
 62 ‘Sergio Ruiz cut the wedding cake’ [El País]
- 63 (3) a. it could cut traffic congestion (by as much as 90%) [COCA]
 64 b. una concentración que cortó el tráfico de la ciudad (??en un 15%)
 a concentration that cut the traffic of the city in a 15%
 65 ‘a demonstration that cut off traffic in the city (??by 15%)’ [El País]

66 To the extent that constraints on figurative polysemy such as the inability of *cortar* to express
 67 reduction can be attributed to event referential aspects of meaning, it should be possible to use
 68 figurative verb senses with confidence as a source of complementary data when disputes arise
 69 about those aspects of meaning for a given verb, as Rappaport Hovav did with *drown*.

70 In making our argument, we must emphasize that we are *not* making an argument for or against
 71 Manner/Result Complementarity, and we will not enter into this latter debate or the data in (1) in
 72 what follows. However, our findings should inform future debate on this hypothesis and have
 73 other theoretical implications as well. For example, we consider them challenging for theories
 74 that posit a radical separation of so-called “root” meaning (analogous to Levin and Rappaport
 75 Hovav’s “idiosyncratic” meaning) and grammatically relevant, event referential components of
 76 lexical meaning, as in Borer (2003) or Mateu & Acedo-Matellán (2012); see Section 4 for more
 77 on this point. We hope that tracing in some detail the source and role of event referential aspects
 78 of meaning in figurative polysemy will also contribute something that Gibbs (2009: 31) considers
 79 essential for Conceptual Metaphor Theory (Lakoff & Johnson 1980), and which is arguably useful
 80 for all current theories of figurative language: Data that will inform efforts to “better articulate
 81 what empirical hypotheses and experimental predictions arise from more linguistic analyses” of
 82 such language.

83 We proceed as follows. In Section 2 we provide some preliminary comments on how we will
 84 approach literal/figurative polysemy. We also describe more specifically how we understand the
 85 notion of “grammatically relevant, event referential” meaning and how we expect it to behave.
 86 In Section 3 we briefly motivate our comparative approach and present the case studies. Finally,
 87 Section 4 highlights some of the broader implications of this work.

88 **2 Figurative language use and grammar: Some preliminaries**

89 The patterns of figurative language use that we discuss in Section 3 are fairly detailed and spe-
 90 cific, and, as noted in the introduction, vary from language to language. As a result, we want to
 91 contextualize our approach to the data within a theory of figurative language that can speak to
 92 this detail of variation. Conceptual Metaphor Theory, because it focuses on identifying maximally
 93 general patterns of metaphorical mapping in human language, is not directly helpful in address-
 94 ing this richness of detail and variation, although it certainly offers general insights into several
 95 of the shared aspects of the figurative language use that we observe (via mappings such as “Pro-
 96 cesses are movements,” or “Means are paths to destinations,” which fall under the strong version
 97 of Lakoff’s (1990) Invariance Hypothesis, on which abstract inferential patterns are claimed to be
 98 image-schematic). We therefore turn instead to Bowdle and Gentner’s (2005) “career of metaphor”
 99 theory, which offers a strategy for addressing highly specific figurative uses, with the added benefit
 100 of suggesting a model for how, over time, such uses lead to the conventionalization of new senses,
 101 i.e., figurative polysemy.

102 According to the career of metaphor theory, metaphor initially involves a comparison-based,
 103 analogical mapping from some features in the representation of a *source domain* (where a source
 104 domain might be, for example, the concept associated with an action producing a controlled sepa-

105 ration in a physical object, which we might describe using *cut*), to that of a *target domain* (for
106 example, the concept of a particular sort of disruption to a flowing movement). Bowdle and
107 Gentner maintain that repeated figurative analogy from a given source to different target domains
108 leads to the formation of a new, more abstract conceptual category shared by the source and tar-
109 gets, and along with this process, the conventionalization of a new, more abstract sense for the
110 metaphorically-used expression.⁶ This “career” – from creative figurative extension to the develop-
111 ment of a more abstract, conventionalized sense that subsumes the original and extended uses – can
112 be viewed as an account of how metaphorical categories of the sort postulated in categorization-
113 based theories of metaphor (such as Conceptual Metaphor Theory) arise.

114 The career of metaphor theory can also shed light on why the distinction between ‘literal’
115 and ‘figurative’ senses can become blurred over time, and sometimes can only be diachronically
116 reconstructed. Fortunately, it is not crucial in what follows for there to be a sharp distinction
117 between these two notions, insofar as we aim to identify aspects of meaning that are consistently
118 traceable across verb senses. Nonetheless, we will continue to employ the terms ‘literal’ and
119 ‘figurative’ for convenience, roughly to describe uses that involve, respectively, physical actions
120 involving concrete participants vs. events that involve abstract (e.g. eventive) participants or that
121 intuitively or demonstrably reflect an analogical mapping from an established sense.

122 Bowdle and Gentner illustrate their theory using nominal predicates; however, it can be applied
123 to verbs as well. In principle, one could expect any aspect of an eventuality described by a verb
124 to potentially serve as the basis for an analogical mapping that will support a figurative use of that
125 verb. This includes features that may be typical of the type of eventuality the verb describes but
126 which are considered outside of the purview of formal – though not conceptual – semantic theories
127 (for example, the pragmatic attention-calling effect of crying out is carried over to examples such
128 as *this cries out for an explanation*). However, it also includes properties of event reference more
129 familiar to formal semanticists, such as whether what is described is a state, an activity, or a change
130 of state; whether a caused event involves a volitional action or not; whether any change is scalar
131 or not, etc. These latter properties – which we refer to hereafter collectively as *event referential*
132 *aspects* (or *components*) *of meaning* – are often, if not always, expressed not by the verb alone, but
133 rather by the verb crucially in conjunction with a given syntax. For example, setting aside cases
134 involving direct pointing at an event in progress, a hearer of a use of *cut* will not know whether it
135 expresses an agentively caused change of state, as in (2), above, or an inchoative change of state
136 involving no agent, as in (4), except by considering the syntactic configuration in which the verb
137 appears.

138 (4) The rope cut on the rock below the ledge before Andrew loaded the belay bolt [Internet]

139 In this respect, event referential aspects of meaning are grammatically relevant: The grammar
140 plays a key role in revealing to the hearer the sort of reference associated with any given use of a
141 verb. Of course, grammar does not do this alone: it is the verb, and not the surface syntax, that
142 tells us, for example, that (5a) entails a change of state while (5b) does not.

- 143 (5) a. It grew.
144 b. It slept.

145 This latter fact highlights a second respect in which event referential aspects of meaning can be
146 considered grammatically relevant: languages vary, within limits but nonetheless somewhat arbi-
147 trarily, in how their verb systems impose an individuation on the same (real world) event, much in

⁶This theory is in principle compatible with different approaches to representing the polysemic expressions, as long as the different senses are somehow related to each other. See, e.g., Vicente & Falkum (2017) on approaches to polysemy, and Spalek 2014 specifically on verbal polysemy. We refer the reader to Bowdle and Gentner’s paper for a more detailed explanation of the career of metaphor.

148 the same way that languages vary in whether the noun used to describe a given entity is countable
149 or not (consider, for example, uncountable *furniture* in English vs. countable *mueble* in Spanish).
150 Crucially, this variation typically has consequences for the broader behavior of the verb within the
151 language (for example, the alternations in which it participates, or its compatibility with certain
152 sorts of modifiers).

153 To give just one example of cross-linguistic variation in event reference, Marín & McNally
154 (2011) argue that while in English, the onsets of psychological states tend to be described using
155 verbal expressions whose event reference corresponds to the transition from one state to another
156 (and which are therefore aspectually dynamic, e.g. *get angry*), in Spanish the same situations tend
157 to be described using expressions whose event reference is stative, and which capture the implicit
158 transition by conventionally carrying the added requirement of referring to the initial moment of
159 the state in question (e.g. *enfadarse*). Such subtle differences are not necessarily obvious at first
160 glance, because it may not matter to the hearer for the purposes of recognizing a situation of some-
161 one getting angry whether it is categorized as a dynamic transition or as state including its onset.
162 However, cross-linguistic variation in event reference can be detected after careful examination of
163 the behavior of verbs in the context of the entire grammar of a language: Levin and Rappaport
164 Hovav's (1995) discussion of English *blush* and Italian *arrossire* vs. Dutch *blozen* (drawing on
165 observations in McClure 1990) offers just one example.

166 The view of verb meaning sketched here suggests two specific expectations for figurative ex-
167 tension. If the analogical basis for a figurative extension does *not* involve event referential aspects
168 of meaning, but rather involves some other aspect(s) of meaning, such as the stereotypical intended
169 purpose of an action, for example, there should be no reason to conclude anything about the event
170 reference of the figurative use from the literal source. We hypothesize that some idiomatic expres-
171 sions – particularly partially- or fully-frozen ones such as *to V one's butt off* – constitute relevant
172 examples. Though figurative extensions of this sort lie outside the scope of our discussion, we
173 make some connections to the literature on the behavior of these and other idioms in Section 4. In
174 contrast, if the analogical basis for a figurative extension *does* involve event referential features of
175 meaning, such as those that fall under theories of lexical aspect or scalar semantics, then we should
176 be able to detect those features in the figurative use. Moreover, to the extent that event referential
177 aspects of meaning condition the syntax in which a verb can appear, we expect these conditions
178 on the syntax to carry over from the literal to the figurative uses. Any such differences should be
179 detectable even when other aspects of the figurative extensions are the same due to similarities in
180 other components of the meanings of the verbs.

181 While, presented in this way, this expectation may seem obvious, it is not what certain ap-
182 proaches to the verb syntax/semantics interface lead one to expect. For example, consider a theory
183 on which the concepts or frames lexically associated with a verb are treated as distinct from event
184 referential aspects of meaning, as suggested in the early work of Borer (e.g., 2003), in approaches
185 to the verb syntax/semantics interface such as that in Mateu & Acedo-Matellán (2012), or perhaps
186 in certain approaches to Construction Grammar. On such a theory, one could imagine the possibil-
187 ity of a figurative use for a verb that, on the one hand, reflected the conceptual content associated
188 with the literal use, and yet, on the other, ignored event referential aspects of that use, pairing
189 the verb instead with some other plausible syntax and event referential properties independently
190 attested in the language. It is therefore not a trivial expectation that novel figurative uses of a verb
191 should respect the event reference that is conventionally associated with its literal uses, as manifest
192 in interpretive facts and the family of syntactic configurations in which the verb appears.

193 In the next section we present two case studies that bear out these expectations. Our results,
194 if still incipient insofar as the number of cases we consider is small, offer a clear, theoretically-
195 grounded motivation to consider figurative data, including (1b), (1c), and (3), to be informative for
196 debates over the event referential analysis of their literal counterparts.

3 Variation in event reference and its implications for figurative uses

In order to test the extent to which specifically event referential properties of literal uses of verbs persist in figurative uses, we need to identify pairs (or sets) of verbs for whose literal uses event referential analyses have been independently established and which, in other respects, are as similar semantically as possible. While one might find such pairs within a single language, the natural tendency within any given language to divide linguistic labor among its expressions left us skeptical that good minimal pairs could be found. Examples such as those discussed in Marín & McNally (2011) as well as informal observation on our own part suggested to us that good candidates could be found in translation equivalents in distinct languages.

We began with a small set of candidate pairs of verbs from Spanish and English – languages that have been examined in some detail in the literature on lexical aspect and the verb syntax/semantics interface, especially since Talmy (1985). Our initial goal was to compare a range of pairs of verbs representing different well-studied categories, particularly verbs of different types of change of state and manner of motion or action. The pairs of verbs were chosen after extensive exploration in both monolingual and bilingual dictionaries, as well as inspection of corpus data, to make sure that they were strongly and consistently associated with each other, both in established reference materials and in the domains of their observed uses. We additionally consulted the IDS database (Key & Comrie 2015), a typological lexical database designed for comparative studies. The pairs discussed here are counterparts in this database.

Eventually, due to space limitations, we have decided to present two case studies: *sweep / barrer* and *cut / cortar*, which are interesting for different reasons. The literal uses of *sweep* and *barrer* have received fairly consistent analyses in the literature, with the former classified as an activity verb and the latter as entailing a result.⁷ As will become clear in Section 3.1, this is almost certainly due to the fact that *sweep* and *barrer* have different origins; however, given the potential of *sweep* to combine with resultative phrases, the overlap in the basic types of situations the two verbs are used to refer to is unquestionably substantial enough to support the expectation (confirmed in Section 3.1) that they should give rise to similar analogical extensions. Since language users are not necessarily aware of the history of the words they use, we did not see a strong reason to give more weight to the etymology of the words than to their demonstrated uses when choosing this pair. In sum, in the absence of a clear argument to the contrary, we consider *sweep* and *barrer* a valid pair for comparison.

In contrast, both *cut* and *cortar* have been analyzed as result verbs. However, while the semantics of *cut* has been the subject of some controversy due to the fact that it appears in a considerable variety of syntactic configurations, *cortar* has received little attention other than the accounts in Rodríguez Arrizabalaga (2003) and Spalek (2014), on both of which it is associated with aspectual (effectively, event referential) properties identical to those of *romper* ‘break.’ We show below that the differences between the figurative uses of this latter pair are naturally accounted for on the hypothesis that 1) typical transitive uses of *cut* entail only minimal scalar change, while *cortar* entails maximal scalar change; and 2) for independent reasons, a broader range of syntactic configurations is available to *cut* than to *cortar*, affording the former greater potential to participate in different kinds of event reference. In both case studies we proceed by first discussing the verb’s event referential properties when used literally and then illustrate in detail how differences in these

⁷An anonymous reviewer raises the question of why we compare *barrer* with *sweep*, rather than, e.g. *brush*. In response to this question, we note that in the IDS database, *barrer* is matched with *sweep* and no other verb. *Brush* (which is listed in the IDS database only as a noun) has a closer counterpart in *cepillar*, which (as in the case of English) is related to the noun for the instrument used in brushing (*cepillo* ‘brush’). We further note that *barrer*, like *sweep*, is not morphologically related to the prototypical instrument for sweeping: the Spanish word for broom is *escoba*.

240 properties correspond to contrasts in figurative use.

241 3.1 Activity and resulting change: *sweep* vs. *barrer*

242 We begin with *sweep* and *barrer*. Rappaport Hovav and Levin (1998: 100) describe *sweep* as a verb
243 of “surface contact through motion.” Their analysis focuses on the contact entailments rather than
244 the motion ones, and in this and later work they group it with verbs like *wipe*. They analyze the
245 verb as used in (6) as contributing only ‘manner’ or activity entailments, and not ‘result’ or change
246 entailments, and this analysis, to our knowledge, is not controversial, among other reasons because
247 both intransitively and simple transitively used *sweep*, such as (6a) and (6b), can be followed by a
248 denial of change of state, such as (6c), without contradiction. Note, additionally, that *sweep* cannot
249 occur with a locatum direct complement alone: in the absence of a resultative phrase or particle,
250 (6d) can only be given the reading that the sand is the location over which the sweeping is carried
251 out. However, the locatum *can* be expressed as the direct complement, whose removal is entailed,
252 in the presence of a resultative, as in (6e).

- 253 (6) a. Patxi swept
254 b. Patxi swept the floor (with a broom)
255 c. The floor remained exactly as it was
256 d. #Patxi swept the sand
257 e. Patxi swept the sand away / off the floor / into a pile

258 *Sweep* has an additional, less discussed, use as a verb of planar motion that allows inanimate sub-
259 jects.⁸ This use requires either a location direct complement or path prepositional phrase (contrast
260 (7a)-(7b)); it does not entail any unexpressed agent controlling the movement, and (7b) contrasts
261 with (6b) insofar as the latter does not entail that Patxi moves, although it does entail that some-
262 thing under Patxi’s control does. Note, further, that (7a) neither entails nor even implies that any
263 locatum is present. Nonetheless, this motion use parallels that in (6e) in allowing a locatum direct
264 complement in the company of a resultative phrase or particle (7c).

- 265 (7) a. The hammock swept (across) the floor.
266 b. ??The hammock swept.
267 c. The hammock swept the dust ??(away).

268 Summarizing, evidence in the prior literature indicates that in simple transitive form, *sweep* de-
269 scribes an activity; in this form, only the location participant can be the direct complement. The
270 participant represented as the subject either moves or controls something that moves in planar fash-
271 ion over the location. When *sweep* combines with a resultative particle or prepositional phrase, the
272 combination describes a change of state; relevantly, this combination allows the locatum to appear
273 as the direct complement argument, change in which is entailed.⁹

274 In contrast, analyses of simple transitive *barrer*, illustrated in (8), below, quite consistently
275 associate it with change entailments, often simultaneously positing a manner or activity component
276 as well.¹⁰ For example, Auza & Maldonado (2005) classify *barrer* an *actividad-resultado* ‘activity-
277 result’ verb. They define an activity-result as “un evento homogéneo demarcado por un resultado
278 final” (‘a homogeneous event delimited by an end result,’ p. 255). They contrast *barrer* with verbs

⁸Note that *sweep* is widely considered to be etymologically related to the motion verb *swoop* (e.g. Skeat 1888). We thank Beth Levin for insisting on the relevance of motion for the semantics of *sweep*.

⁹Resultatives can also be added when the location is the direct complement (e.g. *Patxi swept the floor clean*). However, these will not play a role in the discussion that follows, so we do not comment further on them here.

¹⁰The references on Spanish cited here do not address any potential challenges these data might raise for the debate over Manner/Result Complementarity.

279 like *arreglar* ‘fix,’ which entail a result but not any specific sort of homogeneous activity leading
280 to the result.

281 Other authors who classify transitive *barrer* as entailing change include Mateu (2005), Conde
282 Noguerol (2013), París (2015), and Agenjo Recuero (2019). Agenjo Recuero, in a discussion of
283 the locative alternation in Spanish, places *barrer* among the *verbos alternantes de desplazamiento*
284 (‘alternating verbs of displacement’), which she contrasts with *verbos alternantes de manera de*
285 *movimiento* (‘alternating verbs of manner of movement’). She characterizes the verb as entailing
286 simultaneous affectation of the location and the locatum, adding (Chapter 6, fn. 14) that it involves
287 a particular type of contact; this latter feature, she hypothesizes, is linked to a more pronounced
288 manner component in its meaning. The simultaneous affectation perhaps explains why *barrer*,
289 unlike *sweep*, has a simple transitive use in which the locatum appears as the direct complement
290 (8b), in addition to the location complement variant in (8a).

- 291 (8) a. Patxi barrió el suelo (con una escoba)
Patxi swept the floor with a broom
292 ‘Patxi swept the floor with a broom’
293 b. Patxi barrió la arena
Patxi swept the sand
294 ‘Patxi swept up the sand’

295 *Barrer* further differs from *sweep* in lacking a use equivalent to that in (7). (9a) is distinctly odd,
296 and the few examples that we have found with e.g. *escoba* ‘broom’ as subject imply some sort of
297 autonomous control (see (9b)).

- 298 (9) a. ??La hamaca barrió el suelo
the hammock swept the floor
299 b. Si usted ve en un sueño que una escoba barre el suelo por sí mismo...
if you see in a dream that a broom sweeps the floor by itself
300 ‘If you see in a dream that a broom sweeps the floor by itself...’ [Internet]

301 We return below to this contrast with *sweep*, which indicates, in line with Agenjo Recuero’s char-
302 acterization, that *barrer* lacks a use as a simple verb of manner of movement.

303 With respect to change of state entailments, *barrer* shows mixed behavior. The verb has a sim-
304 ple intransitive use (10a) which seems difficult to distinguish from its intransitive English counter-
305 part, and native speakers tell us that sentences like (10b), with the location as direct complement,
306 are not contradictory.

- 307 (10) a. Patxi barrió
Patxi swept
308 ‘Patxi swept’
309 b. Patxi barrió el suelo, pero quedó igual
Patxi swept the floor but stay.3SG.PST same
310 ‘Patxi swept the floor, but it remained in the same condition’

311 We return to the intransitive (10a) when we discuss the figurative uses. With respect to transitive
312 uses, Agenjo Recuero emphasizes that *barrer* patterns with change of state verbs like *limpiar*
313 ‘clean’ and contrasts with activity verbs of contact that are pragmatically associated with removal,
314 such as *frotar* ‘rub,’ in allowing a *de* prepositional phrase describing the result.¹¹

¹¹We reproduce the asterisk marking from Agenjo Recuero but assume that the example is anomalous, rather than strictly speaking ungrammatical. The glosses and translations of her examples are provided by us.

- 315 (11) a. Juan limpió la bola de cristal de huellas
 Juan cleaned the ball of crystal of fingerprints
 316 ‘Juan cleaned the crystal ball of fingerprints’ [Agenjo Recuero 2019: 252]
 317 b. *Juan frotó la bola de cristal de huellas
 Juan rubbed the ball of crystal of fingerprints
 318 Intended: Juan rubbed the crystal ball of fingerprints [*ibid.*]
 319 c. Patxi barrió el suelo de migas
 Patxi swept the floor of crumbs
 320 ‘Patxi swept the floor of crumbs’

321 Thus, we can conclude that, at the very least, *barrer* has to have a genuine use for reference
 322 to entailed changes of state. If change were only implied, but not entailed, we would have no
 323 explanation for why (11b) is anomalous, given that *frotar* often implies change. Moreover, when
 324 the locatum is the object, change is entailed, as the oddness of (12) shows.

- 325 (12) ??Patxi barrió la arena, pero la arena quedó allí
 Patxi swept the sand but the sand stayed there
 326 ?? ‘Patxi swept up the sand, but it remained there’

327 We could conceivably conclude that *barrer* is genuinely ambiguous between referring to a change
 328 of state and referring to a simple activity. However, we would have to stipulate that this ambiguity
 329 holds only when the location is the direct complement, which seems arbitrary. Moreover, the ab-
 330 sence of a result entailment in (10b) has an alternative explanation that we consider more plausible,
 331 inspired in Martin and Schäfer’s (2017) analysis of so-called ‘zero-change’ readings of causative
 332 verbs.

333 Martin & Schäfer (2017), among others, have observed that certain ostensibly causative verbs,
 334 including English *teach* and a variety of verbs in French, have a reading that does not entail change:
 335 (13) (their (2a)) is not a contradiction.

- 336 (13) Ivan taught me Russian, but I did not learn anything.

337 On their analysis, the result state of such verbs appears in the scope of a sublexical necessity modal
 338 (see Koenig & Davis 2001 for the notion of *sublexical modality*), whose modal base is restricted
 339 to causally successful worlds. Informally put, in all worlds that are causally successful, teach-
 340 ing entails learning, but the possibility of causally unsuccessful worlds is not excluded, in which
 341 teaching takes place but learning does not. We will adapt this idea to account for the asymmetry in
 342 result entailment between (10b) and (12), as we spell out below, effectively grouping the behavior
 343 of *barrer* with that of other verbs discussed by Martin and Schäfer.

344 Summarizing, the literature on *barrer* strongly supports analyzing its simple transitive use as
 345 describing a change of state specifically focused on the locatum or the location, resulting from a
 346 homogeneous activity, although the change is arguably sublexically modalized in the case of the
 347 location complement. The verb further contrasts with *sweep* in lacking a use describing a simple
 348 movement of the sort illustrated in (7). With this initial description of the two verbs in hand, we
 349 quickly present some working referential semantic representations for them, which we will take
 350 to our discussion of their figurative uses. These representations are directly inspired in Williams
 351 (2015), although he does not analyze these specific verbs.¹²

352 Williams’ analysis of the syntax/semantics for verbs has two distinguishing characteristics.
 353 First, he posits highly underspecified Agent and Patient thematic role types, close in spirit, if not

¹²Our choice of Williams’ approach is not crucial; however, we found that it facilitates a compact and novel per-
 spective on polysemy and complex event reference, especially in the case of unselected object resultatives, as shown
 in Section 3.2.

354 identical, to Dowty’s (1991) Proto-roles, or the Actor and Undergoer macroroles of Role and Refer-
 355 ence Grammar (Van Valin 1999). The Agent role type associated with subject position in English,
 356 understood in this sense, subsumes role types attributed to subject position that are distinguished in
 357 other literature, such as Instrument or Cause.¹³ Williams appeals to pragmatic reasoning to capture
 358 many of the observations captured by positing explicit role types in other approaches; for example,
 359 world knowledge tells us that a human Agent is likely to have self-control properties that partic-
 360 ipants assigned the Instrument or Cause role on other analyses do not have, weakening the need
 361 to make a hard-coded distinction between Agent and Instrument or Cause associated with subject
 362 position (see Williams 2015 for detailed argumentation).

363 Second, Williams follows Pietroski (2000, 2005) in rejecting “Cause” (however defined more
 364 precisely) not only as a thematic role type but also as an event predicate in the analysis of cer-
 365 tain English transitive expressions of change of state, *contra* much of the literature on verb syn-
 366 tax/semantics. Rather, such verbs are argued to describe what he calls *processes* that consist of
 367 two subevents: a Means and an End.¹⁴ The subject and object arguments are assigned the thematic
 368 role types Agent and Patient, respectively, with respect to this process. The characteristics of these
 369 arguments that have led some researchers to posit distinct Cause and Theme role types alongside
 370 Agent and Patient (e.g. Folli & Harley 2008 via v_{DO} and v_{CAUSE} , or Alexiadou et al. 2015 via
 371 $Voice_{AGENT}$ and $Voice_{CAUSE}$ heads) are claimed to be underspecified and to follow from the spe-
 372 cific entailments associated with participating in a process consisting of a Means component and
 373 an End component. Williams develops this analysis specifically with resultative constructions in
 374 mind; he supports it by observing that there are empirical arguments against positing a distinct
 375 causing event, and that the relation between the initial subevent of a process – the Means – and the
 376 state that constitutes its End is not always intuitively describable as causing. We refer the reader to
 377 his work for additional discussion.

378 Against this background, our treatment of transitive *sweep* works as follows. Like Levin &
 379 Rappaport Hovav (1991), we assign it a simple (activity) event reference, as shown in (14).

$$380 \quad (14) \quad \lambda y \lambda x \lambda e [\mathbf{Sweep}(e) \wedge \mathbf{Agent}(e, x) \wedge \mathbf{Patient}(e, y)]$$

381 The detailed lexical entailments of *sweep* must further ensure that the Agent (or something con-
 382 trolled by the Agent) enters into planar contact with the Patient. This will exclude the anomalous
 383 reading of *sweep the sand*, as the contact with the locatum in a sweeping event is not necessarily
 384 oriented in a planar fashion – for example, when one sweeps away a (standing) bottle, the sweeping
 385 instrument is not necessarily oriented in a planar fashion with respect to the locatum.

386 Since Williams does not distinguish between animate agents and inanimate causes, the entry in
 387 (14) can also be extended to account for the sentences in (7a) and (7c). Intransitive *sweep* can be
 388 analyzed by simply existentially binding off the **Patient** argument.

$$389 \quad (15) \quad \lambda x \lambda e \exists y [\mathbf{Sweep}(e) \wedge \mathbf{Agent}(e, x) \wedge \mathbf{Patient}(e, y)]$$

390 This will not immediately account for why (7b) is infelicitous in contrast to (6a), as there is no
 391 reason in principle it should be incompatible with this translation. We tentatively suggest (15) is
 392 conventionally restricted to describing the stereotypical sort of sweeping associated with intended
 393 cleaning: Fillmore (1986) observed similar sorts of idiosyncratic restrictions on possible senses in
 394 other cases of missing complements (e.g., *give* is restricted to describing charitable contribution
 395 when one or both of its complements are missing).

¹³This does not exclude the possibility of morphemes expressing specifically instrumental or causation roles or relations; we take subsumption by the Agent role to apply specifically to subject position.

¹⁴A similar, essentially mereotopological approach to change of state predicates can also be found in e.g. Pustejovsky (1991). Note that, despite the fact that the term *process* is sometimes used as synonymous with *activity* to describe atelic event types, this is clearly *not* how Williams uses the term.

396 (15) is an appropriate candidate to serve as a Means in a description of a complex process like
 397 resultative *sweep away*; the resultative predicate contributes the description of the End subevent.¹⁵
 398 Williams composes Means and End in resultatives with the composition rule **Komp** shown in
 399 (16a). This is a conjunction rule that guarantees that the Means described by a predicate whose
 400 logical translation is mnemonically represented by **M** in (16a) brings about the change that results
 401 in the End described by a predicate whose logical translation is mnemonically represented by **R**,
 402 via the introduction of the relation *K*, whose entailments are spelled out in (16b) (see Williams
 403 2015: 315, where he comments that “*K* relates a process e_1 to its end e_3 , and also to an event
 404 e_2 by means of which it is achieved”; **Means** and **End** are semantic primitives encoding specific
 405 relations between processes and their parts).

- 406 (16) a. **Komp**($\lambda x \lambda e [\mathbf{M}(e) \wedge \mathbf{Agent}(e, x)]$, $\lambda y \lambda e' [\mathbf{R}(e') \wedge \mathbf{Patient}(e', y)]$)
 407 $\equiv \lambda y \lambda x \lambda e_1 \exists e_2 \exists e_3 [\mathbf{M}(e_2) \wedge \mathbf{R}(e_3) \wedge K(e_1, e_2, e_3) \wedge \mathbf{Agent}(e_1, x) \wedge \mathbf{Patient}(e_1, y)]$
 408 b. $K(e_1, e_2, e_3) \equiv \mathbf{Means}(e_1, e_2) \wedge \mathbf{End}(e_1, e_3)$

409 Williams’ account of resultatives further assumes two postulates designed to guarantee that the
 410 Agent of the process is the Agent of the Means (17a), and the Patient of the process is the Patient
 411 of the End (17b).

- 412 (17) a. $\mathbf{Means}(e_1, e_2) \wedge \mathbf{Agent}(e_1, x) \models \mathbf{Agent}(e_2, x)$
 413 b. $\mathbf{End}(e_1, e_2) \wedge \mathbf{Patient}(e_1, x) \models \mathbf{Patient}(e_2, x)$

414 (18) provides the representation for *sweep away*, where $T(\alpha)$ gives the logical representation of
 415 α . Other resultative structures involving *sweep* (e.g. *sweep off*, *sweep out*, *sweep clean*) can be
 416 composed in an analogous fashion.

- 417 (18) **Komp**($T(\textit{sweep})$, $T(\textit{away})$) $\equiv \lambda y \lambda x \lambda e_1 \exists e_2 \exists e_3 [\exists z [\mathbf{Sweep}(e_2) \wedge \mathbf{Patient}(e_2, z)] \wedge$
 418 $\mathbf{Away}(e_3) \wedge K(e_1, e_2, e_3) \wedge \mathbf{Agent}(e_1, x) \wedge \mathbf{Patient}(e_1, y)]$

419 We now turn to *barrer*. We treat transitive *barrer* as encoding lexically the same event reference
 420 produced by **Komp** in (18). This representation is the basis for both the locatum- and location-
 421 object variants; however, these will have to be minimally differentiated, as the patient of the process
 422 is not identical in the two cases. Our proposal appears in (19). We represent the End state using the
 423 binary predicate **Barrido**, a subtype of state of removal entailing thoroughness and resembling an
 424 effect of friction, which we specify with **Locatum** and **Location** participants.¹⁶ Crucially, distinct
 425 variants of **Barrido** can be predicated of the location and the locatum, respectively. In addition,
 426 the End in the location-object variant is sublexically modalized under \Box_ρ , where ρ represents a
 427 stereotypical modal base.¹⁷

- 428 (19) a. $\lambda y \lambda x \lambda e_1 \exists e_2 \exists e_3 [\mathbf{Means}(e_1, e_2) \wedge \mathbf{End}(e_1, e_3) \wedge \exists z [\mathbf{Barrido}(e_3) \wedge \mathbf{Locatum}(e_3, y) \wedge$
 429 $\mathbf{Location}(e_3, z)] \wedge \mathbf{Agent}(e_1, x) \wedge \mathbf{Patient}(e_1, y)]$
 430 b. $\lambda y \lambda x \lambda e_1 \exists e_2 [\mathbf{Means}(e_1, e_2) \wedge \Box_\rho \exists e_3, z [\mathbf{End}(e_1, e_3) \wedge \mathbf{Barrido}(e_3) \wedge \mathbf{Locatum}(e_3, z) \wedge$
 431 $\mathbf{Location}(e_3, y)] \wedge \mathbf{Agent}(e_1, x) \wedge \mathbf{Patient}(e_1, y)]$

432 Despite the intuition in the literature cited above that *barrer* describes a homogeneous activity

¹⁵Alternatively, we could posit an *ad hoc*, undecomposable resultative construction with which verbs like *sweep* could be combined; this aspect of the implementation is not crucial.

¹⁶Although the specific result state need not actually have been produced by friction, the relevant result entailments are arguably due to the fact that *barrer* derives from Latin *verrere*, which is related to the Proto-Indo-European root **wers-* ‘to drag on the ground.’

¹⁷In earlier work, Martin & Schäfer (2012) propose a stereotypical modal base, rather than the causally-effective one they later defend. We consider the former more suitable for the verbs under consideration here, especially given our Cause-free analysis of the verbs, but this is a question that perhaps merits further research.

433 ending in the result state, we do not propose to specify the details of the Means because we are not
434 convinced that there is any specific Means involved. It is possible to *barrer* not only with a broom,
435 but also with objects such as one's hand, a mop, a pool cleaner, or a small brush.¹⁸

- 436 (20) a. En el caso de los suelos, bastará con barrer con un cepillo o una mopa
in the case of the floors suffice.3SG.FUT with sweep with a brush or a mop
437 'In the case of floors, it's enough to clean with a brush or a mop' [Internet]
- 438 b. las partículas en suspensión se juntan y decantan al fondo de la piscina,
the particles in suspension SE join and precipitate to.the bottom of the pool
439 donde posteriormente las podremos barrer con un limpiafondos
where after them can.1PL.FUT sweep with a pool.cleaner
440 'the suspended particles come together and precipitate to the bottom of the pool,
441 where we can then eliminate them with a pool cleaner' [Internet]
- 442 c. las etiquetas de cartón [...] están cubiertas de un moho negro. Se puede
the labels of cardboard [...] are covered of a mold black SE can.3SG.PRS
443 barrer con una simple brocha porque las salas se han ido secando y con
sweep with a simple brush because the rooms SE have been drying and with
444 ellas todo lo que contenían
them all that that contained
445 'the cardboard labels [...] are covered with a black mold. It can be removed with a
446 simple brush because the rooms have dried out over time and with them everything
447 inside' [Internet]

448 We propose instead to derive implications about the Means from the specification of the End state
449 as a subtype of removal. Further details concerning the incremental nature of the changes involved
450 could be specified, but as these will not be crucial in this section, we will not do so.

451 Summarizing, the resultative construction affords English speakers the possibility of using
452 *sweep* to express the same sort of process that *barrer* can express on its own. However, the fact
453 that the process is constructed syntactically in English has the consequence that complex process
454 predicates involving *sweep* can be both more specific than their counterparts with *barrer*, due to
455 the fact that different resultative predicates add different End entailments, as well flexible in dif-
456 ferent ways, since *sweep* by itself does not entail (intended) removal but rather only a (Means of)
457 movement that is compatible with a variety of Ends.¹⁹

458 With this basic analysis in hand, we now turn to the figurative uses. We first observe that there
459 are striking parallels in the figurative domains in which the two verbs are used. These parallels
460 point to important similarities in the conceptual information associated with the verbs, which form
461 the basis for analogical extensions in use. However, we expect that, if these extensions also involve
462 event referential aspects of meaning, any differences in event reference between the two verbs
463 should be traceable in the figurative uses. This is indeed what we find.

464 Consider first the contrast between Spanish and English in the use of these verbs to describe
465 removal in a general way. Since the locatum is what is removed in the literal use (compare (8b)),
466 such examples are possible, as expected, with simple transitive *barrer*. In contrast, in the case of

¹⁸This said, *barrer* is apparently not compatible with all kinds of contact. Contact in a broadly linear fashion seems to be involved; (20c) cannot describe circular brushing, for example. This could be explained by etymology of the verb mentioned in footnote 16.

¹⁹The fact that Spanish does not have the same flexibility in encoding results has been connected to Talmy's (1985) proposal that Spanish is a "verb-framed" (rather than "satellite-framed") language. While at a coarse level, this typological classification has some validity, we do not appeal directly to Talmy's classification here because we need more precise analyses of the syntax/semantics of event reference than he proposed. See, *inter alia*, Gehrke (2008), Beavers et al. (2010) and Martínez Vázquez (2015) for specific suggestions for approaching some of the differences between English and Spanish identified by Talmy.

467 *sweep*, a resultative is required in order to entail removal, as also happens with the literal use (recall
468 (6d)):

- 469 (21) a. la coalición rojiverde, formada por los antiguos rebeldes del 68, que barrió la
the coalition red-green, formed by the former rebels of.the 68, that swept the
470 era Kohl
era Kohl
471 ‘the red-green coalition, consisting of the former rebels of 68, which swept ??(away)
472 the Kohl era’ [Internet]
- 473 b. Vendréis a trabajar con vuestros hermanos para preparar esa revolución que
come.2PL.FUT to work with your brothers for prepare that revolution that
474 barrerá todo vestigio de esclavitud
sweep.3SG.FUT all vestige of slavery
475 ‘You’ll come to work with your brothers to prepare that revolution that will sweep
476 ??(away) all vestiges of slavery’ [CdE]
- 477 c. Tools that enable communication do not sweep ??(away) distrust, hatred and preju-
478 dice [COCA]
- 479 d. What we really need is a constitutional amendment to sweep ??(away) what the
480 Supreme Court has done [COCA]

481 Note that, although the *sweep* examples in (21) all involve the resultative *away*, other resultatives
482 appear in sentences that entail removal, such as in (22).

- 483 (22) a. He came into power in 2004 and swept out a lot of old timers [COCA]
484 b. He swept off his hat [COCA]

485 While some of the events described by sentences like these could perhaps also be described using
486 *barrer* (e.g., (22a)), others, such as (22b), cannot. *Barrer* is excluded from uses like (22b) because
487 of the differences in the way reference to the removal event is constructed in the two languages.
488 We have argued that *barrer* encodes change resulting from surface contact, while *sweep* merely
489 encodes activity in the form of planar motion (recall (7a)), with any removal entailment resulting
490 from combining the verb with a result state predicate. The fact that *barrer* does not express simple
491 movement over a location (without contact) and that it lexically specifies that its result state should
492 resemble the effect of removal by frictional contact conflicts with the features of the event described
493 by (22b). *Barrer* is therefore unsuitable for reference to such events.²⁰

494 Interestingly, we have also found cases where the reverse holds, namely that *barrer* can de-
495 scribe removal events that *sweep* cannot, again due to predictable differences in the event refer-
496 ence of the two verbs. Specifically, if the sort of planar motion required by *sweep* is pragmatically
497 excluded, while the sort of result produced via frictional contact implied by *barrer* is not, removal
498 is naturally expressed by *barrer* only. (23) offers an example.

- 499 (23) Me puse la mano en el bolsillo y barrí algunas monedas.
1SG.DAT put.1SG.PST the hand in the pocket and sweep.1SG.PST some coins
500 ‘I put my hand in my pocket and ??swept / took out some coins.’ [Internet]

²⁰Unsurprisingly, given these differences in event reference and the considerable productivity of path/result con-
structions in English, *sweep* has still other figurative uses as an intransitive motion verb that are completely inconceiv-
able with *barrer*, as in (i):

- (i) a. Forest Service officers swept in to end the stand-off [COCA]
b. Finally, I could see and relief swept over me [COCA]
c. A polite round of applause swept through the room [COCA]

However, we will not discuss these for reasons of space.

501 *Sweep* is a poor choice to describe (23) because pockets in most cases do not afford room for planar
 502 motion; alternative verbs such as *scoop* better describe the pragmatically most likely movement. A
 503 related example is found in the absence of counterparts with *swept* (*away/off/etc.*) for certain uses
 504 of the participle *barrido*, such as *un tornillo barrido* ‘a stripped/??swept (off) screw’ – one from
 505 which the grooves on the head or the threads have been removed.

506 The contrasts in the event referential characteristics of *sweep* and *barrer* can also explain a
 507 nuance of difference in figurative uses of the two verbs in the domain of the passage/effect of me-
 508 teorological forces. As we have shown (recall (6), (7), and (14)), *sweep* simply entails movement
 509 over a location, while *barrer* carries a sublexically modalized entailment of change of state in the
 510 location (recall (19b)) – in other words, while exceptions are possible, the process described by
 511 *barrer* should produce a change in all stereotypical circumstances. Now consider the following
 512 contrast, where the direct complement corresponds to the location in both languages:

- 513 (24) a. A concert stage collapsed Saturday night as a powerful storm packing severe winds
 514 swept the fairgrounds [COCA]
 515 b. The fire erupted Monday about 45 miles southeast of Los Angeles as warm, dry Santa
 516 Ana winds swept the region [COCA]
 517 c. La tormenta del año pasado barrió un área de aguas abiertas
 518 the storm of.the year past swept an area of waters open
 518 ‘Last year’s storm swept through an area of open water’ [CdE]
 519 d. Instantes después se desplomó sobre nosotros un furioso mar de espuma que,
 520 instantes after SE collapsed over us a furious sea of foam which,
 520 pasando por sobre el puente, barrió la cubierta de proa a popa
 521 passing over the bridge, swept the covering from bow to stern
 521 ‘Moments later a furious sea of foam descended on us which, passing over the bridge,
 522 swept the deck from bow to stern’ [CdE]

523 Despite the shared figurative extension of both verbs to describe similar meteorological phenom-
 524 ena in (24), on our account the details of the event reference in these examples are nonetheless
 525 fundamentally different: only movement is entailed in English, while removal is entailed in Span-
 526 ish. We therefore predict that it should be possible to find *sweep* in descriptions of meteorological
 527 phenomena where no implication of change in the location is even suggested – for example, when
 528 the force behind the movement is weak. In contrast, *barrer* should be odd in contexts where the
 529 meteorological force is not pragmatically compatible with potentially producing a removal-like
 530 change in the location. This prediction is borne out by contrasts such as the following: (25a)
 531 cannot be translated using *barrer* ((25b)):

- 532 (25) a. a gentle breeze swept my face [Internet]
 533 b. ??una ligera brisa barrió la cara de la chica
 533 a light breeze swept the face of the girl

534 Another domain of figurative use for *sweep* and *barrer* where some examples look strikingly
 535 similar, but where event referential differences also emerge, involves the description of victory
 536 (often in sports, elections, or awards):

- 537 (26) a. estaba dispuesta a barrer los oros
 538 be.3SG.IPFV prepared to sweep the golds
 538 ‘she was prepared to pick up (i.e. win) all the gold medals’ [El País]
 539 b. When [*The Silence of the Lambs*] swept the Oscars, the only other movies to win all
 540 five major awards were the screwball rom-com *It Happened One Night* and mental-
 541 ward drama *One Flew Over the Cuckoo’s Nest* [COCA]

542 Note, crucially, the contrasts in (27) and (28).

- 543 (27) a. [El Madrid] barrió al Maccabi en el Palacio (79-53) y se adelanta 1-0 en
[the Madrid] swept to.the Maccabi in the Palace (79-53) and SE advance 1-0 in
544 la serie
the series
545 ‘[Madrid] beat Maccabi in the Palace (79-53) and takes a 1-0 lead in the series’ [CdE]
546 b. ??Madrid swept Maccabi 79-53...
547 c. To sweep a series at this time of year [...] feels pretty good [COCA]
- 548 (28) a. Indiana, un estado en el que Trump barrió a Clinton por 20 puntos
Indiana, a state in the that Trump swept to Clinton by 20 points
549 ‘Indiana, a state in which Trump defeated Clinton by 20 points’ [CdE]
550 b. ??Trump swept Clinton by 20 points
551 c. Bernie Sanders sweeps the weekend’s primaries by huge margins in Alaska, Wash-
552 ington, and Hawaii [COCA]

553 The difference between the acceptability of the (a) examples in (27) and (28) vs. the counterpart
554 (b) examples follows given that the defeated opponent in the Spanish examples can be assigned
555 the locatum role, analogous to the direct complement in (8b), and thus corresponds to that which is
556 figuratively removed. This role is not available to this participant with *sweep*, which does not allow
557 locatum direct complements in simple transitive uses. In the (c) examples (as in (26)), the direct
558 complement must be mapped to the location role, which must be a two-dimensional surface, as
559 with its literal counterpart in (6b). The distribution of a plurality of individual contests (sometimes
560 represented metonymically by the opponent) can be conceived of as determining this surface. The
561 victories themselves then correspond to the understood locatum that is ‘picked up.’ This option is
562 available to *barrer* as well (as is plausibly the case in (26a)), but, as noted, it is not required.

563 The trace of contrasting event referential features is further visible in an additional contrast in
564 (29): While *barrer* can be used intransitively to describe victory, *sweep* cannot, and indeed, we
565 found no examples of active intransitive *sweep* with this use in COCA.

- 566 (29) a. Los socialistas barrieron en dos provincias
the socialists swept in two provinces
567 ‘The Socialists won overwhelmingly in two provinces’ [El País]
568 b. ??The Socialists swept

569 We hypothesize that the literal intransitive use on which these examples are based involve sup-
570 pressing the expression of the direct complement, but that they do not diverge from the transitive
571 uses in the general type of their event reference. If this is correct, intransitive *sweep* only describes
572 a Means with no entailed change – without a resultative phrase it lacks result (End) entailments;
573 in contrast, *barrer* always carries End entailments, if sublexically modalized. (29a) therefore can
574 describe a change while (29b) does not.

575 We close this section with a final set of event referential contrasts in figurative uses, this time
576 in the domain of looking or searching:

- 577 (30) a. Now that you know the Hubble classification scheme [...], you can sweep the skies
578 for galaxies and scrutinize them [COCA]
579 b. Intenté pillar la cometa [...] pero no tuve éxito a pesar de barrer
try.1SG.PST catch the comet but not have.1SG.PST success despite sweep
580 el horizonte oeste una y otra vez
the horizon west one and another time
581 ‘I tried to catch the comet [...] but I wasn’t successful despite sweeping the western

583 These uses of *sweep* and *barrer* always involve the searched location, rather than any searched-for
 584 entity, as the direct complement. The obvious analogy involves mapping the searched area to the
 585 location and any searched-for object to the locatum. Recall from the literal use that with a location
 586 direct complement, neither verb ultimately requires a change in the searched location (cf. (6c)
 587 for English and (10b) for Spanish), if not for the same reason. In this respect, the verbs resemble
 588 *search* and its Spanish counterpart *buscar* in allowing for, but not entailing, finding something.

589 However, we also expect a difference between the two verbs. The event reference we propose
 590 for *barrer* always involves a locatum (cf. (19)), even if it is not explicitly mentioned. If the fig-
 591 urative use preserves event referential features, we expect there to always be a counterpart of the
 592 locatum in the use of *barrer* to describe searching – namely, a searched-for object – even if any
 593 change in it (e.g., being found) is sublexically modalized. In contrast, the event reference of simple
 594 transitive *sweep* does not involve a locatum, even if one might be pragmatically inferred (cf. (14)).
 595 It should thus be possible for visual sweeping to lack any object of search, while in the case of
 596 *barrer*, an object of search should be required, even if it turns out not to be present. This prediction
 597 seems to be correct. In English we find examples such as (31), which suggests that the Agent is
 598 not looking for anything in particular.

599 (31) His red, unfocused eyes swept the bar and settled on me [COCA]

600 Spanish speakers we have consulted tell us that it is odd to describe such events using *barrer*.
 601 On the contrary, examples with this verb consistently imply an intended object of search. The
 602 examples in (32) are representative.

- 603 (32) a. barrí el lugar con la mirada, buscando a nuestros enemigos
 604 sweep.1SG.PST the place with the look, searching to our enemies
 605 'I swept the place with my eyes in search of our enemies' [Internet]
- 605 b. cuando escaneamos o hacemos scan de un fragmento, los ojos
 606 when scan.1PL.PRS or make.1PL.PRS scan of a fragment the eyes
 606 barren el texto de modo sistemático, escrutando cualquier detalle que
 607 sweep.3PL.PRS the text of mode systematic scrutinizing any detail that
 607 responda al propósito
 608 respond.3SG.SUBJ to the purpose
 608 'When we scan or make a scan of a fragment, our eyes sweep the text systematically,
 609 scrutinizing for any detail that could serve our purpose.' [Internet]

610 Summarizing, this case study of *sweep* and *barrer* shows very clearly how two verbs associated
 611 with extremely similar conceptual content, as manifest in the similarities in their literal and figura-
 612 tive uses, can nonetheless diverge in ways that can be directly traced to a difference in grammati-
 613 cally relevant, event referential aspects of meaning.

614 3.2 Incremental change: *cut* vs. *cortar*

615 We now turn to *cut* and *cortar*. We begin with the latter, as its analysis is less controversial. Spalek
 616 (2014), in line with Rodríguez Arrizabalaga (2003), argues that *cortar* describes a simple change
 617 of state without any specification of the activity or manner (or Means, as we call it here) in which
 618 it is produced. Though often an agent is pragmatically required (contrast (33a)-(33b)), examples
 619 like (33c) show that one is not essential.²¹

²¹Both Rodríguez Arrizabalaga and Spalek emphasize the similarities between *cortar* and *romper* 'break,' both in syntactic distribution and in the possibility of incremental Patients as in (35), below. We can explain the frequent

- 620 (33) a. Sergio Ruiz cortó la tarta nupcial
Sergio Ruiz cut the cake nuptial
621 ‘Sergio Ruiz cut the wedding cake’ [El País]
622 b. ??La tarta nupcial se cortó
the cake nupcial SE cut
623 c. nunca el aire es más aire que cuando insufla la piel luminosa de un cometa.
never the air is more aire than when inflates the skin luminous of a kite
624 ¡Qué importa si se cortó el hilo!
what matters if SE cut the string
625 ‘never is the air more itself than when it inflates the luminous skin of a kite. What
626 does it matter if the string snaps?’ [CdE]

627 Simple transitive *cortar* entails complete transection. Neither of the following examples would
628 therefore be true if only an incision was made in the tree, ears or tail.²²

- 629 (34) a. cortó un árbol [...] y en su lugar plantó un pino
cut.3SG.PST a tree [...] and in its place plant.3SG.PST a pine
630 ‘he cut down a tree [...] and in its place planted a pine’ [Internet]
631 b. indultó un toro y cortó cinco orejas y un rabo
pardon.3SG.PST a bull and cut five ears and a tail
632 ‘he pardoned a bull and cut off five ears and a tail’ [CdE]

633 The transection entailment can be defeated only by an explicit modifier such as *parcialmente*, as
634 in (35); note that in English, the modifier is not only unnecessary, but would even be odd.

- 635 (35) a. El piloto [...] cortó parcialmente la mano del viandante [...] El corte [...]
the driver [...] cut partially the hand of the pedestrian [...] the cut [...]
636 alcanzó el nervio y el hueso de su mano izquierda
reached the nerve and the bone of his hand left
637 ‘The driver cut the pedestrian’s hand [...] The cut [...] reached the nerve and bone of
638 his left hand’ [Internet]
639 b. Es tan simple como cortar parcialmente la masa con unas tijeras y
be.3SG.PRS so simple as cut partially the dough with some scissors and
640 desplazar alternativamente el trozo de masa a un lado y al otro
displace alternatively the piece of dough to one side and to the other
641 ‘It’s as simple as cutting the dough with a scissors and bending the pieces of dough

pragmatic requirement of an Agent with *cortar* under the assumption that, in contrast to *romper*, events described by *cortar* involve a predictable locus of separation (see Majid et al. 2008): An Agent will be required when the predictability of this locus depends on controlled action.

²²*Cortar* does not entail transection when used with a so-called dative of interest. This is common when the direct complement is a body part, as in (i).

- (i) ¿Por qué te cortó la cara?
why 2SG.DAT cut.3SG.PST the face
‘Why did (s)he cut your face?’ [CdE]

If the dative is missing, transection is entailed, as in (34b); to express incision, the alternative *hacer un corte* is available, as in (ii), which describes a step in a technique for making a fake open wound.

- (ii) Cuando las capas estén secas, podrás [...] hacer un corte en el papel y el látex
when the layers are dry can.2SG.FUT [...] make a cut in the paper and the latex
‘When the layers are dry, you can make a cut in the paper and the latex’ [Internet]

As examples with the dative of interest will not figure in our subsequent discussion, we set them aside here.

643 These examples indicate that if there is incremental progress in the cutting event described by
644 *cortar*, it is measured as a function of the proportion of the patient that is transected.

645 The analysis of *cut* has a longer and more controversial history. Early studies claimed that the
646 basic syntactic structure for *cut* is transitive (e.g. (36a), Guerssel et al. 1985, Haspelmath 1993).
647 Guerssel et al. and Levin (1993), among others, supported this claim based on apparent agent-
648 oriented entailments that are incompatible with the inchoative variant (see (36b)).

- 649 (36) a. They used a ceremonial sword to cut the cake [COCA]
650 b. ??The cake cut [Levin & Rappaport Hovav 2013: (10)]

651 In contrast, Bohmeyer (2007), Rappaport Hovav & Levin (2010), and Levin & Rappaport Hovav
652 (2013) have argued, based on examples like (37), that *cut*, like *cortar*, entails a change of state
653 without necessarily specifying the means by which it is produced.

- 654 (37) Suddenly, the rope cut and he fell down the well. [Levin & Rappaport Hovav 2013: 12d]

655 Nonetheless, as the contrasts between the Spanish examples and the English renderings in (34)-
656 (35) indicate, *cut*, unlike *cortar*, does not entail full transection, although it is compatible with it
657 (as implied in (36a)), and it is the default interpretation when the cut object is extremely thin or
658 narrow, as with hair, rope, or ribbon.

659 More important differences between *cortar* and *cut* emerge at the syntactic level, due to the
660 fact that English has a highly productive resultative construction, including what we will refer to
661 as unselected object resultatives, whereas Spanish has a very limited resultative construction, with
662 no unselected object variant (see, e.g., Mateu 2012 for recent discussion; see also Napoli 1992 on
663 Italian, which is very similar to Spanish). Descriptively speaking, both languages allow resultatives
664 to further specify the result state of the cut object, as in (38)-(39).

- 665 (38) Prep your carrots by cutting them in halves [COCA]
666 (39) Cortó el arrollado de pollo en finas rodajas
cut.3SG.PST the roll of chicken in fine slices
667 '(S)he cut the stuffed chicken roll in thin slices' [CdE]

668 However, only English also has resultatives such as those in (40a)-(40b) (cp. (40c)), where the
669 result phrase describes a state of directionally-oriented detachment from an entity to which the cut
670 participant is originally connected.²³

- 671 (40) a. You can always cut off the parts with 'freezer burn' [COCA]
672 b. Cut out the child's adenoids and the trouble will cease [COCA]
673 c. ??cortar las adenoides fuera
cut.INF the adenoids out
674 Intended reading: ≡ (40b)

675 Martínez Vázquez (2015) argues that resultative constructions conveying directional movement

²³Without the particle, sentences like (40a)-(40b) entail mere incision into the cut participant; complete transection, although conceivable, is strongly dispreferred.

- (i) a. You can always cut the parts with 'freezer burn'
b. Cut the child's adenoids

We hypothesize that complete transection is more difficult to infer in these cases than in (36) because the variants with the particles have specialized and compete with particleless variants; note that there is no directly competing alternative to (36a). See also the discussion of the examples in (48), below.

676 are possible in Spanish only when either the verb or the result phrase entails or strongly implies
 677 directed motion. She notes that Spanish lacks inherently directional prepositions like *off* or *out*:
 678 *fuera* is purely locative. Since we have no evidence of implied directional movement with *cortar*,
 679 a resultative interpretation of (40c) is anomalous. Recall from (34b) that simple transitive *cortar*
 680 describes this sort of cutting without need for the particle: Transection entails detachment, and any
 681 directionality is presumably pragmatically inferred.²⁴

682 In unselected object resultatives, as in (41), the direct complement participant does not suffer
 683 the cut at all – in this sense, it is “unselected.” Rather, some contextually understood entity is
 684 cut, with the result that the direct complement participant ends up in the state described by the
 685 resultative phrase. *Cortar* cannot be used in this way (see (42)).²⁵

- 686 (41) a. She and two others are accused of taking the dog [...] after cutting it loose from a
 687 tree [COCA]
 688 b. one can cut a path into a hollow area in the middle of a [bamboo] grove, creating a
 689 peaceful sanctuary [Internet]
 690 c. I cut a hole in the loaf and put the money in [Internet]

- 691 (42) a. ??cortaron el perro suelto / libre / del árbol
 cut.3PL.PST the dog loose / free / of.the tree
 692 b. ??cortar un agujero en el pan
 cut.INF a hole in the bread

693 Our analysis of simple transitive *cortar* and *cut* builds on Williams’ (2015: 227) analysis of *melt*,
 694 reproduced in (43) with non-crucial details changed. (43) differs from the analyses of *sweep* and
 695 *barrer* in introducing no Means subevent entailment: e_1 is the larger event that has an End as a
 696 subpart; the postulate in (17b) guarantees that the Patient of e_1 is also the Patient of the End.

- 697 (43) $\lambda y \lambda x \lambda e_1 [\mathbf{Agent}(e_1, x) \wedge \exists e_2 [\mathbf{End}(e_1, e_2) \wedge \mathbf{Patient}(e_1, y) \wedge \mathbf{Melted}(e_2)]]$

698 The absence of a Means subevent entailment will be connected to the conclusion of earlier authors
 699 that *cut* and *cortar* are simple change of state verbs. Recall that on Williams’ analysis the **Agent**
 700 role encompasses both nonvolitional and volitional contributors to change; controlled activity will
 701 thus be compatible with this sort of event reference when pragmatically appropriate.

702 The characterization of the result state will be crucial to capturing the similarities and differ-
 703 ences between the two verbs. The data we have seen so far, especially in the contrasts in (34),
 704 (35), and (40), suggest that incrementality plays a key role. We therefore specify that the relation
 705 between the events e_1 denoted by *cut* and *cortar* and the End e_2 is incremental, as defined in (44),
 706 from Rothstein (2004: 107–108), with minor edits.²⁶

- 707 (44) a. **INCR**($e_1, e_2, C(e_2)$) (“ e_1 is **incrementally related** to e_2 with respect to the incre-
 708 mental chain $C(e_2)$ ”) iff there is a contextually available one-one function μ from

²⁴See, e.g., Gehrke (2008), Beavers et al. (2010) for further discussion of the role of lexical inventory in facilitating resultatives with prepositions.

²⁵To express (41c) the related verb *recortar* is used.

- (i) Dibuja una recta, un ángulo, recorta un triángulo
 draw.3SG.IMP a line an angle cut.3SG.IMP a triangle
 Draw a line, an angle, cut out a triangle [CdE]

Morphological derivation can modify event reference just as the addition of a resultative can, and the account presented here will make predictions for the patterns of polysemy found with derived verbs, once an analysis of their components is established. However, due to space limitations, we will not discuss examples with these verbs here.

²⁶An alternative would be to use a scalar semantics like that proposed in Spalek (2014) for *cortar*, which built on Kennedy & Levin (2008)’s analysis of degree achievement verbs; for our purposes the choice is not crucial.

- 709 $C(e_2)$ onto the set of parts of e_1 such that for every $e \in C(e_2)$, $\tau(e) = \tau(\mu(e))$,
710 where $\tau(e)$ is the run time of e .
- 711 b. An **incremental chain** $C(e)$ is a set of parts of e such that:
712 1. the smallest event in $C(e)$ is the initial bound of e ;
713 2. for every e_1, e_2 in $C(e)$, $e_1 \sqsubseteq e_2$ or $e_2 \sqsubseteq e_1$;
714 3. $e \in C(e)$

715 We incorporate the incremental relation into the translations of the verbs in (45). We differentiate
716 *cut* and *cortar* via a scalar difference in their result states: While both entail separation at a pre-
717 dictable locus as a result, which we represent using the English-mnemonic constant **Separated**,
718 the amount of entailed separation will be minimal in the case of *cut*, and maximal in the case of
719 *cortar*, as indicated by the subscripts *min* and *max*, respectively.

- 720 (45) a. *cut*: $\lambda y \lambda x \lambda e_1 [\mathbf{Agent}(e_1, x) \wedge \exists e_2 [\mathbf{End}(e_1, e_2) \wedge \mathbf{Patient}(e_1, y) \wedge$
721 $\mathbf{Separated}_{min}(e_2) \wedge \mathbf{INCR}(e_1, e_2, C(e_2))]]]$
722 b. *cortar*: $\lambda y \lambda x \lambda e_1 [\mathbf{Agent}(e_1, x) \wedge \exists e_2 [\mathbf{End}(e_1, e_2) \wedge \mathbf{Patient}(e_1, y) \wedge$
723 $\mathbf{Separated}_{max}(e_2) \wedge \mathbf{INCR}(e_1, e_2, C(e_2))]]]$

724 Note that the minimal separation entailment for *cut* is compatible with higher degrees of separation,
725 including complete transection. Similarly, the amount of partial completion of events described by
726 *cortar* will be measured by the amount of incremental change in the state of separation.

727 To compose resultative phrases that modify the result state, we propose a second **Komp**(osition)
728 rule, **Komp**_{End}, related to that in (16a), which can apply to a verb that already entails an End, al-
729 lowing the resultative phrase to further specify that End, as in (46a).²⁷ By way of illustration, the
730 representation for *cut out* is shown in (46b).

- 731 (46) a. **Komp**_{End}($\lambda y \lambda x \lambda e_1 [\mathbf{Agent}(e_1, x) \wedge \exists e_2 [\mathbf{End}(e_1, e_2) \wedge \mathbf{Patient}(e_1, y) \wedge \mathbf{R}_1(e_2)]]$),
732 $\lambda z \lambda e [\mathbf{R}_2(e) \wedge \mathbf{Patient}(e, z)]$) \equiv
733 $\lambda y \lambda x \lambda e_1 [\mathbf{Agent}(e_1, x) \wedge \exists e_2 [\mathbf{End}(e_1, e_2) \wedge \mathbf{Patient}(e_1, y) \wedge \mathbf{R}_1(e_2) \wedge \mathbf{R}_2(e_2)]]]$
734 b. **Komp**_{End}($T(\textit{cut}), T(\textit{out})$) $\equiv \lambda y \lambda x \lambda e_1 [\mathbf{Agent}(e_1, x) \wedge \exists e_2 [\mathbf{End}(e_1, e_2) \wedge$
735 $\mathbf{Patient}(e_1, y) \wedge \mathbf{Separated}_{min}(e_2) \wedge \mathbf{INCR}(e_1, e_2, C(e_2)) \wedge \mathbf{Out}(e_2)]]]$

736 This rule yields a description of a change with a complex End state that involves, in this case, the
737 Patient being both separated and out of wherever it was located prior to the onset of the process.
738 The resultative entailment will guarantee that the separation must effectively be maximal.

739 For unselected object resultatives, we assume that *cut* can also appear in the representation
740 illustrated in (47) for *cut loose*, via the **Komp** rule we used for resultatives with *sweep*. That is, the
741 cutting constitutes the Means by which an End is achieved. Note that just as with *sweep away*, the
742 Patient of the Means is distinct from the Patient of the process as a whole; the latter is entailed by
743 (17b) to be the Patient of the result state **Loose**.

- 744 (47) **Komp**($T(\textit{cut}), T(\textit{loose})$) $\equiv \lambda y \lambda x \lambda e_1 \exists e_2 \exists e_3 [\exists z [\mathbf{Agent}(e_2, x) \wedge \exists e_4 [\mathbf{End}(e_2, e_4) \wedge$
745 $\mathbf{Patient}(e_2, z) \wedge \mathbf{Separated}_{min}(e_4) \wedge \mathbf{INCR}(e_2, e_4, C(e_4))]]] \wedge \mathbf{Loose}(e_3)$
746 $\wedge K(e_1, e_2, e_3) \wedge \mathbf{Agent}(e_1, x) \wedge \mathbf{Patient}(e_1, y)]]$

747 It is simply a fact about Spanish that the operation in (47), unlike (46a), is unavailable to *cortar*.

²⁷This rule can thus be viewed as producing what Rapoport (1999) and references cited there call a ‘modified result’ construction. We leave unresolved the issue of how to capture any additional constraints that might be needed on the licensing of specific result phrases, such as the more limited availability of adjectival resultatives in Spanish vs. English. We also leave open whether (46a) amounts to a semantics for so-called “weak” resultatives, and (16a), a semantics for “strong” resultatives (see Mateu 2012 for recent discussion and relevant data). For further discussion and analysis of syntactically complex change of state/location constructions, including in a comparative Germanic/Romance perspective, see also Napoli (1992), Gehrke (2008), Beavers (2012a, 2012b), and references cited in these works.

748 Whatever the ultimate explanation for this fact, which has been widely debated in the literature
 749 growing out of Talmy (1985), the important point for this discussion is that the interaction of the
 750 lexicon and syntax affects the range of event reference that verbs can participate in, and a proper
 751 characterization of this range should shed light on patterns of variation in event-reference-related
 752 figurative uses of those verbs.

753 With this background, we now consider the figurative uses. As with *sweep* and *barrer*, there
 754 are important similarities between the figurative uses of *cut* and *cortar*. Both verbs entail only
 755 predictable separation, without any entailment of Means. As there are relatively few restrictions
 756 on the nature of entities that can be separated, figurative controlled separation is found with a wide
 757 range of entities, including eventualities, information, and amounts. The nature of these entities,
 758 in turn, affords little in the way of figurative interpretations beyond interruption, elimination, or
 759 reduction. Nonetheless, we also observe consistent differences between the interpretations found
 760 with *cut* and *cortar* which are fully expected given the difference in the degree of change they
 761 respectively entail.

762 One figurative use that illustrates the contrast between minimal vs. maximal separation in
 763 the complement involves events involving the reduction or stopping of the (possibly metaphori-
 764 cal) flow, supply or movement of homogeneous substances, such as water, electricity, air, traffic,
 765 money, or words, as in (48). In these examples, the flow is transected, and since the verbs differ in
 766 entailed degree of transection (recall (45)), we find differences in the degree of change in the flow.
 767 Specifically, *cortar* entails stopping (i.e., complete transection of the flow), while *cut* entails only
 768 reduction (i.e., partial transection of the flow), unless accompanied by *off*.

- 769 (48) a. Low traffic neighbourhoods are a simple and effective way to cut traffic flow through
 770 an area's streets [Internet]
 771 b. Retiran un árbol que cortó el tráfico en el Camiño da Renda
 772 remove a tree that cut the traffic in the Camiño da Renda
 773 'The police] remove a tree that cut off traffic on Camiño da Renda' [Internet]
 774 c. wrapping the hair elastic around her fingers...cutting (off) her circulation [COCA]
 775 d. Estos materiales pueden [...] cortar la circulación de las extremidades originando
 776 those materials can [...] cut the circulation of the extremities originating
 777 la muerte de los tejidos
 778 the death of the tissues
 779 'Those materials can [...] cut off circulation in the extremities, causing the death of
 780 the tissues' [CdE]

778 That said, as with literal cutting, this use of *cut* often implies complete stopping when the figurative
 779 distance to be transected is very small, as in (49a), which is most saliently understood as equivalent
 780 to *cut off*) and analogous to the examples in (49b).

- 781 (49) a. the power company cut the electricity at the poles [COCA]
 782 b. Cortaron la electricidad, telefonía e Internet
 783 cut.3PL.PST the electricity telephone and internet
 784 'They cut off the electricity, telephone and internet service' [CdE]

784 A related figurative domain where the difference in entailed degree of change becomes evident
 785 involves complements that denote eventualities; with these, the progress or continuity of the even-
 786 tuality can be assimilated to flow.²⁸ As expected, given the examples in (48), *cut* typically describes
 787 reduction of activity unless accompanied by a particle like *off*, while *cortar* describes interruption

²⁸The general association of events with the action of flowing is a well documented metaphor in the Cognitive Linguistics literature (cf. "Flow of Events is Flow of Water" in Lakoff et al. 1991).

788 or cessation, as seen in the contrasts in (50) and (51).²⁹

- 789 (50) a. Carrizo Oil and Gas is cutting activity and deferring some completions [COCA]
790 b. Francia corta la entrega de etarras
France cuts the delivery of ETA members
791 ‘France cuts ??(off) the extradition of ETA members’ [EL País]
- 792 (51) a. cut ??(off) [=stop] the conversation / negotiations / activity
793 b. cortar la conversación / las negociaciones / la actividad
cut the conversation / the negotiations / the activity

794 Other differences in figurative uses of these verbs are attributable to the event referential potential
795 of *cut* as specifically facilitated by syntactic resources unavailable to *cortar*. We illustrate with two
796 examples. The first involves uses of *cut* to describe reduction in physical volume, which has been
797 extended to reduction in amount more generally. (52) illustrates with information-related objects,
798 such as works of art or literature. *Cut* clearly can describe reduction in amount and, in some cases,
799 is compatible with describing elimination, as in (52a) (which is ambiguous). In contrast, *cortar*
800 describes only elimination.

- 801 (52) a. we’re over budget. We have to cut the scene [COCA]
802 b. cortaron la escena compartida con Chris Evans
cut.3PL.PST the scene shared with Chris Evans
803 ‘they cut the scene with Chris Evans’ [CdE]

804 For the elimination entailment to be unambiguous with *cut*, *out* or similar is required:

- 805 (53) At least one broadcast version of this movie cut out the scene where Spicoli and his friends
806 open the door to their van and tons of smoke comes out. [Internet]

807 The use of *cut* to describe a general reduction in amount is illustrated in (54).

- 808 (54) a. it could cut traffic congestion by as much as 90% [COCA] (=3a)
809 b. cutting our deficits by almost three-quarters [COCA]
810 c. cutting taxes massively for both the middle class and for companies [COCA]
811 d. We could cut the price by about \$500 per ticket [COCA]

812 *Cortar*, at least in Peninsular Spanish, lacks this use. We have already seen that *cortar* rejects
813 amount modifiers equivalent to *by n%* ((55), repeated from (3b)), and in the CdE, no examples of
814 *deficit(s)*, *precio(s)*, or *impuesto(s)* appeared in a collocation search with a four-word window to
815 the right of the verb.³⁰

- 816 (55) una concentración que cortó el tráfico de la ciudad (??en un 15%)
a concentration that cut the traffic of the city in a 15%
817 ‘a demonstration that cut off traffic in the city (??by 15%)’ [El País]

²⁹To describe reduction in activity, more often than *cut* alone (which can sound odd and is in fact extremely rare in COCA), one finds instead *cut back* or *cut down*. Further research is needed to determine why this is the case; a first hypothesis is that cases where *cut* fails to express reduction are cases where the clearest metaphorical mapping to flow involves time (as opposed to e.g. a volume of homogeneous activity by multiple agents), which lacks the appropriate internal structure to support reduction as partial cutting.

³⁰Only a handful of examples with *precio(s)* appear in other dialects, and in some cases we cannot exclude that the examples are translations from English, indicating that this use is not well-established in other varieties of Spanish, either. In contrast, we did find about 50 examples of *cortar* with *prespuestado(s)* ‘budget(s),’ again almost entirely from non-Peninsular sources. This could be due to the possibility of conceiving of a reduction in budget as arising from the removal (i.e., cutting off) of one or more items from a list, an independently attested use of *cortar* that is consistent with our analysis.

818 The elimination entailment with *cortar* is a small pragmatic step from the complete separation
819 of the piece in question, analogous to example (34b). Perhaps less obvious is how *cut* comes to
820 describe reduction in volume or amount in these examples, since partial transection or separation
821 of the objects in question does not obviously lead to this result.

822 The *Oxford English Dictionary* relates this use of *cut* to the resultative forms *to cut short* and
823 *to cut down* (presumably in the sense of making lower in height) – the use arguably illustrated
824 in (52a). It seems that the association of this sense with simple transitive *cut* came later, and the
825 extension specifically to amounts not directly related to removal of physical parts dates from the
826 second half of the 19th century. Thus, the reduction sense of *cut* has arisen due to the availability
827 of a resultative construction that specifically describes the result of cutting as making something
828 smaller, a construction not available in Spanish. The hypothesis that the problem with (55) involves
829 the expression of event reference, rather than a deep conceptual difference between *cut* and *cortar*,
830 is supported by the fact that reduction is habitually expressed in Spanish with the morphologically
831 related verbs *recortar* ‘cut back, cut out’ or *acortar* ‘shorten.’

- 832 (56) a. su coste nos recortaba gran parte del presupuesto
833 its costs 1PL.DAT cut.back.3SG.IPFV big part of.the budget
834 ‘its cost was taking away a big part of the budget’ [El País]
835 b. El Rey ha decidido recortar en un 7,1% sus ingresos brutos
836 the king has decided cut.back in a 7.1% his income gross
837 ‘The King has decided to cut his gross salary by 7.1%’ [CdE]
838 c. El Málaga acortó distancias en el minuto 55 con un tanto [de] Stadsgaard
839 the Malaga cut.short distances in the minute 55 with a point of Stadsgaard
840 ‘Malaga cut [the opponent’s] lead in minute 55 with a score [by] Stadsgaard’ [CdE]

838 The second example of a difference in figurative use due to differences in event reference afforded
839 by syntax involves the unselected object construction, shown above in (41). The specific figurative
840 interpretations are analogically related to the literal uses: For example, those with *loose* describe
841 freeing from control or restraint, as in (57).

- 842 (57) by cutting the banks loose [...] one could expect them to fully return to the markets
843 [Internet]

844 In other cases, the unselected object is the same as on the literal use and the figurative interpretation
845 arises via the result phrase; in such cases (e.g. with *hole*, *niche*, or similar), the sentence entails
846 making a metaphorical version of the unselected object referent.

- 847 (58) serpents that had long ago cut a niche for themselves in the island’s deranged ecology
848 [COCA]

849 Since such resultatives do not exist in Spanish, as illustrated in (42), it is unsurprising that we get
850 nothing like these examples with *cortar*.

- 851 (59) a. ??cortar la banca suelta
852 cut.INF the bank loose
853 b. ??cortar(se) un hueco en el entorno
854 cut.INF(SE) a hole in the surroundings

853 *Cut* and *cortar* are extremely frequent verbs, and we have had space to consider only some of the
854 domains of figurative extension. Nonetheless, the data discussed clearly illustrate how the event
855 referential properties of the verbs – whether in simple or more complex syntactic structures – are
856 traceable in these figurative uses.

857 This concludes our pair of case studies of illustrating how event referential aspects of meaning

858 intervene in the licensing of figurative uses. The patterns of similarity and difference support the
859 claim that figurative uses of verbs are an informative source of data to consider when there is doubt
860 about event referential aspects of verb (and verb phrase) meaning.

861 4 Implications

862 We now comment briefly on the implications of this work for more general questions concerning
863 verb meaning and grammar.

864 We begin by returning to idiomatic expressions. We noted in Section 2 that, as we understand
865 the career of metaphor theory, figurative extensions can selectively target specific components
866 of meaning. Thus, our claims concerning the traceability of event reference across literal and
867 figurative uses apply only in cases where the source of figurative analogy includes event referential
868 aspects of meaning. If a figurative extension does *not* involve event reference, we have no reason
869 to expect the event reference in the source to be respected in the same way. This, we suggest, is
870 what happens in partially- or fully-frozen idioms.

871 Idiomatic uses of verbs are an example of figurative language *par excellence*. However, in
872 contrast to what we have seen in Section 3 (and despite what has been claimed by e.g. McGinnis
873 2002), verb-based idioms do not always respect the event reference of the source use. For example,
874 (60), despite involving the resultative particle *off*, describes an atelic event, as incompatibility with
875 the *in X time* modifier shows; the idiom *to V one's butt off* is paraphrasable as 'to V very hard' (see
876 e.g., Jackendoff 1997, Espinal & Mateu 2010 and references cited there).

877 (60) John laughed his butt off all day long/??in ten minutes
878 (Espinal & Mateu 2010: (19a))

879 Interestingly, however, precisely in this sort of case, the relevant parts of the syntax of the idiomatic
880 expression are frozen: (60) cannot be passivized, nor can the direct object be topicalized or other-
881 wise displaced. Gehrke & McNally (2019) note that there seems to be a correlation between the
882 source of the analogy for the idiomatic use and the grammatical flexibility of the idiom: When
883 the analogy has its origins in event referential (including participant role-related) properties of the
884 source description, grammatical flexibility is preserved in the idiomatic use. In contrast, when the
885 analogy underlying the idiom has no relation to any grammatically relevant aspect of meaning,
886 grammatical flexibility seems to be correspondingly reduced, and the part of the construction asso-
887 ciated with the idiomatic meaning functions for practical purposes as an undecomposable lexical
888 item. In the case of (60), the idiom presumably originates in an analogy involving the intensity
889 required of an action in order for a body part fall off; however, intense action in general in no way
890 crucially depends on there being a participant corresponding to a body part, nor, therefore, on it
891 experiencing any result. Recognizing a status for grammatically relevant, event referential mean-
892 ing as distinct from the rest of verb meaning thus can lead to predictions not only for the sorts of
893 figurative uses discussed in Section 3 but also for when we should expect fully or partially frozen
894 idioms. These predictions should be investigated in detail in future research.

895 Partially- or fully-frozen idioms offer an example of how a verb's surrounding morphosyntax
896 may fail to preserve its typical event reference under certain sorts of figurative uses. We should
897 also note that language offers ample examples in which a verb is used in novel morphosyntax with
898 the goal of associating a type of action, change or state that the verb already describes with a new
899 event reference. To give just one example, the verb *disappear* originally described a spontaneous
900 change of state but eventually was extended to describe a caused version of that change of state.
901 However, what we have *not* found is for a verb to undergo an arbitrary change in morphosyntax
902 and event reference *at the same time as* its use is extended from an existing source domain to
903 a novel domain. For example, even though English has transitive verbs with an event reference

904 ostensibly identical to that of *barrer* (consider, for example, *vacuum the dust*), a figurative use of
905 *sweep* involving an analogical extension to a new domain does not seem to be possible by freely
906 associating the verb with an event reference that it was not already associated with. It is all the more
907 striking that this might be the case given that English does afford alternative syntactic structures
908 independently available to the verb on its literal use (e.g. the resultative *sweep away*) to express
909 the same meanings as are expressed by the simple transitive form in Spanish, and that could in
910 principle be expressed by combining *sweep* with the argument structure associated with *vacuum*
911 *the dust*. Whether this empirical observation has any counterexamples, and if so, how they have
912 arisen, should be further tested.

913 This latter observation has implications for the ongoing debate in syntactic theory over how
914 the “root” content associated with verbs should be related to the non-root (also variously referred
915 to as “templatic,” “argument structural,” or “event structural”) content that is manifest in mor-
916 phosyntax, assuming that these are distinguished (and distinguishable). As recently discussed
917 in Rappaport Hovav (2017), analyses that posit these two kinds of components to verb meaning
918 disagree as to whether they are fully independent of each other, as maintained by e.g. Mateu &
919 Acedo-Matellán (2012), or whether each verb carries some specification constraining its distribu-
920 tion in argument structures (e.g. Alexiadou et al. 2015) or event structures (Rappaport Hovav &
921 Levin 1998). Although our goal has not been to directly address this question, our data are difficult
922 to explain on accounts that treats these two aspects of a verb as fully independent. On such ac-
923 counts, it is not obvious why the morphosyntactically encoded event referential aspects of meaning
924 associated with the literal use of a verb would have to be preserved when the relevant sort of novel,
925 figurative uses are created.

926 In addition, our examination of the interaction of grammatically relevant event referential con-
927 tent with content that is not specifically linked to grammar strongly suggests that the former is less
928 malleable than the latter. Whether this asymmetry is due to a fundamental difference in the nature
929 of the meaning contributions of grammar vs. a grammar-free root, as suggested by e.g. Borer (2003,
930 2013) and Carston (2019); or whether grammatically relevant content is simply less specific than
931 the rest of verb content, as suggested by e.g. Goldberg (2010) and Beavers & Koontz-Garboden
932 (2020), and thus perhaps affords fewer possibilities for analogical meaning extension, is another
933 question for future research.

934 Finally, our study took as its rhetorical starting point a reflection on the sort of argumentation
935 used by Levin and Rappaport Hovav to defend the Manner/Result Complementarity hypothesis.
936 While, as we noted in the introduction, we cannot enter into the debate over this hypothesis here,
937 we can make a few observations. First, our analysis of *sweep* and *barrer* shows clear differences
938 in the respective preservation of Means vs. End entailments from literal to figurative uses. *Sweep*
939 consistently places constraints on the manner of figurative movement,³¹ while any entailments
940 regarding the result vary according to other lexical material, notably resultative phrases. *Barrer*, in
941 contrast, consistently entails a result across uses, even if it is sometimes sublexically modalized,
942 while virtually nothing is entailed concerning the Means subevent, other than that there is one and
943 that it be of the sort that could produce the result. Even though we associated *barrer* lexically with
944 complex event reference, which could be seen as contravening Manner/Result Complementarity,
945 we did not place any specific restrictions on the Means subevent. We take this to be compatible
946 with Rappaport Hovav and Levin’s (1998) claim that idiosyncratic material can fill in only one
947 slot in their templatic representations for verbs (e.g., as a modifier of an abstract ACT predicate or
948 as a complement to an abstract BECOME predicate; see their paper for details). In other words,
949 our analysis highlights the fact that there are potentially different ways to concretize Manner/Result
950 Complementarity. It can be viewed as a hypothesis concerning the complexity of the event referents
951 described by a verb, or it can be viewed as a hypothesis about constraints on the lexically-specified

³¹This finding seems to conflict with what is reported in Martin et al. (2019) for figurative uses of verbs in German, but we must leave a close comparison of our work and theirs for the future.

952 association of idiosyncratic descriptive content with those event referents or their parts (which
953 might be complex). Our reading of the recent literature is that Manner/Result Complementarity
954 has been interpreted implicitly or explicitly in both ways. Future debate concerning the hypothesis
955 should be careful to control for the two ways of understanding it.

956 Second, the case study in Section 3.2 showed that *cut* and *cortar* consistently entail a result
957 in both literal and figurative uses, while no Means or manner component was posited for either
958 verb, even for *cut* as used in the unselected object resultative in English. This is interesting for two
959 reasons. First, we were able to analyze the unselected object use of *cut* without positing a second,
960 “manner” sense for the verb (cp. the suggestion in Levin & Rappaport Hovav 2013: fn. 7). This
961 analysis was possible because nothing under the assumptions made by Williams (2015) prevents
962 a change of state involving one Patient from constituting the Means component of a process by
963 which another change of state is produced in another Patient. That is, Means is not identical to
964 “manner.” We consider this a benefit of Williams’ approach to resultatives, and we conjecture that
965 it might be fruitfully applied to certain other unselected object and related constructions. Second,
966 our analysis has highlighted the potential for figurative uses to help distinguish manner and result
967 *entailments* from pragmatic manner and result *inferences*, the latter of which may come and go
968 depending on the specific eventualities described by the verb.

969 5 Conclusions

970 In spite of all that has been written on the semantics of verbs in the formal linguistics literature,
971 literal/figurative polysemy has received comparatively little attention. We have shown how deeply
972 diving into the figurative uses of counterpart verbs in different languages can uncover regularities
973 in grammatically relevant aspects of event reference across literal and figurative uses and yields
974 new and, in some cases, quite nuanced, insights into verb meaning. In addition, by showing how
975 event referential characteristics are preserved across figurative polysemy, our study has also opened
976 the door to a more principled way of accounting for figurative data that are not currently explained
977 by theories that focus exclusively on highly general conceptual metaphors or similar notions.

978 Our study reveals that a grammatically relevant component of meaning – specifically, event
979 reference – both constrains and facilitates figurative uses of verbs, and that cross-linguistic com-
980 parison can shed light on the articulation between grammar and conceptual content. We hope that
981 the results not only contribute to informing theories of the syntax/semantics interface but also en-
982 courage further approximation between approaches to meaning that focus on reference and those
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1160 Appendix

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