

# Complications in diagnosing lexical meaning: A rejoinder to Horvath and Siloni (2013)

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## Abstract

We respond to Horvath and Siloni's (2013) continued arguments against the reflexivization analysis of anticausatives, which we show suffer many of the same problems Beavers and Koontz-Garboden (2013) identified with the arguments in Horvath and Siloni (2011).

In Beavers and Koontz-Garboden (2013) (BKG) we point to methodological, empirical, and conceptual inadequacies in Horvath and Siloni's (2011) arguments against the analysis of anticausativization as a reflexivization operation, as argued by Chierchia (2004), Beavers and Zubair (2013), and particularly Koontz-Garboden (2009). One of BKG's main points is a methodological one — a key task in evaluating claims of semantic unacceptability is ensuring that context is taken into account in evaluating the relevant data. As BKG demonstrated repeatedly, examples that sound odd absent a context are instead judged acceptable when appropriate context is supplied. Such observations have ramifications for whether certain acceptability patterns are due to pragmatics vs. lexical meaning qua the set of lexical entailments encoded by a given word (following e.g. Dowty 1991). BKG conclude that Horvath and Siloni's (2011) claim that their data indicate an absence of reflexive causal meaning in anticausatives is not supported, and that the data instead support such an analysis. Despite this, Horvath and Siloni (2013) (HS) suffers from essentially the same problems. As such, our overarching point in this rejoinder is the same as in BKG. In what follows we largely just point out where these problems arise again, and close by responding to their assessment of advantages of the reflexivization analysis over alternatives such as causer deletion, showing that there are key empirical and formal misunderstandings that lead HS again to unsupported conclusions.

## 1 Context, acceptability judgements, by *itself*, and negation

The problems regarding absence of context in HS are seen most clearly in relation to *by itself* modification. BKG (following both Chierchia 2004 and Koontz-Garboden 2009) claim that *by itself* only modifies predicates that lexically encode causal meaning, including causatives and, we argued, anticausatives, but not statives. Underived inchoatives vary depending on whether a given inchoative lexicalizes causal meaning. The crux of HS's (p. 219ff.) counterargument is that this predicts *by itself* modifiers to be acceptable with *all* causatives. However, they note that while such modifiers are acceptable with causatives with animate subjects, they are less acceptable if the subject is inanimate. Consider (1) from Spanish (their (10a,b)) and (2) from Hebrew (their (9a,b)).

- (1) a. *El viento rompió el vidrio (??por sí solo).*  
the wind broke the glass by REFL only  
'The wind broke the glass by itself.'
- b. *El calor fundió el hielo (??por sí solo).*  
the heat melted the ice by REFL only  
'The heat melted the ice by itself.'
- (2) a. *Ha-ruax šavra et ha-xalon (??be-acma).*  
the-wind broke ACC the-window in-itself

- ‘The wind broke the window by itself.’  
 b. *Ha-xom hemes et ha-kerax (??be-acmo).*  
 the-heat elted ACC the-ice in-itself  
 ‘The heat melted the ice by itself.’

Thus *by itself* may not always be available for predicates with causal meaning, calling into question BKG’s analysis of this diagnostic. However, this conclusion is not supported by the data. First and foremost, the only inanimates given in (1) and (2) are natural forces. We asked one of our Spanish speakers about inanimate artifacts with *por sí solo*, and these are judged to be quite acceptable, e.g. (3) is acceptable in a context where the hammer fell from a shelf onto the vase without any explicit intervention (as opposed to being manipulated, i.e. being an instrument).

- (3) *El martillo rompió el vaso por sí solo.*  
 the hammer broke the vase by REFL only  
 ‘The hammer broke the vase by itself’

This suggests that HS’s main empirical point about animacy is incorrect — it is a fact more narrowly about natural forces. Furthermore, as is clear from (1) and (2), these data are given without any context. When we consulted speakers of Spanish and Hebrew respectively, they found the sentences improve with contrastive focus regarding the causer.<sup>1</sup> For example, (1a) is a fine response to a question asking whether the wind or the earthquake broke the glass, and (2b) is fine as a response to an assertion that both the salt and the heat were responsible for melting the ice. Thus there is no fundamental incompatibility with *by itself* and natural force causer subjects in (1) and (2).

We suggest that the reason natural forces require a particular context to be license *by itself* modifiers follows from how informative such modifiers are for particular predicate/subject combinations given that their main function is to clarify sole responsibility when it is in question (Rákosi 2012: 193). For anticausatives and causatives with inanimate artifact subjects, *by itself* modifiers clarify that the patient/artifact was indeed the causer, when the expectation would normally be that they were acted upon. For causatives with animate subjects *by itself* modifiers clarify ultimate personal responsibility, relevant when human agents are involved (since it is not uncommon that there might be many potential agent causers in any given context). But it is unlikely that natural forces would be set in action by or act in tandem with other causes (i.e. they are likely to be unique in any given context), nor be held responsible in any human sense. Thus it is unsurprising that *by itself* modifiers are pragmatically odd with natural force causers absent some other communicative motivation, like contrastive focus. At any rate, HS are correct in noting that BKG’s analysis predicts that (1) and (2) should be acceptable — as indeed they are, once the right context is considered. The claimed unacceptability is instead an artifact of inadequate elicitation techniques.

The problem with context is similar in HS’s discussion of negation, and again we find that once the data they give are properly understood, they provide further evidence for the reflexivization

<sup>1</sup>Incidentally, the Hebrew speaker we consulted did also reject *me-acmo/a* in (2) (consistent with HS’s (8)). The most reasonable explanation for this, we believe, has to do with natural forces being relatively agent-like (see e.g., Cruse 1973: 11; Van Valin and Wilkins 1996: 294), and therefore preferring the agent-oriented *be-acmo/a* (as discussed in Horvath and Siloni 2011 and BKG, p. 204-205). Contrary to the claim in HS (p. 221), this fact is not inconsistent with the reflexivization analysis — the two modifiers are simply in a paradigmatic relationship with one another, seemingly along the lines of agentivity. So, it seems unsurprising that in clearly non-agentive (i.e. anticausative) environments, one is found, while the other is found in environments that are more agentive.

analysis. HS (p. 223) incorrectly claim that in BKG we argued against the use of NPIs as a way of ensuring that the negation in the negation diagnostic is logical rather than metalinguistic. However, this is a misunderstanding of our position in BKG; we continue to believe that the use of NPIs is the *best* way to ensure a logical reading of negation. Our concern was simply in Horvath and Siloni's (2011) implementation of the diagnostic, which is problematic in several ways. In Hungarian, Horvath and Siloni's argument relied on negation with preverbal aspectual particles being unambiguously metalinguistic. We showed that this is not the case (nor is negation with postverbal particles unambiguously logical, as we also definitively showed). In the case of Spanish, we showed that there are confounding tense and aspect factors that Horvath and Siloni did not control for that complicated the judgments. Furthermore, there were inconsistencies in which NPIs they used with which data, where different NPIs may bring additional meaning to bear that is orthogonal to their use in ruling out metalinguistic negation but complicates the judgments. Crucially, none of these factors invalidate the use of NPIs to rule out metalinguistic negation (although the Hungarian observations do invalidate particle position as a control for negation type). Rather, they simply must be controlled for when using this diagnostic. Once they are controlled for, we maintained then and now that NPIs are an effective way of implementing the negation diagnostic (see our extensive discussion in BKG for further details and empirical justification).

Nonetheless, HS develop a new negation diagnostic that avoids using NPIs, which involves using negated sentences with "no preceding utterance" (HS, p. 223), building on the idea that metalinguistic negation can only arise in response to a prior utterance and thus 'out of the blue' negation must be logical. Of course, we welcome any new, well-justified diagnostic, since the best support for any argument comes from converging evidence. But as with any diagnostic, one has to be aware of potentially tangential inferences tied to it that can confound the issue under investigation. Here, once again, we suggest that HS have overlooked the role of context in a way that undermines their argument. In particular, negated sentences uttered 'out of the blue' are usually unacceptable for purely pragmatic reasons. Consider (4) (a contextually enriched English version of their (18)).

- (4) CONTEXT: A and B come upon a child who is bleeding from a cut. A says to B:  
 ?The child didn't cut himself.

While it is true that the negation in (4) is logical rather than metalinguistic, it is difficult to conclude anything about the underlying meaning of the verb *cut* given that the utterance is pragmatically odd for unrelated reasons. For example, it violates Grice's Maxim of Relevance, since it is unclear why (4) would be useful information in the given context. It also violates the Maxim of Manner, since whatever it is meant to convey is better expressed via some more direct, affirmative assertion.

So if HS's proposed diagnostic is to be taken seriously, the relevant utterance must not be pragmatically unacceptable from the outset. For this to be the case for an utterance conveying the negation of a proposition  $P$  in the absence of any previous utterance, there must be some reasonable expectation (given the nature of the world or specific contextual knowledge) that if things had been operating normally  $P$  might have been the case. If this were so, then an utterance conveying  $\neg P$  is relevant and directly informative. For example, (4) is more acceptable if the child in question is known to cut himself on a regular basis (the utterance then suggesting that something afoot is afoot, although there are more direct ways to convey this).

Building on this, in order for a negated anticausative to be pragmatically felicitous in ‘out of the blue’ contexts on the reading relevant for evaluating the reflexivization hypothesis, there must be a reasonable expectation given the nature of the world or specific contextual clues that the patient will have undergone the change-of-state named by the verb without external intervention. This is rarely the case for objects we can imagine that commonly undergo breaking events, so the infelicity of (5), HS’s (15), particularly given the poor context given to their consultants, seems unsurprising.

- (5) a. Context: You know that ‘Juan broke the glass’; given this, would you be lying (or incoherent) if you stated [(5b)]?  
 b. *#No se rompió el vaso.*  
 NEG REFL broke the glass  
 ‘The glass didn’t break.’

Under such circumstances, the default interpretation of (5) will be negation of the change of state, which of course gives rise to a contradiction. But this is a fact about the nature of objects (that we can think of) that undergo breaking events, not about the lexical semantics of the verb itself. However, this is not necessarily true for all participants in events named by anticausatives. For example, the earth, particularly in desert-type surroundings, often cracks as part of its natural development. As a consequence, if someone encountered such a crack ‘out of the blue’, they might reasonably expect that the earth opened up on its own. In such a context, a denial that this was the case will not be pragmatically odd. Crucially, and as predicted by the reflexivization analysis, the negation of an anticausative clause meaning “the earth cracked” in Spanish is indeed licit in such a context, as shown by (6).

- (6) CONTEXT: There is a large crack in the earth with marks suggesting that a seismic event did not do it, but rather human (or machine) intervention. An observer says:  
*La tierra no se abrió. Se notan las marcas de una pala mecánica aquí y*  
 the earth didn’t SELF open REFL note the marks of a digger mechanical here and  
*aquí. Voy a encontrar al que lo hizo.*  
 here going.1SG to find.out the who it did  
 ‘The ground didn’t open. One notes the marks of a mechanical digger here and here. I am going to find the person who did this.’

In (6), it cannot be the change-of-state that is being denied, as this would be flatly false in the given context. Thus what is instead being denied — via logical negation according to HS’s ‘out of the blue’ diagnostic — must be causation, which must thus be in the meaning of the anticausative, as predicted by the reflexivization analysis.

By contrast, with negated stative predicates in contexts where the state named by the predicate clearly holds and what one wants to deny instead is causation of the state, a sharp contradiction is generated, even in the richest of contexts, as in (7), consistent with the received wisdom that such predicates lack causative entailments.

- (7) CONTEXT: There is a biology teacher well-known for frightening children with spiders unnecessarily. The principal and the superintendent of his school district are walking past the class one day. They peer into the room and see that the teacher is forcing the children to hold huge tarantulas on their heads for a minimum of five minutes at a time while watching

a film about the virulence of tarantula poison, a film which includes images of people dying painful deaths after tarantula bites. The children are in hysterics, screaming and crying. The principal, worried about the fact that his teacher is making the students fear tarantulas and thinking that they need to do something about the situation, says to the superintendent:

#*No les tienen miedo a las tarántulas los estudiantes. Tenemos que castigar al maestro.*  
 no them have fear to the tarantulas the students we.must that punish the teacher  
 ‘The students do not fear tarantulas. We must punish the teacher.’

Similarly, with the underived inchoative *empeorar* ‘worsen’, even in an enriched context like that in (8) in which patients do commonly get worse for unspecified reasons without external intervention, negation yields a clear contradiction, consistent with *empeorar* not lexically encoding causation.

- (8) CONTEXT: A doctor in a hospital is visiting a patient of his, and sees that his condition has worsened. He detects signs suggesting that the worsening may be a side effect of one of the treatments he earlier provided. He say to his colleagues:

#*No empeoró el estado del paciente. Voy a encontrar cuál de los tratamientos lo*  
 no worsened the state of.the patient 1SG.go to find.out which of the treatments it  
*hizo.*  
 did

‘The state of the patient didn’t worsen. I’m going to find out which of the treatments did it.’

Rather, the only reading of (8) is to deny the change-of-state, which gives rise to a contradiction in the given context. Thus the data from HS’s own diagnostic support anticausatives having causal entailments, by contrast with statives and (some) underived inchoatives, which do not.<sup>2</sup>

In short, we continue to believe that the best way to implement the negation diagnostic, and to rule out the possibility of metalinguistic negation, is to use an NPI under the appropriate conditions. HS’s new diagnostic can potentially also rule out metalinguistic negation, but it introduces unrelated tangential complications regarding the pragmatic context of use that can lead to infelicity for reasons that have nothing to do with the lexical meaning of the predicate under investigation. When these factors are controlled for, HS’s new diagnostic actually provides evidence in support of the reflexivization analysis of anticausatives. Furthermore, a deletion analysis as proposed by HS would be unable to account for these data, since on that analysis there would be no causative lexical entailments to be logically negated in anticausatives, a fact which in turn causes problems in capturing the contrast between anticausatives vs. statives and (some) underived inchoatives.

As a final point regarding context and acceptability, we briefly note an additional argument HS make about *by itself* modifiers. They suggest that most if not all underived inchoatives actually do allow *by itself* modifiers, if the context can be enriched enough to make clear the possibility of external causation. Thus (9), which is normally unacceptable, is fine in the given context.

- (9) *La situación del paciente empeoró por sí sola, (el médico no tiene la culpa).*  
 the situation of.the patient worsened by REFL only (the doctor NEG has the fault)  
 ‘The patient’s situation worsened by itself (it isn’t the doctor’s fault).’ (HS, (6a))

<sup>2</sup>HS also discuss additional Hungarian data, using again their new diagnostic but also again failing to control for context (and they claim to have similar judgments for Hebrew but do not give the data). We have not consulted Hungarian or Hebrew speakers on such data, but given the problems with HS’s use of the new diagnostic in Spanish, we suspect that HS’s data in these other languages is likely also compromised in similar ways.

HS argue that these data undermine BKG’s claim that there is ever a distinction between anticausatives and underived inchoatives. Although this is an instance where HS laudably do take context seriously, the conclusion they draw is a bit of a non-sequitur — as BKG (p. 204) noted, the reflexivization analysis makes no predictions about underived inchoatives, so it is not clear why data such as (9) should matter one way or the other. Indeed, following the logic of this diagnostic as outlined in BKG (p. 204), the obvious conclusion from (9) should simply be that since *empeorar* occurs with *por sí solo* in at least some contexts, then it must encode causation. This is of course entirely compatible with a reflexivization analysis of anticausatives since it has nothing to do with anticausatives as such (see Koontz-Garboden 2009: 108, fn. 27 and BKG, p. 204 for discussion).

With that said, however, it turns out that an interesting fact emerges from the data above — that HS were presumably not aware of — that points towards a more subtle conclusion than the one just suggested. In particular, our speakers who rejected (8) (and other negation diagnostic data like it — see BKG, p. 205ff.) in fact accept (9). Taken together, this is an apparent contradiction, since (8) (and other negation data like it) suggests that *empeorar* does not lexicalize causation, while the judgment in (9) suggests that it does. Although this seems to put the tests at odds, there is a simple reconciliation already hinted at by BKG (p. 202, fn.3). In particular, there is still a key empirical difference between causatives and anticausatives vs. (some) underived inchoatives and statives, which are also typically unacceptable with *by itself* modifiers: causatives and anticausatives all have uses that allow *by itself* modifiers readily without an enriched thematic context like (9), while (some) underived inchoatives require such a context. Why can context improve *by itself* modifiers with verbs that otherwise do not allow them and for which other evidence (such as (8)) suggests they lack causation in their meaning? A simple answer is that the constraint on *by itself* modification is more general than previously suggested: it is licensed when causation has been previously established in the discourse (rather than more narrowly lexically entailed by the modified verb, as per Levin and Rappaport Hovav 1995, Chierchia 2004, and Koontz-Garboden 2009, among others). This can be satisfied in at least two ways: (i) through lexical content of the modified predicate as with causatives and anticausatives (consistent with earlier approaches cited above) or (ii) pragmatically in enriched contexts for predicates that do not encode it lexically (building on Koontz-Garboden 2007a and Rákosi 2012: 193). The empirical difference will be the requirement of necessary contextual thematic enrichment. Given the behavior of verbs like *empeorar* ‘worsen’ in other constructions as in (8), and that the right context must be found for its use with *por sí solo*, we believe (9) falls into this latter class. Thus *empeorar* lacks causative lexical entailments, even if these can be introduced by other discourse material in ways that satisfy *por sí solo*’s requirements.<sup>3</sup> Thus a more careful view of the data — and a more nuanced understanding of what data involving context can tell us — show that the reflexivization analysis is compatible with all of these facts.

The moral, reiterating BKG, is that diagnostics must be applied with care, and one must ensure that in cases where a particular utterance is (in)felicitous it is so for the claimed reasons. This means not only understanding the relevant meanings of the parts in the constructions under consideration, but also providing appropriate contexts for evaluating examples and understanding why these contexts play the role they do in facilitating acceptability. As we discussed in BKG and further above, these contextual issues are key in distinguishing lexical from non-lexical information. When con-

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<sup>3</sup>See also Jackendoff (1990: 294, fn. 7) for a parallel discussion of what he calls “grammatical” vs. “discourse” patients, i.e. something that is a patient because it is entailed by the predicate vs. something that is a patient because of particularized discourse contexts, which will have an impact on affectedness tests and thus must be controlled for.

sultants are asked to evaluate sentences with contexts that are highly underdetermined, the risk of running foul of some tangential constraint on use is high; when some otherwise unacceptable example can be saved by context, we should ask why that is so. As in Horvath and Siloni (2011), HS's discussion suffers from methodological problems related to these issues, leading them to what we continue to believe is the incorrect conclusion. Once these issues are controlled for, their arguments against reflexivization are actually arguments in favor of it.

## 2 Greek *apo*

HS further suggest a previously unnoted prediction of the reflexivization analysis in relation to the Greek causal adjunct *apo* (see Koontz-Garboden 2009: 121-122). They state that the "... reflexivization analysis leads us to expect that the causative alternate should be able to occur with *apo* PPs no less than its derived anticausative. The reason for this is that under reflexivization both the causative and the anticausative alternates would have an argument with a Cause role (not only a causal meaning) present in the clause, so there is no reason why *apo* should not behave uniformly with regard to both." (HS, p. 228). They provide (10) and (11) suggesting that this is false.

- (10) a. *I porta espase apo ton anemo/apo tin kateyida.*  
the door broke from the wind/from the storm  
The door broke from the wind/from the storm.  
b. *I porta espase apo to apotomo klisimo.*  
the door broke from the abrupt closing  
The door broke from the abrupt closing.
- (11) a. *O anemos espase tin porta (\*apo tin kateyida).*  
the wind broke the door from the storm  
The wind broke the door (from the storm).  
b. *I kateyida espase tin porta (\*apo ton anemo).*  
the storm broke the door from the wind  
The storm broke the door (from the wind).

We have not verified these judgements, but simply point out that the acceptability of (11) is not a prediction of the reflexivization analysis. Rather, any reasonable theory of event semantics, such as that adopted by Koontz-Garboden (2009), predicts (11) to be unacceptable.<sup>4</sup> Koontz-Garboden (2009: 105), for example, follows Piñón (2001: 18, fn.9) in his view that although a single event can have more than one cause, it cannot have more than one cause of the same thematic type. In the data in (11), both the subject and the *apo* causer are kinds of natural forces, and thereby excluded by this condition. By contrast, with anticausatives like (10), as Koontz-Garboden (2009) discusses and as Beavers and Zubair (2013) provide solid formal articulation for, although there

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<sup>4</sup>An additional example that HS provide is (i) (their (27c)):

- (i) *O anemos espase tin porta (\*apo to apotomo klisimo).*  
the wind broke the door from the abrupt closing  
The wind broke the door (from the abrupt closing).

Again, we have not verified the judgement, but assuming it is indeed unacceptable, we presume it is because there is a problem with the causal order of the subject and *apo* causer. As suggested (implicitly) by Croft (1991: 185), causer adjuncts other than instrument/means adjuncts should indicate causes that precede rather than follow the subject in the causal chain. These are reversed in (i), however, since the wind would cause the closing, and not vice versa.

are two causes they are of thematically different types. In the theory of Beavers and Zubair, for example, the undergoer is the effector of a stative causing eventuality (less formally, something about the patient led to the change) while the complement of the *apo* PP would be the effector of an eventive causing eventuality (some action involving the causer led to the change). Thus there is no incompatibility between them. In sum, contrary to HS's claims, (10) and (11) differ from one another in key ways that explain the contrast, once a better articulated theory of event semantics is worked out. Furthermore, the contrast in acceptability between them is at once tangential to the reflexivization theory of anticausativization and also consistent with it.

### 3 Theoretical and further empirical advantages

Finally, HS attempt to refute several other claimed advantages of the reflexivization analysis, both empirical and theoretical. Empirically, as Koontz-Garboden (2009) and Chierchia (2004) both point out, the reflexivization analysis of anticausativization makes straightforward sense of the wide-spread crosslinguistic syncretism between anticausativizing and reflexivizing morphology (see e.g. Haspelmath 1990). HS (p. 218) rightly point out that, as the data from Haspelmath (1990) and Kemmer (1993) show, the same morphemes also commonly mark middles, reciprocals, and passives. They thus conclude that because reflexivization is clearly not the right semantic analysis for these additional operations it cannot underlie this morphology at all, presumably calling reflexivization into question as the right analysis for anticausativization. However, Koontz-Garboden (2009: 92, fn. 11) already anticipates such an objection in relation to the syncretism with passive, pointing out that for most languages the arguments showing that a particular operation is passive rather than anticausative are generally not provided in the first place. Still further, even if some other uses are passive, HS's argument is dubious — while the relevant morphology is not categorically reflexive, it certainly allows that reading in the relevant languages for canonical reflexives. If it is an available interpretation, there is no reason to assume it cannot also underlie the anticausative.

Indeed, a reflexivization analysis of anticausativization is in fact entirely consistent with the syncretism with these other operations. For example, Beavers and Zubair (2013: 30-31) show that in Colloquial Sinhala there are two types of anticausatives, one which does not implicate any additional causer participant for the change-of-state described by the verb, thus conforming to the standard understanding of an inchoative, and the other which clearly does implicate some additional causer participant, giving rise to a passive-like reading despite not being syntactically passive. Beavers and Zubair propose that these two types of anticausatives can be given a unified analysis by assuming that the operation that derives anticausatives simply strips a causer from the argument structure of the verb in question but leaves it in the verb's lexical semantic content, implemented formally as saturation by a free variable.<sup>5</sup> Assuming free variables must receive some interpretation, various language-specific interpretive processes give rise to the two readings: coidentifying the underlying causer with the expressed patient subject derives a reflexive and thus canonical anticausative reading, while existentially binding the causer derives a passive-type reading. Thus reflexive and passive meanings are two outgrowths of a more basic semantic operation.

Still further, as Beavers and Zubair (2013: 31-32) themselves mention (see also Beavers 2012), this analysis could be extended to middles and canonical passives if the language-specific inter-

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<sup>5</sup>There may actually be convergence between HS's own proposed "deletion" analysis and an analysis consistent with the facts supporting reflexivization: Beavers and Zubair note that their idea might be construed as at least one kind of formal implementation of Reinhart's (2002) decausativization, also cited by HS, although in Beavers and Zubair's analysis causal meaning is still preserved truth conditionally.



pretative rules include other ways of binding the underlying causer. This could include existential quantification again for various sorts of passives, generic quantification for middles, and plural reflexivization qua reciprocalization (straightforward extensions of Beavers and Zubair’s analysis). Thus there is a unifying underlying generalization that unites all the various operations (the free variable) but still admits anticausatives as a type of reflexive while also distinguishing those from other operations that share the same morphology in terms of the nature of the quantificational operation. This in turn allows that these operations might also be marked differently in some cases, e.g. if the morphology has a meaning that includes the specific quantificational meaning. It also leads to the expectation that anticausativization and reflexivization, since they are notional variants of the same underlying operation of coidentifying a suppressed argument with an expressed argument, would most likely be marked identically. This is consistent with the crosslinguistic morphological facts — in the survey of Haspelmath (1990: 36) anticausativization and reflexivization are almost always marked identically, whereas the marking of passive, for example, more often diverges from them.<sup>6</sup> Notwithstanding HS’s protestations, this is expected under the reflexivization analysis.

HS (p. 218–219) also object that a reflexivization analysis of anticausatives cannot explain why the reflexivization operation that derives anticausatives from causatives with effector subjects does not also always apply productively to agent-subject verbs to produce a huge class of proper reflexives. However, BKG (p. 214–215) already addressed this, again building on proposals in both Koontz-Garboden (2009: 93–96) and Beavers and Zubair (2013: 41–42), suggesting that the relative productivity of the type of reflexive morphology used to form anticausatives can only be understood by considering the larger system of reflexivization in a language, which may include other forms (such as long reflexives) that specifically encode “agent act on self” readings and thus may block anticausative morphology from operating in some cases (see fn. 6).

Finally, a higher level issue HS (p. 218; 229–230) bring up is the question of whether an analysis of anticausativization that is consistent with the Monotonicity Hypothesis is desirable, as Koontz-Garboden (2009) argues. Firstly, they point to an additional empirical phenomenon — deverbal adjective formation — which poses a challenge to Monotonicity, suggesting that it gives rise to empirically incorrect predictions in that domain and so must be wrong (independent of the facts of anticausativization).<sup>7</sup> They then go on to suggest that there is no independent reason to believe that Monotonicity should even hold at all. Regarding the issue with deverbal adjectives, Koontz-Garboden (2010) and Deo et al. (2011) show that there is no argument from deverbal adjectives for deletion in the analysis of deverbal adjective formation (contra, e.g., Dubinsky and Simango 1996). As with anticausativization, the lexical semantic facts have simply been misunderstood, and once they are properly understood, it is in fact shown, as with anticausativization, that a deletion analysis makes a series of incorrect predictions. As for the second issue, we do not find HS’s discussion of deletion rules in relation to this issue helpful. We simply do not understand what they mean in saying that lexical representations do not “involve semantic ( $\lambda$ -)formulas” (HS, p. 230) or what

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<sup>6</sup>That said, it is possible that a language could distinguish even reflexivization and anticausativization on this analysis: although they share a core of coidentification of arguments, the thematic roles of the suppressed arguments differ in the canonical cases. If a language is sensitive to this it may mark them differently.

<sup>7</sup>HS (p. 230) also suggest that result nominals may pose a challenge to Monotonicity. As Koontz-Garboden (2007b: 288) points out, however, this depends very much on what the direction of derivation is morphologically (in languages where this can actually be seen) and what the meaning of result nouns is. Because there has been no typological study of the issue that we are aware of, nor is there a sufficient understanding of the lexical semantics of result nominals, we think it is far from clear that these are a challenge, though we agree that this remains to be demonstrated.

the nature of lexical semantics and semantic composition is that their view entails. We would invite them to implement their ideas model-theoretically, as we have done (Koontz-Garboden 2009, Beavers and Zubair 2013), so that it can be better understood what exactly they are proposing. We note with some optimism, however, that it may well be, as noted in fn. 5, that there is a formal implementation of something akin to their higher-level “deletion” idea that is consistent with reflexivization (“deletion” of an argument as saturation by an open variable, later bound in some way).<sup>8</sup> Crucially, however, such an analysis does not entail deletion of any causative lexical entailments, a welcome result, since the facts in Koontz-Garboden (2009), BKG, and above show that the derivation of an inchoative from a causative verb preserves such entailments.

As for the broader desirability of the Monotonicity Hypothesis, it may be that it follows from independent principles of compositionality (as suggested by Koontz-Garboden 2012, though see fn. 8). But even if it does not, the fact is that many theoreticians across a range of frameworks either explicitly or implicitly do theory development on the assumption that it does actually hold (see Koontz-Garboden 2012 for discussion). The point of our discussion, and Koontz-Garboden’s (2009, 2010, 2012) more generally, has been to question whether this assumption is actually warranted by taking it from axiom to falsifiable hypothesis and subjecting it to empirical investigation. We have so far seen no evidence to suggest it does not hold. Even in the cases where it appears on the surface to be violated, as with deverbal adjective formation and anticausativization, once the lexical semantic facts are properly understood, it is seen that the hypothesis is still well supported. Given that examination of difficult cases like anticausativization and deverbal adjectives in light of the hypothesis has led to the better understanding of the lexical semantics of these phenomena in the first place, we believe that adopting it as a working hypothesis has the advantage of leading to newer and more subtle empirical predictions in other domains as well. Thus its desirability is based on the value it has as a working hypothesis, and the debate herein suggests it has much to offer, even if it were ultimately shown to be empirically incorrect in some domain.

### Acknowledgements

We would like to thank Ricardo Bermúdez-Otero, Oliver Bond, Itamar Francez, Valia Kordoni, and Maria del Mar Bassa Vanrell for general comments and/or their help with various datapoints. We especially thank Julia Horvath and Tal Siloni for raising interesting questions that have led to a productive debate. We also thank Johan Rooryck for facilitating it.

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<sup>8</sup>Beavers (2012) in fact sketches out a way in which HS could achieve the effects of true deletion compositionally by constructing the meaning of the anticausative from the ground up around the state-denoting root of the causative, but not including causation in the event structure. However, while compositionally possible, the facts to date show that such an approach is empirically undesirable.

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