

In defense of the reflexivization analysis of anticausativization

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Abstract

Horvath and Siloni (2011) argue against an analysis of anticausativization as reflexivization as presented especially by Koontz-Garboden (2009) for languages in which anticausatives exhibit overt reflexive marking. We show that Horvath and Siloni's evidence, when examined in greater detail, either does not argue against such an analysis, or in some cases even supports it.

Keywords: anticausativization, reflexivization, causative/inchoative alternation, change of state verbs

1. Introduction

A key phenomenon on work in argument realization is causative/inchoative alternations as in (1), where a single verb may be used transitively to indicate change-of-state of some patient caused by a distinct causer, or intransitively to indicate change-of-state with no commitment to a distinct causer (Fillmore 1970; Nedyalkov and Silnitsky 1973; Perlmutter 1978; Haspelmath 1987, 1993; Levin and Rappaport Hovav 1995; Reinhart 2000, 2002; Piñón 2001; Doron 2003; Chierchia 2004; Nichols et al. 2004; Alexiadou et al. 2006; Schäfer 2008; Koontz-Garboden 2009; Beavers and Zubair in press; *inter alia*; see Schäfer 2009 for an overview).

- (1) a. John broke the vase. (causative)

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- b. The vase broke. (inchoative)

This alternation is common across languages, and raises a number of questions about how verb meanings are constructed, how meanings of different uses of verbs are related, and how those meanings determine the morphosyntactic contexts the verb may occur in.

Related to this last question, an intriguing fact about these alternations is that in many languages one or the other variant (or both) shows overt morphological marking. In cases where only one is marked it suggests that the marked form is derived from the unmarked one. Although which variant is marked varies from language to language and verb to verb (see Nedyalkov and Silnitsky 1973; Haspelmath 1987, 1993, Levin and Rappaport Hovav 1995, Ch.3, Nichols et al. 2004), a common cross-linguistic encoding option (for certain event types; Haspelmath 1993; Nichols et al. 2004) is that the inchoative is marked, i.e. derived from the causative via some anticausativization operation. Furthermore, in those cases it is very often the case that the overt marker on the inchoative is independently attested in the language as a reflexivization marker (Haspelmath, 1990). Spanish is illustrative of this, where the inchoative variant of *romper* ‘break’ as in (2) is marked by the clitic *se*, elsewhere used for marking reflexivization, as in (3) with *bañar* ‘bathe’.¹

- (2) a. *Juan rompió el vaso.*
 Juan broke the cup
 ‘Juan broke the cup.’
 b. *El vaso se rompió.*
 the cup REFL broke
 ‘The cup broke.’ (Koontz-Garboden, 2009, 84, (13a), (14a))
- (3) a. *Juan bañó al niño.*
 Juan bathed ACC.the child
 ‘Juan bathed the child.’
 b. *Juan se bañó.*
 Juan REFL bathed
 ‘Juan bathed (himself).’

¹Our interlinear glosses in the remainder of the paper are as follows: ACC, accusative case; CAUS, causative; DAT, dative case; ITR, the Hungarian anticausative marker; NACT, Greek inactive voice; NEG, negative; PRT, Hungarian particle; PST past tense (in Hungarian); REFL, reflexive; TR, the Hungarian transitive marker.

Such data have led some to hypothesize that such inchoatives are related semantically to the causative by the same process that relates transitives and reflexives in cases like (3) — the causer and patient are coidentified, with no other change in the meaning. Koontz-Garboden (2009), building on foundational work by Chierchia (2004), explicitly defends this proposal based on interpretive facts regarding anticausatives and their relation to causatives, and Beavers and Zubair (in press) have since expanded on its semantic underpinnings.

However, Horvath and Siloni (2011) have recently argued against the reflexivization analysis of anticausativization in languages that overtly mark anticausatives this way, claiming that the data upon which the claim rests do not hold up, and that additional data further call the analysis into question. We demonstrate that Horvath and Siloni’s arguments are not complete, and much of their new data, once the empirical landscape within which they are situated is understood, either have no bearing on the issue or actually support a reflexivization analysis of anticausatives. The upshot is that reflexivization remains the most plausible analysis of productive anticausativization via reflexive morphology, at least for the cases that have been examined in the requisite degree of syntactic and semantic detail. We begin by reiterating the basic outline of a reflexive analysis of anticausatives, as detailed by Koontz-Garboden (2009). We then go through Horvath and Siloni’s arguments and show that they do not support their conclusion. Our goal is not to offer new arguments in favor of an anticausative analysis, nor is it to offer a broader defense of the anticausativization as reflexivization analysis (for this see in particular Chierchia 2004 and Koontz-Garboden 2009). Our goal here is simply to show that Horvath and Siloni’s arguments do not argue against it, and may even support it.

2. Anticausativization as Reflexivization

We begin with a brief review of the relevant properties of anticausatives to be accounted for, and illustrate how a reflexivization analysis accounts for them. Although our focus is on languages that productively realize (some) inchoatives as reflexives, for expository purposes we illustrate these properties in English. English itself does not have morphological anticausativization, and thus we are not committed to reflexivization (or anticausativization in general) being the right analysis of any set of its inchoatives (see Koontz-Garboden 2009:79, fn. 3 for further discussion of this issue). For comparison,

we contrast the inchoative with the passive of the corresponding causative, which can also express change-of-state without an overt causer.

Intuitively, both causatives and inchoatives subcategorize for a patient that undergoes a change-of-state, but the causative additionally subcategorizes for a causer entailed to have caused the change. This contrast is put in relief by contradiction tests — external causation (i.e. causation by some event participant distinct from the patient) can be denied with the inchoative as in (4a), but not the causative as in (4b). The passive, although it does not require an overt causer, always entails the existence of one, as in (4c).

- (4) a. The vase broke, but nobody/nothing broke it.
- b. John broke the vase, #but nobody/nothing broke it.
- c. The vase was broken (by John), #but nobody/nothing broke it.

Second, causatives and inchoatives — but not passives — pattern together in allowing *by itself*-type modifiers indicating that the predicate entails no external causer, i.e. no causer not overtly expressed in the predicate (Siewierska 1984, 78–79, Chierchia 2004, 42–44, and Koontz-Garboden 2009:106–110):

- (5) a. The vase broke by itself.
- b. John broke the vase by himself.
- c.#The vase was broken by itself/himself.

Third, inchoatives — but not causatives or passives — reject purposive modifiers (Roeper 1987; Levin and Rappaport Hovav 1995, 109; though see (12) and related discussion for qualifications):

- (6) a. *The vase broke to collect the insurance money.
- b. John broke the vase to collect the insurance money
- c. The vase was broken to collect the insurance money.

In (6b) the subject of the purposive is interpreted as the subject of the causative, while in (6c) it is the implicit logical subject of the passive. No such reading is available with the inchoative in (6a), suggesting there is no acceptable causer syntactically or semantically for this predicate.

Another crucial fact about inchoatives is that not every causative has an inchoative variant. By and large, the causatives that have inchoative variants are those whose subjects are not specified for anything other than simply being causers of the change-of-state lexically entailed by the verb. For example, transitive *break* has an inchoative form and requires no particular

morpheme. Finally, causer deletion violates the otherwise empirically well-motivated Monotonicity Hypothesis of Kiparsky (1982, 8), Rappaport Hovav and Levin (1998, 111, 124), and Koontz-Garboden (2012), by which operations on lexical semantics never delete meaning; only addition is possible.

A reflexive analysis of anticausatives avoids these pitfalls. On this analysis, anticausatives and true reflexives are both derived by a single operation that coidentifies the causer and the patient to derive a monadic verb, explaining the syncretism directly. The difference between true reflexives and anticausatives arises as an artifact of the meaning of the input verb. If the causative has an agent subject, the resultant reading is “agent act on self”, which Koontz-Garboden equates with a true reflexive reading as found with English *self*-reflexives. This is the reading obtained for Spanish *se* reflexives with such verbs:

- (8) a. *Los terroristas/#El hacha/#El bombardeo asesinaron al*
the terrorists/the axe/the bombing assassinated ACC.the
senador.
senator
‘The terrorists assassinated the senator.’
b. *El senador se asesinó.*
the senator REFL assassinated
‘The senator assassinated #(himself).’
(Koontz-Garboden 2009:88-89)

Conversely, if the causative selects an effector subject, the resultant single argument will be an effector-patient, but not necessarily an agent-patient (see (12) and discussion for details). Koontz-Garboden (2009) equates an effector-patient subject with the reading of an inchoative:

- (9) a. *Juan/El hacha/El huracán rompió la mesa.*
Juan/The axe/The hurricane broke the table
‘Juan/The axe/The hurricane broke the table.’
b. *El vaso se rompió.*
the cup REFL broke
‘The cup broke.’ (Koontz-Garboden 2009:84, (13a), (14a))

This aspect of the analysis explains the key empirical fact that deletion analyses cannot: reflexivized agent-subject verbs do not allow inchoative readings because their single argument is an agent-patient, requiring a true reflexive

reading. Conversely, reflexivized effector-subject verbs have effector-patient subjects, giving rise to inchoative readings. Thus, which verbs allow inchoatives follows directly as an interaction of the lexical semantics of the verb plus the semantics of reflexivization, and need not be stipulated as with deletion analyses. (See Koontz-Garboden 2009, 84-91, 123-125 for a formal analysis and further discussion.)

This analysis furthermore predicts everything a deletion analysis does. Since the causer and patient are co-identified, there is no entailment of an external causer. Furthermore, both Chierchia (2004, 41-42) and Koontz-Garboden (2009:102) argue that the *by itself* facts are not only compatible with but actually favor a reflexivization analysis. In particular, they propose that *by itself* modifiers specifically indicate that (a) the subject is a causer and (b) it is the only causer. Furthermore, these modifiers, at least in Spanish and Italian, do not introduce causation — rather, they only modify predicates that already encode it. Thus uncontroversially non-causative predicates, e.g. stative *saber inglés* ‘know English’, disallow *by itself* modifiers:³

(10) **Juan sabe inglés por sí solo.*

Juan knows English by REFL only

*‘Juan knows English by himself.’ (Koontz-Garboden 2009:107, (63b))

Similarly, Koontz-Garboden (2009) notes (citing prior literature) that the same holds for (some) morphologically simple inchoatives (e.g. Levin and Rappaport Hovav’s 1995: 91-95 “internally caused change-of-state” verbs), which also do not (necessarily) lexicalize causation (though see §3 for some variation):

(11) ??*Juan empeoró por sí solo.*

Juan worsened by REFL only

??‘Juan worsened by himself.’ (Mendikoetxea, 1999, 1598)

The *by itself* facts thus illustrate a further fundamental property of a reflexive analysis, namely that causation is preserved semantically in the inchoative — albeit a very unspecified form of it — predicting that causatives and anticausatives will pattern alike in terms of diagnostics sensitive to this (see

³The degree to which statives are at all acceptable with *by itself* there must be significant contextual support introducing some notion of change-of-state plus possible external causation, suggestive of some kind of coercion (which is widely attested with stative verbs; Koontz-Garboden 2007), something not true for causatives and anticausatives.

also Alexiadou et al. 2006). This analysis is also compatible with the Monotonicity Hypothesis, since all truth conditional content of the causative is preserved in the inchoative, and none is deleted.

Still further, if inchoatives have effector-patient subjects, and effectors are unspecified for agentivity, then in context subjects of inchoatives should be resolvable as agent-patients, deriving a true reflexive reading. This is attested: derived inchoatives in Spanish may be interpreted as true reflexives if context and the type of subject favors it, e.g. a human subject and a purposive modifier in a pragmatic context favoring reflexive action as in (12) (based on Koontz-Garboden 2009:100, (52a)).

- (12) *Y aquel día ... cuando Phil_i se ahogó [para PRO_i salvar-le*
 and that day when Phil REFL drowned for save-him
la vida a Jim] ...
 the life DAT Jim
 ‘And on that day ... when Phil drowned (himself) to save Jim’s life...’

On a causer deletion analysis this fact is unexplained (though see §6 for some qualifications).

Finally, Koontz-Garboden (2009, 112-119) points out one additional and more subtle prediction of this analysis. If causation is part of the meaning of an anticausative, albeit assigned to the patient, then technically the causative does not entail the inchoative: both assert the same change, but different causers. Of course, as Koontz-Garboden also notes, they are not mutually exclusive — an event may have multiple causes (Piñón, 2001, 18, fn. 9), so *John broke the vase* and *The vase broke* can be true simultaneously even if asserting different things about causation. But the lack of an entailment relation due to differences in assertions about causation means that one should be able to deny the anticausative and then assert the causative, as in (13).

- (13) *No se rompió el vaso — sino que lo rompiste tú!*
 NEG REFL broke the glass rather it broke you
 ‘The glass didn’t *break* — you broke it!’
 (Koontz-Garboden 2009:103, (57))

The reading is not that no change-of-state occurred, but rather that a change-of-state did occur, and what is being denied is a lack of external causation, suggesting that causation is in the meaning of the inchoative.

However, there is a possible alternative analysis of (13), which Koontz-Garboden (2009) rejects: (13) could be metalinguistic rather than logical negation, in particular denying a conversational or conventional implicature of no external causation rather than no external causation as a part of the actual asserted content of the verb. As noted by Horn (1985), logical and metalinguistic negation can be distinguished in that the former, in contrast to the latter, licenses negative polarity items (NPIs). This is illustrated for Spanish and English in (14) (based on Horn 1985, 132, (17b), 135, (24) and Koontz-Garboden 2009:116, (82)):

- (14) a. *No consiguió resolver ALGÚN problema — consiguió solucionar-los todos!*
 NEG managed solve some problem managed
 solve-them all
 ‘S/he didn’t manage to solve SOME problems — s/he managed to solve ALL of them.’
 b. *#No consiguió resolver NINGÚN problema — consiguió solucionar-los todos!*
 NEG managed solve any problem — managed
 solve-them all
 #‘S/he didn’t manage to solve ANY problems — s/he managed to solve ALL of them.’

Crucially, the sentence and interpretation in (13) can license an NPI as in (15).

- (15) *No se rompió ningún vaso; los rompió todos Andrés.*
 NEG REFL broke any glass them broke all Andrew
 ‘Any glass didn’t break; Andrew broke them all.’
 (Koontz-Garboden 2009:117, (83))

Thus the negation here is logical and not metalinguistic, targeting asserted causation in the meaning of the verb. This provides striking evidence for treating anticausatives as having causal meaning.

Finally, we offer three caveats about the reflexivization analysis. First, as presented it is intended only for languages in which the anticausative is morphologically derived by reflexive morphology. It may also be applicable in languages that do not use reflexive morphology, though such arguments must be made individually (e.g. Beavers and Zubair in press make such a case based on semantic evidence for at least some anticausatives in Sinhala).

Second, the reflexivization analysis is intended for causative/inchoative pairs where the inchoative is morphologically derived from the causative, again with reflexive morphology (although as Koontz-Garboden 2009:108, fn. 27 discusses, and as we discuss further below, other inchoatives may have reflexive semantics for independent reasons). As Haspelmath observes, the derivational relationship in causative/inchoative pairs more broadly often differs verb-to-verb, even within a single language, and there may be alternative analyses for other types.⁴ Third, anticausativization qua reflexivization has to be understood partly on a language by language basis, in particular regarding how reflexivization is encoded in different languages. For example, the existence of a broader paradigm of reflexivization in a language may constrain the possible distribution and interpretation of anticausative forms, making the identity of true reflexives and anticausatives only a default. We return to this point in more detail in §6. With this summary of the reflexive analysis in place, we turn to Horvath and Siloni’s objections.⁵

3. *By Itself* Modifiers

Horvath and Siloni (2011, 2176-2179) take issue with the *by itself* diagnostic for causation in a verb’s meaning. They note first that in some languages *by itself* modifiers can occur with inchoatives that are not morphologically anticausative (i.e. those that lack a reflexive marker and corresponding causative variant), apparently contra Koontz-Garboden’s observation that some such verbs do not (see §2):

⁴For example, as Koontz-Garboden (2009:114, fn. 33) discusses, some underived inchoatives in Spanish can also be causative, reflecting a labile rather than anticausative alternation (in Haspelmath’s terms). Levin and Rappaport Hovav (1995, Ch.3) more generally discuss various types of “causative pairs” that look like causative/inchoative alternations but have different analyses.

⁵One additional complication is the definition of “effector” in contrast to “agent”, where the latter is treated as a subtype of the former. This leaves open the question of what else is included in the notion of “effector” other than agents, i.e. entities that act, move, or intentionally cause another event. Beavers and Zubair (in press) address this issue, arguing that agentive causation corresponds to causation by an event (e.g. *John’s hitting his car destroyed it*), in contrast to causation by some state or property of the causer (e.g. *John’s stupidity (in leaving his car out in acid rain) destroyed his car*), which is non-agentive causation. This fills the lacuna in the analysis presented here; see Beavers and Zubair for additional detail, and also §6.

- (16) *La hierba crece por sí sola.*
 the grass grows by REFL only
 ‘The grass grows by itself.’
 (based on Horvath and Siloni 2011, 2178, (2d))

Thus, they argue, *by itself* modifiers do not provide evidence for causative meaning in anticausatives.

This argument carries no force. The claim based on *by itself* modifiers is only that verbs that take it have causation in their meanings. Crucially, all causatives and derived anticausatives take this modifier, a fact that follows directly if the latter are derived from the former by reflexivization. Conversely, pure statives (which presumably as a class are never causative) disallow these modifiers. The fact that some morphologically simple inchoatives do allow *by itself* modifiers while others do not has no bearing on this argument, as Koontz-Garboden (2009:108, fn. 27) already observes: morphologically simple inchoatives are *underived* lexemes, and as such they have whatever meaning they have due to lexicalization, *not* by virtue of any derivational process. Since lexicalization is idiosyncratic, some underived inchoatives may have reflexive causative meanings just like derived anticausatives and others may not, predicting variability in whether and which underived inchoatives accept *by itself* modifiers. Thus the prediction of a reflexive analysis is that anticausatives and causatives will consistently take *by itself*, statives will preclude it, and underived inchoatives will vary idiosyncratically in taking it, exactly as attested.

Horvath and Siloni (2011, 2178) further suggest that anticausatives cannot always be grouped with causatives by *by itself*. In particular, in Hebrew there are two ways of expressing “without outside help”: *be-acmo* ‘in itself’, which occurs with causatives and reflexives, and *me-acmo* ‘from itself’, which appears with anticausatives (albeit only with inanimate subjects; see below):

- (17) a. *Dan hitgale’ax/hitlabeš be-acmo.*
 Dan shaved/dressed in-himself.
 ‘Dan shaved/dressed by himself.’
 b. **Dan/ha-agartal hitlaxlex/nafal be-acmo.*
 Dan/the-vase became.dirty/fell in-himself/itself
 ‘Dan/the vase dirtied/fell by himself/itself.’
 c. *ha-agartal hitlaxlex/nafal me-acmo.*
 the-vase became.dirty/fell from-itself

‘The vase dirtied/fell by itself.’

(Horvath and Siloni 2011, 2178-2179, (3)-(4))

Thus, Horvath and Siloni suggest, causatives and anticausatives cannot be lumped together, undermining the argument that they both share causative meaning as identified by *by itself* modifiers.

This argument also carries no force. As Horvath and Siloni (p. 2178) note, but do not appreciate the significance of, while both modifiers indicate “without outside help”, they impose additional orthogonal constraints: *be-acmo* requires the subject be an agent and thus animate, and *me-acmo* requires it to be inanimate and thus not an agent. Further, as Horvath and Siloni (p. 2185) note (though see Koontz-Garboden 2009:127, (98) and fn. 47), Hebrew anticausatives, unlike those in Spanish, generally *preclude* true reflexive (i.e. agentive) readings (see §6). These facts together explain (17): *me-acmo* is out in (17a) because the subject is animate/agentive, leaving only *be-acmo*, and *be-acmo* is out in (17b,c) because the subjects are inanimate/non-agentive, leaving only *me-acmo*. This is unrelated to the presence of causation. Indeed, that *by itself* modifiers are possible for both causatives and anticausatives suggests they do share causation in common, as predicted by the reflexive analysis. Thus Horvath and Siloni’s objections to *by itself* do not stand up to scrutiny.

4. Negation

4.1. Spanish

Horvath and Siloni’s (2011:2179–2181) second objection has to do with the argument from negation in Spanish, whereby it is possible under logical negation to deny the inchoative but assert the causative on the reading that what is being denied is not the change-of-state but that the patient is the causer as defined above, as in (18a) (Koontz-Garboden 2009, 117, (83)). The same is not true for non-causative predicates like some underived inchoatives as in (18b) (Koontz-Garboden 2009, 117, (84)) and statives as in (18c).

- (18) a. *No se rompió ningún vaso; los rompió todos Andrés.*
NEG REFL broke any glass them broke all Andrew
‘Any vase didn’t break; Andrew broke them all.’
b. *#No empeoró ninguna paciente; la empeoró el tratamiento.*
NEG worsened any patient her worsened the treatment
#‘Any patient didn’t worsen — the treatment made her worsen.’

c. #*Mar no tiene miedo ninguno a los insectos. Tú se lo*
 Mar NEG have fear any ACC the insects you REFL it
haces tener.
 made have
 #‘Mar doesn’t have any fear of insects — you made her fear them.’

Horvath and Siloni have two major objections. First, they were unable to replicate the judgment in (18a). We returned to Koontz-Garboden’s (2009) original two consultants, as well as consulting one additional speaker, all Iberian Spanish speakers. All three find (18a) acceptable (and (18c) unacceptable). Two also confirmed the judgments in (18b), though a third finds this acceptable. Why might speakers vary in this way? Regarding the speaker who finds (18b) acceptable, since *empeorar* ‘worsen’ is a lexical inchoative nothing precludes some speakers lexicalizing it with a reflexive causative meaning like that proposed for *romperse* in (18a), while others do not. Thus this variation has no impact on the analysis of (18a). As for Horvath and Siloni’s speaker(s) and their rejection of (18a), we first note that in general the shape of the diagnostic for denial of causation does not require the presence of an NPI (see e.g. (13)). The introduction of an NPI is meant simply to rule out metalinguistic negation as a possible analysis, but any given NPI may bring additional yet orthogonal grammatical or semantic complexities to bear that independently make the sentences harder to judge when the intended meaning is simply denial of causation (e.g. *ningún* introduces also content regarding quantity). Although our speakers accepted such examples, one overall found did all NPI sentences slightly stilted (a judgment she did not give for sentences like (13)), which could partly explain the judgments of Horvath and Siloni’s speakers regarding (18a). Connected to this, it is thus also important to establish contexts in which the intended reading is salient, i.e. contexts that highlight which specific component out of many in the meaning of the verb is meant to exclusively fall under the scope of negation, in this case the lack of external causation, as well as support whatever independent requirements a given NPI might bring to bear. For example, one of our speakers volunteered (19) for a sentence similar to (18a) that brought out the reading sharply for him:

- (19) [There’s a dining room with *vasos* (water glasses) and *copas* (wine glasses with a stem). Some of the *vasos* and some of the *copas* are broken. The son is in the room, and wants to cover for Andrés, who is known to be particularly “sausage-fingered”. Background: *copas* are

not easy to handle, and easily broken by someone that cannot hold them properly.]

- a. *Father: Que pasó aquí?*
 what happened here
 ‘What happened here?’
- b. *Son: Se rompieron algunos vasos y algunas copas.*
 REFL broke some cups and some glasses
 ‘Some cups and some glasses broke.’
- c. *Father: No, no se rompió ninguna copa. Las copas las*
 NEG NEG REFL broke any glass the glasses them
rompió todas Andrés.
 broke all Andrew
 ‘No, no glass broke — Andrew broke them all.’

When appropriate contexts are established — as is done in our data below — our speakers have not found these sentences to be unacceptable, and similar facts may hold for Horvath and Siloni’s speaker(s). This is unlike canonical cases of metalinguistic negation with NPIs, where no context makes them acceptable.

Second, Horvath and Siloni note that other NPIs, e.g. Spanish *en absoluto* ‘at all’ and *nunca/jamás* ‘ever’, are unacceptable on the relevant readings (Horvath and Siloni 2011, 2180, (11)-(12)):

- (20) a. *Son: El vaso se ha roto.*
 the glass REFL has broken
 ‘The glass broke.’
- b. *Father: #No, no se ha roto en absoluto; lo has roto*
 NEG, NEG REFL has broken at all it has broken
tú!
 you
 #‘The glass didn’t break at all; you broke it!’
- (21) a. *Son: La puerta se ha abierto (a menudo).*
 the door REFL has opened (often)
 ‘The door opened (often).’
- b. *Father: #No, la puerta no se ha abierto nunca/jamás;*
 NEG the door NEG REFL has opened ever/ever
la has abierto tú!
 it have opened you

#‘The door has never opened; you opened it!’

Furthermore, Horvath and Siloni (2011, 2180) draw a crucial comparison with *lavarse* ‘wash’, which is uncontroversially reflexive with an agent-patient (also effector-patient) subject. Here their speaker(s) could deny just causation using logical negation (Horvath and Siloni 2011, 2180-2181, (13a–d)):

- (22) a. *Mother: El niño se ha lavado.*
 the boy REFL has washed
 ‘The boy washed.’
- b. *Father: El niño no se ha lavado; lo ha lavado la*
 the boy NEG REFL has washed him has washed the
 nodriza.
 nanny
 ‘The boy didn’t wash; the nanny washed him.’
- c. *Father: El niño no se ha lavado en absoluto; lo ha*
 the boy NEG REFL has washed at all him has
 lavado la nodriza.
 washed the nanny
 ‘The boy didn’t wash; the nanny washed him.’
- d. *Father: Ningún niño se ha lavado; los ha lavado (a*
 NEG boy REFL has washed them has washed to
 todos) la nodriza.
 all the nanny
 ‘No boy washed; the nanny washed them (all).’

Prima facie, these data suggest that genuine reflexives allow denial of causation under logical negation — justifying the diagnostic — but not anticausatives, unexpected on a reflexive analysis.⁶

However, there are numerous complications with these data and arguments that, when controlled for, show a very different pattern that ultimately

⁶There is a problem with (22d) as given by Horvath and Siloni (their (13d), p. 2181): here the n-word *ningún* occurs sentence initially, with no other marker of negation. It is known that such words can introduce negation on their own when preverbal (see e.g. Herburger 2001, *inter alia*), so it is unclear that there is an NPI here to distinguish logical from metalinguistic negation. Thus technically this example has no bearing on the argument. Below we correct for this by substituting equivalent examples that include both a negative *no* and a separate NPI. The expected reading does in fact obtain, consistent with Horvath and Siloni’s claim.

supports anticausatives as encoding semantic causation. First, while Horvath and Siloni test anticausatives in (18a) and (20)-(21) with the NPIs *ningún*, *en absoluto*, *nunca*, and *jamás*, in (22) with the true reflexive *lavarse* they omit *nunca* and *jamás* without comment. We consulted two of our speakers about this. Interestingly, one speaker could *not* get the relevant reading with *lavarse* and *nunca* or *jamás*, even in contexts designed to favor it:

- (23) [Mother is surprised to find that the boy has washed himself. The father corrects her, saying that while he has been washed, the nanny did it.]
- a. *Mother: El niño se ha lavado.*
 the boy REFL has washed
 ‘The boy washed.’
- b. *Father: #El niño no se ha lavado nunca/jamás; lo ha*
 the boy NEG REFL has washed ever/ever him has
 lavado la nodriza.
 washed the nanny
 #‘The boy didn’t ever wash; the nanny washed him.’

The same speaker concurred on Horvath and Siloni’s (21). Taken together, this suggests that this speaker categorically rejects using *nunca/jamás* for this type of sublexical negation regardless of the verb type. Horvath and Siloni’s speaker(s) may be the same, explaining the judgment in (21). Interestingly, the other speaker we consulted found (23) acceptable, but also judged (21) acceptable, meaning this speaker *can* use these NPIs this way, and does so consistently with reflexives and anticausatives. This suggests that for speakers who can use *nunca/jamás* in this way, the judgments actually support a reflexive analysis of anticausatives, contra Horvath and Siloni. Why speakers should vary in how they can use *nunca/jamás* is beyond the scope of our paper, though perhaps for some speakers these NPIs require denying *all* of the entailments associated with the modified predicate, so that denying the anticausative requires denying also the change-of-state, in contradiction with the asserted causative. Whatever the reason, the *nunca/jamás* facts are more complicated than Horvath and Siloni present them to be, and need more study that carefully controls for speaker variation and NPI choice, and considers complete paradigms of the relevant data. Given this speaker variation, we set *nunca/jamás* aside for the remainder of this discussion and focus only on *ningún* and *en absoluto*, which all of our speakers accepted for all relevant verbs.

This leaves (20) as Horvath and Siloni’s sole data point against the Spanish negation argument. But there is an even more problematic complication with (20)-(22) that suggests that there is really no difference between anti-causatives and *lavarse* at all. In particular, all of Koontz-Garboden’s (2009) original data were given with verbs in the simple past, whereas Horvath and Siloni’s data are all given with verbs in the present perfect, a change made without comment. Crucially, the two speakers we consulted on this issue found Horvath and Siloni’s (20) at least as acceptable as the original (18a) when changed to the simple past:

- (24) [A father comes home to find the vase broken. His son claims it simply broke on its own, and the father counters that the child broke it.]
- a. *Son: El vaso se rompió.*
the glass REFL broke
‘The glass broke.’
 - b. *Father: No, no se rompió en absoluto; lo rompiste tú!*
NEG, NEG REFL broke at all it broke you
‘The glass didn’t break at all; you broke it!’

For completeness, (22) is as acceptable (even a little more) in the simple past as in the present perfect:

- (25) [Mother is surprised to find that the boy has washed himself. The father corrects her, saying that while he has been washed, the nanny did it.]
- a. *Mother: El niño se lavó.*
the boy REFL washed
‘The boy washed.’
 - b. *Father: El niño no se lavó; lo lavó la nodriza.*
the boy NEG REFL washed him washed the nanny
‘The boy didn’t wash; the nanny washed him.’
 - c. *Father: El niño no se lavó en absoluto; lo lavó la nodriza.*
the boy NEG REFL washed at all him washed the
nanny
‘The boy didn’t wash; the nanny washed him.’
 - d. *Father: No se lavó ningún niño; los lavó (a todos)*
NEG REFL washed NEG boy them washed to all

la nodriza.

the nanny

‘No boy washed; the nanny washed them (all)’.

Thus, in the simple past anticausatives and *lavarse* behave alike with both *en absoluto* and *ningún*, contra Horvath and Siloni, suggesting that the complicating factor in their data is the choice of the more complex tense/aspect. Why tense/aspect — and its interaction with verb class — should matter is a mystery, but there are well known differences between present perfect and simple past when they contrast semantically (as they do in Spanish, with some cross-dialectal variation; see e.g. Howe 2006) that are likely to be relevant. In particular, while both indicate that (some portion of) event time occurs in an interval preceding reference time (Bybee et al. 1994, 52), the present perfect is the marked case that brings additional aspectual meaning to bear (*id.*:86). For example, it is sometimes thought that present perfects are categorically stative (Iatridou et al. 2003), corresponding to one of several specific readings (e.g. the experiential, perfect of persistent situation, perfect of result, or perfect of recent past noted by Comrie 1976, 56-61; see also Dowty 1979, 339-348, Bybee et al. 1994, 61-63, Kiparsky 2002, Iatridou et al. 2003, Pancheva 2003, *inter alia*), and are also subject to certain restrictions regarding continuing relevance of the post-state of the event at reference time (e.g. see Smith 1997, 108, *inter alia*), none of which applies to the simple past. Furthermore, the available readings are at least partly contingent on the aspectual class of the underlying predicate (Kiparsky, 2002; Pancheva, 2003). Given that anticausatives are canonical unaccusatives but middles have properties in common with unergatives (Reinhart and Siloni 2005), verb class plus the additional meaning components associated with the present perfect may interact significantly with negation to create the patterns seen here, although exactly how is an open question. Certainly, if what is under investigation is the lexical semantics of the base verb, it is good methodological practice to use tense/aspect combinations that introduce as few confounding aspectual complications as possible so as to not obscure what is encoded in the verb. Thus the simple past should reflect the basic pattern and is the most appropriate combination for the questions at hand. Given this, the key fact is that, as predicted by a reflexivization analysis, anticausatives and true reflexives actually behave identically in licensing NPIs; the contrast Horvath and Siloni observed is a consequence of confounding tense/aspect facts that make the data more complex than they present.

In contrast, two of our three speakers found underived inchoatives unacceptable on the intended readings, and none found statives acceptable, consistent with the latter lacking causative meanings for all speakers and variation in lexicalized meaning for the former. This is illustrated with *hervir* ‘boil’ (our speakers had comparable judgments with *empeorar* ‘worsen’ and *crecer* ‘grow’), and stative *tener miedo* ‘have fear’:

- (26) [2 cooks, A and B, and 5 liters of water in 5 pans are in a kitchen. Each of the 5 liters must be at room temperature for a recipe. A leaves. A returns to find two of the pans hot. A asks B what happened, B says that they just boiled. A denies this, asserting that B did it.]

A: *¡El litro de agua hirvió!*
 the liter of water boiled
 ‘The liter of water boiled!’

B: *#No hirvió en absoluto; tú lo herviste.*
 NEG boiled at all; you it boiled
 #‘It didn’t (ever) boil (at all) — you boiled it.’

B’: *#No hirvió ningún litro de agua; tú lo herviste.*
 NEG boiled any liter of water; you it boiled
 #‘Any liter of water didn’t boil — you boiled it.’

- (27) [B teaches biology. A is a trouble-making student. B is teaching about insects, using live specimens. B leaves the classroom, and on her return, the insects are out of their cages, and many students are screaming. B suspects A released them to taunt the other children.]

A: *¡Mar tiene miedo a los insectos!*
 Mar has fear ACC the insects
 ‘Mar fears insects!’

B: *?Mar no tiene miedo a los insectos en absoluto. Tú se lo haces tener.*
 Mar NEG have fear ACC the insects at all you REFL it
 made have
 #‘Mar doesn’t (ever) fear insects (at all) — you made her fear them.’

B’: *#Mar no tiene miedo ninguno a los insectos. Tú se lo haces tener.*
 Mar NEG have fear any ACC the insects you REFL it
 made have
 #‘Mar doesn’t have any fear of insects — you made her fear them.’

Taken all together, these data suggest a contrast between anticausatives and true reflexives on the one hand and (some) lexical inchoatives and statives on the other: the former two classes allow denial of causation with logical negation and the latter two do not, exactly as proposed by Koontz-Garboden (2009). It is important of course to control carefully for confounding factors like NPI choice and tense/aspect, to consider the full paradigm of such combinations with the relevant verbs, and to make clear appropriate contexts for the relevant readings. But once those are controlled for, it is clear the reflexivization analysis is supported by the negation facts.

4.2. Hungarian

Horvath and Sioni (2011, 2181–2182) make a similar argument for Hungarian. They first claim that logical and metalinguistic negation are indicated in Hungarian by position of the verbal aspectual particle that accompanies many Hungarian verbs: preverbal particles mark metalinguistic negation and postverbal particles mark logical negation, as in (28) with particle *ki* (see below for some complications with these data).

- (28) a. *Mari nem ki-javít-ott néhány hibá-t; ő ki-javít-ott minden hibá-t.*
 Mari NEG PRT-correct-PST several error-ACC she PRT-correct
 every error-ACC
 ‘Mari didn’t correct several errors; she corrected all errors.’
- b. *Mari nem javít-ott ki néhány hibá-t.*
 Mari NEG correct-PST PRT several error-ACC
 ‘Mari didn’t correct several errors.’
- c. **Mari nem ki-javít-ott néhány hibá-t.*
 Mari NEG PRT-correct-PST several error-ACC

(Horvath and Sioni 2011:2182, (16))

They claim that the particle position for denying causation in anticausatives is preverbal and not postverbal, suggesting that it is only possible with metalinguistic negation (Horvath and Sioni 2011, 2182, (18)).⁷

⁷Horvath and Sioni also give an example with an underived inchoative. As noted above, underived inchoatives behave idiosyncratically and are subject to speaker variation due to lexicalization. The behavior of underived inchoatives in Hungarian ultimately are

- (29) a. *Son: Össze-gyűr-őd-ött az ing-em*
 PRT-wrinkle-ITR-PST the shirt-my
 ‘My shirt wrinkled.’
- b. *Father: Az ing-ed nem össze-gyűr-őd-ött, hanem te*
 the shirt-your NEG PRT-wrinkle-ITR-PST rather you
össze-gyűr-ted!
 PRT-wrinkle.TR-PST.it
 ‘Your shirt didn’t wrinkle, rather you wrinkled it.’
- c. *Father: #Az ing-ed nem gyűr-őd-ött össze, hanem te*
 the shirt-your NEG wrinkle-ITR-PST PRT rather you
gyűr-ted össze!
 wrinkle.TR-PST.it PRT

They thus claim that denying causation must be metalinguistic, contra a reflexivization analysis.

There are numerous questions about these data that Horvath and Siloni do not address, including whether the anticausative marker *-őd-* in (29) is genuinely reflexive and how productive it is. But our primary objection is that Horvath and Siloni have not shown that (28a,b) differ in representing metalinguistic vs. logical negation — specifically negation of non-asserted vs. asserted meaning — nor that this is reflected in a simple alternation solely in verbal particle placement. In particular, É. Kiss (2002, 130-135) argues that while constructions like (28b) represent true sentential negation with negator *nem*, constructions as in (28a) are syntactically quite distinct, representing sentence conjunction with a complex coordinator *nem ... hanem* (the *hanem* being elided in (28a) but not in (29b,c)), similar to English *it’s not X but rather Y*, in which the *nem* is in a very different position than the *nem* in (28b) (see also Surányi 2003, 114-115 for a related discussion). This in turn has an effect on particle placement. É. Kiss (2002, 55-62) argues that Hungarian verbal particles like *ki* are base-generated postverbally, but surface preverbally by default via some movement operation, as in (30a). However, particle movement can be blocked under certain circumstances, e.g. if there is a preverbal focused XP as in (30b) or, crucially, if there is sentential negation, as in (30c) (see also Piñón 1992 and Puskás 2000, Ch.5, *inter alia*):

not relevant for the argument we wish to make in this section, so we set this example aside.

- (30) a. *János fel-olvasta a verseit.*
 John PRT-read his poems
 ‘John read out his poems.’
 b. *János tegnap olvasta fel a verseit.*
 John yesterday read PRT his poems
 ‘It was yesterday that John read out his poems.’
 c. *Péter nem olvasta őket fel.*
 Peter NEG read them PRT
 ‘Peter did not read them out.’ (É. Kiss, 2002, 56-57, (70)-(71))

É. Kiss proposes that the *nem* that occurs with *hanem* sits in a higher position than sentential negation *nem*, one that does not block movement. Thus by default particles in *nem ... hanem* constructions should move to the preverbal position unless otherwise blocked. This is shown in (31), which incidentally also represents logical negation semantically, showing that preverbal particle placement does *not* encode (solely) metalinguistic negation in the sense of denying implicated rather than asserted content:

- (31) *János nem fel hívta a fiúkat, hanem meg látogatta őket*
 John NEG PRT called the boys but PRT visited them
 ‘John did not call the boys up, but visited them.’
 (based on É. Kiss 2002, 134, (13))

Therefore, given the syntax of *nem* vs. *nem ... hanem*, it is possible that the unacceptability of (29c) is purely syntactic and has nothing to do with semantics: the particles by default should raise before the verb, as in (31). That particle placement here is contingent on syntax and not the semantic type of negation is further evidenced by (32), in which the objects in both clauses are fronted for focus purposes, and therefore have postverbal particles despite still being metalinguistic negation semantically:⁸

⁸Example (32) differs from Horvath and Siloni’s (28a) in contrasting two numerals rather than plural indefinite vs. universal quantifiers. This is because for incidental reasons DPs with universal quantifiers in Hungarian are generally not focusable (É. Kiss 2002, 81-82, Onea and Beaver 2009, 345, *inter alia*; see fn. 9 for some discussion). That said, DPs with the quantifier *összes* ‘all’ may be frontable in some contexts for some speakers. For example, of 10 speakers who were asked, the minimal variant of (28a) given in (i.b) with this quantifier was found acceptable, if a bit stilted, by seven native speakers (with one speaker finding it entirely unobjectionable, and only two finding it ungrammatical):

- (32) *Mari nem ÖT HIBÁ-T javított ki, hanem HÉT HIBÁ-T*
 Mary NEG five error-ACC corrected PRT, rather seven error-ACC
javított ki.
 corrected PRT
 ‘Mary didn’t correct five errors — she corrected seven of them!’

This example further illustrates that it is possible to have postverbal particles with metalinguistic negation, just as (31) shows preverbal particles with logical negation.⁹ Taken together, these data — especially (31) — show that (a) semantic type of negation does not correspond to particle placement and therefore (b) Horvath and Siloni are wrong to conclude that (29b) is necessarily an example of metalinguistic negation. It may well not be, thus supporting the reflexivization analysis, rather than arguing against it.

Horvath and Siloni’s error is to assume that the only difference between (28a) and (28b) is particle placement and the corresponding semantics, without considering broader syntactic facts governing particle position and different uses of *nem*, nor verifying that the semantics lines up in this way.¹⁰

-
- (i) A: *Mari ki-javított néhány hibát (a disszertációjában).*
 Mary PRT-corrected.INDF several error-ACC in her.dissertation
 ‘Mary corrected several errors (in her dissertation).’
 B. ?*Mari nem NÉHÁNY HIBÁ-T javított ki, hanem ő AZ ÖSSZES*
 Mary NEG several errors-ACC corrected PRT but she the all
HIBÁ-T javította ki.
 errors-ACC corrected PRT
 ‘Mary didn’t correct several errors — she corrected all of the errors!’

This shows clearly that the particle placement in (28a) is contingent largely on syntax, not metalinguistic negation. (We are deeply indebted to Éva Kardos for her extensive discussion of these issues and in consulting the additional native speakers.)

⁹There is a possible alternative analysis of (32): preverbal focused XPs in Hungarian are also known to exhibit an exhaustivity effect (see e.g. É. Kiss 2002, 77-82, *inter alia*), which may constitute part of the asserted content (as suggested by Horvath 2010, 1358-1360), explaining for example why universal quantifiers cannot appear preverbally. In that case (32) may represent logical negation (of exhaustivity) rather than metalinguistic negation. However, Onea and Beaver (2009) have strongly called into question the idea that exhaustivity is part of the asserted content based on attested data and experimental evidence (furthermore some universal quantifiers can be preposed as in (i.b) in fn. 8). They suggest instead that the degree to which it arises it is a pragmatic artifact of focus constructions having a function of answering questions under discussion. This suggests that (32) must represent metalinguistic negation.

¹⁰That *nem* and *nem ... hanem* are wholly different constructions also explains an

A more appropriate way to go forward would be to probe for metalinguistic vs. logical negation in any particular negative construction via more well established diagnostics such as the possibility of licensing NPIs, and then see how negation of putative non-external causation behaves. A tentative look at least suggests that there may be evidence for a reflexivization analysis in this regard, namely that NPIs such as *semmilyen* ‘any’ (the closest translation to the English NPI used by Horn 1985, 132, 135) are generally not possible (according to one speaker we consulted) if the semantic nature of the negation is metalinguistic as in (33a), but crucially are possible for negation of causation with an anticausative as in (33b), suggesting that this negation is logical and the relevant content is asserted as part of the meaning of the verb.¹¹

- (33) a. **Semmilyen ing nem gyűr-őd-ött össze, hanem AZ*
any shirt NEG wrinkle-ITR-PST PRT but the
ÖSSZES ING *gyűr-őd-ött össze*
all shirt wrinkle-ITR-PST PRT
‘It’s not that any shirt wrinkled, but rather all of the shirts wrinkled.’
b. *Semmilyen ing nem gyűr-őd-ött össze, hanem TE*
any shirt NEG wrinkle-ITR-PST PRT, hanem you

oddity of the data in (28) that Horvath and Siloni use to motivate their metalinguistic vs. logical negation contrast, namely the superficial inconsistency of the data: (28a), consisting of two clauses conjoined paratactically (presumably with an elided *hanem* as in (29)), is given as grammatical, and yet (28c), which contains the first clause of (28a), is given as ungrammatical, a contradiction (a native speaker we consulted agrees (28c) is ungrammatical). The ungrammaticality is explained by the fact that the *nem* with the preverbal particle in (28c) requires a *hanem* clause to follow. É. Kiss (2002, 135) also shows that the position of *nem* with *hanem* is more variable than *nem* of sentential negation, and has a different prosody, further suggesting confounding differences between these constructions.

¹¹*Semmilyen* ‘any’ might be a problematic choice for testing for metalinguistic vs. logical negation since (as noted by Puskás 2000, 336-337) it is a so-called *sem*-series NPI, which does not have the distributional properties of NPIs in English. In particular, it occurs only under sentential negation and not other downward entailing contexts such as questions and conditionals (therefore being antiverdical; *id.*: 336). However, that it is ruled out in metalinguistic negation contexts as in (33a) but not in logical negation (as the many examples in Puskás, Ch.6 indicate) suggests that it can still be used to distinguish the two types of negation.

gyűr-ted *össze az ing-et.*
 wrinkle-TR-PST.it PRT the shirt-ACC
 ‘No shirt wrinkled, but it’s you who wrinkled the shirt.’

However, we are not experts in Hungarian, and delving any further is beyond the scope of this response. We simply point out that the facts are more complicated than what Horvath and Siloni present — involving a complex interaction of syntactic, semantic, and information structural factors — and more careful study is needed before anything can be concluded about Hungarian, though the data so far may well be compatible with a reflexivization analysis, as (33) tentatively suggests.

4.3. Hebrew

Finally, Horvath and Siloni (2011, 2181) also reject the negation diagnostic on the basis of data from Hebrew, where again they claim that the relevant readings do not seem to be possible for anticausatives with NPIs, including determiner *af* ‘no’ and adverbial *bixlal* ‘at all’, as in (34).¹²

- (34) a. *Son: ha-tacum hitlaxlex*
 the-photo got.dirty
 ‘The photo got dirty.’
 b. *Father: ha-tacum lo hitlaxlex; ata lixlaxta oto.*
 the-photo NEG got.dirty you soiled it
 ‘The photo did not get dirty; you soiled it.’
 c. *Father: #af tacum lo hitlaxlex; ata lixlaxta et kol*
 no photo NEG got.dirty you soiled ACC all
 ha-tacumim.
 the-photos
 ‘No photos got dirty; you soiled all the photos.’
 d. *Father: #ha-tacum bixlal lo hitlaxlex; ata lixlaxta oto.*
 the-photo at all NEG got.dirty you soiled it

¹²In (34) the term *tacum* ‘photo’ is considered by some to be a bit formal and thus may lead to some register clash; the alternative *tmuna* ‘picture’ might be preferred. Also, *af* ‘no’, like the *sem*-series NPIs in Hungarian, does not generally occur in other downward entailing NPI contexts such as questions or conditionals (Levy, 2008, 318-319), unlike *bixlal*, and might alternatively be better classed as a negative concord item (as per Francez and Goldring 2012, 352-353, Tonciulescu 2011, Ch.3).

‘The photo didn’t get dirty at all; you soiled it.’
(Horvath and Siloni 2011, 2181, (14))

Our objection here is simply that two native speakers we consulted find (34c,d) with both NPIs acceptable. Conversely, one finds (35b) and (36b), with underived inchoatives and NPI *bixlal*, less readily acceptable (and similarly if *af* is used in (36); it is independently ruled out in (35) since it does not occur with mass nouns). The second is less clear on whether he gets a contrast.¹³

(35) [Kim put cider out to ferment 5 weeks ago, anticipating Sandy’s visit.
On Sandy’s arrival:]

- a. *Sandy: yesh! ha-sayder she-amarta she samta ba-martef*
yay! the-cider that-said that put in.the-cellar
tasas!
fermented!
‘Score! The cider you said you put in your cellar
fermented!’
- b. *Kim: ??ha-sayder lo tasas bixlal, ha-temperatura*
the-cider NEG fermented at all, the-temp
hetsisa oto.
fermented.CAUS it

¹³By contrast, both speakers readily accept (i.b), also with an underived inchoative and *bixlal*, as a response to (i.a) (which Horvath and Siloni report as contradictory):

- (i) a. *Son: ha-taclum nafal*
the-photo fell
‘The photo fell.’
- b. *Father: ha-taclum bixlal lo nafal; ata hipalta oto.*
the-photo at all NEG fell you made.drop it
‘The photo didn’t fall at all; you dropped it.’(Horvath and Siloni 2011,
2181, (15))

Taken together, (i.b) and (35)-(36) show that morphologically simple inchoatives again vary in their encoding of causative entailments within and across speakers. Further, while some of the variation between Horvath and Siloni’s speakers and ours is likely a consequence of the nature of the elicitation (whether a plausible context is provided or not), there does seem to be some genuine variation across speakers, since e.g. (i) as provided in Horvath and Siloni is simply judged acceptable as is by our consultant. Still further, a third speaker finds (35b) unacceptable but says it might be salvaged by moving *bixlal* to the prenegation position as in (34d). Why there should be this difference is unclear to us.

‘The cider didn’t ferment at all, the temperature fermented it.’

- (36) [Kim (a child) and Sandy (her father) planted a special seed several months ago and have been anxiously waited for it to sprout. On seeing it has sprouted:]

a. *Sandy: yesh! ha-zera navat*
yay! the-seed sprouted
‘The seed sprouted!’

b. *Kim: ??ha-zera lo navat bixlal, ha-geshem hinbit oto.*
the-seed NEG sprouted at all the-rain sprouted it
‘The seed didn’t sprout at all, the rain did it!’

This again reflects cross-speaker variation. Why would this be? If there are speakers who do not get (34c,d), it may be that for them *af* and *bixlal* do not license sublexical negation in the same manner that Spanish *nunca/jamás* do not with some speakers; one would need to look carefully at more data to know for sure. This suggests that what is called for once again is more systematic exploration of the relevant data, possibly experimentally. Either way, it is clear that Horvath and Siloni’s Hebrew arguments, as they currently stand, no more argue against a reflexivization analysis than they argue for it. More broadly, none of Horvath and Siloni’s negation arguments reviewed in this section support their point when examined in more scrutiny; in some cases the data are less clear than they appear to be on the surface, and in other cases they are simply much more complicated in ways that effect the logic of the diagnostic.

5. Cause and Adjuncts

Horvath and Siloni (2011, 2182-2185) discuss another potential argument for a reflexive analysis of anticausatives. It is sometimes assumed that causer adjuncts cross-linguistically indicate the presence of causal meaning in a verb (Alexiadou et al. 2006, 7-15, Koontz-Garboden 2009:119-122). Thus the fact that the anticausatives in (37) can be modified by PP modifiers spelling out the cause (*me-* PPs in Hebrew and *from* PPs in English) might be taken to show that these verbs lexicalize causal meaning.

- (37) a. *ha-meyxal hitpocec me-ha-laxac.*
the-container exploded from-the-pressure
‘The container exploded from the pressure.’

- b. *hu hit'alef me-ha-xom.*
 he fainted from-the-heat
 'He fainted from the heat.'

(Horvath and Siloni 2011, 2183, (19)-(20))

However, Horvath and Siloni observe that Hebrew *me* PPs can also modify statives, as in (38), and similarly for English *from* PPs in the translations (a fact already noted by Levin 2009, 246, fn. 4).

- (38) a. *ha-sdinim retuvim me-ha-laxut.*
 the-sheets moist from-the-humidity
 'The sheets are moist from the humidity.'
- b. *ha-or šelo adom me-ha-daleket.*
 the-skin his red from-the-inflammation
 'His skin is red from the inflammation.'

(Horvath and Siloni 2011, 2183, (23))

Thus Horvath and Siloni claim that causer adjuncts introduce rather than probe for causation in the meaning of predicates they modify, and thus cannot provide support for the existence of causation in the meaning of anticausatives, a key component of a reflexivization analysis.

This argument is based on a misunderstanding of the logic behind the diagnostic. A key point implicit in Koontz-Garboden's (2009) discussion is that not all causer modifiers behave uniformly crosslinguistically, nor even language-internally — some may require the predicate they modify to have causation, while others may not. Modifiers that require this will not be able to modify non-causative predicates such as statives, and those that do not require the predicate they modify to have causation should be acceptable with such predicates. Each modifier needs to be investigated on a case by case basis to determine whether it adds causation or truly modifies pre-existing causation. All Horvath and Siloni's data indicate is that Hebrew *me* and English *from* do introduce causation entailments, and thus are not diagnostics for the encoding of causation. But Koontz-Garboden (2009) made no claims about these modifiers. Rather, Koontz-Garboden (2009:121-122) discussed other modifiers, notably Greek *apo*, which do occur with anticausatives but not with statives (at least for some speakers), and thus qualify as true diag-

nostics of cause in a verb’s meaning:¹⁴

- (39) a. *I Maria skotothike apo ton sismo.*
 the Mary killed.NACT by/from the earthquake
 ‘Mary died from the earthquake.’
 (Alexiadou et al., 2006, 200, (46b))
- b. **To edafos itan kokino apo tis diarkus drastiriotitas tu*
 the ground was red because the constant volcanic the
ifestiu
 activity
 ‘The ground was red from constant volcanic activity.’
 (see Koontz-Garboden 2009:122, (93a))

The fallacy implicit in Horvath and Siloni’s argument is to presume that all PP modifiers will be semantically identical crosslinguistically. Nothing in the reflexivization analysis predicts this, and given that some causer modifiers *do* clearly test for causation in a predicate’s meaning and furthermore occur with anticausatives, this diagnostic supports a reflexive analysis of anticausatives.¹⁵

¹⁴The only *apo* data Horvath and Siloni (2011, 2183, fn. 12) discuss is that *apo* PPs may modify some unergatives (citing Alexiadou and Anagnostopoulou 2009, though they suggest that these may be source/locative PPs rather than causer PPs). Horvath and Siloni make no argument, however, as to what the status of causation in unergatives might be. This, in addition to how many types of *apo* there are, are open questions that require further investigation and how these would bear on Koontz-Garboden’s (2009) claims about *apo* are not obvious. Horvath and Siloni (p. 2184) also make further observations about Greek *me* PPs and their ability to introduce indirect causation that are simply not relevant for Koontz-Garboden’s (2009) observations about Greek *apo*.

¹⁵A second objection that Horvath and Siloni have regarding causal modifiers is moot in light of the above, but we briefly mention it here since it is based on an additional empirical misunderstanding worth highlighting. They observe that while cause modifiers are acceptable with anticausatives, they are not with canonical reflexives like middles:

- (i) *He showered from the heat.

Thus they argue that canonical reflexives and anticausatives cannot be treated identically. Here again, Horvath and Siloni have not controlled for all factors: a difference between middles and anticausatives is that the former are like unergatives (Reinhart and Siloni, 2005) in requiring their subjects to be volitional agents. It could be that cause adjuncts — for whatever reason — do not modify predicates with agent subjects. That this is so is evidenced by the fact that verbs that require agentivity such as *murder* (also *connive*, *bemoan*), or are modified by volitional adverbs such as *deliberately*, are unacceptable with

6. Reflexive/Inchoative Ambiguity

Finally, Horvath and Siloni (2011, 2185) note in passing that on an effector-patient subject reflexivization analysis of anticausatives, it should be possible to resolve the causer as an agent in context, meaning anticausatives should pass agentivity diagnostics, such as taking instrument adjuncts. Horvath and Siloni claim that these are generally not possible with anticausatives in Hebrew and English, even with animate subjects:

- (40) *hu hitkarer* (**be-kerax*).
 he cooled.down with-ice
 ‘He cooled down (*with ice).’ (Horvath and Siloni, 2011, 2185, (30))

Furthermore, while in some languages (e.g. Spanish) anticausatives have alternate interpretations as true reflexives (see §2), in other languages that have reflexive-marked anticausatives — they note Hebrew and Russian — this is not possible, arguing against a reflexive analysis, they claim.

Again, however, this argument is incomplete in a way that undermines it. First, the English translation of (40) does not sound objectionable, and attested examples exist in the right contexts:

- (41) a. We made it back to the house just in time for the heat of the day to become unbearable, and Travis cooled off with a nice glass of half milk and half cranberry juice. (fujicrazy.blogspot.com/2010/07/carters-mountain-road-ride.html)
 b. [W]ith temperatures hovering around -35 degrees here in the city, it made sense to warm up with a nice glass of red wine. (weekly-grape.blogspot.com/2011/01/56-negroamaro.html)

such causal modifiers:

- (ii) a. *John murdered his neighbors from the heat.
 b. John involuntarily/*deliberately cried/jumped from chopping onions.

The verb in (i) also seems to allow only agentive readings (e.g. **John showered accidentally/involuntarily*), thus predicting its inability to occur with causer modifiers if they require agentivity. (A similar analysis may be extensible to the Hebrew equivalents Horvath and Siloni give.) Thus data like (i) pose no challenge to the reflexivization analysis firstly because *from* PPs are not diagnostics for the encoding of causative entailments in a predicate, as noted above, but secondly for the reasons mentioned in this footnote.

As for Hebrew, although two speakers we consulted do find (40) odd, one of them volunteered that the minimally distinct (42) is acceptable for him with the same type of instrumental adjunct:¹⁶

- (42) *hu hitxamem be-smira.*
 he warmed.up in-blanket
 ‘He warmed up with a blanket.’

Thus, as elsewhere in their discussion, the data are simply more complicated than Horvath and Siloni point out, in ways suggesting that their general point does not hold.

The question is why inchoatives in some languages (or even different ones in the same languages) resist agentive modifiers, but not in others. Several factors have been proposed in prior work that may be relevant. Beavers and Zubair (in press) propose that (at least some) anticausatives in Sinhala are derived by reflexivization, but in Sinhala — in which an agent vs. effector contrast has been grammaticalized in its obligatory volitive/involitive verbal mood morphology — a true reflexive reading is precluded due to properties of the anticausative operation in Sinhala that fixes effector subjects of anticausatives as unresolvable for agentivity, something not true of anticausatives in Spanish. So languages may differ in how anticausatives are derived in ways that rule out agentive modifiers, even within a broader scheme of reflexivization.

Beavers and Zubair further argue that the fact that Sinhala and Spanish differ in this way is connected to an even broader factor, namely that the existence of other reflexivization strategies in a language may block agentive readings with anticausatives. It is generally known that if a language has, for example, long and short form reflexives there is often a meaning contrast between them (Kemmer, 1993). One such contrast is that long form reflexives often *require* a true reflexive reading (e.g. #*The vase broke itself* requires an anthropomorphic reading, and similarly for equivalents in Sinhala, Spanish, and Russian with long form reflexives, according to native speakers we consulted). The presence/absence of an alternative way of specifically deriving a true reflexive reading distinct from the reflexivization operation that derives anticausatives may block a true reflexive reading from occurring

¹⁶The second speaker did not like it. A third speaker who read an early draft of this paper volunteered that he found this unacceptable but that it would improve if the preposition were *im* ‘with’.

with anticausatives, either categorically (as Beavers and Zubair propose for Sinhala) or as a strong preference (as they propose for English). Conversely, while Spanish long form reflexives (the *(a) sí mismo/a* forms) require an animate coreferent, they also have a limited distribution (Peregrín Otero, 1999). In other words, they are not general markers of reflexive readings. The short form reflexive *se* has the more general distribution in that regard, and as such marks both anticausatives and true reflexives, thus readily allowing both readings and showing the ambiguity predicated by default on a reflexivization analysis. Thus an argument from the interpretations allowed in a given language for anticausatives must take into account the full suite of ways of making a predicate reflexive in a given language.¹⁷

7. Conclusion

In this paper we have demonstrated that Horvath and Siloni’s arguments against anticausativization as reflexivization are based on both misunderstandings regarding the analysis and insufficiently detailed explications of the relevant data. Rather, once the analysis is appropriately laid out and the data carefully controlled for relevant factors, the majority of the data they cite are either irrelevant or ultimately support a reflexivization analysis. Furthermore, Horvath and Siloni do not mention perhaps the key point that motivates the reflexive analysis in the first place, namely the fact that it is the only proposed analysis that predicts rather than stipulates that verbs with heavily agentive external arguments will disprefer having anticausative variants. Of course, we should reiterate that the claim is not that all inchoatives in causative/inchoative pairs in all languages are derived via reflexivization (e.g. Beavers and Zubair in press demonstrate that some such inchoatives in Sinhala are derived via existential binding of the causer). However, in at least some languages that have been investigated in the requisite level of detail, e.g. Spanish, we believe the arguments to be overwhelming.

¹⁷See also Rooryck and Vanden Wyngaerd (2011, 177-182) for related discussion on consequences of short form/long form contrasts, with illustration from standard Dutch, which lacks a robust contrast (having a restricted short form reflexive) and correspondingly lacks anticausative uses of the reflexive, and the Heerlen dialect of Dutch, which has a more robust contrast and does have anticausative uses.

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References

- Alexiadou, A., Anagnostopoulou, E., 2009. Agent, causer, and instrument PPs in Greek: Implications for verbal structure. *MIT Working Papers in Linguistics* 57. Cambridge, MA, pp. 1-16.
- Alexiadou, A., Anagnostopoulou, E., Schäfer, F., 2006. The properties of anti-causatives crosslinguistically, in: Frascarelli, M. (Ed.), *Phases of Interpretation*. Mouton de Gruyter, Berlin, pp. 187–211.
- Beavers, J., Zubair, C., In press. Anticausatives in Sinhala: Involitvity and causer suppression. *Natural Language and Linguistic Theory* .
- Bohnenmeyer, J., 2007. Morpholexical transparency and the argument structure of verbs of cutting and breaking. *Cognitive Linguistics* 18, 153–177.
- Bybee, J., Perkins, R., Pagliuca, W., 1994. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World*. University of Chicago Press, Chicago, IL.
- Chierchia, G., 2004. A semantics for unaccusatives and its syntactic consequences, in: Alexiadou, A., Anagnostopoulou, E., Everaert, M. (Eds.), *The Unaccusativity Puzzle*. Oxford University Press, Oxford, pp. 22–59.

- Comrie, B., 1976. *Aspect*. Cambridge University Press, Cambridge.
- Doron, E., 2003. Agency and voice: The semantics of the Semitic templates. *Natural Language Semantics* 11, 1–67.
- Dowty, D., 1979. *Word Meaning and Montague Grammar*. Reidel, Dordrecht.
- É. Kiss, K., 2002. *The Syntax of Hungarian*. Cambridge University Press, Cambridge.
- Fillmore, C.J., 1970. The grammar of *Hitting* and *Breaking*, in: Jacobs, R., Rosenbaum, P.S. (Eds.), *Readings in English Transformational Grammar*. Ginn, Waltham, pp. 120–133.
- Francez, I., Goldring, K., 2012. Quantifiers in Modern Hebrew, in: Keenan, E.L., Paperno, D. (Eds.), *Handbook of Quantifiers in Natural Language*. Springer, Dordrecht, pp. 346–397.
- Grimshaw, J., 1982. On the lexical representation of Romance reflexive clitics, in: Bresnan, J. (Ed.), *The Mental Representation of Grammatical Relations*. MIT Press, Cambridge, MA, pp. 87–148.
- Härtl, H., 2003. Conceptual and grammatical characteristics of argument alternations: The case of decausative verbs. *Linguistics* 41, 883–916.
- Haspelmath, M., 1987. Transitivity alternations of the anticausative type. (Arbeitspapiere, N.F., Nr. 4) Cologne: Institut für Sprachwissenschaft der Universität zu Köln.
- Haspelmath, M., 1990. The grammaticization of passive morphology. *Studies in Language* 14, 25–71.
- Haspelmath, M., 1993. More on the typology of inchoative/causative verb alternations, in: Comrie, B., Polinsky, M. (Eds.), *Causation and Transitivity*. John Benjamins, Amsterdam, pp. 87–120.
- Herburger, E., 2001. The negative concord puzzle revisited. *Natural Language Semantics* 9, 289–333.
- Holisky, D.A., 1987. The case of the intransitive subject in Tsova-Tush (Batsbi). *Lingua* 71, 103–132.

- Horn, L., 1985. Metalinguistic negation and pragmatic ambiguity. *Language* 61, 121–174.
- Horvath, J., 2010. "discourse features", syntactic displacement and the status of contrast. *Lingua* 120, 1346–1369.
- Horvath, J., Siloni, T., 2011. Anticausatives: Against reflexivization. *Lingua* 121, 2176–2186.
- Howe, L.C., 2006. Cross-Dialectal Features of the Spanish Present Perfect: A Typological Analysis of Form and Function. Ph.D. thesis. The Ohio State University. Columbus, OH.
- Iatridou, S., Anagnostopoulou, E., Izvorski, R., 2003. Observations about the form and meaning of the perfect, in: Iatridou, S., Rathert, M., von Stechow, A. (Eds.), *Perfect Explorations*. Walter de Gruyter, Berlin, pp. 153–205.
- Kemmer, S., 1993. *The Middle Voice*. John Benjamins, Amsterdam.
- Kiparsky, P., 1982. Word-formation and the lexicon, in: Ingemann, F. (Ed.), *Proceedings of the 1982 Mid-America Linguistics Conference*, Lawrence, Kansas. pp. 3–29.
- Kiparsky, P., 2002. Event structure and the perfect, in: Beavers, D.I., Martínez, L.D.C., Clark, B.Z., Kaufmann, S. (Eds.), *The Construction of Meaning*. CSLI Publications, Stanford, CA, pp. 113–136.
- Koontz-Garboden, A., 2007. Aspectual coercion and the typology of change of state predicates. *Journal of Linguistics* 43, 115–152.
- Koontz-Garboden, A., 2009. Anticausativization. *Natural Language and Linguistic Theory* 27, 77–138.
- Koontz-Garboden, A., 2012. The monotonicity hypothesis, in: McNally, L., Demonte, V. (Eds.), *Telicity, change, and state: A cross-categorical view of event structure*. Oxford University Press, Oxford, pp. 139–161.
- Levin, B., 2009. Further explorations of the landscape of causation: Comments on the paper by alexiadou and anagnostopoulou, in: *Proceedings of the Workshop on Greek Syntax and Semantics*, MIT Working Papers in Linguistics, Cambridge, MA. pp. 239–266.

- Levin, B., Rappaport Hovav, M., 1995. Unaccusativity: At the Syntax-Lexical Semantics Interface. MIT Press, Cambridge, MA.
- Levy, A., 2008. Hebrew negative polarity items — *šum* and *af*, in: Armon-Lotem, S., Danon, G., Rothstein, S.D. (Eds.), Current Issues in Generative Hebrew Linguistics. John Benjamins, Amsterdam, pp. 313–336.
- Mendikoetxea, A., 1999. Construcciones inacusativas y pasivas, in: Bosque, I., Demonte, V. (Eds.), Gramática Descriptiva de la Lengua Española. Editorial Espasa, Madrid, pp. 1575–1629.
- Nedjalkov, V.P., Silnitsky, G., 1973. The typology of morphological and lexical causatives, in: Kiefer, F. (Ed.), Trends in Soviet Theoretical Linguistics. Reidel, Dordrecht, pp. 1–32.
- Nichols, J., Peterson, D., Barnes, J., 2004. Transitivity and detransitivizing languages. Linguistic Typology 8, 149–212.
- Onea, E., Beaver, D., 2009. Hungarian focus is not exhausted, in: Cormany, E., Ito, S., Lutz, D. (Eds.), Proceedings of SALT 19, The Ohio State University, Columbus. pp. 342–359.
- Pancheva, R., 2003. The aspectual makeup of perfect participles and interpretations of the perfect, in: Iatridou, S., Rathert, M., von Stechow, A. (Eds.), Perfect Explorations. Walter de Gruyter, Berlin, pp. 277–306.
- Peregrín Otero, C., 1999. Pronombres reflexivos y recíprocos, in: Bosque, I., Demonte, V. (Eds.), Gramática descriptiva de la lengua española. Espasa-Calpe, pp. 1427–1518.
- Perlmutter, D., 1978. Impersonal passives and the unaccusative hypothesis, in: BLS 4, UC Berkeley, Berkeley. pp. 157–189.
- Piñón, C., 1992. Heads in the focus field, in: Kenesei, I., Pléh, C. (Eds.), Approaches to Hungarian, Vol. 4: The Structure of Hungarian. JATE, Szeged, pp. 99–122.
- Piñón, C., 2001. A finer look at the causative-inchoative alternation, in: SALT XI, Cornell Linguistics Circle, Ithaca, NY. pp. 346–364.
- Puskás, G., 2000. Word Order in Hungarian. John Benjamins, Amsterdam.

- Rappaport Hovav, M., Levin, B., 1998. Building verb meanings, in: Butt, M., Geuder, W. (Eds.), *The Projection of Arguments: Lexical and Compositional Factors*. CSLI Publications, Stanford, pp. 97–133.
- Reinhart, T., 2000. The theta system: Syntactic realization of verbal concepts, in: *OTS Working Papers in Linguistics*. Utrecht Institute of Linguistics, University of Utrecht.
- Reinhart, T., 2002. The theta system - an overview. *Theoretical Linguistics* 28, 229–90.
- Reinhart, T., Siloni, T., 2005. The lexicon-syntax parameter: Reflexivization and other arity operations. *Linguistic Inquiry* 36, 389–436.
- Roeper, T., 1987. Implicit arguments and the head-complement relation. *Linguistic Inquiry* , 267–310.
- Rooryck, J., Vanden Wyngaerd, G., 2011. *Dissolving binding theory*. Oxford University Press, Oxford.
- Schäfer, F., 2008. *The Syntax of (Anti-)Causatives. External arguments in change-of-state contexts*. John Benjamins, Amsterdam/Philadelphia.
- Schäfer, F., 2009. The causative alternation. *Language and Linguistics Compass* 3, 641–681.
- Siewierska, A., 1984. *The Passive: A Comparative Linguistic Analysis*. Croom Helm, London.
- Smith, C., 1997. *The Parameter of Aspect*. Kluwer, Dordrecht.
- Surányi, L.B., 2003. *Multiple Operator Movements in Hungarian*. Ph.D. thesis. Universiteit Utrecht. Utrecht.
- Tonciulescu, K., 2011. *Licensing Conditions for Indefinite Pronouns in Modern Hebrew*. Ph.D. thesis. University of Ottawa. Ottawa, Canada.
- Van Valin, R.D., Wilkins, D.P., 1996. The case for ‘effector’: Case roles, agents, and agency revisited, in: Shibatani, M., Thompson, S.A. (Eds.), *Grammatical Constructions: Their Form and Meaning*. Oxford University Press, Oxford, pp. 289–322.