Rasia, Eugenia M. 2025. The syntax of intransitive alternations: asymmetries across languages. *Glossa: a journal of general linguistics* 10(1). pp. 1–43. DOI: https://doi.org/10.16995/glossa.9114

Open Library of Humanities

The syntax of intransitive alternations: asymmetries across languages

Eugenia M. Rasia, IECH-CONICET, AR, mangialavorirasia@iech-conicet.gob.ar

This paper analyzes intransitive alternations in relation to manner/result transitivity patterns. We focus on productivity and distribution in Romance, Greek, and English, where a major asymmetry is created by the (un)availability of monadic alternates featuring a stative cause as the single participant (e.g. *Caffeine dehydrates; Covid kills*). These constructions are contrasted with intransitive alternatives generally considered in the literature, like the Characteristic Property of Agent Alternation (e.g. *This dog bites*). Criteria like eventivity, episodicity, agentivity, and intentionality/volitionality are examined. We find that the types contrasted correspond to two structurally distinct kinds of predication. Major differences emerge between originally transitive structures where the object, even if unexpressed/unspecified, is assigned a place in the configuration (the type traditionally explored) vs. original atransitive variants consisting only of the external-argument-licensing head, with consequently different semantic and syntactic properties.

This distinction also explains the apparently striking distribution of intransitivity alternations in psych verbs. We note that certain verbs, even if eligible for psych predication like *bother* or *intimidate*, can have other uses related to manner-of-behavior predications. We identify central conditions (eventivity, animacy/agenthood, defeasibility) regulating argument/event realization: in languages like English, whereas structurally monadic variants with a cause subject are generally unavailable (**Madrid bewitches/fascinates*), manner-type alternatives are fully productive for verbs with non-psych uses, offering less-constrained conditions for object drop/non-specification. In Romance and Greek, both structures are systematically available, offering distinct syntactic and semantic computations for intransitive variants across different verb classes.

1 Introduction

Transitivity alternations have inspired major advances in Generative Grammar, motivating diverse theories on the relation between verb meaning and grammatical representation (Perlmutter and Postal 1983; Levin 1993; Pesetsky 1995; Halle & Marantz 1993; Pylkkänen 2002; Hale & Keyser 2002; Ramchand 2013; Levin & Rappaport 2015 *i.a.*; cf. Alexiadou et al. 2015 and references therein). On the specific topic of intransitivity alternations – as a shorthand for intransitive or objectless variants for verbs with default transitive frames (cf.(1) below) –, by contrast, much less is said.

Here, we examine intransitive alternatives in two major verb classes – causative and psych verbs – in Romance and English to explore two distinct but related empirical problems.

It has been noted that causative verbs, including *bite*, *itch*, *scratch*, *sting*, etc., can appear intransitively, with the interpretation that event(uality) described by the verb is characteristic of the subject argument (Goldberg 2001: 518). However, specific tests and distributional patterns, show that even if similar at first sight, two distinct frame realizations exist, involving radically different configurational and semantic properties. To illustrate this point, we preview a contrast between one case, the traditionally considered intransitive alternation (Unexpressed/Unspecified Object Alternation, Levin 1993 i.a.), illustrated in (1), and the more recently discussed type in (2), which we will call atransitive alternation here following McIntyre (2004).[1]

(1) Unexpressed/Unspecified Object Alternation (Levin 1993)
   a. *This dog bites.*
   b. *African bees sting.*

(2) Intransitive Causative Alternation (M. Rasia 2017)
   a. *Covid kills.*
   b. *Caffeine dehydrates.*

Syntactically, the main contrast concerns the presence/absence of internal-argument-licensing structure, with the constructions in (1) showing properties consistent with unspecified/unexpressed objects, and those in (2) failing null/unexpressed object tests, coherent with an atransitive monadic structure, (atransitive variant [AV]). This asymmetry is reflected by differences in basic denotation and aspectual properties: although both constructions suggest simple subevental structures, the type in (1) generally produces event-based patterns involving a volitional actor participant, whereas the type in (2) produces stative (IL) predications describing

[1] McIntyre (2004) describes atransitive structures as those where direct objects normally selected by the verb cannot be linked. For the specific motives supporting our use of the term, see Section 2 and fn.13.

the subject as a possible cause of the lexically-coded result associated with the verb – in other words caffeine as a possible cause of dehydration. Thus, contrasts are most visible in the role of the single specified participant (actor vs. cause).

This structural asymmetry has deep(er) implications for evental representation. Based on a series of semantic and aspectual properties, we note that the availability of intransitive alternation could be directly related to the availability of manner-type denotation and the (non)interpretability of the subject as animate (actor) participant, correlated with the presence of eventivity/dynamicity in the core denotation. The contrasts thus obtained conform to a basic premise in the relation between lexicalized meaning and flexibility in argument frame realizations. Specifically, we find that the asymmetric patterns defined by the Manner/Result Complementarity (Levin & Rappaport-Hovav 2008) [MRC] provide a compatible basis for a principled distinction between two structurally distinct types of intransitive alternations underlying the contrast between (1) and (2). The difference could be predictable from core verb meaning and lexically-coded conditions.

With this in mind, and to test the validity and empirical extension of the proposal, we take the analysis further by considering intransitive alternate availability in psych verbs.

Psych verbs are interesting for many reasons. Notably, they are associated with two major argument structure alternations – the transitive/unaccusative (a.k.a. causative/anticausative) alternation, the middle alternation and the eventive/stative alternation. Moreover, psych verbs are associated with peculiar syntactic properties, generally regarded as *non-canonical transitivity* (Belletti & Rizzi 1988; Pesetsky 1995; but cf. Doron 2020).

Now, a first and fundamental question arises as to why certain 'psych' verbs disallow intransitive structures like (2) and, why, those that do, do it under very specific conditions, practically suggesting a different sort of intransitive alternation, closer in its basic denotation and aspectual properties to (1). A second question is why, in languages like English, a significant number of psych verbs only allow this (latter) type of intransitive alternate, and why this option apparently involves losing all 'special' psych properties, including the peculiar syntactic conditions observed in specific contexts. Key conditions in the analysis of (1)-(2), like agentivity, volitionality, and habitual/iterative entailments, are also applied next to analyze productive contrasts like (3), capturing at the same time a major observation about some psych verbs, like *concern*, distinctly rejecting agentive interpretations (Grimshaw 1990, Levin 1993:191).

All these points provide empirical arguments to identify syntactic and semantic variables defining the set of verbs that show this behavior and allowing us to predict which verbs will not.[2]

[2] This label is used following previous works cited. In the discussion below, it is used as an umbrella term to describe single-specified-argument constructions in general, along with unrealized/unspecified/arbitrary/null object alternatives (Levin 1993), especially in those cases where differences in this regard are not crucial to the discussion. The reasons for this simplification are laid out in Section 5.

(3) *Bob always bothers/*concerns (on purpose).* ENGLISH[3]

Importantly, languages like Romance or Greek lack similar restrictions, showing full productivity for the subject-as-possible-cause atransitive alternate (cf. *Bob siempre preocupa* 'Bob always causes worry', which is the strict parallel for (3) [lit. *Bob (always) concerns*]).

In these constructions, the prominent reading does not involve an experiencer, as in (3), but rather the unique argument is computed a potential cause/trigger of a mental state. The structural contrast between (3)-(4)a, where the subject is an experiencer, and (4)b-c, showing a default causer interpretation of the subject, raises a pressing question.

(4) a. *Bob always irritates/amazes/worries.* ENGLISH
b. *Bob siempre irrita/asombra/preocupa.* ROMANCE (SPANISH)
Bob always irritate/amaze/worry.3S
'Bob is always irritating/amazing/worrying' (=Bob always causes irritation)
c. *O Bob anisixi/entuposiazi/enoxli* GREEK
the Bob irritate/amaze/upset.3S
'Bob is irritating/amazing/upsetting' (M. Rasia 2021: 255)

Apparently, the unrestricted frame alternation in these languages includes the possibility for psych verbs to yield both causative-inchoative and atransitive frames resembling (2), as well as intransitive alternates of the sort also present in English (i.e., more like (1)). Consequently, for these languages two semantically and syntactically different intransitive alternates are systematically available.

(5) a. *Bob intimida, ofende y humilla.*
Bob intimidates, threatens, and humiliates.
b. *Bob preocupa y angustia.*
Bob concerns and anguishes
'Bob causes concern and anguish'

In English, by contrast, if we set aside those cases ultimately allowing intransitives like (3) under typical null/Arb/unexpressed object alternation conditions much in line with (1) – presumably associated with a silent object interpretable as [people] (Levin 1993) –, anticausative middle-like readings are preferred, favored by the equipollent (unmarked) frame alternation (*Bob gets irritated/upset/worried* for (3)) absent in other languages. This contrasts

[3] The data has been cross-checked with native speakers on online anonymous surveys (including different Romance and English varieties) and personal communications with native colleagues.

with the default cause-as-only-participant reading in Greek and Romance for monoargumental unmarked variants. In these languages for other (e.g. anticausative) interpretations, special morphology is required.[4] Therefore, whereas *Barcelona* in (6)a is naturally interpreted as 'Barcelona generates exasperation' in Romance or Greek, in English a subject-as-possible-cause counterpart is not an option, much less a default one, leaving the usual anticausative reading, compared above (recall (3)-(4)a above), as the default option. As this involves the computation of the single specified participant as experiencer of a mental change of state, the result is grammatically feasible but semantically (conceptually) odd (≈'Barcelona feels exasperation') at least under an inanimate reading of the subject.[5] This empirical contrast remains, to our knowledge, largely unexplored.

(6)	Spanish	English
a.	*Barcelona exaspera.*	**Barcelona exasperates.*
b.	*El Covid asusta.*	**Covid scares.*
c.	*La película entretiene.*	**The movie entertains.*

Here, the (un)availability of each type of intransitive alternate in psych verbs is analyzed under the same criteria used in standard manner vs. result verbs above. We propose an analysis where finding empirically clear observations on the relation between semantic and syntactic representation pulling (1)-(2) apart, and the relation – and potential similarity – with (5)a-b, are central points. Our hypothesis is that the syntactic and semantic status of the external argument, along with key eventive properties like dynamicity/agentivity, could explain, first, the productive restriction allowing some verbs, but not others, to appear in intransitive subject-only alternates in English, producing (3), and, second, the general unavailability of direct correlates for (4) especially if aligned with internal-argument-licensing capacity and semantic/syntactic conditions favoring null/unspecified/generic objects (e.g., habitual entailments, episodicity). The working idea is that the availability of manner-of-behavior readings coincides with manner-type intransitivity alternation patterns in psych verbs, facilitating object drop or non-specification under standard conditions (agentivity, volitionality) paralleling those noticed in causative verbs above. If correct, a natural account of these questions becomes possible, including a unified analysis of a much wider spectrum of alternating verbs.

[4] Although possible, an unaccusative (anticausative) reading of constructions like *Caffeine dehydrates* (caffeine = undergoer) is odd (M. Rasia 2021; 2024).

[5] Animacy restrictions are not irrelevant and will be discussed later.

2 Part 1: Two types of intransitivity alternation

There are different types of transitivity alternation. Best-known variants include causative-inchoative, conative, locative, and middle alternations. Although these types differ in the general layout of the transitive frame, the oblique role assigned to the subject, and the nature of the argument promoted, they still share a point: for all of them, the theme is constantly realized. Other alternatives in frame realization, carrying equally important theoretical implications, received considerably less attention. These alternatives are discussed next.

2.1 The 'well-known' intransitivity alternation

Intransitive alternations (Levin 1993: 33) differ from other alternations in the type of constituent constantly realized. In this case, the mandatory presence of the external argument vs. the optional status of the theme is what sets Intransitive Alternations apart from the set of commonly studied alternations (transitivity alternations such as the causative, middle and conative alternations). Clear patterns have been established as to what kind of verb may enter (in)transitivity alternations and of which type.

Levin & Rappaport-Hovav (1998; 2008) note that, first, verbs allow for distinct argument structure and event representation options and, second, that major asymmetries in this respect seem to be linked to specific meaning components in the denotation. Following previous studies from neighboring disciplines like cognitive linguistics (Gentner 1978), a distribution is proposed whereby verbs from different semantic classes fall into two major types: manner vs. result verbs. Whereas manner-type verbs essentially express the way in which an action is carried out, result-type verbs refer to the establishment of a state as a result of a certain happening involving scalar change. The saliency of these meaning components is conceived in complementary distribution.

(7) a. MANNER VERBS: nibble, rub, scribble, sweep, flutter, laugh, run, swim, etc.
b. RESULT VERBS: clean, cover, empty, fill, freeze, kill, melt, open, enter, etc.
(Levin & Rappaport-Hovav 2008: 1)

Further studies (Levin & Rappaport-Hovav 1995; Levin 2006) conclude that it is the saliency of manner/result denotation what defines major constraints on internal argument realization, defining frame alternations accordingly. For instance, manner verbs typically allow possessor raising (*The dog bit me on the ear*), unselected objects (*The dog bit his way through town*), and conative alternations (*The dog bit at me*).[6] Crucially, for this class, unexpressed objects (*This dog bites*) are possible or even frequent. This is important for many reasons, but especially because in the opposite verb class (result-type), which produces typical examples of the probably most popular frame alternation – the Causative Alternation (8) – unselected, unspecified, or

[6] As a reviewer suggests, in Romance things are slightly different, with the conative alternation often replaced by possessor raising.

unexpressed objects (Levin 1993) are, by rule, disallowed. This condition, illustrated in (9)–(10), places a severe limitation: essentially, it reduces frame alternations for result verbs to transitive/unaccusative variants; that is, structures where the internal argument is invariably realized.

(8) *Kim burnt/cleared the table* CAUSATIVE
The table burnt/cleared. ANTICAUSATIVE
**Kim burnt/cleared.* INTRANSITIVE

(9) MANNER VERBS
a. *Kim scrubbed the floor.*
b. *Kim scrubbed all morning.*
c. *Kim scrubbed the table clean.*
d. *Kim scrubbed the carcass on its surface.*
e. *Kim scrubbed the dirt off the boots.*
f. *Kim scrubbed at her face with a tissue.*

(10) RESULT VERBS
a. *Kim broke the toy.*
b. **Kim broke (all morning).*
c. **Kim broke her hand bloody.*
d. **Kim broke the carcass on its surface.*
e. **Kim broke the toy shattered.*
f. **Kim broke at the toy.*

The MRC imposes differences in subevent representation as well. The question of which verbs allow intransitive alternates is explained also in relation to asymmetrically complex semantic structures. For instance, prototypical examples of manner verbs include surface contact and removal verbs like *wipe* and *sweep* (Rappaport-Hovav & Levin 1991: 129; Levin 1993; Erteschik-Shir & Rapoport 2010). As action verbs, these verbs express simple event structures consisting of a single subevent. Assuming that subcategorization options for any verb transparently reflect event structure (cf. Levin 1999), the general pattern explains why it is precisely verbs whose core denotation involves only one subevent, that require only one argument. This offers in consequence a less constrained context for object realization. Agentivity is in general central to this pattern: provided the core denotation is a manner of action, only one structural argument – the actor – is required, hence satisfying (11).

(11) Structure Participant Condition: There must be an argument XP in the syntax for each structure participant in the event structure. (Levin & Rappaport-Hovav 1998: 113; Levin 2006)

As a result, unexpressed or null object constructions become naturally available for certain verbs insofar as two conditions are met: (i) there is an explicit actor participant involved; (ii) the predication is eventive and structurally simple. These circumstances produce the variants in (12) (see also Levin 1993: 99).

(12) a. *The horse kicks.*
b. *Pat kicked his way out of the operating room.*
c. *Pat kicked at Bill.* (Goldberg 2001: 503)
d. *They kicked Pat out of the office.*

What (12) further shows that intransitive alternations also come in many guises. Along with way-constructions (12)b, conative alternation (12)c and out-of (12)d variants, unexpressed, null, unspecified, and arbitrary (PRO-arb) object realizations (Levin 1993), together with objectless (Mittwoch 2005; Lemmens 2006) and deprofiled object (Goldberg 2001; 2005; Lemmens 2005) constructions like (12)a have been widely discussed.[7] The fact that for all of them, the grammatical subject bears the same semantic relation to the verb (Levin 1999; Levin & Rappaport 2008) poses interesting parallelisms with other widely-studied transitivity alternations like the causative alternation, where it is also the constant argument (in this case, the internal argument) that preserves the semantic role (theme) in relation to the verb's predication (Levin 1993: Levin & Rappaport 1995; 2008). An overarching notion thus emerges, as transitivity alternations commonly discussed – centrally, transitive-to-objectless and transitive-to-unaccusative variants – all preserve the semantic role across alternates.

Now, from all the types mentioned above, we will focus on a particular kind of intransitive alternation, the Characteristic Property of Agent Alternation [CPAA], taking (13) as a toy example.

(13) Characteristic Property of Agent Alternation (Levin 1993, Dixon 1991)
a. *The dog bites.*
b. *Cinderella sweeps.*

Several properties of this alternation are central to the discussion. First, verbs allowing CPAA are almost exclusively instances of 'manner' verbs. As argued above, it is generally agreed that, among transitive verbs, those showing more flexibility for (non)specification of the object involve a prominent manner component in the denotation (Mittwoch 2005). A verb-lexicalized manner entailment and its characteristic global interpretation would explain the distribution drawn, namely, by adverbials like those in (14)a–b. Moreover, it would further capture the computation of frequency adverbials like always in (14)c in relation to a characteristic property of the subject constructionally created by pluractional implication (i.e. repeated action > manner of behavior).

(14) a. *Hemingway ate, drank, and smoked **too much**.* (Lemmens 2006)
b. *Scott hammers and saws **like a pro**.*
c. *Bill **always** interrupts.*

[7] See the discussion around (14) just below, and Goldberg's proposal about (64) in Section 4.1.

Various studies stress that in all these variants the emphasis is placed on the action and the agent (Lemmens 2006). Goldberg (2001) notes that it is the coincidence of a de-emphasis of the patient and emphasis on the action that is essential to 'objectless' – strictly, omitted object – alternatives for otherwise transitive verbs, illustrated in (14). This captures two relevant conditions on representation – simple event, actor participant – conforming to the Structure Participant Condition ((11) above). Concomitantly, Rice (1998: 206) notes that because these constructions evoke general semantic scenarios, the object is "fairly unimportant as the pragmatic focus is on the activity itself". Essentially, the intransitive variant is used to express that the subject typically shows a disposition for the action named by the verb.[8]

(15) a. *Mary drinks **at her birthdays**.*
b. *Mary drinks.*

What (15) additionally illustrates is Rice's, Levin's (1993: 38), and Goldberg's (2001: 506) intuition about an understood/implied easily retrievable object (e.g. much [alcohol]) (e.g. (14)a above) essentially based on cognitive grounds. The conditions summarized in (16) reflect these points.

(16) objectless variants: the action named by the verb is interpreted as a characteristic (a dispositional habit) of the subject, which must be in turn interpretable as an intentional actor, in a subject-controlled event.[9]

From here – pragmatic reasons aside – the relative irrelevance of the theme/patient to the core predication and the weaker conditions on its realization seem to always follow from the kind of event structure involved, which is assumed to decompose into something like (17). This layout would be coherent with the vP configuration usually assumed for the same verbs in constructional accounts ([Init, Proc] verbs in Ramchand 2007: 214, V_{DO}-headed verbs in Folli & Harley 2005, to name a few) where the only logical (default) argument is the external one –i.e., one defined not by the verb, but rather by construction.

(17) [x ACT< √MANNER>] CPAA

Properties and patterns characterizing this alternation will be discussed in detail below. Yet, before we proceed, a different type of (in)transitivity alternation must be introduced in order to make clear the contrast at issue here.

---

[8] Whereas the pluractional entailment central for the computation of the action as a defining characteristic (not just merely a repeated event), the volitional implication related to the fact that the subject can choose or define when the behavior takes place becomes equally crucial to this constructional meaning (action = property). These two implications, which are key to pulling apart these cases from atransitive variants later (section 2.3), are anticipated not only by the typical adverbial distribution (*always, often*), but also by the fact that the habitual reading needs no further markers or context to be derived, as (14)c-(15)a, and (15)b respectively show.

[9] Using the term quite broadly, encompassing also intransitive alternation types like those in Levin (1993).

2.2 The 'other' transitivity alternation

The constructions addressed next offer examples of a relatively underexplored alternative. These variants feature monadic frames for result verbs, which are, as anticipated, structurally — semantically and syntactically — distinct from the monadic (unaccusative) frame commonly discussed: in these constructions it is the external argument that is kept constant, while the unique argument is not interpreted as a patient or resultee but as a possible cause. Basically, what is expressed in these constructions is that an entity (subject) has the potential to motivate a change of state associated with the lexical root.

The observation that verbs appearing in these constructions are precisely those entering the causative alternation is problematic for a simple reason: such verbs are generally classed as result-type verbs (cf. Levin 2006; 2017), and, under the transitivity pattern defined by the MRC, unexpressed, null, or unspecified internal argument occurrences So often seen in traditionally considered intransitive variants (e.g. CPAA), are disallowed (Levin & Rappaport-Hovav 2008 i.a.). However, occurrences like (18) are not rare. Similar examples involving canonical result verbs like *kill* figure prominently in the literature on optional and omitted objects (cf. Lemmens 2006).

(18) a. *Rice, bananas, apples, and toasts constipate.*
b. *Some chemicals asphyxiate.*
c. *Caffeine dehydrates and overstimulates.*

Two things are especially noteworthy about constructions like (18). First, they contrast with the 'intransitive' null/unspecified/omitted object variants discussed in Section 2.1 above, which characteristically involve an active participant with active volitional attitude or disposition to act in a punctual (iterated) event (cf. (19)).

(19) a. *In that case, he could have murdered, too, I suppose.*
b. *Stop me before I kill again.* (Lemmens 2006: 11)

Second, the systematic productivity of constructions like (18) challenges the view that, for verbs allowing scalar change-of-state predication – a key property for result-type classification –, transitivity alternations seem naturally restricted to unaccusative and transitive frames. Nevertheless, Romance languages like Spanish, Catalan, Romanian, Portuguese and Italian, or even Greek (cf. Alexiadou & Iordachioaia 2014; M. Rasia 2021; Kallulli 2021) allow this alternative almost unrestrictedly, as (20) also shows.

(20) *I aktinobolía alpha kei.* GREEK
Radiația alpha arde. ROMANIAN
La radiación alfa quema. SPANISH
[the] radiation alpha burns
'Alpha Radiation causes burns'

Although more restrictedly (cf. (20)), English also allows for a fair set of what seem objectless alternatives of prototypical result verbs including causatives Stop;[10] literal glosses to many Romance productive examples are in fact possible, as in (21).

(21) a. *La heroína mata.* ROMANCE
Heroine kills. ENGLISH

b. *El alcohol en altas concentraciones desinfecta.*
Alcohol in high concentrations disinfects.

c. *La cafeína en exceso deshidrata.*
Excessive caffeine dehydrates.

There are three points to consider here.

First, the DP subject in these occurrences is necessarily inanimate. This sets a clear contrast with the usually-discussed intransitive alternates like (1), (13)-(14) and (19) above – e.g., *Mary drinks* or *This dog bites*.

Second, intransitive variants like (20)–(21) consistently follow stative patterns.[11] Both points are important because constructions like (2) deviate from the usual profile of 'objectless' predications as to the two relevant conditions: active participant and agent-controlled event with (volitional) denotation. Instead, they seem to lack them both (cf. (22) vs. (16) above).

(22) a. *La cafeína/El alcohol/*Mary deshidrata.*
b. *La cafeína/El alcohol/deshidrata #voluntariamente/#para desinfectar.*

Third, these constructions fail all relevant tests for null/$_{ARB}$pro constructions.[12] Namely, constructions like (23)–(24) disallow object-oriented secondary predication (Rizzi 1986) and

---

[10] We leave open the question on whether these verbs take *state* (Levin 2017) or *result* roots to another paper (M Rasia & Marin forthcoming).

[11] AVs consistently fail eventivity diagnostics. Namely, they resist *what-x-did* or *what-happened-was* frames (Jackendoff 1990; Dowty 1991; Rappaport-Hovav & Levin 2001), present tense does not yield habitual readings (Dowty 1979; Krifka et al. 1995) and reject related adverbials verbs, as (i)-(ii) illustrate. Incompatibility with *stop/finish* agree, setting a uniform contrast with unexpressed objects. Similar patterns ((76) below) appear with psych verbs.

(i) a. #*What rice does is dehydrate/constipate.* MONADIC (AV)
b. #*What happened was that caffeine dehydrated.*
cf. *What Cinderella did was scrub and swipe (all day).* UNEXPRESSED/UNSPECIFIED OBJECT

(ii) *Rice dehydrates/constipates (#at eight / in the morning / every day).*
Cf. *Cinderella swipes (at eight / in the morning / every day).*

(iii) #*Rice stopped/finished dehydrating/constipating.*
Cf. *Cinderella stopped/finished sweeping.*

[12] The tests include SC subject with adjectival/participial predicate and binding, null-object-oriented depictives/resultatives, *ne*-cliticization (Italian), PRO-control, ¿null-object quantification.

null-object quantification. In Italian, ne-clitization and quantifiers used as null-object diagnostic (bare molti, Cattaneo 2008) are equally resisted.

(23) *La heroína mata *(dormidos/asustados).* SPANISH
the heroine kills asleep frightened
Heroine kills (sleeping/frightened).

Additional tests unanimously indicate that these are not null or missing object instances. Namely, Spanish shows deviant results with null-object quantifiers like *muchos* 'many', in parallel with (23).

(24) *El alcohol en altas concentraciones desinfecta (*demasiados/muchos).* SPANISH
*L'alcol in alte concentrazioni (*ne) disinfetta (*molti).* ITALIAN
the alcohol in high concentrations disinfects too many several
'Alcohol in high concentrations disinfects (too many/several).'

(25) is interesting as it reveals a significant difference in the computation of the intensifier, which is not interpreted on a quantized (null/unrealized/unspecified/missing) object, but it rather is computed in reference to the disinfecting capacity of alcohol – that is, in the stative sense, maximizing the degree to which the gradable property holds for the subject as individual-level characteristic. The English gloss in (25)b, expressing the difficulty to interpret the partitive quantifier *some* has been used as a test for null and objectless constructions (cf. Mittwoch 1982: 120, Levin 1993); this contrasts with the occurrence of *something*, which is typically allowed with null and arbitrary/generic objects.

(25) a. *El alcohol concentrado desinfecta, pero la lejía desinfecta más.* SPANISH
Concentrated alcohol disinfects, but bleach disinfects more.

b. *La lejía pura desinfecta ??algunos.*
Pure bleach disinfects ??some. (cf. pure bleach must disinfect something)

Similarly, (26) shows that further null/arb object-oriented quantifiers are fine in prototypical CPAA examples like (14)a above – repeated in (26)a – but not in (26)b. Also here, the quantifier, if allowed, gets once more a stative reading where the dehydrating capacity of caffeine as a possible cause is measured, just as in (25)a above.

(26) a. *He drinks too much.* 'OBJECTLESS' CONSTRUCTION
b. *#Caffeine dehydrates too much.* ATRANSITIVE VARIANT [AV]

In addition, and what is more important, there is the fact that subject-as-possible-cause monadics are systematically productive with both unpassivizable verbs and verbs by default incompatible with null objects (M. Rasia 2019).

Taken together, empirical observations of this sort contribute to our proposal that the constructions at issue constitute genuine monadic atransitive variants [AV]. This involves the

assumption that we are not dealing here with an underspecified, null, or generic object, but rather with a structure where no object is structurally licensed at all. If correct, a configurational contrast between atransitive vs. arbitrary/unexpressed/unspecified[13] object constructions would support the proposed existence of asymmetrically different (in)transitive alternations. Each type would Accordingly define have a distinctive behavior and distributional semantic pattern coherent with their relevant denotational and configurational properties, coherent with the MRC.

2.3 Two characteristic property alternations

There are three points objectless[14] and AV constructions share. First, CPAA and AV constructions fit the notion of characterizing sentences in the sense that they both express some distinctive trait in an entity, such that a change in the character of the entity arises if the description is altered (Deo et al. 2013). Second, they respond to the central condition in (27) (see also Park 2009). Third, CPAA and AV constructions both apply for the Structure Participant Condition provided there is an only required argument (single participant) involved in the expression of a simple event (single eventuality).

(27) Responsibility condition: The subject must have properties such that it can be understood to be responsible for the action expressed by the predicate. (Fellbaum 1986)

Importantly, however, they apply in different ways. Essentially, CPAAs and AVs build on distinct sorts of simple atelic types – actions vs. states. This yields distributional differences suggestive of a configurational contrast imposing disparate selectional and interpretive patterns. There are three basic examples:

One. In standard generalizing sentences taking a missing/unrealized/unspecified object, as CPAAs do adverbs like *usually (also, when, whenever)* yield the entailment that there may be exceptions to the rule established by the predicate – essentially, a series of events that define the subject by habit or disposition to a certain behavior (Krifka et al. 1995), as in (28)a.[15] Instead, if the object is realized, episodic event reports are entailed, as in (28)b.

(28) a. *A pig usually/often bites intentionally (when threatened).*
b. *A pig usually/often bit me intentionally (when threatened).*

[13] In this case, the presence of a result lexical component stripped from additional derivational structure furnishing the verb with transitive capacity would explain the results obtained here, motivating the configuration proposed below (cf. (44) in Section 2.4).

[14] We avoid a specific discussion on each one of these variants to concentrate on the major structural difference between atransitive and omitted/null/arbitrary/unspecified/unrealized/missing object constructions drawn by presence/lack of internal-argument-licensing structure.

[15] For specific effects of *when/whenever* and *usually* interpretive effects and the link with habitual/dispositional entailments, see Van Geenhoven (2003).

By contrast, AVs fail to license habitual entailments in which exceptions or omissions are derived. This follows naturally from their structural semantic properties – specifically, three: (i) a clear lack of subject animacy/volitionality, shown in (29), (ii) distinctive generic dispositionality entailments, and (iii) a clear non-episodic nature.

(29) *Coffee (?usually/often) dehydrate #intentionally.*

Moreover, AVs yield non-deontic predications where real event instantiations are not required, as shown by (30) and epistemic effects arise with modals like must. Consider the contrast in (30).[16]

(30) a. *This dog bites! #[but it hasn't bitten yet].* CPAA
b. *This lotion disinfects [but it hasn't been used to disinfect yet]* MV

(31) a. *This dog must bite.*
⇏ Subject has property x
⇒ Subject is under obligation to bite. (it has been trained to)
b. *This lotion must dehydrate.* MV
⇒ Subject has property x
⇏ Subject is under obligation to dehydrate.

Two. Important distributional differences also touch on tense compatibility. Whereas prototypical examples of unexpressed/null object alternatives and objectless constructions usually involve perfective tenses (cf. Levin 1993: Mittwoch 2005; Lemmens 2006), for AVs, by contrast, the perfect tense is odd, showing instead the affinity with generic tenses typically expected from stative constructional variants.[17]

(32) a. *#That alcohol disinfected. [but the brand is no longer available, this one does not]*
b. *#Caffeine dehydrated (if swallowed/if rubbed on the skin).*

Consequently, if allowed, the past tense yields the LifeTime effect expected in temporally unbounded (Individual-Level) stative predications, entailing that the holder of this stable property no longer exists (Carlson 1977), as in (33). This contrasts with the discontinued habit reading in prototypical objectless constructions like those in (34), including normal contexts like concatenation ((34)a) and division of labor ((34)b).

(33) *John drank.*

---

[16] Because this distribution is a standard test for (non)deontic *stativity* (Maienborn 2008, Rothmayr 2009), we take it to support the proposed ILP nature of AVs as states. The potential IL/SL nature of CPAAs, instead, is not discussed here for reasons of space and complexity (see Deo et *al.* 2013).

[17] In this sense, the distinction between habitual and pure generic predications (Dobrovie-Sorin 2003) rises a promising topic for further research (Mangialavori & Marin forthcoming).

(34) a. *John drank, swore, and yelled (often).*
b. *Cinderella scrubbed, while her sisters knit.*[18]

Relatedly, in standard objectless constructions punctual adverbials define action iteration (event multiplicity) as a source of the habit(ual) entailment, as in (35), while frequency adverbs stress a cyclic reading, as in (36).

(35) *John drinks at night.*

(36) *The chef-in-training chopped and diced all afternoon.* (Goldberg 2001: 506)

In fact, it has been often noted that adverbials facilitating habitual and iterative readings improve grammaticality in those cases where the object is selected but left unspecified (Rice 1988; Bender 1999; Lemmens 2006). Such observations are consistent with a subject characterized by repeated actions dispositionally performed by an actor.

(37) *Tigers only kill at night.* (Goldberg 2001: 506)

The requirements on occurrence frequency in objectless constructions (cf. Deo et al. 2013) explain not only their usual combination with adverbs like *typically*, *usually*, *generally*, and phrases marking temporal/situational frames like (35), Moreover, the absence of similar adverbs is problematic with subject DPs with not-so-clear volitional reading:

(38) a. *#Covid killed.*
b. *#Covid only kills at night.*

Three. The proposed analysis effortlessly captures Rizzi's intuition on prototypical null/arbitrary object examples like (37).

(39) *Questo serial killer uccide sempre di notte.*
This serial killer kills [] always at night.

Four. Minimal pairs, like those in (40) below, show that with DP subjects eligible for inanimate/stative/involuntary causer readings, an AV predication becomes available. This variant is incompatible with perfectivity, deonticity, and frequency, thus stressing the need of animacy/agency/volitionality in the subject to license a missing object frame——exactly as our analysis predicts. Instead, when the DP subject guarantees an agentive/active reading, and the verb allows entailments related to habitual events characteristically performed by a volitional actor, as in (40)b, the objectless (CPAA-like) construction becomes prominent again.

---

[18] Many prototypical examples of null/*objectless transitives* in the literature, if revisited under our approach, can be seen to actually correspond to **atransitive** structures. Consider (i)

(i) *It was either white hot or black hot. The white hot burned. The black hot suffocated.* (Lemmens 2006: 19).

(40) a. #*Covid kills [every day/at night]*.
b. *John disinfects [every day/at night]*.

For all these facts, a natural explanation building on a constructional (configurational) contrast, based on the transparent event-to-syntax correlation pursued, is available and discussed next.

2.4 Analysis

From the previous (sub)sections, a major contrast between distinct intransitive alternation types emerges. According to a series of conditions evaluated above, it can be noted that intransitive alternatives commonly discussed in the literature (CPAA/objectless type) involve no major differences with respect to the dyadic variant: across frames, dynamicity and agentivity are generally preserved.

(41) a. *This dog bites/This dog bites people/This dog bites Bob (often/every day/only at night)*.
b. *This dog bites/This dog bites people/This dog bites Bob (intentionally/tenaciously/to show sadness)*.

By contrast, when a monadic (atransitive) variant of a result-type verb is produced, all hallmark properties of the result class, like scalar change, resultativity, eventivity, and episodicity are disabled, leaving a mere (Individual-Level) predication instead. We propose that this major aspectual difference between result-type-based AVs and internal-argument-licensing (causative/anticausative) forms of the same verbs – i.e., intransitive variants commonly discussed for this type –, like (42)b, can be explained grammar-internally, and so can the fundamental differences between AVs and standard objectless constructions with manner-type verbs like (42)a.

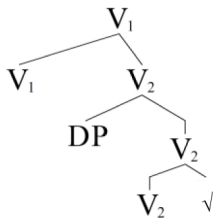
(42) a. *By the afternoon, Cinderella was sweeping/Tom was drinking/Hemingway was drinking.*
MANNER VERBS
b. #*By the afternoon, alcohol was dehydrating/Caffeine was stimulating/Covid was killing.*
RESULT VERBS

Our hypothesis is that this asymmetry – along with the specific implications analyzed in Section 3.3 – immediately follows from the absence of specific heads playing a critical role in argument structure and event representation. Consequently, the stativity of AVs would be a predictable configurational result of an optional non-merger of such heads. To propose this, we build on aspectual tests presented above offering evidence that the absence of the relevant (internal-argument-licensing) head correctly correlates with the absence of its (sub)evental (aspectual) structure counterpart.

The component in question is the one generally associated with the eventive denotation – notably, the BECOME prime in Levin & Rappaport-Hovav (1995), Dowty (1979) i.a. This component is structurally linked to the (sub)structure introducing the internal argument – the

undergoer of the change in the thematic/argument structure. Following the same combinatorial logic, stative occurrences of result verbs, as a pure configurational result, would be by default possible. Importantly, this holds under the condition that the matrix verb is not combined with the inner verbal head furnishing the verb with the ability to license internal arguments and introducing the scalar change denotation (V_2 in the $V_1 \rightarrow V_2$ subevent schema in Hale & Keyser 2002; 2005; [vCAUSE [vBECOME]] embedding in Levin & Rappaport-Hovav 1995). The caveat emerging here is that transitivity in these verbs is a constructional result, automatically obtained, via Merge, by virtue of the complement (v-V) relation (Hale & Keyer 2005: 12), as in.

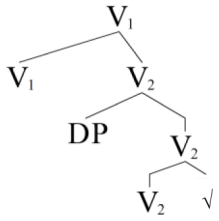
(43)



(Hale & Keyser 2005:2 (8))

The aspectual properties noted in e.g. (42)a would therefore follow naturally, provided that the originally monadic verbal head is independently realized, licensing a sole subject participant who is a mere holder of a property, as in (44).[19] This structural difference should account for their behavior in relation to the standard causative-inchoative alternation but also to unexpressed/ unrealized object alternatives discussed.[20]

(44)



(Hale & Keyser 2005:2 (6))

Importantly, while still conforming to Hale & Keyser's (2002; 2005) compositional process – obtained by direct root(sister-to-v)-incorporation also giving place to unergative verbs (cf. also Harley 2005) – the proposed structure also conforms to more recent constructional proposals specifically addressing causative stativity, like Rothmayr (2009). A direct combination of the

[19] We take inverted IO psych verbs – disallowing causative/anticausative alternation and resultative structures – as independent evidence of free root-composition with *Init* or v (according to the specific work followed) and the constructional nature of the problem (see (50)).

[20] We leave open whether caused change as traditionally understood ($e_1 > e_2$) is strictly dependent on v[V] composition. Recent proposals offer empirical arguments to dismiss resultativity as a core component in standard result verbs (non-culminating events, Martin 2015, Alexiadou et al. 2017). We explore these options in a forthcoming paper.

matrix verb with rhematic information (that is, skipping merge with internal-argument licensing heads) would effortlessly accommodate the facts discussed above independent of properties that come with v-V composition. In doing this, they still meet the requirement that this kind of projection (Rheme) fill the lowest slot in the subject-holder configuration (Ramchand 2007, Berro 2015), as in (45), producing a stative verb in consequence (2007:115).[21]

(45) [vP [holder, v [v°, rheme√]]]

In (45) the rheme projection is interpreted as a stative relation linking a property to the DP in specifier position. Since there is no ResP, and the rhematic material is not selected by a process-introducing head (proc) but rather by an aspectually underspecified projection (Init) headed by a defective v head (Ramchand 2007: 44),[22] the argument is automatically interpreted as the holder of a property – an initiational state – and not as the holder of a 'result' (cf. Ramchand 2007: 53). Whether this property is associated with a change of state is irrelevant here, in the sense that the scalar change component is structurally not represented and is not entailed in the core denotation (ultimately, it is merely implied).[23]

Now, reconsider the contrast in (46).

(46) a. *This dog bites.* UNEXPRESSED/UNSPECIFIED/ARB OBJECT
b. *Covid kills.* MONADIC [AV]

It is important to note here that the specific interpretation of the subject – whether it is a volitional agent, causer, force, experiencer (e.g., of a psych status), or holder – depends on lexical, conceptual and syntactic (configurational) factors. These include animacy (Arad 1998: Doron 2020), additional semantic underpinnings of the predicate (Alexiadou et al. 2017), and the presence of proc and res projections (V_2 and $P_{TerminalC}$ on Hale & Keyser's terms), respectively. In addition, provided that proc is not mediating between InitP (i.e. vP) and the rhematic information at the bottom of the configuration, the subject in (46)b is interpreted as a stative holder. This contrasts with (46)a, where the external argument gets instead an actor reading.

The configurational restriction to a stative holder computation explains that no relevant differences are found with DPs lexically limited to inanimate readings (cf. *Zyklon B kills*).[24]

[21] Although the notation in our proposal uses Ramchand-like (2007; 2018) terms, it remains compatible with fundamental approaches to the topic (Pylkkänen 2002, Reinhart 2001) but, more importantly, with the standard Hale & Keyserian terms.

[22] Assuming that the external-argument-introducing head (analogous to VoiceP) is not the locus of introduction of event arguments in the syntax, but merely a functional head establishing the thematic relation between the external argument and the eventuality expressed (cf. Pylkkänen 2002 and references therein; the 'flaking' aspectually unspecified *v* head in Ramchand's account).

[23] A discussion on implied/entailed results in causative verbs, following notions like defeasibility and non-culminating change is offered in a forthcoming paper.

[24] We leave open whether this is better defined in terms of dispositionality, stative causation, etc.

Animated (volitional) readings of the DP – think of *Covid kills to survive* –, require that the eventive core (proc) be merged.

Under the proposed structural homomorphism, eventivity means, in principle, an internal-argument-licensing structure (VP). This agrees with the premise that manner-patterning events characteristically involve a ProcP argument guaranteeing the entailment of an initiator (agent) licensed by the external-argument-introducing head (InitP in Ramchand 2013; 2018), which is, recall, aspectually unspecified. The Characteristic Property sense in Levin's intransitive alternates would thus involve a manner-of-behavior property whose holder is originally an actor; specifically, the argument of the eventive proc associated with the V head. A structure like (47) would account for such (CPAA-like) cases.

(47) [InitP [Init^{i}, ProcP [Proc^{i}]]] (activities: [init^{i}, proc^{i}], Ramchand 2007: 82)

If correct, two important conclusions arise: first, in cases like the CPAA, no real argument frame alternation seems involved; at least not to the extent seen in AVs (which characteristically lack internal-argument-licensing structure).[25] Concomitantly, atransitive (AV) structures, with the underlying configuration in (45), contrast in all the relevant points: there is no emphasis on an action and/or agent (Lemmens 2006), the subject is not described by manner-of-behavior or tendency to certain action, and, most importantly, it cannot be presented as a volitional actor performing an agent-controlled event, even if this parsing is lexically possible (though semantically and conceptually) odd. This disparity crucially explains the pattern illustrated at the beginning of this subsection ((42)a-b above). In turn, minimal pair contrasts like (48) empirically summarize the points just raised.

(48) a. *This man #(always) disinfects (in the weekends).*
b. *This alcohol (#always) disinfects (#in the weekends).*

These selectional restrictions are important under the transparent mapping between event structure and participant selection rule. In both alternatives, a simple eventuality with a single mandatory participant appears – an activity in one case, a state in the other. In both cases, the subject is the holder, but in radically different characterizing predications. Distinct vP configurations, with predictable semantic properties, account for this.[26]

---

[25] Under the standard premise that generic null objects are active in the syntax and should therefore be present in the structural semantic representation (Rizzi 1986).

[26] With a monadic alternative, not involving (semantically or phonetically) null representations of a subcategorized argument, Levin & Rappaport-Hovav's (2008) prediction is preserved: *manner*-compatible verbs allow unexpressed/null/Arb-PRO objects and core *result* verbs do not. What remained unsaid, however, is that the restriction on *result verbs* may hide a caveat, provided they disallow null/arb/unselected/unspecified/unrealized objects, because they **may not take internal arguments at all**. If correct, two radically distinct alternations should figure more prominently in the discussion.

Whether and how these findings can be extended to other verbs like psych verbs is the topic of the next section.

3 Part 2: Psych verbs

In the discussion on argument structure, psych verbs attract special attention given the peculiar conditions shown. Like the verbs discussed above, they also have been associated with the causative-anticausative alternation, even if in English the applicability of the alternation is not straightforward (cf. Levin 1993: 190) and even if their causative status is per se discussed (Neeleman & van de Koot 2012; Rozwadowska & Bondaruk 2019). Although seemingly transitive, the dyadicity displayed is also of a very particular sort, often regarded as non-canonical transitivity (Belletti & Rizzi 1988, Pesetsky 1995, Arad 1998). This includes special effects on ne-cliticization, backward binding, auxiliary distribution, passivization (since Belletti & Rizzi 1988), island extraction (Landau 2010) and absence of a transitive reading (Pesetsky 1995) in nominal derivations.

The goal of this section is to examine intransitivity alternations in these verbs – and, ideally, confirm whether distinct types of psych verbs, crosscut by MRC-like patterns, exist. In doing this, properties like agentivity, transitivity (e.g. passivization potential) and eventivity, along with the crosslanguage patterns allowed in each case, are considered.

3.1 A productive asymmetry

There are two properties that Object Experiencer psych verbs and canonical causative verbs like those analyzed above share. First, they both alternate between transitive and unaccusative frames, taking special morphology for the anticausative (unaccusative) variant in languages with nonequipollent derivation like Romance (SE-CL) or Greek (NAct inflection). Second – and this is somehow new to the discussion – they both allow for monadic variants (AVs) featuring a possible cause as only argument.[27] This option, along with the asymmetries defined by the (un)availability of intransitive (AV) variants across languages (e.g., Greek, Romance vs. English), leads to four important, strictly empirical, observations.

One. Whereas AVs are, as noted above, possible in standard result verbs (cf. Section 3.2) in English, this alternative is apparently disallowed for psych verbs. Things are different in

[27] The verbs discussed belong, note, to a very particular subtype of OE. Different possible subtypes concerning the productivity gap are considered later (but see also M. Rasia 2021, Marín & M. Rasia 2022, M. Rasia 2024).

languages like Romance or Greek,[28] where atransitive structures are systematically productive with psych verbs, as (49) shows.

(49) a. *O Messi* *enoxli.* GREEK
Messi *irrita.* SPANISH
Messi *enervează.* ROMANIAN
Messi.NOM irritates
'Messi is irritating [causes irritation]'

b. **Messi irritates.* ENGLISH

Importantly, this option is available even with psych subtypes not licensing themes or anticausative alternates, like (50) (inverted IO verbs, Nishida 2016).

(50) *Messi atrae/repele/desagrada/fascina/seduce.* SPANISH
Messi attracts repels disgusts fascinates seduces
'Messi causes attraction/repulsion/disgust/fascination/seduction'

Two. When AV production is disallowed, English recruits an analytic (be + -ing) construction to convey a similar meaning. In turn, the monadic variant gets an unaccusative (anticausative or middle-type) defective reading in which the single visible argument is generally interpreted as experiencer or undergoer (cf. Pesetsky 1995: 56; see also data in Lekakou 2005) (cf. (51)). This happens even when the DP is lexically eligible for agentive and/or cause readings, as (49)b above and (52) equally show.

(51) *Messi irritates (often/easily).* ENGLISH

(52) *El presidente alarma/enfada/irrita/asusta/exaspera/aburre.* ROMANCE
#the President alarms/enrages/irritates/frightens/exasperates/bores ENGLISH
'The President is alarming/enraging/irritating/frightening/exasperating/boring'

In languages like Romance or Greek, by contrast, an unmarked monadic construction has defective AV (subject-as-possible-cause) reading, whereas special morphology (SE-CL/NAct) aligns with anticausative or middle computation.

(53) *O Messi* *enohlit**hike*** *(grigora).* GREEK
the Messi.NOM irritate.NACT quickly
*Messi **se*** *irritó* *(rápido).* SPANISH
Messi SE-CL irritated quickly
Messi irritated (quickly). ENGLISH

[28] For Greek and Italian, see Alexiadou & Iordachioaia (2014), M. Rasia (2021). For Romanian, see *alarma/înfrico/înfuria/îngrozi/demoraliza/înviora* respectively in Iordachioaia (2021).

The relevant observation here is that the asymmetry in AV productivity seen above aligns with the asymmetry created by (non)equipollent derivation.[29]

Three. Some psych verbs do allow intransitive alternates in English, as the gloss in (54) indicates. The difference is that, for these verbs, languages like Romance offer an option between AV and CPAA readings unparalleled by English, where possible readings instead alternate between anticausative and CPAA constructions. Thus, whereas Cause/Originator (Borer 2005) and Actor readings are equally available for the single participant of the eventuality in Romance and Greek, English opts between Actor and Experiencer defaults. The option, note, involves a major structural shift regarding the configurational slot assigned (external vs. internal argument). This disparity is avoided in Romance or Greek, provided the argument is consistently computed as external in both (CPAA/AV) constructions.

(54) *El presidente molesta/agobia/amedrenta/intimida.*
the President bothers/overwhelms/coerce/intimidates
'The President causes bother/overwhelm/coercion/intimidation' **ROMANCE** (AV)
'The President gets bothered/overwhelmed/coerced/intimidated' ENGLISH (UNACC)
'The President bothers/overwhelms/coerces/intimidates [people]' **ROMANCE**/ENGLISH (CPAA)

Four. In Romance, animate nouns allow distinct readings coherent with the crosscut in intransitive alternatives. One reading describes a non-volitional property that characterizes the subject as a potential cause, subject matter or trigger (Levin & Grafmiller 2013) of a mental state. The other describes the subject as a volitional participant in a controlled, intentional action with an implied psych result defining the subject based on a dispositional behavior (action). The disparity is not trivial, as the glosses (boldened in (54)) show.

Tests like adverbial modification support this contrast: whereas quantifiers and intensifiers scope on the active/agentive event, yielding event frequency or intensity in the agentive reading, a purely stative sense (property degree) is yielded, coherent with its ILP nature, in the AV reading.

(55) *Will amedrenta mucho.* SPANISH
Will intimidates a lot.
a. ⇝'Will causes intimidation [to a great degree]' CPAA
b. ⇝'Will intimidates [for hours/on many occasions]' AV

[29] Consider (i) vs. (51):

(i) a. *O Mési thymónei/exorgízei (sychná)* 'Messi (often) causes anger/rage'
b. *Messi enoja/enfurece (a menudo)* 'Messi (often) causes anger/rage'
c. *Messi angers/enrages (often)* 'Messi (often) gets angry/enraged'

In English, the intransitive is possible as long as the subject can be interpreted agentively, and the verb allows for manner-of-behavior denotation. Since the only syntactically licensed alternative takes an external argument in an agent-controlled event, the reading in (55)b is effortlessly computed, whereas (55)a is not.[30] Consequently, if the subject cannot be interpreted agentively, as happens with concern (Levin 1993: 191), the English gloss fails.

(56) *Will preocupa mucho.*
*Will concerns a lot.
a. ⇝ 'Will causes intimidation [to a great degree]'
b. ⇝ 'Will intimidates [for hours/on many occasions]'

Further English examples equally suggest that if the subject cannot be interpreted as an actor in an agent-controlled event, a single-specified participant construction fails. As a result, deviant acceptability is dependent on the choice of subject, following specific semantic properties like ±animacy/±volitionality. This is a predictable outcome when alternations are limited to one (CPAA) type. This crucial effect captures the distributional contrast in (57), showing that English psych verbs systematically refuse the inanimate subject-as-possible-cause seen in AVs.

(57) ^{OK}*Will /*Poverty bothers/disturbs/oppresses/intimidates.* ENGLISH
a. ! ⇝ Will/Poverty causes bother/disturb/oppression/intimidation
b. ⇝ Will/$^{\#}$Poverty acts in a bothersome/disturbing/oppressive/intimidating manner

In Romance, in principle, no such asymmetries emerge. ±animate subjects are effortlessly accommodated in intransitive frames under a stative cause reading (AV-type computation) remaining systematically available (cf. (58)). In turn, when the subject DP allows for animate/active readings, two alternative (AV/CPAA) computations coexist.

(58) ^{OK}*Will Smith/^{OK}La pobreza molesta/fastidia/oprime/amedrenta.* ROMANCE
a. ⇝ Will Smith/Poverty causes bother/disturb/oppression/dismay
b. ⇝ Will acts in a bothersome/disturbing/oppressive/intimidating manner

Summing up, various patterns indicate that in the set of verbs traditionally classed as psych, only those allowing an event-based agentive reading with a prominent manner component generally allow for intransitive alternates (manner-of-behavior CPAA), imposing interpretive and selectional restrictions on the subject accordingly. The output of the consequent productive asymmetry – vs. psych verbs freely deriving AV variants outside English – and its crosslanguage

[30] The interpretive restriction imposing the animated/volitional reading of the subject (Green 1974) highlights agentivity and intentionality as key variables for intransitive frame licensing in English. Consider (i):

(i) *It's clear that America intimidates, degrades, humiliates, and/or tortures for one of two reasons.*

expression, is illustrated in (59). The resulting distribution in complementary patterns offers new evidence of a major (psych-internal) verb class difference.

(59) a. *Will molesta/ofende/fastidia/intimida/amedrenta/amenaza/anima/oprime*
Will bothers/offends/disturbs/intimidates/coerces/threatens/amuses/oppresses.
b. *Will preocupa/aflige/alarma/emociona/deprime/deteriora/fascina*
**Will worries/concerns/alarms/moves/depresses/deteriorates/fascinates.*

Relatedly, the contrast in auxiliary distribution for verbal passives in Italian – a Romance language in which auxiliary distribution is a prominent indicator of event/syntactic structure – is quite suggestive in this regard. Note the possibility of an eventive (venire da) passive construction depending on the verb type, as predicted by (58).

(60) *Guarda come Nadal viene disturbato/*preoccupato da un bambino nella finale 2019*
Look how Nadal comes bothered / worried from a baby in the final 2019.
'Look how Nadal is bothered/worried by a kid in the 2019 final'

Importantly, eventivity goes hand in hand with manner-of-behavior denotation. In English, only active/agentive psych variants are systematically productive. Accordingly, adverbials expressing volitionality, event runtime, and specific situations for eventive instantiation are naturally predicted to fit well with the kind of intransitive variant available, as (61)a, as opposed to (61) b, indicates.

(61) a. *Will bothers/offends/disturbs/intimidates/coerces/threatens (on purpose/all day/in meetings)*.
b. **Will worries/alarms/upsets/fascinates/angers/deteriorates (on purpose/all day/in meetings)*.

In the analysis, eventivity is crucial.[31] Structurally, dynamicity is responsible for triggering the manner-of-behavior reading It thus rests, under the standard analysis, on further composition with the inner V head introducing the eventive (process) component (given a standard v[V°] configuration) and providing the verb with transitive capacity. The structure proposed is repeated below.

(62) $[vP_{InitP}$ [v, V_{ProcP} [$V°_{Proc}$, DP]]] (activities: [init^{i}, proc^{i}], Ramchand 2007: 82)

This means that 'intransitive' alternates allowed in English would be configurationally closer to Levin's intransitive – strictly, speaking unexpressed/unrealized/proArb object – alternates than to atransitive configurations assuming that an internal-argument-licensing head ultimately figures in the representation (with (47) above matching (62)).

[31] Such a (pure) stativity arising from the proposed atransitive derivation would differ from the one seen in traditional psych predications (*This bothers John*) including punctual and inchoative stativity (Marín 2011, Marín & McNally 2011).

If this turns out as the correct generalization, the conclusion that follows is that intransitive alternates in languages like English reduce, for both psych and non-psych verbs, to internal-argument-licensing (unaccusative or null/unspecified object) frames.[32]

The general idea that the crosslanguage asymmetry seen in psych (OE) verbs correlates with the (un)availability of a construction amenable to the atransitive variant in standard causative verbs finds support in patterns. Importantly, these patterns draw similar contrasts with CPAA/ objectless constructions. Namely, intransitive variants allowed in English for (some of the) verbs traditionally treated as *psych* are deontic, carry pluractional or iterative implications, can be situated in time, and, moreover, allow perception reports rejected by pure psych predicates (Arad 1998 i.a.) The general picture is, hence, too similar to the one seen in Section 2.

(63) a. *Will bothers, bothers, and bothers.*
b. *Jada saw Will bother.*
c. *Will bothers (all day/in staff meetings/on purpose).*

Many examples, like (63) and (64), reflect the conditions on objectless constructions listed by Goldberg (2001) and Lemmens (2006), including habitual contexts, compatibility with instrument adverbs, and verb series (Massam & Roberge 1989).

(64) a. *Will (always) disturbs.*
b. *Will disturbs? (with those tweets).*
c. *Will bothers, offends, intimidates, and disturbs.*

The examples in (65) further show these observations. At the same time, they introduce another important indication. Note that the (CPAA) available variants foreground (Goldberg 2001) an eventuality characterizing the subject by describing an action computed as manner of behavior. That the manner component is central to this effect becomes crucially visible with defeasibility. Because a psych component (the emotional resulting state) is not necessarily entailed, its cancellation does not yield a contradiction.

(65) a. *Will bothered insistently [but nobody bothered].* DEFEASIBILITY
b. *Will disturbs in public events [but nobody actually felt disturbed].*

Importantly, the fact that intransitive flexibility is favored by eventive (agentive/volitional) denotation, coinciding with the non-central role of the psych component (result/change undergone), offers a connection with the premise behind intransitive flexibility according to the MRC (discussed in Section 3). Martin's corollary on defeasibility under agenthood/animacy captures these points (66), while efficiently accounting for the asymmetric productivity and distribution summarized in (57) above.

---

[32] Assuming that CPAA are null/arb/unrealized (but still transitive) constructions.

(66) Agent Control Hypothesis. Zero-CoS construals require the predicate's external argument to be associated with 'agenthood' (Demirdache & Martin 2015). Agentive ongoing causation events are ontologically independent of their effects (Martin 2015).

From here, a general observation follows. The full proposal is offered next.

3.2 Psych verbs: class-internal subtypes

In the matter of aspect and argument structure, psych verbs raise, as anticipated, a complex question. In addition to the many peculiarities concerning their syntax, the discussion on semantic aspects which are central to argument structure representation is also far from settled, including their Vendlerian type.[33]

The most commonly found observation is that psych verbs enter the eventive-stative alternation (Rothmayr 2009; Alexiadou 2018), alternatively yielding eventive predications with animate subjects (agents), and states with inanimate subjects (experiencers). Other accounts (e.g. Arad 1998) focus on the availability of canonical syntax, as opposed to the special syntactic behavior known as psych effects (Belletti & Rizzi 1988; Arad 1998: 9), in agentive uses.

To solve this general puzzle, Arad (1998) proposes a threefold distinction between: agentive uses with an active participant (67)a, eventive uses with involuntary subjects (67)b, and stative uses describing a mental state (the typical psych reading, illustrated in (67)c).

(67) a. *Nina disturbed Laura deliberately / to make her go away.* AGENTIVE
b. *Nina frightened Laura [without intending to].* EVENTIVE
c. *Sausages disgust Laura.* PSYCH

On this view, there are no such things as predesigned psych verbs, but rather normal verbs participating in the expression of mental states. By setting (67)c apart, the proposal captures the fact that the syntactic peculiarities noted by Belletti & Rizzi limit to the psych use; thus, as soon as an agentive reading is forced, psych effects disappear (Arad 1998: 12).

In principle, the variation between psych and agentive representations is purely configurational and depends on the identity of the V head combined (v/V) in the derivation, producing (68) accordingly.

(68) AGENTIVE READING: external argument, canonical object, no psych effects
STATIVE READING: no external argument, non-canonical object, psych-effects

In a more recent study, Doron (2020) analyzes verbs with noncanonical syntax like *interest, fascinate, disappoint, bore* to argue that what makes these verbs different is that they express

[33] See Landau (2010); Marín & McNally (2011); Alexiadou & Iordăchioiaia (2014) for summary and overview.

locative relations, in line with Landau's (2010:11) original proposal. The idea that psych predicates are modeled on locative relations goes back to Jackendoff (1990), who proposes a conceptual semantics for dyadic psych predications like X frightens Y decomposed into an abstract locative representation.

(69) [$_{\text{Causer}}$Subject ([X], [INCH [BE ([FEAR ([a])], [AT [Y]])]])]]
'X causes fear of X to come to be in Y' (see also Landau 2010)

This offers a possible solution. If psych verbs are grammatically different in several respects, and their semantic representation is conceptually modeled on abstract locative representations, the productive asymmetry would follow from the fact that a construction realizing only a causer of terminal (psych) location – conforming to the AV representation – is simply not possible in languages like English. In terms of event and argument structure this makes sense, as there would be no participant for the psych experience to be situated – in Jackendoff's terms, no container (experiencer) in which the emotion (located object) can be situated. Yet, the question remains as to why the same structure is syntactically and semantically possible – and, moreover, fully productive – in many languages, like Romance and Greek.

We want to explore a different answer here. If we take up the productive asymmetry analyzed above, along with the verb-type difference including the (un)availability of alternative configurations and semantic (evental) representations, we can conclude that intransitive alternates are generally possible in languages like English **for a specific verb type**. More specifically, if we consider that: (i) the type of alternative allowed is the underlyingly transitive type (null/unrealized object); and (ii) its denotation takes an active participant in an agent-controlled action, it follows that intransitive alternations are productively available for psych verbs with canonical transitivity (null object selection) and not restricted to psych state predications – i.e., allowing manner-of-behavior computations.[34] Such conditions would accommodate the distributional facts noted above along with their crosslinguistic distribution.

The idea of distinct psych classes has gained prominence over the last decades (cf. Marin 2011 for summary). Recent works analyzing Mandarin, English, Spanish, Romanian, Greek, French, Finnish, and German psych verbs find a non-trivial contrast in transitivity, semantic entailments, and aspectual structure (Marin & McNally 2011; Marín & Fábregas 2020; Martin 2007; Alexiadou & Iordachoiaia 2014 among others). Specific differences are found in agentivity, eventivity, iterativity, and entailments associated with subject computation (e.g., pluractionality, Agent/Force, and volitionality, see Doron 2020, Marín & Fábregas 2020 and references therein) with syntactic effects. Notably, it is shown that a subset of verbs of the object-experiencer type allows

[34] For discussion surrounding this distinction, see M. Rasia (2021).

passive and agentive constructions with zero-Change-of-State denotations [zero-CoS], illustrated in (70), while another subset does not.

(70) a. *Pierre l'a provoquée, mais cela ne l'a pas touché du* FRENCH *tout.*
Pierre her-has provoked but this NEG her-has not touched at all
'Pierre provoked her, but this didn't touch her at all.' (Martin & Schaffer 2017: 89)

b. *Juan molestó a María, pero María no se molestó en absoluto.* SPANISH/ENG
Juan bothered Maria but María not INCH bothered in absolute
'Juan bothered María, but María didn't bother at all' (Marin & M. Rasia 2022)

Several studies find a strong link between eventivity/agenthood, passivization (canonical transitivity) potential, and defeasible causativity (Martin 2019, Martin & Schaffer 2017). In predications headed by a causative verb in which an action (behavior) concentrates the core denotation, the result component (the psych state) can be omitted or canceled without contradiction (recall (65) above). Crucially, this is not possible for all (psych) verbs.

In our case, we notice that psych verbs rejecting objectless variants in English are those having the psych state necessarily entailed, as in (71)b. Under a transparent event-to-syntax mapping (Structural Participant Condition, cf. (11) above) this makes sense, provided the (psych/result) entailment places a structural requirement: the argument realizing the mental state must be specified.

(71) a. *Quentin molestó an Uma (durante horas), pero ella no se molestó.* ROMANCE
Quentin bothered Uma (for hours), but she didn't bother. ENGLISH

b. *Quentin preocupó a Uma (durante horas), pero ella no se preocupó.*
Quentin worried Uma (for hours), #but she didn't worry. (Marin & M. Rasia 2022)

Apparently, in cases where the psych state is not a core part of the verb denotation, the corresponding (experiencer) argument can be omitted. Verbs crosslinguistically allowing intransitive variants turn out to be precisely those describing defeasible psych states (Martin 2019) in agent-controlled events.[35] Recall (65), repeated in (72) below:

(72) a. *Will bothered insistently [but nobody bothered].*
b. *Will disturbs at public events [but nobody actually felt disturbed].*

[35] Interestingly, in Italian ne-cl, taken as indicator of null objects, appears with defeasible (CPAA-compatible) verbs, but not with nondefeasible (core) psych verbs:

(i) *Molti ne disturbano/offendono/intimidano/*annoiano/*fascinano/*preoccupano.*
'Many (of them) bother/offend/intimidate/bore/fascinate/worry

Conversely, only an inner state that is necessarily entailed – hence, requiring structural representation – can be, for instance, tracked by verbs like *keep*.[36] This option fails in frame alternating (CPAA-friendly) verbs.

(73) *Juan kept her worried/bored/#bothered/#intimidated/#offended/#denigrated.*

Agentivity plays a crucial role on defeasibility and zero-Change-of-State (cf. (66) above) conforming to the Agent Control Hypothesis.[37] Also here, eventive passives show a relevant contrast. Thus, while by-phrases identify agentivity/eventivity in defeasible (non-core) psych verbs, consistent with (71)a, with-adverbials guarantee that the animate subject in the objectless variant is automatically computed as an agent rather than as a cause (Martin & Schäffer 2017: 95). Similar cases, centrally combining an active Agent and a cancelable result are attested in the literature (cf. Copley & Harley 2018).

(74) a. *Uma ha sido/#está amedrenta(da)/ofendida/denigrada (por Juan/con un palo).*
Uma has been intimidated/offended/denigrated (by Juan/with a stick).

b. *Uma *ha sido/ok está preocupada/aburrida (#por [parte de] Juan/#con un palo).*
*Uma *has been worried/bored #(by Juan/with a stick).* (Marín & M. Rasia 2022)

The immediate conclusion that follows is that the two criteria postulated by Arad to distinguish eventive (canonical transitive) uses of psych verbs and stative (typical psych denotation) predications – (I) whether there is an agent deliberately doing something; and (ii) whether there is change of state in the experiencer – stand in complementary distribution, with direct impact on argument structure alternations.

Our hypothesis is that Arad's intuition on verbs which are not per se *psych* – those for which canonical transitivity is allowed but 'disappears' in psych uses (1998: 12) – refers to a lexically coded difference. It would be the case of verbs known for having both a psych and a "physical" use (cf. also Ramchand 2013); that is, verbs which are originally not psych, provided that they are not limited to psych denotation across all their uses – which is the standard criteria defining lexicalized content (Levin & Rappaport-Hovav 1998; 2000) – and for which the psych component is characteristically defeasible. Prototypical examples of this set include, precisely, verbs like *disturb* and *bother* (Arad 1998; Bouchard 1992) – i.e., the 'normal' verbs in Arad's proposal allowing for canonical syntax and eventive/agentive denotations. These verbs are, in fact, those providing most examples of psych objectless alternatives across languages, especially those considered here.

---

[36] Adjectival passives, distinctively realized by *estar* in Spanish, provide compelling evidence in this respect.

[37] In non-alternating verbs – those for which the result is a necessary (nondefeasible) part of the denotation – the subject is invariably interpreted as inanimate (cf. There are two types of alternations, each with a (79)b below).

By contrast, the distributional semantics of psych verbs suggests that whenever a subject cannot be interpreted agentively – i.e., in a manner-of-behavior predication – the verb will only yield a non-defeasible predication. This would be the case of verbs invariably appearing in non-eventive psych predications (Arad's psych use), with non-agentivity and non-defeasibility restricting intransitive productivity and (non)canonical syntactic patterns accordingly.[38] In short, core (lexically-(pre)defined) psych verbs.

3.3 Summary of the proposal

Above, we contend that verbs crosslinguistically allowing objectless variants would be 'normal' verbs which could, given the semantic properties of their root, appear in psych predications. The distinction proposed between verbs allowing manner-like patterns and those that do not as a fundamental parameter to predict and explain intransitive alternations crosslinguistically is motivated by five facts, outlined next.

First, in the intransitive psych variants allowed in English, aspectual tests like compatibility with stop and What x did frames reveal a dynamic denotation (Dowty 1991). This contrasts with the atelic non-eventive (stative) patterns shown by non-alternating verbs.

(75) a. *Will stopped/#finished bothering/offending/intimidating/disturbing/oppressing.* ALT
b. *Will #stopped/#finished boring/depressing/fascinating/worrying.* NON-ALT

(76) a. *What Will did here was to bother/offend/intimidate/disturb/oppress.* ALT
b. #*What Will did here was to bore/depress/fascinate/worry.* NON-ALT

Second, for both types incompatibility with culminative terminar 'finish' is predictable from the atelic nature of either (activity/stative) eventuality constructionally expressed. By contrast, the choice of terminative (stop-equivalent) verbs reveals, at least in Spanish, distinct termination senses. Whereas *dejar* may apply to stative cause(r)s, parar is distinctively associated with volitional dynamic predications (Marín & McNally 2011, Marín 2011, Marín & Fábregas 2015) suggestive of an agent-controlled type of termination. Consider the constraint, for alternating verbs, on volitional actors according to subject choice in (77).

(77) a. *Will dejó/paró de molestar/amedrentar/humillar/intimidar.*
'Will ceased/stopped bothering/harassing/humiliating/intimidating.'

b. *El árbol dejó/#paró de molestar/amedrentar/humillar/intimidar.*
'*The tree ceased/stopped bothering/harassing/humiliating/intimidating.'

Third, psych verbs not allowing AV variants in English – i.e., those yielding monadic frames only in Romance (or Greek) – do not license agent-controlled termination, as (78) indicates.

[38] For further clarifications and discussion, see M. Rasia (forthcoming).

(78) *Will dejó/#paró de aburrir/deprimir/fascinar/preocupar*.
'Will ceased/stopped boring/depressing/fascinating/concerning'

(78) is coherent with the observation above on the subject being distinctively interpreted as inanimate (subject matter) argument in pure psych denotations (Rothmayr 2009, Alexiadou 2018). Therefore, whereas adverbials tracking the manner in which a volitional event is performed are fine for verbs with generalized (crosslanguage) intransitive alternation (i.e., the alternating type), the non-alternating type – the (sub)set with AV productivity limitations – yields a middle reading rejecting agentive manner adverbials instead.

(79) a. *Will tenaciously/actively bothers/offends/intimidates/disturbs/oppresses.* ALT
b. *#Will actively/tenaciously bores/depresses/fascinates/worries/concerns.* NON-ALT

Imperatives – generally linked to agent-controlled actions – show a consistent distribution.

(80) a. *Bother/offend/intimidate/oppress her!* ALT
b. **Bore/depress/fascinate/worry her!* NON-ALT

Fourth, in English-allowed intransitive constructions the quantifier scopes on the intensity/frequency of a (manner of) behavior, whereas the psych state can be cancelled without affecting the truthful occurrence of the event (cf.(81)a). Such conditions contrast with verbs not eligible for objectless (CPAA) alternation, which show restrictions expected from invariably stative, non-defeasible (core psych) verbs like *bore* and *worry* ((81)b).

(81) a. *Will bothers/threatens/humiliates (a lot), and yet no one actually felt bothered/threatened/humiliated.* ALT
b. *Will bores/worries (a lot), #and yet no one actually felt bored/worried.* NON-ALT

Fifth, the distribution of accusative/dative clitics in (82) furnishes the intuition that, when used agentively, alternating verbs behave like normal transitive verbs (Arad 1998). Thus, accusative clitic marking in Spanish is only natural with agent subjects, yielding a dispositional activity (CPAA-like) construction with the expected pattern (Ackerman & Moore 2001). Instrument and control/purpose adjuncts, essentially describing the manner in which an event (activity) is performed, show a similar distribution.

(82) a. *El árbol #lo/le molesta.* **(con una rama/a propósito)*
the tree ACC DAT bother.3S with a branch on purpose
'The tree bothers him'

b. *Will lo/le molesta.* *(con una rama/a propósito)*
Will ACC DAT bother.3S with a branch on purpose
'Will bothers him [with a branch/on purpose]'

In Greek, clitic doubling is allowed for actor subjects in eventive constructions but blocked for the psychological (inanimate subject) predication, mirroring the Spanish split in (82).[39]

(83) a. *I fotografies enohlun *(ton) Petro.*
the pictures bother.3P the.ACC Petro.ACC
'The pictures bother Petro.'

b. *I Maria enohli ton Petro.*
The Maria bother.3S the.ACC Petro.ACC
'Maria bothers Petro.'

These facts support the existence of two structurally distinct verb types. Further support comes from works on agentivity and pluractionality in Spanish.

Marin & Fábregas (2020) also note the existence of two OEPV subtypes. Taking *amedrentar* 'intimidate' and *preocupar* 'worry' as main examples, they build a principled distinction according to two conditions resembling the discussion above. These are: (i) the denotation of specific events performed by an Agent, and (ii) the reference to event iteration, tested with modifiers favoring pluractional readings. In addition, the construction must be episodic (2020: 117) and compatible with temporal adverbs setting identifiable points in time when the event occurred, as in (84). In this way, set verbs allowing eventive and agentivity-related structures (the *amedrentar* type) are set apart from those that do not (the *preocupar* type).

Crucially, these conditions apply to verbs with generalized intransitive alternation (cf.(79)-(81) above). Deonticity and episodicity show similar results for canonical manner verbs and psych types allowing objectless frames ((84)a), as opposed to non-alternating (proper psych) verbs ((84)b). Event iteration (repeatedly), and time-point adverbials tested by Marín & Fábregas support the distribution.

(84) a. *Juan molestó/intimidó/amenazó/ofendió (repetidamente) ayer/el lunes.*
Juan bothered/intimidated/threatened/offended (repeatedly) yesterday/on Monday. ALT

b. *Juan aburrió/angustió/preocupó/avergonzó/enfadó/enfureció/frustró #(repetidamente) #ayer/el lunes.*
#Juan bored/anguished/worried/embarrassed/angered/infuriated/frustrated (repeatedly) yesterday/on Monday. NON-ALT

Dispositionality, habituality and other typical conditions facilitating unexpressed object constructions (Lemmens 2006; Mittwoch 2005) are also present in these examples. Such patterns instantiate the long-held MRC premise that as the action component is made prominent, the realization of the patient finds itself in a less-constrained situation. Lemmens (2006) specifically

[39] See Landau (2010) for comparable asymmetries (accusative marking) in Russian and Hebrew.

points out that a prominent action denotation coincides with de-emphasis – hence, structural triviality – of the object, as in (85).

(85) a. *He often harasses, delays, coerces, threatens, intimidates.*
b. *Sanctions apply if the person disparages, intimidates, patronizes, threatens.*
c. *He is like the bullies at school. He intimidates, gets others to do his dirty work, insults.*[40]

Taken together, these observations combine with empirical patterns to produce a unified account of intransitive alternates across verb types (psych and non-psych), which is formalized next.

4 Putting it all together

4.1 General situation

Given the general conditions that allow a verb to appear in 'objectless' frames, and based on all the discussion, data and theoretical arguments gathered above, the parameters in (86) provide a unified account of why intransitive alternatives are indeed more natural for some verbs than for others, and how this extends to psych verbs.[41]

(86) a. volitional actor + controlled event
b. event construal: single required participant, agentive/eventive predication (animacy restriction on lexically inanimate DPs)
c. positive relation between potential for manner foregrounding and flexibility in intransitivity alternations, with improved acceptability for objectless variants in context favoring iteration/pluractionality/habitual readings.

Points like (86)c in particular introduce the central premise behind intransitivity alternation patterns and the MRC (Levin & Rappaport 1995; Levin 2006 i.a.; cf. (11) above). For some

[40] Certain nondefeasible psych verbs may appear in objectless constructions provided an intentional, agent-control reading is allowed (cf. the sublexical modality in Martin & Schäfer 2017 crucially linking an implied/entailed manner component). This option unsurprisingly comes with perfect tense compatibility, purpose clauses, and clear volitional/habitual denotation (unseen in AVs). According to Goldberg, iterativity or genericity in the denotation are also key to the triviality of the object, producing (i).

(i) *The singer always aimed to dazzle/please/disappoint/impress/charm.* (Goldberg 2001: 503)

Levin uses (ii) to illustrate intransitive unexpressed object alternations receiving "PRO-arb" reading. She notes that alternation in object-experiencer verbs is more limited in English than in Italian, indicating that "not all psych-verbs listed here may participate in this alternation" (Levin 1993: 38). Strikingly, the conditions considered are precisely those analyzed in our discussion above.

(ii) a. *That movie always shocks people.*
b. *That movie always shocks.*

[41] This conclusion would not be fully satisfactory if we neglect the fact that other verbs are entirely consistent as to stative psych predication and (un)availability of intransitive (manner-of-behavior, agentive, activity-like) alternatives (see Marin 2011 and references therein).

psych-rooted verbs of the manner-compatible type, this potential for frame flexibility comes with canonical transitivity (e.g. eventive passivization), eventivity, agency, and defeasibility – thus bringing the MRC and the Agent Control Hypothesis together. Similar remarks on the canonical transitive behavior of psy(chose)-rooted agentive/active predications are found in Arad (1998) and McGinnis (2000) among others.[42]

An important finding, in this sense, is that contrary to what Arad argues, not all psy(chose) roots – i.e., those naming the emotion induced by a trigger –[43] seem to allow for agentive/active predications (her a-b options in (67) above), and not all are 'normal' verbs allowing for non-psych, agentive/eventive uses (i.e., allowing alternation between psych and 'normal' constructions). Consider, for instance (87)a (Arad 1998: 13) vs. (87)b.

(87) a. *Nina bothered/intimidated Laura deliberately/to make her go away.*
b. #*Nina worried/bored/concerned Mary deliberately/to make her go away.*

The distribution of intransitive alternates would reflect a constraint on constructional possibilities according to specific semantic features (dis)allowed by the verb, with a distributional result predictable from the same criteria.

In languages like English, manner-compatible verbs with a psych component in the root (Croft's psy-chose) would allow two different single participant construals: activity-type 'objectless', and anticausative[44]/middle frames, as in (88). For verbs strictly denoting a psych state instead – i.e., showing no potential for active/agentive or defeasible readings – the manner-of-behavior intransitive (CPAA) is logically unavailable. Provided AVs are unavailable as well,[45] options eventually reduce to transitive/unaccusative frames – i.e., the transitivity alternation patterns typically associated with result verbs –, as (89) shows.

(88) *Will bothers.*

a.	ok*Will acts in a bothering manner.*	OK IN ROMANCE
b.	**Will is (inanimate) cause of bother.*	OK IN ROMANCE
c.	ok*Will gets bothered (easily).*	! IN ROMANCE (okSE-CL)

(89) *Will worries.*

a.	! Will acts in a worrying manner.	! IN ROMANCE
b.	! Will is cause of worry.	OK IN ROMANCE
c.	ok*Will gets worried.*	! IN ROMANCE (okSE-CL)

[42] See Martin & Schäffer (2017) on defeasibility in comparable cases.

[43] The original concept is taken from Bouchard (1992: 32), though implemented in a different way.

[44] Keeping the familiar/traditional term for ease of exposition.

[45] Presumably, a grammatical constraint related to direct v_{Init}-composition not being freely available (cf. M. Rasia 2021; 2024 for similar intuitions on non-psych verbs).

4.2 General analysis

Standard constructional approaches like Ramchand (2007; 2013) offer a coherent account for the asymmetries noted.

In this model, activities and accomplishments are associated with structures that do not include, as part of the verb's core denotation, the lowest result projection. Ramchand's clarification on non-default addition of the Res layer is crucial for three reasons: first, it agrees with the fact that the event structure is one requiring the realization of one participant: the external one (no result, no experiencer); second, in doing this, it accommodates a fundamental property like defeasibility; third, it preserves the constructional possibility to map a psy(chose) root onto an atelic dynamic event keeping the constant participant as initiator, but of a process (active agent), leaving open the possibility to add an optional (not verb-entailed) result state, provided this is lexically supported by the verb.[46]

If the agentive manner/activity type of predication supported by the tests and observations above is correct, then verbs with a psy-chose root – 'normal' verbs not restricted to psych denotation – could appear in a manner-type (single event) representations very much like the one producing objectless eventive/agentive frames in CPAA/objectless occurrences ((47) above, repeated as (90)

(90) [InitP [Init^{i}, ProcP [Proc^{i}]]] (activities: [init^{i}, proc^{i}], Ramchand 2007: 82)

In the same theoretical (Ramchandian) decompositional model, activities are standardly defined by (i) an external argument; (ii) an eventive core. The key is the referential identity of the DP. In (89), the argument in the specifier of the defective external-argument-introducing head shares referent with the central participant (actor) of the dynamic core (ProcP), hence retaining both (initiator/actor) roles (Ramchand 2007: 80). Since in this model Init's argument is also interpretable as a holder, it could be alternatively (constructionally) computed as the holder of a characteristic property, provided this is understood as the behavior described by repeated deontic instantiations of the event. Consequently, the configuration captures the semantic nuance of the allowed (CPAA) alternation.[47] Now, being a psych-chose root, the verb could also appear in a typical psych predication. In that case, all 'normal' properties, along with canonical transitivity, 'go away', as Arad (1998) predicted.[48]

---

[46] The optionality of ResP is moreover important considering that if the resultative predication is taken as basic, defeasible (manner-type) uses would involve removal/manipulation of lexically-coded meaning (cf. Koontz-Garboden's 2012 *Monotonicity Hypothesis*).

[47] The configuration would satisfy the premise that the difference between pure *Causes* and *Actors* is that the latter are related to both *Initiation* and *Process* (which may or may not lead to a result); while *Causes* remain instead pure specifiers of Init*P* (Ramchand 2007: 63).

[48] A detailed analysis of what is lexically coded and what can be compositionally achieved, according to independent evidence, is offered in M. Rasia (forthcoming).

On the other hand, there would be a set of roots producing the canonical 'psych' denotation. Such verbs lack all the properties just mentioned: they are stative (non-eventive, non-dynamic (Marin 2011; Marín & McNally 2011), fail to display canonical transitivity (Arad 1998 i.a.) and in many cases include an aspectual boundary directly related to the (non-defeasible) psych state inherently described.[49] Such properties, unparalleled by standard (non-debated causative) result verbs, result in unavailability of monadic structures with the subject as stative cause in English – which is instead possible, though limited, instead for standard result verbs, as shown above (Section 3). Taken as an indicator of structural representation, non-defeasibility of the (psych) state is coherent with both the strict(er) restriction on the realization of the object/experiencer and AV unavailability.

4.3 General summary & Results

If correct, the crosscut in productivity noted would be the aftermath of a specific restriction.

Languages like Romance and Greek would systematically allow monadic structures for both types of roots, including those invariably yielding core psych verbs, provided that free independent composition with the defective external-argument-introducing head is systematically allowed. This combinatorial possibility, also suggested by AV productivity with non-transitive IO experiencer psych verbs, yields a structure similar to (44) above, repeated in (91)b, where the aspectually-neutral head Init introduces the holder of the dispositional stative property, as stative/involuntary cause of the root-coded content (e.g., dehydration/worry). Direct complementation by rhematic material conforms to the essential stativity of the construction.[50]

In languages like English, by contrast, independent composition with this head is severely restricted – presumably, to verbs with canonical transitivity and only to a certain extent.[51] This confines psych roots (when allowed) to internal-argument-licensing frames. With AVs unavailable (English), roots producing 'normal' verbs with canonical transitivity may opt for either the dyadic or the 'objectless' (Levin's intransitive) alternatives, following a manner-like (single dynamic, agentive event structure) pattern, conforming to (91)a, hence explaining the objectless construction allowed. For roots only realizable as pure (invariably stative, non-defeasible) psych verbs instead, AV unavailability reduces options to unaccusative/middle predications (cf. (91)c), coherent with unmarked or equipollent derivation, resembling the result pattern.

---

[49] Given also the generally agreed stativity of psych constructions, a question remains on the presence (or not) of a *ProcP* head being necessarily dynamic; ultimately, what is clear is that whatever the nature of the head, it must be one licensing an internal argument with particular syntactic properties.

[50] We leave the possibility of a crosscut defined by psych-chose root conflation (manner-type) vs. incorporation (result-type) underlying the semantic and syntactic split in psych verbs for a paper currently in preparation.

[51] Assuming that canonical result verbs (e.g., *melt*) are severely limited in monadic productivity (cf. **Heat melts*.) and psych verbs are altogether blocked. We thank an anonymous reviewer for remarks in this sense.

(91)	a.	[$_{Init}$vP [$_{holder}$DP^{i}, $_{proc}$VP [$_{ag}$DP^{i}, V'[V, √]]]]	intimidate/*worry	CPAA
	b.	[$_{init}$vP [$_{holder}$DP, v [v^{o}, RhemeP [√]]]]	*intimidate/*worry	AV
	c.	[$_{proc}$VP [$_{und}$DP, V' [V, √]]]	intimidate/worry	UNACC/MID

Ultimately, if manner-like (e.g., CPAA) alternations are basically transitive frames where the object remains semantically and/or syntactically unspecified (but licensed); and anticausative/middle alternations would not actually be argument structure alternations but rather Voice ones (Martin 2019), a final corollary would be that proper argument frame alternations are unavailable for English psych (OE) verbs or either type.

Above we mentioned some well-known arguments raised by Landau (2010). He proposed a classification of natural languages based on criteria like availability of verbal passives. Based on the facts discussed above, the present typology would look pretty much like this:

(92) **Languages A** (English, German, Dutch)

- Only event-compatible psych (OE) verbs (manner-compatible verbs) allow intransitive alternations (CPAA-type).
- Pure psych (stative, non-defeasible) verbs resist structures not licensing a patient (container of emotion).
- Psych verbs in general are restricted to transitive frames (objectless vs. middle/unaccusative).

Languages B (Romance, Greek, Polish)

- Psych (OE) verbs generally allow AVs (atransitive alternation)
- Manner-compatible psych verbs allow agentive intransitive (CPAA-style) alternation and animated subjects allow for both (CPAA/AV) readings.
- Result and psych roots are systematically eligible for independent composition with the external-argument-introducing (aspectually defective) head.
- Transitivity is not a constant property of either (canonical result/psych) verbs.[52]

This distribution would explain crosslanguage productivity in a way amenable to the manner/result distinction in transitivity alternations, preserving a transparent syntax-to-event correlation. Strict complementary distribution is avoided by considering verbs with multiple uses and possible event representations; notably, verbs allowing 'normal' and psych predications.[53]

The remaining questions can be, we believe, safely derived from the distinct properties of psych verbs, including non-canonical transitivity (Arad 1998), default stativity (Marín 2011) and unclear causative status (Neeleman & van de Koot 2012). On the question of why certain roots produce activity-denoting verbs with canonical transitivity and diverse event/argument

[52] We will not discuss here the specific ontology (Init, v, Voice) of this head. This does not dismiss the fact that the above analysis is strictly compatible with mainstream approaches (see Section 2.3).

[53] On the disputed (manner/result) status of verbs like *dehydrate*, *suffocate*, etc. see M. Rasia (2024).

representations, while others invariably hold a pych denotation, we believe differences like external vs. internal causation (McKoon & MacFarland 2000) are worth exploring.

5 Conclusion

Clearly, argument structure alternations are not universal, and each language has its own alternation system. Here, the question remains what restricts the availability of (in)transitive alternatives in distinct languages and which semantic components define verb types available for distinct argument frame variants. Based on the asymmetry in subject type observed, correlated with event structure (aspectual class and participants involved), we propose a split between two fundamentally different sorts of intransitivity alternations. This distinction is key to explaining the productive asymmetries noted in psych verbs in languages like English vs. Romance and Greek.

This approach has several advantages. First, asymmetric productivity is reliably defined according to two fundamentally different structural configurations – apparent (null object) intransitives vs. monadic atransitive constructions – followed by verb lexical-semantic potential to appear in them. Provided that each structure has distinct structural semantic and syntactic properties and conditions, productivity could be predicted from specific criteria, like the subtype of verb involved in each case (e.g., manner-reading compatibility), aspectual patterns followed (e.g., availability of eventive denotation) and the choice of subject (e.g., agentive DPs). For ‘psych’ verbs, asymmetric productive patterns follow from two main verb subtypes, with distinct syntactic and semantic properties and consequent potential to appear in alternative frames. If correct, productivity patterns for the intransitive frames identified here would provide a new testing tool to identify verb subtypes often lumped together.

Competing Interests

The author has no competing interests to declare.

References

Ackerman, Farrell & Moore, John. 2001. *Proto-properties and grammatical encoding*. Stanford: CSLI.

Alexiadou, Artemis & Anagnostopoulou, Elena & Schäfer, Florian. 2015. *External Arguments in Transitivity Alternations*. Oxford: Oxford Academic. DOI: https://doi.org/10.1093/acprof:oso/9780199571949.001.0001

Alexiadou, Artemis & Iordachioaia, Gianina. 2014. The psych causative alternation. *Lingua* 148. 53–79. DOI: https://doi.org/10.1016/j.lingua.2014.05.010

Alexiadou, Artemis & Martin, Fabienne & Schäfer, Florian. 2017. Optionally causative manner verbs: when implied results get entailed. Roots V, QMUL & UCL, 16–18 June, 2017. London: Queen Mary University of London/University College.

Arad, Maya. 1998. Psych-notes. *UCL Working Papers in Linguistics* 10. 203–223.

Belletti, Adriana & Rizzi, Luigi. 1988. Psych-verbs and theta-theory. *Natural Language and Linguistic Theory* 6. 291–352. DOI: https://doi.org/10.1007/BF00133902

Bender, Emily. 1999. Constituting context: null objects in English recipes revisited. *Penn Working Papers in Linguistics* 6(1). 53–68.

Berro, Ane. 2015. Breaking verbs. From event structure to syntactic categories in Basque. Vitoria Gasteiz: Euskal Herriko Unibertsitatea dissertation.

Bouchard, Denis. 1992. Psych constructions and linking to conceptual structures. In Hirschbühler, Paul & Koerner, Konrad (eds.), *Romance languages and modern linguistic theory*, 25–44. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/cilt.91.04bou

Carlson, Gregory. 1977. Reference to kinds in English. University of Massachusetts at Amherst dissertation.

Copley, Bridget & Harley, Heidi. 2018. A force-theoretic framework for event structure. *Linguistics and Philosophy* 38(2). 103–158. DOI: https://doi.org/10.1007/s10988-015-9168-x

Demirdache, Hamida & Martin, Fabienne. 2015. Agent control over non-culminating events. In Barrajón López, Elisa & Cifuentes Honrubia, Jose Luis & Rodríguez-Rosique, Susana (eds.), *Verb Classes and Aspect*, 185–217. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/ivitra.9.09dem

Deo, Ashwini & Francez, Itamar & Koontz-Garboden, Andrew. 2013. From change to value difference in degree achievements. In Snider, Todd (ed.), *Proceedings of SALT 23*, 97–115. Califiornia: SALT. DOI: https://doi.org/10.3765/salt.v23i0.2664

Dixon, Robert. 1991. *A new approach to English grammar*. Oxford University Press, Oxford. DOI: https://doi.org/10.1093/oso/9780198242727.001.0001

Dobrovie-Sorin, Carmen. 2003. Adverbs of quantification and genericity. In Beyssade, Caire & Bonami, Olivier & Cabredo-Hofherr, Patricia & Corblin, Francis (eds), *Empirical Issues in Formal Syntax and Semantics* 4, 27–44. Paris: Presses Universitaires de la Sorbonne.

Doron, Edit. 2020. The causative component of psychological verbs. In Bar-Asher Siegal, Elitzur & Boneh, Nora (eds.), *Perspectives on causation*, 395–416. Cham: Springer Nature. DOI: https://doi.org/10.1007/978-3-030-34308-8_12

Dowty, David. 1979. *Word meaning and Montague grammar*. Dordrecht: Reidel. DOI: https://doi.org/10.1007/978-94-009-9473-7

Dowty, David. 1991. Thematic proto-roles and argument selection. *Language* 67(3). 547–619. DOI: https://doi.org/10.1353/lan.1991.0021

Erteschik-Shir, Nomi & Rapoport, Tova. 2010. Contacts as results. In Rappaport-Hovav, Malka & Doron, Edit & Sichel, Ivy (eds.), *Syntax, Lexical Semantics, and Event Structure*. Oxford: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780199544325.001.0001

Fellbaum, Christiane. 1986. *On the middle construction in English.* Bloomington. Indiana: Indiana University Linguistic Club.

Folli, Raffaella & Harley, Heidi. 2005. Flavors of v. In Slabakova, Roumyana & Kempchinsky, Paula (eds.), *Aspectual Inquiries*, 95–120. Dordrecht: Springer. DOI: https://doi.org/10.1007/1-4020-3033-9_5

Gentner, Dedre. 1978. On Relational Meaning. *Child Development 49*. 988–998. DOI: https://doi.org/10.1111/j.1467-8624.1978.tb04067.x

Goldberg, Adele. 2001. Patient Arguments of causative verbs can be omitted: the role of information structure in argument distribution. *Language Sciences* 34. 503–524. DOI: https://doi.org/10.1016/S0388-0001(00)00034-6

Goldberg, Adele. 2005. Constructions, Lexical Semantics and the Correspondence Principle. In Erteschik-Shir, Nomi & Rapoport, Tova (eds.), *The Syntax of Aspect*, 215–236. Oxford: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780199280445.003.0010

Green, Georgia. 1974. *Semantic and Syntactic Regularity*. Bloomington: Indiana University Press.

Hale, Ken & Keyser, Samuel Jay. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge: MIT. DOI: https://doi.org/10.7551/mitpress/5634.001.0001

Hale, Ken & Keyser, Samuel Jay. 2005. Aspect and the Syntax of Argument Structure. In Erteschik-Shir Nora & Rapoport, Tova (eds.), *The Syntax of Aspect,* 11–41. Oxford/New York: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780199280445.003.0002

Halle, Morris & Marantz, Alec. 1993. Distributed Morphology and the Pieces of Inflection. In Hale, Ken & Keyser, Samuel Jay (eds), *The View from Building 20*, 111–176. Cambridge: MIT Press.

Harley, Heidi. 2005. How Do Verbs Get Their Names? In Erteschik-Shir, Nomi & Rapoport, Tova (eds), *The Syntax of Aspect*, 42–64. Oxford/New York: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780199280445.003.0003

Jackendoff, Ray. 1990. *Semantic structures*. Cambridge: MIT Press.

Kallulli, Dalina. 2021. Voice morphology (mis)behaving itself. In Bárány, András & Biberauer, Theresa & Douglas, Jamie & Vikner, Sten (eds.), *Syntactic Architecture and its Consequences III: Inside Syntax*, 3–22. Berlin: Language Science Press.

Koontz-Garboden, Andrew. 2012. The Monotonicity Hypothesis, in Demonte, Violeta & McNally, Louise (eds.), *Telicity, Change, and State: A Cross-Categorial View of Event Structure*, 139–161. Oxford: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780199693498.003.0006

Krifka, Manfred & Pelletier, Francis & Carlson, Gregory & ter Meulen, Alice & Link, Godehard & Chierchia, Gennaro. 1995. Genericity: an introduction. In Carlson, Gregory & Pelletier, Francis (eds.), *The Generic Book*, 1–124. Chicago: Chicago University Press.

Landau, Idan. 2010. *The Locative Syntax of Experiencers*. Cambridge: MIT Press. DOI: https://doi.org/10.7551/mitpress/8387.001.0001

Lekakou, Maria. 2005. In the middle, somewhat elevated. London: University of London dissertation.

Lemmens, Maarten. 2005. Les constructions causatives sans objet. *Cercles Occasional Papers Series I*, 117–141.

Lemmens, Maarten. 2006. More on objectless transitives and ergativization patterns in English. *Constructions I*, 1–680.

Levin, Beth. 1993. *English Verb Classes and Alternations*. Chicago: University of Chicago Press.

Levin, Beth. 1999. Objecthood: An event structure perspective. *Proceedings from the Annual Meeting of the Chicago Linguistic Society* 35(I). 223–247.

Levin, Beth. 2006. English Object Alternations: A Unified Account. Stanford: Stanford University dissertation.

Levin, Beth. 2017. The elasticity of verb meaning revisited. In Burgdorf, Dan & Collard, Jacob & Maspong, Sireemas & Stefánsdóttir, Brynhildur (eds.), *Proceedings of SALT 27*, 571–599. Maryland: LSA. DOI: https://doi.org/10.3765/salt.v27i0.4187

Levin, Beth & Grafmiller, Jason. 2013. Do you always fear what frightens you? In King, Tracy & de Paiva, Valeira (eds.), *From Quirky Case to Representing Space*, 21–32. Stanford: CSLI.

Levin, Beth & Rappaport-Hovav, Malka. 1991. Wiping the Slate Clean. *Cognition* 41. 123–151. DOI: https://doi.org/10.1016/0010-0277(91)90034-2

Levin, Beth & Rappaport-Hovav, Malka. 1995. *Unaccusativity: At the Syntax-Lexical Semantics Interface*. Cambridge: MIT Press.

Levin, Beth & Rappaport-Hovav, Malka. 1998. Building Verb Meanings. In: Butt, Miriam & Geuder, Wilhem (eds.), *The Projection of Arguments.* Stanford: CSLI. 97–134.

Levin, Beth & Rappaport-Hovav, Malka. 2008. A constraint on verb meanings: Manner/result complementarity. Talk given at *Brown University*. March 17, 2008.

Maienborn, Claudia. 2008. On Davidsonian and Kimian states. In Comorovski, Ileana & von Heusinger, Klaus (eds.), *Existence: Semantics and Syntax. Studies in Linguistics and Philosophy* 84. 107–130. Dordrecht: Springer. DOI: https://doi.org/10.1007/978-1-4020-6197-4_4

Marín, Rafael. 2011. Casi todos los verbos psicológicos son estativos. In Carrasco-Gutiérrez, Maria Angeles (ed.), *Sobre Estados y Estatividad*, 26–44. München: Lincom.

Marín, Rafael & Fábregas, Antonio. 2015. Deriving individual-level and stage-level psych verbs. *The Linguistic Review* 32(2). 167–215. DOI: https://doi.org/10.1515/tlr-2014-0022

Marín, Rafael & Fábregas, Antonio. 2020. Initiators, states, and Passives in Spanish Psych verbs. In Rozwadowka, Bozena & Bondaruk, Anna (eds), *Beyond Emotions in Language*, 113–139. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/la.263.04fab

Marin, Rafael & M. Rasia, Eugenia. 2022. If psych, then stative. *52nd meeting of the Linguistic Symposium on Romance Languages (LSRL 52)*. Wisconsin, University of Wisconsin-Madison, April 21–23, 2022.

Marín, Rafael & McNally, Louise. 2011. Inchoativity, change of state, and telicity. *Natural Language and Linguistic Theory* 29(2). 467–502. DOI: https://doi.org/10.1007/s11049-011-9127-3

Martin, Fabienne. 2007. "Non-agentive" verbs presupposing an action. Psych-verbs and agent-oriented adverbs. *Forces in Grammatical Structures Paris 8-CNRS-ENS*, 18–20 January 2007.

Martin, Fabienne. 2015. Explaining the link between agentivity and non-culminating causation. In D'Antonio, Sarah & Moroney, Mary & Little, Carol Rose (eds.), *Proceedings of SALT 25*, 246–266. Stanford: Stanford University Press. DOI: https://doi.org/10.3765/salt.v25i0.3060

Martin, Fabienne. 2019. Non-culminating accomplishments. *Language and Linguistics Compass*, 13(8). DOI: https://doi.org/10.1111/lnc3.12346

Martin, Fabienne & Schäfer, Florian. 2017. Sublexical modality in defeasible causative verbs. In Arregui, Ana & Rivero, Maria Luisa & Salanova, Andrés (eds.), *Modality across Syntactic Categories*, 87–108. Oxford: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780198718208.003.0006

Massam, Diane & Roberge, Yves. 1989. Recipe context null objects in English. *Linguistic Inquiry* 20. 134–139.

McGinnis, Martha. 2000. Semantic and Morphological Restrictions in Experiencer Predicates. In Jensen, John & van Herk, Gerard (eds.), *Proceedings of the 2000 CLA Annual Conference*, 245–256. Ottawa: Cahiers Linguistiques d'Ottawa.

McIntyre, Andrew. 2004. Event paths, conflation, argument structure and VP shells. *Linguistics*, 42(3). 523–571. DOI: https://doi.org/10.1515/ling.2004.018

McKoon, Gail & MacFarland, Talke. 2000. Externally and internally caused change of state verbs. *Language* 76. 833–858. DOI: https://doi.org/10.2307/417201

Mittwoch, Anita. 2005. Unspecified arguments in episodic and habitual sentences. In Erteschik-Shir, Nomi & Rapoport, Tova (eds), *The Syntax of Aspect*, 237–254. Oxford/New York: OUP. DOI: https://doi.org/10.1093/acprof:oso/9780199280445.003.0011

Neeleman, Ad & Van de Koot, Hans. 2012. The linguistic expression of causation. In Everaert, Martin & Marelj, Marijana & Siloni, Tal (eds.), *The Theta System*, 20–51, Oxford: Oxford University Press. DOI: https://doi.org/10.1093/acprof:oso/9780199602513.003.0002

Nishida, Chiyo. 2016. IO realizations in Spanish reverse psych verb sentences. In Ruchot, Thierry & Van Praet, Pascale (eds.), *Atypical predicate-argument relations*, 61–85. Amsterdam: John

Benjamins. DOI: https://doi.org/10.1075/lis.33.03nis

Park, Kabyong. 2009. Explaining English Middle Sentences. *Journal of Pan-Pacific Association of Applied Linguistics* 13(2). 125–140

Pesetsky, David. 1995. *Zero Syntax: Experiencers and Cascades*. Cambridge: MIT Press

Pylkkänen, Liina. 2002. *Introducing Arguments*. Cambridge: MIT Press.

Ramchand, Gillian. 2007. *Verb Meaning and The Lexicon: a First-Phase Syntax*. Oxford: OUP. DOI: https://doi.org/10.1017/CBO9780511486319

Ramchand, Gillian. 2013. Argument structure and argument structure alternations. In Den Dikken, Marcel (ed.), *The Cambridge Handbook of Generative Syntax*, 265–321. Cambridge: Cambridge University Press. DOI: https://doi.org/10.1017/CBO9780511804571.013

Ramchand, Gillian. 2018. *Situations and syntactic structures*. Cambridge: MIT Press. DOI: https://doi.org/10.7551/mitpress/9780262037754.001.0001

Rappaport-Hovav, Malka & Levin, Beth. 2001. An event structure account of English resultatives. *Language* 77(4). 766–797. DOI: https://doi.org/10.1353/lan.2001.0221

Rasia, Eugenia. 2017. Expanding the causative alternation. *Belgian Journal of Linguistics* 31(1), 104–135. DOI: https://doi.org/10.1075/bjl.00005.man

M. Rasia, Eugenia. 2019. Stativity in the causative alternation? New questions and a new variant. *Open Linguistics* 5. 233–259. DOI: https://doi.org/10.1515/opli-2019-0014

M. Rasia, Eugenia. 2021. Crosslanguage systematicities and untapped data from Romance and Greek. In Alexandru, Nicolae & Dragomirescu, Adina (eds.), *Romance Languages and Linguistic Theory 2017*, 240–261. Amsterdam: John Benjamins.

M. Rasia, Eugenia. 2024. Manner/Result and (In)transitivity Alternations. In Autry, Robert & de la Cruz, Gabriela & Irizarry Figueroa, Luis A. & Mihajlovic, Kristina & Ni, Tianyi & Smith, Ryan & Harley, Heidi (eds.), *Proceedings of the 39th West Coast Conference on Formal Linguistics*, 609–616. Somerville: Cascadilla Press.

Reinhart, Tania. 2001. Experiencing derivations. In: Hastings, Rachel & Jackson, Brendan & Zvolenszky, Zsofia (eds), *Proceedings of SALT 11*, 365 387. Ithaca: CLC Publications. DOI: https://doi.org/10.3765/salt.v11i0.2845

Rice, Sally. 1988. Unlikely Lexical Entries. *Berkeley Linguistics Society* 14. 202–212. DOI: https://doi.org/10.3765/bls.v14i0.1797

Rizzi, Luigi. 1986. Null Objects in Italian and the Theory of pro. *Linguistic Inquiry* 17(3). 501–557.

Rothmayr, Antonia. 2009. *The Structure of Stative Verbs*. Amsterdam: John Benjamins. DOI: https://doi.org/10.1075/la.143

Rozwadowska, Bozena & Bondaruk, Ana. 2019. Against the Psych Causative Alternation in Polish. *Studies in Polish Linguistics. Special Volume 1*, 77–97. DOI: https://doi.org/10.4467/23005920SPL.19.007.10987

Van Geenhoven, Veerle. 2003. The semantic diversity of characterizing sentences. In Dekker, Paul & van Rooy, Robert (eds.), *Proceedings of the 14th Amsterdam Colloquium*, 211–216. Amsterdam: ILLC.