

Expanding the causative alternation in Spanish. What about a third variant?

Abstract

The causative-inchoative alternation has been a subject of much debate. It might also be a case where variation patterns that escape existing typological descriptions provide a new perspective on the problem.

We analyze the variability and systematicity of alternative argument structure realizations, together with corresponding aspectual/event properties, by considering three different ways in which change-of-state verbs can be semantically and syntactically construed in Romance. Under the general assumption that the syntactic projection of arguments correlates non-trivially with event structure, we apply a novel theoretical approach to the semantics and syntax of the causative-inchoative alternation. We argue that different verbal heads can be independently combined to yield contrasting verbal configurations, with corresponding event/argument structure properties quite freely. Alongside standard cases such as causative and inchoative frames, we discuss what we call ‘stative-causative constructions’ [SCC], where the initiator appears as the sole argument. The general properties of this additional (third) variant suggest the availability of a null causative (external-argument-selecting) v^o producing original monoargumental structures with corresponding (simpler) event structure. These little-known Spanish data challenge current argument structure theories assuming that the causative v^o necessarily implicates the eventive (BECOME) component, or that the latter figures in the verb’s permanent lexical entry. SCCs provide empirical evidence suggesting that what is commonly described as a basic unaccusative/transitive verb may have unergative uses.

1. Introduction

1.1. The problem: Alternatives in the causative alternation

Transitivity alternations are a fundamental issue in the study of the lexicon/syntax interface. An important characteristic of the causative-inchoative alternation, exemplified by (1), is that the contrast and variable complexity in argument realization coincides with a contrast and relative complexity in event structure. Central to this claim is the idea that the causative form encompasses the simpler structure corresponding to the intransitive variant (2).

- (1) a. John closed the door. [cause John[become [the door<closed>]]]
b. The door closed. [become[the door <closed>]]]
- (2) $V_{\text{TRANSITIVE}} = \text{CAUSE to } V_{\text{INTRANSITIVE}}$ (Levin 1993:27)

There is an impressive body of literature on this alternation, which cannot be summarized here. A major discussion centers on the question of whether the two variants are derivationally related—and, if so, which structure is the ‘original’ and which one is derived. While some accounts analyze the complexity of the transitive variant as the consequence of the combination of a basic monadic structure with a causative structure (including works from different theoretical orientations, e.g., Dowty 1979;

Parsons 1990; Hale & Keyser 1993, Rappaport-Hovav & Levin 2011); others propose instead that the transitive form is basic and that the inchoative is derived (Levin & Rappaport-Hovav 1995; Reinhart 2002, Chierchia 2004).¹ More recently, non-derivational approaches (Rosen 1996, Doron 2003, Harley 2008) advanced the idea that it is not the case that one variant derives from the other, but rather that they are constructed from the same source. The ongoing discussion is important because even isolating a specific problem—namely, which is the correct structural configuration of the verbs showing the alternation—raises fundamental questions on the architecture of grammar and the balance between listedness and constructionality.

In Romance languages, the causative-inchoative alternation has been subject to extensive research as well (e.g., Labelle 1992 on French, Folli 2002 on Italian). Nevertheless, a crucially undiscussed fact is that the variability in the syntactic frame can be argued to extend to a third alternative, also related through the notion of *cause*. This little-discussed variant features a unique argument, which is interpreted by default not as the undergoer, but as the entity with the relevant properties to instigate a change (i.e., the *cause* or *initiator*), as in ((3)c). Interestingly, even if this monoargumental (*initiator*-only) form is possible in English in certain contexts, it seems to be quite free in Spanish—setting external, encyclopedic restrictions aside (e.g., (4)c). Compare (3) with (4)–(5).

- | | | |
|--------|--|----------------------------------|
| (3) a. | El cloro blanquea hongos y algas. | [Spanish] |
| | ‘Bleach whitens fungi and algae’ | [English] |
| b. | Los hongos y las algas (se) blanquean. | [Spanish] |
| | ‘Fungi and algae whiten’ | [English] |
| c. | El cloro blanquea. | [Spanish] |
| | ?‘Bleach whitens’ | [English] |
| (4) a. | La comida chatarra engorda a los niños, la leche no. | |
| | ‘Junk food fattens the kids, milk doesn’t’ | |
| b. | Los niños engordan. | |
| | ‘The kids fatten [up]’ | |
| c. | La comida chatarra engorda. | Cf. # El agua engorda. [Spanish] |
| | *‘Junk food fattens’ [Junk food is fattening] | # ‘Water fattens’ [English] |
| (5) a. | El sol calienta la Tierra. | |

¹ Importantly, the position taken in answer to this first question is independent of the position taken with respect to the domain where the divergence is contained. Both transitive-to-intransitive (Levin & Rappaport-Hovav 1995) and intransitive-to-transitive derivations (Rappaport-Hovav & Levin 2011) figure in both lexicalist and constructionalist approaches (cf. Folli et al. 2005).

‘The sun heats the Earth’

b. La Tierra (se) calienta.

‘The Earth heats [up]’

c. El sol calienta.

[Spanish]

*‘The sun heats’ [The sun has heating power]

[English]

The present discussion concentrates on Spanish examples; nonetheless, equivalents can be easily found across the board in Romance.² The construction—called here Stative Causative Construction [SCC] (see Rothmayr 2009:47 for similar terminology)—creates a problem for the structural characterization of change-of-state verbs in at least three respects.

On the one hand, it raises the question as to whether the internal argument—which appears as the stable argument in the alternation when the analysis is limited to (1) or to (a-b) in (3)-(5)—is indeed a default constituent in the argument structure configuration of these verbs, as commonly assumed in both lexicalist and constructional approaches (e.g., “lexically specified by the verb”, Rappaport-Hovav & Levin 2011:152; “internal to the lexical structure”, Hale & Keyser 2002:112, Hale & Keyser 1992:167). Further, SCCs call into question the commonly accepted classification of the verbs at the table either as *bona fide* unaccusatives (cf. Ramchand 2008:35, Levin & Rappaport-Hovav 1995:80) or as basic transitives (e.g., Levin 1993, Levin & Rappaport-Hovav 1995:25). To the extent that, at least in Spanish, change-of-state verbs appear to allow external-argument-only frames, or have some unergative uses, SCCs pose a question on the structural makeup of these verbs by suggesting that both arguments, along with the relevant eventive component, may be equally optional.

On the other hand, by suggesting that the causative component may be independently realized, SCCs challenge a basic rule of event composition involved in the two main lines of work (cf. (6)-(7)) whereby: (i) the event structure of change-of-state verbs combines two basic components in a hierarchical relation, cause and process; and (ii) the former, if present, causally implicates the latter. In this sense, SCCs also invite us to reconsider the notion that the general semantics of causation is strictly relational—i.e., dependent on the embedding just exposed.

² Compare, namely:

- | | | |
|-----|--|--------------|
| (i) | a. El chocolate engorda. / los sonidos demasiado agudos ensordecen. | [Spanish] |
| | b. Il cioccolato ingrassa. / I suoni troppo acuti assordano. | [Italian] |
| | c. O chocolate engorda. / Os ruídos excessivamente agudos ensurdecem. | [Portuguese] |
| | d. Le chocolat fait engraisser. / Des bruits trop aigus assourdissent. | [French] |
| | e. La xocolata engreixa. / Els sons massa aguts ensordeixen. | [Catalan] |
| | f. *Chocolate fattens. / *Sharp noises deafen. | [English] |

(6) causal relation

Syntactic embedding: [V [VP]]

(Hale & Keyser 1993:69)

Semantic embedding: $e_1 \rightarrow e_2$ (the matrix event "implicates" the subordinate event)

(7) [x cause [become [y <state>]]]

(Rappaport-Hovav & Levin 1998:108)

Another interesting problem is that the non-eventivity of SCCs contrasts with stative predicates analyzed as the result of a causative v^o ($v_{INIT/CAUS}$) in previous accounts (e.g., English *Katherine fears nightmares*, Ramchand 2008) in two ways. First, in SCCs the subject is interpreted by default as a *cause(r)* of a potential change rather than as a *holder* of a *result state*. Second, unergativity—which follows naturally assuming under the conception of v_{INIT} as an external-argument-introducing head—is not predicted by the standard analysis, and contrasts with the argument realization patterns shown by the proposed English examples (i.e., the dyadicity seen in both subject-experiencer and object-experiencer stative verbs like *fear* and *scare*). In this respect, the consistent semantic and syntactic properties of SCCs would provide much-needed evidence in support of the non-eventive nature of $v_{INIT/CAUS}$ ³ (Ramchand 2008 *i.a.*), at the same time that they preserve the desired correlation between simple argument structure (monadic, unergative) and simple event structure (process-less predicate, default interpretation of the external argument as cause).

1.2. The proposal: New (theoretical) ways of analyzing syntactic variation

We propose to account for this particular kind of flexibility in structural alternations by suggesting that alternative realizations depend on the type of verbal head (v^o) combined, rather than on the properties of a particular lexical entry, with three potential configurations resulting from a common (perhaps category-neutral) root. We argue that the possibility to derive constructions like ((3)-(5)c) (i.e., SCCs) can be explained by a null causative v^o . This v^o would be freely available in Spanish (and, potentially, across Romance), producing a simpler event and argument structure than the one seen in ((3)-(5)a), but at the same time, one which is significantly (semantically and syntactically) different from the simple structure seen in ((3)-(5)b). Drawing on specific tests and independent sample data, we show that in SCCs the absence of the internal argument crucially correlates with the absence of the process (sub)event, thus preserving a strict correlation between argument structure realization patterns and event structure.⁴

Specifically, SCCs represent data that is problematic even for more recent constructional accounts (e.g., Ramchand 2008). To accommodate these facts, we put forward a new constructional analysis based on v -flavors (e.g., Folli & Harley 2007, Harley 2014). A more precise typology of v heads is needed to account for the relation between event structure and argument structure in those cases where a stative predicate with the general semantics of causation is produced by a simpler configuration where the DP

³ For the ease of exposition, we keep the two notations commonly seen in the literature. The label *proc* will in turn be related to V_{BECOME} (cf. (42)).

⁴ All sample data in the paper was tested against and validated by corpus and experimental data, which for reasons of space are not introduced here (see fn.13).

is interpreted by default as cause/initiator (SCCs), as opposed to the undergoer interpretation in commonly-analyzed monoargumental frames; but also in contrast to other types of verb allegedly produced by external-argument-introducing heads. In this light, we submit that a nonderivational (constructional) approach, with *v* heads constraining interpretation and argument selection, provides a principled explanation for the problem. Although the argumentation rests on a specific type of constructional account (set out in Sections 3-4 and further refined in Section 7), we work under the general hypothesis that the semantic properties of the different verbal heads combined are responsible for event interpretation and argument structure realization. In this way, the proposal retains the headway made by early work on the topic (e.g., Hale & Keyser 1992), while it capitalizes on constructivist work that gained prominence over the past ten or fifteen years.

Several advantages follow. The absence of a process component in initiator-only frames would confirm a transparent correlation between the (simpler) event structure of SCCs and the (simpler) syntactic frame, thus reinforcing the idea of an internal-argument-licensing process component (v_{BECOME} , Folli 2007 *i.a.*; ProcP , Ramchand 2008) not included by default in the configuration of the verb. In this way, the proposal contrasts with an explanation building on implicit arguments and/or uninterpreted projections which is not favored by empirical data, as we will show next, and is consistent with similar observations concerning atransitivity (cf. McIntyre 2004(59)). Moreover, the optional (constructional) status of the process subevent, together with the corresponding verbal projection, fits well with the widely-known empirical fact that unaccusative frames are morphologically more complex in Romance, (see Ramchand 2008, Rappaport-Hovav & Levin 2011 for summary and discussion).⁵ In addition, the analysis of SCCs as the result of free compounding with $v_{\text{INIT/CAUS}}$ ⁹ is consistent with the considerable range of verbs which are productive in SCCs, as illustrated below. Finally, a free causative composition mainly constrained by external semantic conditions agrees with arguments from more recent constructional (e.g., Harley & Noyer 2000, Hale & Keyser 2005) and lexicalist (e.g., Rappaport-Hovav & Levin 2011) accounts.

2. Preliminary empirical observations: Implicit arguments and composite roles

Non-overt arguments (implicit arguments, *pro*, A/A'-traces) have been proposed in accounts of a wide range of syntactic phenomena. They seem a compelling solution for the problem, among other things because they commonly appear in generic tenses (cf. Rizzi 1996), as is also the case for SCCs, but especially if SCCs are analyzed under the assumption of a basic transitive/unaccusative configuration, namely since they are essentially described as 'unlinked' argument slots in the argument structure (Williams 1985 apud Bhatt & Pancheva 2006), or as conceptual arguments that are neither

⁵ Assuming that derivational processes correlate with morphological markedness (cf. Haspelmath 1993). For the way in which unaccusativity relates to inchoativity in different accounts, cf. Rappaport-Hovav & Levin (2011 fn.1), Hale & Keyser (2002:124 fn. 6).

expressed syntactically, nor bound to an argument that is expressed syntactically (Jackendoff 1990: 55). Although there is not a unanimous consensus concerning their status, a salient characteristic of implicit arguments is that they are syntactically active elements and, as such, their presence determines specific syntactic facts. Analytic data, however, suggests that SCC are better analyzed as genuine monoargumental configurations. In this (sub)section we will ignore finer implications of what is a complex syntactic problem to concentrate on empirical diagnostics for implicit/null arguments, which is in fact not an easy task.⁶ Nevertheless, stronger evidence comes from the key homomorphism between argument realization and event structure shown in Section 5.1.

An initial diagnostic for non-overt arguments, secondary predication (e.g., Rizzi 1986 *i.a.*), introduces a first difference. (8) shows that prototypical cases of null objects in Spanish allow both (a) secondary object-oriented depictives and (b) resultative predication. Apparently, this is not possible in SCCs (9). Importantly, insofar as some verbs in Spanish allow unmarked unaccusative frames, a construction like *el horno calienta empaquetado* can be marginally admitted. This, however, crucially requires an *undergoer* interpretation of the DP and a stage-level, subject-oriented depictive reading of the AP—i.e., an inchoative frame, as in (10), as opposed to SCCs (see fn. 7 and 15 below for patterns further extending to Italian).

(8) Null object

- | | |
|--|-----------------------------|
| a. El chef compra {empaquetado/natural/barato}. | Secondary predication |
| ‘The chef buys wrapped/natural/cheap [items]’ | (object-oriented depictive) |
| b. El chef cocina {abundante/rico/salado}. | |
| ‘The chef produces [cooks] abundant/tasty/salty [meals]’ | (resultative) |

(9) SCC

- | | |
|--|-----------------------------|
| a. El horno calienta (*empaquetado/*natural). | |
| (intended) ‘The oven causes heat (wrapped/natural)’ | (object-oriented depictive) |
| b. El horno calienta (*abundante/*rico/*salado). | |
| (intended) ‘The oven causes heat (abundant/tasty/salty) [meals]’ | (resultative) |

(10) El horno (se) calienta empaquetado.

‘The oven heats up (when) wrapped’

Second, while null object quantification is generally available for Romance transitive verbs—even for those like *ver*, *comprar*, *calentar* which generally require the realization of the internal argument (cf. *Juan vio/compró/calentó *(algo)*. ‘Juan saw/bought/heated (something)’)—(11) shows that this type of quantification is not allowed in SCCs.

⁶ Some of these problems start with the fact that SCCs are unpassivizable. See Landau (2010) *i.a.* on discussion about diagnostics of syntactic projection.

- (11) El sol calienta (*todos/*algunos). cf. {Vio/Compró/Calentó} *(todos/algunos)
 ‘The sun causes heat (all/some)’ ‘[he] saw/bought/heated *(all/some)’

It has also been argued that, at least in null-subject Romance languages, null objects can bind reflexive pronouns (Rizzi 1986). If SCCs such as (13) involved null objects, then reflexive phrases should be possible. Nonetheless, these modifiers only seem natural in unaccusative/transitive frames, as suggested by the reflexivizing/inchoative (*se*) and accusative (*lo*) clitics in (12). This is important because SCCs could be alternatively explained by assigning a composite role to the external argument, as we will see next, but also considering the analysis of prototypical unergative verbs like *dance* and *sleep* proposed by accounts under consideration here (e.g., Ramchand 2008: 118). The distribution shown below also argues against this answer to the problem.

(12) CAUSATIVE/INCHOATIVE

- (se/ lo) indigna/enoja/irrita (consigo mismo).
 INCH ACC outrage/anger/irritate with self
 ‘(It) makes (him) outraged/angry/irritated at himself’

(13) SCC

- a. La injusticia indigna/enoja/irrita (*consigo mismo).⁷
 ‘Injustice outrages/angers/irritates (*at oneself)’
 b. El payaso asusta (*a sí mismo).
 ‘The clown is scary (*at himself)’

Another potential explanation for SCCs comes from generic (null) internal arguments (viz., *algo/alguno* ‘some’), which are in principle generally available in Romance (cf. Bhatt & Pancheva 2006, Dobrovie-Sorin 1994). Crucially, however, a generic internal argument shifts the interpretation to an eventive (change-of-state) predication, yielding telicity independently of DP quantification (object measuring-out, in the standard sense). By contrast, SCCs remain invariably atelic, as suggested by their incompatibility with endpoint modifiers like *completely* or *in X time* in (14), and in line with major generalizations about unergativity and atelicity (e.g., Dowty 1979, Borer 2003:35). Note that relevant minimal pairs are produced by presence/absence of a (potentially quantified) null object.

- (14) a. El chocolate engorda *(algo/alguno) (en x tiempo/completamente).
 ‘Chocolate fattens *(some) in x time/completely’
 b. El sol quema *(algo/alguno) (en x tiempo/completamente).
 ‘The sun burns *(some) in x time/completely’

⁷ In Italian, a construction paralleling Rizzi’s example of null-object binding is not systematically available with verbs allowing SCCs (*L’ingiustizia indigna/arrabbia/irrita (*con se stessi)*). Also here, non-trivial minimal pairs obtain (e.g. **(si) indigna/arrabbia/irrita con se stessi*).

If it is true that bare quantifiers behave as null objects (*'Bare molti'*, Cattaneo 2008), (15) contributes a similar contrast, inasmuch as null object constructions allow past perfect inflection, as opposed to SCCs (see also (31) below). Aspectual considerations of this sort are not irrelevant, especially since the relation between event and argument structure is central to the discussion, and will be addressed in detail next. For present purposes, the important point is that, as a focal post-V quantificational expression is missing, *ne*-cliticization, a common test for unaccusative verbs and Null objects in Romance languages like Italian (Russi 2008:113, Borer 2003:37), predictably fails with SCCs, as shown by (16).

(15) *Bare molti* (Null object)

- | | |
|---|-----------|
| a. Questo ha reso/lasciato molti {infelici/poveri/indignati}. | [Italian] |
| Esto ha dejado muchos {infelices/pobres/indignados}. | [Spanish] |
| 'This has left many unhappy/poor/outraged' | |
| b. Questo ha {infuriato/impovertito/indignato} *(molti). | [Italian] |
| Esto {ha enfurecido/empobrecido/indignado} *(muchos). | [Spanish] |
| 'This made *(many) furious/poor/outraged' | |

(16) La radiazione infrarossa ne riscalda/brucia *(la metà).

the radiation infrared PART heats burns the half

'Infrared radiation heats/burns *(half) [of them]'

Finally, implicit arguments generally allow PRO-control (cf. Bhatt & Pancheva 2006:13 *i.a.*), paralleling inchoative frames (note that Spanish uses a morphophonologically identical clitic for passives and unaccusatives), as in (17). Apparently, this is not allowed in SCCs (18).

(17) INCHOATIVE/PASSIVE

Se {secan/calientan} (para ser pintados/doblados).

INCH/PAS dry / heat to be painted /folded

⇒ 'They dry out to be painted/folded'

⇒ 'They are dried/heated to be painted/folded'

(18) SCC

El sol {seca/calienta} *(para ser pintado(s)).

(intended) 'The sun causes dryness/heat to be painted'

These preliminary observations are the starting point for our proposal that SCCs are better analyzed as structures with simpler syntactic and event configuration. Patterns of these sort allow us to argue that, in some cases, verbs which are generally classified as unaccusatives or as basic transitives appear to produce frames crucially lacking an internal-argument-introducing projection.

Common diagnostics of unergativity support this hypothesis. Namely, assuming that resultative constructions cannot be formed from subjects of unergative verbs—although they may be formed from unaccusatives/transitives (e.g., Levin & Rappaport-Hovav 1995:14)—, the distribution in (19) is correct.

Also in this case, ((19)a) could only be allowed under an undergoer (i.e., inchoative) reading of the unique argument (see fn. 15 below). The observation is important because it helps to explain the patterns just discussed concerning secondary predication (recall (8) above).

(19) SCC

a. El grafito calienta *(hasta quedar incandescente/fundido).

‘Graphite causes heat until (becoming) incandescent/fluid’

CAUSATIVE/INCHOATIVE

b. El grafito {se/lo} calienta (hasta quedar incandescente/fundido).

‘Graphite heats (itself/it) up until (it) becomes incandescent/fluid’

Note that verbs lacking unaccusative variants—e.g., the hit/touch-type, Levin 1993, as well as object-experiencer verbs, which are relevant to the current discussion (next)—, in addition to verbs which do not allow implicit objects (e.g., *llenar* ‘fill’), generally allow SCCs, as attested by (20). Corpus search results, showing qualitative and quantitative⁸ productivity, are exemplified in (21).

(20) CAUSATIVE

a. Su discurso {impacta/toca/afecta/captura} a la audiencia.

‘His speech {shocks/touches/affects/captures} the audience’

INCHOATIVE

b. *La audiencia (se) {impacta/toca/afecta/captura}.

‘The audience shocks/touches/affects/captures’

SCC

c. Su discurso {impacta/toca/afecta/captura}.

‘His speech shocks/touches/affects/captures’ (intended: ‘His speech is shocking’)

⁸ ≥40 SCC occurrences with each of 20 not-null-object-allowing verbs including those exemplified in (21).

(21) a. La coca-cola llena. the coke fills 'Diet coke has a satiating effect'	Cf. *Juan llena. 'Juan fills'
b. Esta pintura cubre bastante. This paint covers enough 'This paint has a fair covering power'	*Juan cubre. 'Juan covers'
c. Esa conducta daña/alarma/altera. That behavior damages/alarms/alters 'That behavior is damaging/alarms/disturbing'	*Juan daña. 'Juan damages'
d. El producto satisface. The product satisfies 'The product has a satisfying effect'	*Juan satisface. 'Juan satisfies'

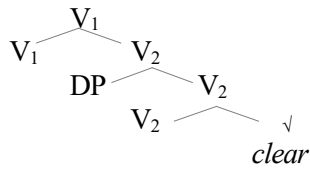
Summarizing, a number of pieces of evidence can be adduced in support of the hypothesis that SCCs do not involve unprojected/unrealized internal arguments. However, given the possibility of drawing consistent syntax/semantics generalizations, these conclusions seem unwarranted unless a relevant correlation is established between argument structure and event structure.

3. Defining the general approach

As mentioned earlier, in this paper we argue that systematic patterns of this sort are to be related to syntactic modes of combination rather than to lexicon-internal processes. The way we propose to account for this empirical problem is by implementing constructionist accounts building on Hale & Keyser's (1993, 2002) l-syntax which sanction the idea of different v heads constraining argument selection and interpretation. The constructional nature of the analysis easily captures the generalized productivity of SCCs in a systematic way, while it remains able to explain contrasts bearing on argument selection and interpretation together with the independent realization of an argument interpreted as *cause* or *initiator*.

Let us introduce some considerations motivating this analytical choice. Hale and Keyser (1993, 2002:106) originally proposed that transitive verbs combine two separate heads. In principle, causative (transitive) alternants are obtained through merge of an independent V (V_2 in (22)) with the original monadic structure yielded by the v^0 implicating the external subject (V_1 on this notation). This supplies the verb with the capacity to license an internal argument.

(22) *'The wind cleared the sky'*



In this analysis, to say that a verb participates in the causative-inchoative alternation means that an independent “notional type of V [which] is a *dynamic event*” (1993:71) (i.e., V_2) can freely appear as the *complement* of the monadic configuration yielded by $v^0(V_1)$. Nonetheless, here v_1 is an unmarked empty verb with no predefined meaning; the causative interpretation is defined configurationally, by embedding V_2 (i.e., the dynamic event). In this model, there are no theta-roles (Hale & Keyser 1992:150): in principle, all that is required for interpretation of the external argument in (22) as *causer/initiator* is Merge of the basic verbal projection headed by v_1^0 with the eventive V head (V_2).

There is, however, a logically possible alternative for verbs entering the alternation which the combinatorial system allows, but whose existence is not addressed. In Spanish—and, more generally, in Romance—, we have inchoative and transitive frames, for which it makes sense that a *causer* interpretation be obtained structurally (i.e., by embedding the eventive V^0 , cf. (6) above). Now, insofar as monadic constructions featuring a single (external) argument, and crucially involving causational semantics (e.g. initiator interpretation), seem to be possible as well, SCCs raise the question of a causative interpretation independent of such an embedding. Recall that, by initial hypothesis, we assume that in SCCs the internal-argument-licensing V is absent. If this is correct, the relevant (cause) interpretation has to be somehow licensed by the ‘basic’ (upper) v^0 independently of V_2 -embedding.

The role of this ‘upper’ v^0 in accounting for event structure and event decomposition has been the focus of intensive study in the last decades. Ample semantic evidence supports the hypothesis that the verb is made up of a matrix external-argument-introducing projection, v^0 , typically determining causative interpretations, and a formally independent projection denoting a process (change) and licensing the internal argument of the verb (e.g., Ramchand 2008, see Section 4 below). The important notion, which is key to the analysis of SCCs, is that the upper v^0 involves grammatically-relevant semantic properties which are independent of an eventive V^0 . As we will argue in detail next, the possibility of an independent v^0 with these characteristics is crucial to accommodate the interpretation of the sole DP in SCCs as initiator/cause—i.e., even in those cases where no internal argument is licensed—, thus preserving a much-desired correlation between argument structure and event participant-hood (external argument > cause), as shown in Section 5 below.

This, however, leaves us with the problem of the different semantic roles assigned to allegedly equivalent argument structure realizations. We refer to the anticipated fact that the interpretation of the external argument in SCCs as the entity with potential to *initiate* a change of state, along with the restricted selection of non-volitional arguments, contrasts non-trivially with the interpretation received

by the external argument of prototypical unergatives like *laugh*, which do not derive initiational/causational interpretation and which are not readily combined with non-volitional external arguments, as (23) indicates.

(23) SCC

- a. {esta linterna/el sol/#Hugo/#el cocinero} {quema/calienta}.
 this flashlight/the sun/Hugo/the cook burns / heats Cf. Hugo quema *(las hojas).
 ‘{This flashlight/the sun/#Hugo/#the cook} causes {burns/heat}’ ‘Hugo burns (the leaves).’
 Prototypical unergative
- b. {#esta linterna/#el sol/Hugo/el cocinero} {ríe / salta}.
 ‘{#this flashlight/#the sun/Hugo/the cook} {laughs/jumps}’

Subsequent work (see Folli et al. 2005) on the causative alternation note that Hale & Keyser gloss their external-argument selecting v° differently in different verb types. While unergative verbs like *laugh* are notated as ‘DO \sqrt{laugh} ’, change-of-state verbs like *clear* are glossed as ‘CAUSE \sqrt{clear} ’. Since corresponding semantic restrictions follow from this contrast (e.g., causer vs. agent), it is proposed that the differences in question reflect structurally distinct primitives of the inventory of light verbs. While we will adopt the semantic implications of this approach—in particular, the semantic definition and restrictions determining distinct primitives in the v° inventory (Folli & Harley 2007, Harley 2005)—, we preserve the complex layering which is key to explain the three-fold alternation.⁹ In this way, the ingredients determining the initiational and process subevents (the “labels” in Ramchand’s model) can be analyzed as the result of different null v° s available in the Romance inventory of verbal formatives.

Even if building on different v° flavors is an analytical choice not unanimously shared by constructionist approaches, a causative v° —as opposed to other external-argument introducing v° s considered in the literature like v_{DO} —is able to address a number of issues related to these constructions. First, it accounts for both the structural and semantic properties noted in SCCs, inasmuch as both the unergative behavior and the interpretation of the external argument as a causing participant (one who has the property of bringing about the change in question) fall out naturally. The non-trivial difference with V_{DO} would also capture the contrast with other (non-stative) unergative verbs, along with the relevant differences in the interpretation of the external argument (cf. Folli & Harley 2007:209).¹⁰ Moreover, the relevant semantic properties of v_{CAUS} correctly accommodate the fact that non-alternating verbs allowing SCCs are those with compatible semantics—namely, object-experiencer (hence, subject-initiator) verbs,

⁹ As opposed to the simplex structure proposed in Harley (2008) for Japanese causatives—which in fact show the inverse pattern in the relation between morphological marking and inchoativity. In addition to the various arguments given by Ramchand (2008) for considering causative (transitive) forms to be produced from two or more syntactically independent heads (see Section 4), a simplified VP structure where the causative v° and the inchoative v° are interchangeable rather than simultaneously present in the transitive cannot account straightforwardly for the structural syntactic/eventive asymmetries between SCCs and eventive (transitive) causatives.

¹⁰ We will not discuss here the relation between $v_{VOICE}P$ and categorizing v° s (see e.g. Harley 2014).

as opposed to subject-experiencer verbs (see Section 6). Unsurprisingly, stative verbs that freely allow SCCs are those which contrast by producing a default interpretation of the external argument as initiator/cause.

Another advantage of the proposed analysis is that it avoids a model of partial projection of listed information to capture certain alternations (e.g., Ramchand 2008, addressed in Section 4 below). Nevertheless, the non-eventive nature of V_{CAUS} proposed by Ramchand (2008)—which is broadly consistent with Hale & Keyser’s (1992) primary account—is centrally preserved. Among other things, it correctly captures the fact that a stative predication obtains from lexical roots which otherwise produce change-of-state verbs.

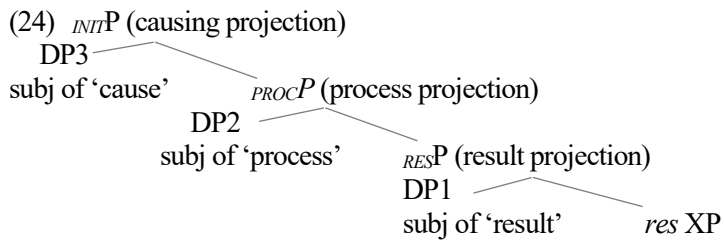
Therefore, while we take advantage of the transparent relation between event and argument structure allowed by the constructional analysis developed by Ramchand to account for the consistent semantic and syntactic properties of SCCs, we propose that SCCs require a finer analysis of v^o along the lines just described. A more refined typology of verbal heads, defined by relevant semantic and syntactic characteristics, allow us to focus on these components as crucial locus of variation, following the headway made by previous constructional work on causativity and transitivity alternations (e.g., Folli et al. 2005, Folli & Harley 2005, McIntyre 2004). We nonetheless contrast this new analysis of the alternation with Ramchand’s as it provides a backdrop for discussing the crucial isomorphism between event and argument structure together with the potential for non-eventive denotations, which is the starting point for our analysis of the alternation illustrated in (3)-(5).

4. **Backdrop: Event and argument structure.**

Ramchand’s (2008) account gives *syntactic constituency* to abstract templatic aspects of Levin and Rappaport-Hovav’s representation ((7) above) in a way which is also compatible with the structure proposed in constructional accounts, especially with Hale & Keyser’s (22).

The analysis is broadly consonant with previous work supporting the idea that arguments are directly introduced into the specifiers of different little v -heads expressing different sub-eventualities, on a Larsonian view of VP structure. Thematic relations are determined configurationally, according to the relative position in the structure in which the verbal predication maximally decomposes, illustrated in (24). Even if alternating verbal frames are also seen in this model as the result of free composition (recursively built up by Merge), they are at the same time conditioned by lexically-encoded category labels (‘tagged’ in the lexical entry of the verb, 2008:21). In this way, the analysis allows for a transparent relation between event and argument structure realization, while it retains a core lexical encoding as a way of constraining argument insertion and interpretation.

The label *INIT*[itation], which is similar to the *v*^o proposed in early and more recent constructional accounts (Hale & Keyser 1993, Harley 1995, Kratzer 1996),¹¹ represents the “outer causal projection” that is responsible for the introduction of the external argument as well as for its consequent interpretation as the initiator/cause of the event(ivity). The label *PROC* represents the dynamic process projection (*PROC*P) and licenses the argument which is interpreted as undergoer of the event, while *RES*P “only exists when there is a result state explicitly expressed by the lexical predicate” (Ramchand 2008:47).



In this model, the alternation is analyzed as a general process determined by the availability of a “default null *INIT* head” (2008:94) with the semantics of general causation that can be built on top of the core (*PROC*P) structure. Since causativization is seen as the result of free automatic structure-building, verbs participating in the causative-inchoative alternation are those which do *not* contain the causative projection [*INIT*] in their lexical specification.¹² If causativization does not occur, the core structure allegedly specified in the lexical entry (see (25)) appears on its own, allowing just [*PROC*]—the projection producing the transitional event and licensing the undergoer—to be identified. Note, however, that this derivation is crucially different from Hale & Keyser’s original proposal, where causativization obtains by inserting a dyadic (internal-argument-licensing) structure into the complement position of the original monadic configuration that implicates the external argument, and not the other way around (cf. Hale & Keyser 2002:175).

(25) *proc*

Intransitive UNDERGOER e.g., *melt, roll, freeze* (Ramchand 2008:95)

Another important point in the analysis is the (non)optionality of verbal projections, and, therefore, the potential conditioning imposed by listedness. The proposed asymmetry between the arguments of the verb, where only the internal argument is lexically specified in the verb’s entry, also figures in recent works defending the inchoative-to-causative derivation from a lexicalist perspective (Rappaport-Hovav & Levin 2011) and is somehow consistent with the original conception in Hale & Keyser (1992:161) of

¹¹ *Init* is comparable to the *little v*^o proposed in Kratzer (1996), Ritter & Rosen (1998) *i.a.*, but is different from a voiceP-type of definition (Alexiadou 2010) for independent reasons (Ramchand 2008:97). On our analysis, an account of the morphological complexity of inchoative variants building on VoiceP does not fit well, namely, with the fact that inchoatives do not allow agent by-phrases (*El pelo se secó {con el secador/por el calor/*por el peluquero}* ‘The hair dried up with a hairdryer/because of the heat/*by the coiffeur’).

¹² It is nonetheless unclear why alternating degree achievements are listed as *Init*, *Proc*, *Res* (Ramchand 2008:112).

the external argument as completely external to the lexical verb. The claim that the causative portion is not present in the underlying structure of lexical causative verbs is consistently defended in proposals developed under different frameworks (see Rappaport-Hovav & Levin 2011, Folli & Harley 2005 *i.a.*). This assumption contrasts, however, with other accounts which rather propose that the inchoative (unaccusative) form contains a non-projected causal ingredient which is nonetheless present in the syntactic or lexical-semantic composition of the verb (e.g. Rivero 2004).

Let us turn to the problem under consideration here. Inasmuch as arguments are directly introduced by meaningful (event) projections, it is logical to assume that a verb licensing an external argument, and especially one which is interpreted as cause/initiator, shall involve the corresponding ($_{INIT}$) head. However, the stative nature of SCCs, together with the potential absence of the undergoer, raises the question as to whether $_{PROC}$ is a permanent component of so-called change-of-state verbs. If data supports the absence of $_{PROC}$ in initiator-only constructions, the existence of SCCs—and the expanded alternation allowed by Spanish—could be taken as an empirical argument to suggest that the process portion (V^o_{PROC}) may be optionally added in the derivation to mediate between the external-argument-introducing projection (V^o_{INIT}) and the lexical source, assuming that a general combinatorial semantics interprets the syntactic structure of the verb in a regular and predictable way, and that the semantics of event structure and participants is read directly off this structure (Ramchand 2008:42). The crucial implication, however, is that for this to happen, V_{INIT} should be able to, first, determine a causative interpretation semantically and syntactically independent of further embedding; and, second, combine directly with the downstairs lexical component. To the extent that this is possible—and Ramchand’s model crucially allows for this option—, the unergativity of SCCs follows straightforwardly from the simpler ($_{INIT}$ only) structure. Otherwise, the constructions under consideration here would create significant problems for the assumption that the causative head is built up on top of a lexically-encoded monadic ($_{PROC}$) head. Namely, SCCs would instantiate an argument related to a projection ($_{INIT}$) which is in principle absent in the lexical entry, and a projection lexically specified ($_{PROC}$) taking no argument—thus violating the requirement that all subevent projections must have a filled specifier (Ramchand 2003:27; see also Hale & Keyser 1993:76)—, or else not being interpreted, although the general situation does not reflect the case of unprojected/uninterpreted heads as seen in I-syntax (cf. Hale & Keyser 1992:158, 2005:24). Alternatively, monoargumental constructions could be explained in this model by composite roles assigned to the sole argument; nonetheless, it is clear that the DP in SCCs is not assigned an undergoer interpretation. Empirically, composite roles should allow reflexive morphology, which is not the case either, as we have shown above.

Assuming the optionality of the undergoer-introducing portion, in contrast to the commonly-accepted configuration (e.g., (25)), we predict that in Spanish a member of the alternating class will display eventive behavior when it takes an internal argument and non-eventive behavior otherwise.

(29) a. El chocolate *está engordando.

‘Chocolate is being fattening’ (cf. ‘#Chocolate is fattening [up]’ [INCH reading])

b. El payaso *está asustando.

‘The clown is being scary’

The same observations, and the same contrasts between SCCs and transitive/inchoative forms, carry over to reiterative/restitutive readings, which are licensed by these verbs in their unaccusative/transitive variants, but are unavailable in SCCs.¹³

(30) SCC

a. El sol calienta *(a cada rato /frecuentemente /una y otra vez).

the sun heats at every while frequently once and again

‘The sun causes heat (every time/frequently/again and again)’

CAUSATIVE/INCHOATIVE

b. {Se / Lo calienta} (a cada rato / frecuentemente / una y otra vez).

INCH ACC heats at every while frequently once and again

‘It heats up (every time/frequently/again and again)’

Finally, given their apparent stativity, SCCs are expected to be uncomfortable with perfective tenses, as in (31). The other important prediction correctly made by a transparent event-to-argument-structure correlation is that perfective inflection forces the interpretation of the sole argument as *undergoer* (which, in turn, delivers the consequent conceptual oddity, as seen above).

(31) a. Este chocolate {engorda /#engordó}.

Cf. El chocolate engordó.

This chocolate fattens fattened

‘The chocolate fattened’

‘This chocolate {is/#had been} fattening’

b. Antes, este viento {despejaba/ #despejó}.

before this wind cleared_{IMPERF} cleared_{PRF}

‘This wind {used to be/#had been} clearing before’

The definiteness of the subject argument seems to be relevant in the interpretation of SCCs. In general, SCCs favor generic interpretations of the subject argument even with restrictive determiners such as *este* ‘this’, as in (31), while causative/inchoatives do not impose such a requirement. Generic

¹³ The current discussion focuses on a new *theoretical* way of analyzing the alternation. In Author (forthcoming), we present corpus data supporting the analytic patterns presented above, which, for reasons of space, cannot be discussed here. Summarizing, an exhaustive (POS-tagged) database search across nearly 30 deadjectival Spanish verbs tested on telicity/durativity patterns returned significant sets (≥ 50) of causative/inchoative constructions for the string [NN*][VIS*] (NP followed by past perfect tense of each verb) vs. no (or < 3) SCC occurrences. The distribution of aspectually-sensitive modifiers analyzed via the same source (Corpusdelespanol.org) reflects the empirical generalization suggested by (14) and (30) (no significant occurrences in SCCs). Preliminary experimental data obtained from online surveys (<https://www.surveymonkey.com/r/TMZRM5>) produce odd/ungrammatical judgments for telic readings of SCCs ($\geq 70\%$) and marginal acceptance on an *undergoer* interpretation of the DP ($\geq 50\%$), under the conditions discussed concerning (26)-(31).

readings and predication over the lifetime of the subject are generally seen as characteristics of individual level predicates. Setting aside the fact that this sort of entailment is not produced by the causative/inchoative variant, the observation is consonant with the considerations raised in (26) above.

5.2. Non-eventivity

If the above analysis is correct, the consistent aspectual profile of SCCs is to be related to a *processless* sort of atelic predicate—that is, a state. We can see this using the standard tests for event type below.

In contrast to other verb classes, statives—and individual-level predicates in particular—cannot serve as complements of perception verbs (Rothmayr 2009:31). (32) shows that this sort of embedding is only possible if an internal object is licensed, either as DP or via inchoative morphology (*se*-cliticization).

(32) SCC

a. El sol calienta.

‘The sun causes heat’ (lit. The sun heats)

CAUSATIVE/INCHOATIVE

b. Vi al sol calentar *(el piso). / Ví el piso calentar*(se).

‘I saw the sun drying the floor’/ ‘I saw the floor getting dry’

SCCs also show stative behavior with locative adverbials. Note that the locative phrase in (33), if allowed, does not specify the location where a change event is accomplished (i.e., in which point in space the entity becomes finally burned, heated, etc.), as expected in change-of-state predications (assuming that, namely, a construction like *Se quemó en el trópico* ‘It burned [up] in the tropic’ can be felicitously uttered, namely, in reference to a plane that burned up at the moment in which it reached the tropic). If locative modifiers occur at all with SCCs, they are interpreted as frame-setting adverbials; that is, as a general (spatial) context in which the individual level property—e.g. the heating capacity of the sun—applies to the initiator. Gradability also behaves statively, insofar as modifiers like *mucho* in ((33)a) measure the degree of property held by the initiator, rather than the degree to which a change-of-state event has progressed.

(33) a. El sol calienta/seca/quema (mucho) en los trópicos. [no en la Antártida].

‘The sun heats/dries/burns (a lot) in the tropics’ (not in the Antarctic area)

b. Los payasos asustan en el circo. [no en sus casas]

‘Clowns scare [are scary] in the circus’ (not at their homes)

Additional evidence comes from the interpretation of modifiers like *a little bit* (Rothmayr 2009). It has been noted that, with eventive types (including Davidsonian states, if that type is considered), this modifier allows for two potential readings: one (stative), in which it acts as a degree modifier, as just discussed, and one (eventive) in which it is interpreted as temporal limit to the progression of the event, as shown by (34). Nonetheless, SCCs only allow for scalar reading—i.e., the one in which what is being measured is the degree of heat/fear that the sun/clown can instigate—, as illustrated in (35).

(34) CAUSATIVE/INCHOATIVE

El sol calentó un poco la superficie / La superficie se calentó un poco.

‘The sun heated the surface a little bit / The surface heated [up] a little bit’

⇒ ‘The sun heated the surface moderately’ (Degree/Stative)

⇒ ‘The sun heated the surface for a moment’ (Temporal/Eventive)

(35) SCC

a. El sol calienta/seca/quema un poco.

‘The sun heats/dries/burns a little bit’

⇒ ‘The sun a moderate heating power’ (Degree/Stative)

! ⇒ ‘The sun heated for a moment’ ! (Temporal/Eventive)

b. Los payasos asustan un poco

‘Clowns scare a little bit’

⇒ ‘Clowns are somewhat scary’ (Degree/Stative)

! ⇒ ‘Clowns scared for a moment’ ! (Temporal/Eventive)

SCCs are also odd with adverbials associated to the frequency or manner in which a change is carried out, as shown by ((36)a). Note that this restriction holds even if the external argument designates a participant with potential capacity for agentivity, as is the case for *payaso* ‘clown’ (cf.(36)b). This is important because agentivity can be thus disregarded as a potential factor causing the oddity seen here.

(36) a. El sol calienta (#directamente/#sistemáticamente/#apropiadamente/#fácilmente).

‘The sun heats (directly/systematically/properly/easily)’

b. Los payasos asustan (#cuidadosamente/#metódicamente/#fácilmente/#empedernidamente).

‘Clowns scare carefully/methodically/easily/stubbornly’

Finally, (37) shows that SCCs are incompatible with imperatives, as expected for verbs crucially lacking process (Dowty 1979, see Levin 2009).¹⁴

¹⁴ Related tests (e.g. *what-happened-is-that* frames) do not apply given the incompatibility of SCCs with perfective tenses. Importantly, the eventiveness required determines undergoer interpretation of the argument, with oddity paralleling (26)-(29) and (31).

(i) Lo que sucedió es que {#el chocolate engordó/#el sol calentó/#el payaso asustó}
‘What happened is that the chocolate fattened/the sun heated/the clown scared’

An alternative test (cf. Rappaport-Hovav & Levin 2010: 284) renders somewhat clearer results:

(ii) Lo que hizo el sol fue # {calentar/secar/quemar} ‘What the sun did was heat/dry/burn’

(37) SCC

a. *Payaso, ¡asusta!

‘Clown, scare!’

CAUSATIVE/INCHOATIVE

b. Payaso, ¡asústate/lo!

‘Clown, scare (yourself/him) away!’

If the non-eventivity suggested above is correct, it presents a problem for the standard classification of the verbs at hand. In the constructional system under consideration here, a stative verb shall not have a *PROC* component in its configuration “(n)or any *undergoer* argument” (Ramchand 2008:63). It follows that the patterns shown above can only be paired with a stative predicate if the verb is consistent with a monadic frame with an external argument, which is the type of argument licensed by *V_{INIT}*—that is, an unergative configuration. As anticipated, this is problematic for a general definition of change-of-state/deadjectival verbs as inherently unaccusative (e.g., Hale & Keyser 2002, Rappaport-Hovav & Levin 2011) or transitives (Levin & Rappaport-Hovav 1995:25), as well as for their analysis as verbs comprising a core *process* component by default in their basic (lexical) configuration (Ramchand 2008:118, see (25) above).¹⁵ In contrast to what is commonly assumed (Rappaport-Hovav & Levin 2000, Burzio 1986), SCCs would show that the verbs at the table are not correctly described as prototypical change-of-state verbs, and that it may not be the default for them to take an internal argument (Rappaport-Hovav & Levin 2000:293 also citing Hale & Keyser 1991).

Importantly, the system allows for the possibility for *V_{INIT}* to yield a state, insofar as it does not have *PROCP* as its complement (Ramchand 2008:63), which is a condition met by the configuration put forward here. Nevertheless, further adjustments are needed, not only to accommodate SCCs, but also to develop a more accurate event/argument structure relation in non-eventive predicates.

6. Preliminary analysis: The ontology of *V_{INIT}/CAUS*

The notion of stativity that we are aiming for here is expected to allow for the possibility that the three variants displayed by Spanish can be explained as a constructional result. Nonetheless, we want to avoid postulating ad-hoc *v* heads to handle unexpected occurrences. Hence, in order for this analysis to have explanatory power, we need to make clear, first, why SCCs can be related to the causative heads available in the inventory (*V_{INIT}*), and, second, why *V_{INIT}* may be used to produce stative predicates.

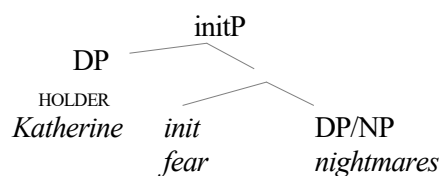
¹⁵ A related generalization challenged is the Default Linking Rule stating that it is default for these verbs to take an internal argument (Rappaport-Hovav & Levin 2010). In Spanish, this prediction can be tested in a restricted number of degree achievement verbs allowing unmarked inchoatives, such as *calentar*. A construction like *La resistencia calienta* ‘The resistor heats’ can be interpreted either as SCC (‘the resistor has the property of causing heat’) or as inchoative (‘the resistor is heating up’). Italian equivalents show a consistent distribution (e.g. *Questa stufa scalda troppo* ‘This radiator heats too much’ [scalar/*eventive] (*scaldare* [Def. 3]. (n.d.). In *Vocabolario Treccani*, retrieved from <http://www.treccani.it/vocabolario/scaldare/>). Such ambiguities are unexpected under a default unaccusative/transitive characterization.

As anticipated, the present analysis allows for the possibility that v_{INIT}° might appear in statives. Our proposal builds on Ramchand (2008) but it differs in a relevant way. The parallel is important, however, because the non-eventive status of SCCs matches the semantic description of the causative ingredient (*flanking state eventualities* that can be *integrated with a process portion* to form a coherent single event 2008:49). Moreover, the unergative patterns suggested by SCCs follow straightforwardly from a verbal configuration produced by the causative head (v_{INIT}) which is in principle freely available for derivation: by definition, v_{INIT} licenses external arguments. In turn, the definition of the *cause/initiator* as the argument that has the capacity to initiate or launch a change, and as a role which is mapped to the external argument position, constitute generally accepted notions going back to Grimshaw (1990), Rosen (1996) *i.a.* In this light, the presence of v_{INIT} in stative verbs is supported by the relevant similarities that it shares with the properties attributed to v_{INIT}° in transitive frames (basically, the semantics of general causation and the realization of the external argument).

The aspectual patterns presented above fit well with the anticipated condition that a stative verb cannot include *PROC* in its lexical syntax. For the same reason, SCCs cannot license an undergoer, since this would produce a complex causal event (recall that no complementation by *PROC* is a relevant condition for stativity). Although a broad semantics for v_{INIT} covering also stative relations like 'is the initiator/source of' is proposed in Ramchand (2008) (see McIntyre 2004 for a wider inventory), the interpretation of the sole DP in SCCs also fits well with the claim that the argument introduced by v_{INIT} is interpreted as the entity *whose properties are the cause or grounds for the stative eventuality to obtain*, according to the definition, but not to the implementation, advanced in Ramchand (2008:116). As mentioned above, in Ramchand's account, given a stative like '*Katherine fears nightmares*', both the presence of v_{INIT} , and the interpretation of Katherine as an initiator, rest on the premise that what is being described is that Katherine has certain *properties* (e.g., her personality) which *cause* fear to arise. A fundamental problem, however, is the contrast in the interpretation of the DP presumably introduced by v_{INIT} : note that in the stative verbs analyzed by Ramchand the subject of *initP* is described as the *holder of the resulting state* (38), which is clearly not the case in SCCs.

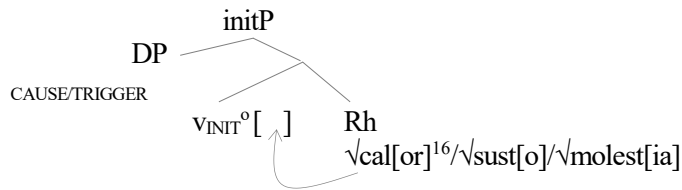
(38) Katherine fears nightmares.

(Ramchand 2008:64)



Even if it might be argued that the grammatical representation of verbs like *fear* is one in which the argument licensed by v_{INIT} *causes a change* (on Ramchand's account, Katherine's personality)—and setting aside the fact that if a change is involved, so should *PROC*; which would be ultimately consistent with the transitive structure seen in these verbs—, this is not the standard semantic analysis. Rather, what

(41) El sol calienta/Los payasos asustan/El corte de pelo molesta.



In sum, SCCs present a case where a null non-eventive, external-argument-introducing v° yields a stative verb with the general semantics of causation, under the condition that it is not complemented by *PROC*. This is unexpected under a typology where these verbs are defined as bearing *PROC* as a preexistent lexically-defined component; it can be, however, correctly predicted by free compounding with v_{INIT} , which in turn produces an original monadic configuration consistent with the unergative patterns discussed above. Importantly, SCCs take a single argument which is not interpreted as undergoer, as in inchoatives, nor as *holder of a result state*, as in prototypical English stative-causatives (i.e., subject-experiencer verbs). This DP does not bear a composite role either, as shown above, and causativity is not subject to a relational condition mutually implicating a second participant. Hence, in order to make the correct predictions for the general properties of the verbs at the table, but specially to capture the contrast with English constructions in question, we want to finish with the proposal that a refined typology of V heads is required.

7. An alternative proposal: v-flavors

The analytical alternative put forward here is compatible with evidence furnishing the premise that the eventive component in the verbs under consideration must be treated constructionally. The account of syntax-semantics mapping that we are proposing also relies on VP shells and on a transparent semantic/syntax correlation. It differs in that light verb heads are seen as distinct components constraining argument interpretation (e.g., McIntyre 2004, Folli et al. 2005, Folli & Harley 2005, 2007) and imposing restrictions accordingly. As mentioned above, a semantic refinement of the external-argument-licensing v° is necessary, namely, to capture the fact that certain subjects of unergative frames are systematically interpreted as initiator/cause, as opposed to non-stative unergatives (e.g., *laugh*, *dance*) which typically select for volitional agents and which do not involve a comparable (cause) interpretation.

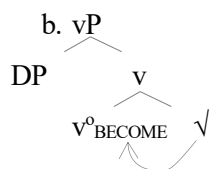
In recent reformulations of Hale & Keyser's account, the thematic properties of a particular verb follow from the syntactic and semantic properties of the verbalizing functional element(s) involved. Different 'flavors' of external-argument-introducing v° (Folli & Harley 2007:217) are differentiated—which is crucial to account for the contrast between SCCs and eventive unergatives taking volitional external arguments—, while argument/event structure realizations, including transitivity alternations, are

¹⁶ A non-derivational approach avoids an analytical problem here (e.g. assuming that *calendar* is formed on either a N or Adj base).

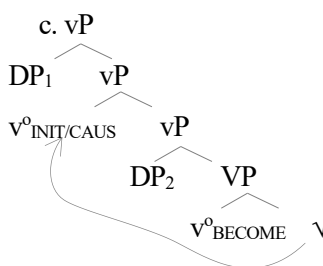
seen as the result of a change in choice of closed-class elements (i.e., the light verb) combined, rather than as a result of lexical manipulation or ‘tagging’. Although relevant restrictions can be drawn by the lexical root, event information is crucially excluded from the lexical entry.

On this account, the light verb implicating the external argument in verbs showing causative-inchoative alternation would be a distinct v° (v_{CAUS}) which imposes no agency restrictions, as opposed to the external-argument-introducing head noted as v_{DO} (Folli & Harley 2005:96, 2007:217) producing prototypical unergatives—but also in contrast to the v° seen in inchoatives (v_{BECOME}). We will standardly assume that the verbs produced by v_{BECOME} may be felicitously embedded under the null causative v° , as in (22) or else occur independently (but see also Folli & Harley 2007(23), cf. Harley 2001; Mateu 2000; Folli & Harley 2004 for a similar analysis). Hence, transitivity alternations obtain when the same lexical root appears in different syntactic structures produced by combination of these distinct types of v° , with the dyadic causative variant involving multiple v° s, as in ((42)b-c) (cf. also McIntyre 2004(53)). This retains the fundamental structural asymmetry (cf. (22) and (24) above).

(42) Inchoative (unaccusative)



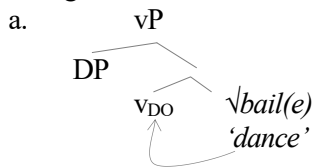
Causative (transitive)



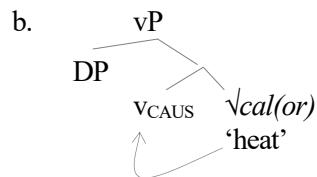
In our case, the important question is how constructions like SCCs are generated.

On the standard (Hale & Keyser) model, unergative verbs are created by incorporating the lexical root ($\sqrt{\quad}$) in the complement of a structure headed by the empty verbal head (v°). Unergative causatives (SCCs) would be, like all unergative verbs in Hale & Keyser’s system, underlyingly transitives, created by incorporation (in the conventional sense, e.g., Hale & Keyser 2002) of the root into the null v° producing the monadic form, paralleling, for instance, atransitivity (e.g., McIntyre 2004). In contrast to prototypical cases of unergative verbs—namely, *bailar* ‘dance’ (i.e., the Spanish equivalent of the standard example in the literature, Hale & Keyser 1992, 2002), as illustrated in ((43)a)—, SCCs would be the realization of the lexical root ($\sqrt{\quad}$) plus an empty v° head which does not introduce an internal argument and does not place agency restrictions on the external argument, as in ((43)b), and as opposed to v_{DO} . We further assume that this v° is, at least in Spanish, a null light verb with causative semantics but with a defective non-eventive interpretation. This is consistent with Ramchand’s condition on stativity, but it also captures the considerations raised with respect to (22), especially the fact that eventivity is crucially dependent on the presence of the internal-argument-introducing head (v_{BECOME} in (42), v_{PROC} in (24), V_2 in (22)).

(43) Unergative verb derivation



SCC



If our analysis is correct, SCCs show that if we alter the closed-class components while keeping the lexical element constant, we can see that eventiveness is not part of the semantic specification of the lexical base, nor of a verb's permanent lexical entry. Consequently, the question of whether a verb is a realization of $v^{\circ}_{\text{BECOME}}$ (or not) becomes an interesting empirical question.¹⁷ Moreover, if it is true that Cause may be suppressed when the event can be conceived of as being able to take place without any external causation (Levin & Rappaport-Hovav 1995), SCCs would therefore indicate that so-called 'change-of-state' verbs, at least in Spanish, can be conceived of as being able to occur without an undergoer, and, consequently, without describing a proper change (i.e., an event). Given the standard inventory of v heads available, the expanded transitivity alternation seems to follow from a full(er) exploitation of syntactic possibilities allowed by the combinatorial system.

We leave for further research whether stative *fear*-type verbs are the realization of v_{BE} , as Folli & Harley argue (2007:47), but it is clear that the non-lexical component must be substantially different to determine a holder/experiencer interpretation of the external argument, as opposed to the default interpretation of the single argument as *cause/initiator* in SCCs and object-experiencer verbs, which is correctly accommodated by $v_{\text{INIT/CAUS}}$. According to Folli & Harley (2007:225), the premise that object-experiencer verbs like *disturbare* 'bother' require a v_{CAUS} is supported by the behavior noted in Italian causatives. In our case, the presence of $v_{\text{INIT/CAUS}}$ correctly predicts the non-trivial fact that verbs not allowing this semantic distribution—i.e., subject-experiencer verbs—do not appear in SCCs, in contrast to the object-experiencer type, which is unsurprisingly productive in SCCs. If we further consider that object-experiencer verbs in languages like Spanish are also unpassivizable, paralleling (15) above, two important facts are correctly predicted by the account put forward here. To this end, however, the semantic restrictions imposed by $v_{\text{INIT/CAUS}}$ are just as important as the independence from direct-object-licensing components—namely, to predict the fact that verbs resisting passivization and those that do not allow null/implicit objects can freely appear in SCCs.

8. Conclusions

New examinations of the causative alternation in Romance point to constructional aspects in the relation between argument structure and event structure. Little-discussed patterns presented here

¹⁷ The idea that unaccusative morphemes like *se* are related to the realization of a specific (non-defective) v° (v_{BECOME}) (cf. Harley 2009), as in ((45)b), captures the fact that inchoative morphology disappears in the causative. Free compounding accommodates this premise without the need to assume a replacement in Folli's terms.

challenge current accounts of alternating change-of-state verbs because their event and argument structure does not coincide with the complex configuration and event implications of causative variants normally considered. They require a theory where the lexical verb does not necessarily contribute internal arguments, a conclusion motivated empirically, and further validated by independent findings and converging analytic data. A new way of analyzing this syntactic variation allows a simpler, unified treatment of the three types of constructions considered here, with a principled understanding of the nature of the correlation between argument and event structure.

Of course, many questions remain to be investigated; namely, the extent to which the analysis proposed can be fruitfully extended to main Romance languages. Nonetheless, we are confident that the data presented in this paper can provide a useful starting point for deeper investigation in several respects.

Namely, Ramchand highlights that the self-evident stative status of her results contrasts with the difficulty to provide empirical evidence supporting the stativity of the causative component. If our analysis is correct, SCCs would provide the required evidence, while preserving the transparent isomorphism between semantic and syntactic structure.

9. References

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