Argument structure alternation, minimal pairs and a non-minimal variation

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The causative-inchoative alternation—a key issue in the constructionalist vs. lexicalist debate—has been subject to extensive research. In Romance (Labelle 1992, Folli 2002 *i.a.*), a fact not commonly discussed 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 interpreted by default not as the *undergoer*, but as the entity with the relevant properties to instigate a change (*cause/initiator*) (1)c. The construction—called here Stative Causative (cf. Rothmayr 2009) [SCC]—creates a problem for the structural characterization and current assumptions on change-of-state verbs [COS] in at least two respects: First, it raises the question as to whether the internal argument, a "stable argument" (Hale&Keyser [HK] 1992:167) in the alternation, if the analysis is limited to the variants normally considered (i.e. (1)a-b), is indeed a default constituent in the phrase structure of these verbs, as generally assumed in both lexicalist and constructional accounts (HK 2002:112, Rappaport & Levin 2011:152). Second, by suggesting that the causative component may be independently realized, SCCs challenge a basic rule of event composition shared by these two major lines of work, whereby: (i) the event structure of COS verbs combines two components (cause, process) in a hierarchical relation; (ii) the former, if present, causally implicates the latter (cf.(2)b-c).

(1) a. La comida chatarra engorda a los niños. 'Junk food fattens the kids'   CAUSATIVE/TRANSITIVE
   b. Los niños engordan.   'The kids fatten [up]'   INCHOATIVE/UNACCUSATIVE
   c. La comida chatarra engorda. [*lit.* Junk food fattens] 'Junk food is fattening'   SCC/UNERGATIVE

(2) a. ([[$_{\text{INIT}}$vP) [$_{\text{PROC}}$VP[$_{\text{PROC}}$v$^{\text{o}}$, √]]] (Ramchand 2008)
   b. $e_1 \rightarrow e_2$ (Hale & Keyser 1993:69) c.[x_{cause} [become [y $_{\text{<state>}}$]]] (Rappaport & Levin 1998:108)

(3) a. El cloro blanquea. cf. ?? Bleach whitens. (≈bleach has a whitening effect)
   b. El sol calienta.   *The sun heats.   (≈the sun has the property of causing heat)

Here I argue that SCCs can be explained by a null causative v$^{\text{o}}$ freely available for derivation. If correct, Romance languages like Spanish diverge from languages like English (3) by systematically allowing the external-argument-introducing v$^{\text{o}}$ to combine directly with the Root, yielding an event and argument structure consequently simpler than the one seen in (a), but at the same time, one which is semantically and syntactically different from the monoargumental structure in (b). Regardless of the specific implementation (distinct v heads constraining argument selection and interpretation; e.g. V$_{\text{INIT}}$ (Ramchand 2008, McIntyre 2004), v$_{\text{CAUS}}$ (Folli & Harley 2007)), I work under the widely-accepted premise that syntactic projection of argument structure correlates non-trivially with event structure (Ramchand 2013 for summary). The data at hand provide new empirical validation for this notion, preserving a strict event/argument structure relation. **3 related points are key to the analysis**:

▪ **Monadicity correlates with unergativity**. Null/implicit objects [NO] seem a viable explanation for SCCs, especially under the standard view that COS verbs are bona fide unaccusatives/transitives. There are, however, contrasts. NOs generally allow secondary (resultative/depictive) predicates (4), while SCCs do not (5). Unlike NOs (Rizzi 1986), SCCs do not bind reflexives (6) nor allow NO quantifiers (7). While implicit arguments allow PRO-control (Jaeggli 1986), paralleling inchoatives frames (SE: ambiguous PAS/INCH), SCCs do not (8). If bare quantifiers do behave as NOs (Cattaneo 2008), (9) shows that perfective inflection is crucially dependent on NOs; otherwise, the construction fails due to the incompatibility of NO-less construction (SCC) with perfect tense. Then, insofar as a focal post-V quantificational expression is missing (10), ne-cl, a common test in Italian for NO and unaccusatives (Russi 2008:113, Borer 2003:37) does not hold. Interestingly, unpassivizable verbs (e.g. *enfurecer/infuriare*) and verbs not allowing NOs are productive in SCCs (e.g. *Esta sopa llena* 'This soup is satiating'[(Lit.)This soup fills]). Resultatives like (11), allowed by unaccusative/ transitive verbs (Rappaport & Levin 1995), are not allowed by SCCs: (11)a is only possible on an *undergoer* reading of the DP, as in (11)b. Data also argues against generic (null) objects [GNO] (Dobrovie 1994, Bhatt&Pancheva 2006), an apparently nice idea since SCCs mostly occur in generic tenses (see▪). Yet, besides lacking affectedness (key condition for GNO in Sp., Maruenda & Salome 1999; against GEN, Dobrovie & Pires 2010 for Port. data amenable to SCCs); GNOs also shift the interpretation to an eventive (COS) type, with verbal telicity independent of object quantification,

thus licensing endpoint modifiers not allowed by SCCs (12). This is consistent with (9): apparently, the internal argument cannot be syntactically realized without yielding eventiveness and telicity.

▣ **Unergativity correlates with stativity**. The central point is that in all cases a non-trivial minimal pair is created by the internal argument (even NO/GNO). Telicity and progression are only possible under this condition (13). Again, event modifiers, progressive and perfect tenses are only accepted on *undergoer* interpretation of the DP (14) (conceptually odd). If framing (*for-x-time*) occurs at all in SCCs, it is interpreted as a temporal bound to an individual-level property, not to an event evolving over time, just like gradability: note the scalar (stative) interpretation in (15). Insofar as potentially ambiguous structures (unmarked INCH) get SCC readings, SCCs challenge not only (2), but also the notion that it is default for these verbs to select internal arguments (e.g. Levin & Rappaport 2010). Note that SCCs are generally restricted to present tense and favor generic readings which, along with predication over lifespan of the subject, are fundamental properties of ILPs (Filip 2001 *i.a.*). If tenses other than present occur, only imperfectives are allowed. Nonetheless, the stative (non-episodic) reading is preserved: (16) does not report an event; at best, it suggests life-time effect (i.e. ILP-hood).

(4) a. El chef cocina {abundante/rico/salado}. 'The chef cooks abundant/tasty/salty [meals]. RESULT
    b. El chef compra {empaquetado/natural}. 'The chef buys wrapped/natural [items]. DEPICT
(5) El horno calienta (*abundante/*rico/*natural). 'The oven heats abundant/tasty/natural'
(6) La injusticia {entristece/enoja} (*consigo mismo). 'Injustice saddens/maddens with oneself'
(7) El sol calienta (*todos/*algunos).   cf. {Ví/Compré/Calenté} *(todos/algunos)
    'The sun heats up all/some'.   'I saw/bought/heated all/some [of them]'
(8) a. Se {secan/calientan} (para ser pintados/doblados). '[they] dry/heat up to be painted'
    b. El sol {seca/calienta} *(para ser pintado(s)).   'The sun dries/heats to be painted'
(9) Questo ha {infuriato/impoverito/indignato}*(molti) 'This infuriates/impoverishes/outrages many'
(10) La radiazione infrarossa ne riscalda/brucia *(la metà) 'Infrared radiation burns (half) [of them]'
(11) a. El grafito calienta *(hasta quedar incandescente/fundido).   SCC
      'Graphite heats [causes heat] (until [becoming] incandescent/fluid)'
    b. El grafito (se) calienta (hasta quedar incandescente/fundido).   INCHOATIVE
      'Graphite heats (itself) up until incandescent/fluid'
(12) El sol quemó (en un minuto/completamente) *(algo/alguno).
    'The sun burned *(some) in a minute/completely'
(13) Estos payasos *(te) asustan (abruptamente/gradualmente/por un tiempo).
    `These clowns {SCC *are scary/CAUS/INCH scare you} (suddenly/gradually/for some time)'
(14) #El chocolate casi engorda/está engordando/engordó
    'Chocolate almost gets fat/is fattening up/fattened'
(15) Esta estufa calienta mucho (Spanish) / Questa stufa scalda troppo (Italian).
    'This radiator causes too much heat'
(16) El sol calentaba. 'The sun used to have heating capacity'   SCC

▣ **Stativity:** SCCs also differ from statives analyzed as the result of a causative v^o in the literature (e.g. (18)) in two ways. First, in SCCs the subject is interpreted by default as a *cause* rather than as '*holder of a result state*' (Ramchand 2008:64). Second, unergativity (which follows naturally from the structural properties of $v_{CAUS/INIT}$, characteristically licensing external arguments) is not predicted by standard analyses and contrasts with the (dyadic) argument realization seen in English verbs (DP$_1$ {fears/annoys} DP$_2$). By contrast, SCCs show a configuration with the desired characteristics for $v^o_{CAUS/INIT}$ (eventless, unergative, DP initiator). This distribution is crucial in accounting for a contrast between subject-experiencer (not allowed), and object-experiencer verbs (fully productive in SCCs). If correct, this leads to (or at least suggests) the conclusion that direct composition with $v^o_{CAUS/INIT}$ provides Spanish (and probably Romance) with a possibility to form stative predicates out of a change in the l-syntactic configuration of the verb, while English requires a construction (BE+*ing*). The structure in (17)a, as opposed to (17)b, should reflect these facts, along with the condition that states yielded by v_{INIT} may only host rhematic material as complement (Ramchand 2008:63). Further, (17)a is consistent with the structure assigned to unergatives in the standard (H&K) analysis.

(17) a. [$_v$P [$v^o_{CAUS/INIT}$, √]] (SCC)   b. [VP [DP, V' [v^o_{BECOME}, √]]] (INCH)

(18) Subject-experiencer: *Katherine fears nightmares* (Ramchand 2008)

    a. *Katherine teme. (intended) 'Katherine is frightening' (lit., Katherine fears.)   SCC

    Object-experiencer: *John's haircut annoys Nina* (Arad 1998:182)

    b. El corte de pelo de Juan molesta. 'Juan's haircut is annoying' (lit., The haircut annoys.) SCC

Recap: SCC show a transparent event/argument structure relation (non-eventivity>unergativity), pointing to an internal-argument-licensing process component not included by default in the lexical configuration. This is in contrast to an explanation building on implicit arguments and/or unrealized projections, which is not favored by empirical data. **Advantages:** ❶ Stativity (SCCs) is consonant with the processless nature of v_{INIT} (Ramchand 2008, McIntyre 2004), but also with general principles relating unergativity and atelicity (Dowty 1979, Borer 2003:35). ❷The optional (constructional) status of the process subevent, together with the corresponding verbal projection correlates well with the relative morphological complexity of unaccusatives in Romance (Haspelmath 1993 a.m.o.). Unaccusative morphology (*se*) could thus be related to realization of a specific, non-defective v head (v^o_{BECOME}).❸ Given the semantic properties of v^o_{INIT}, the proposal correctly predicts that noneventive verbs showing transitive alternation (object-experiencer verbs; i.e., verbs with Subject-Cause(r) distribution) are productive in SCCs, as opposed to to subject-experiencer verbs. ❹ Free combination with the causative component, majorly constrained by external semantic conditions, agrees with observations raised in both constructional (Harley & Noyer 2000, Hale & Keyser 2005) and lexicalist (e.g. Rappaport & Levin 2011) accounts. ❺A moderate constructional view captures the generalized productivity of SCCs and the higher flexibility seen in Spanish in a systematic way; while it remains able to explain contrasts in argument selection/interpretation, productivity gaps (roots not allowing transitive nor SCC frames, hence incompatible with $v_{CAUS/INIT}$, for which minimal lexical restriction may be required); along with the independent realization of $v_{CAUS/INIT}$. ❻ Crucially, SCCs show that cause(r) interpretation is not purely structural (by-product of V_2 embedding, HK 2002:176; assigned to [vP[VP]], Chomsky 1995:315) ❼ The account avoids a model of partial projection of lexical structure to capture relevant alternations; as well as the idea that it is lexical idiosyncrasy that COS readings obtain from anticausatives and inherent properties from unergatives (with different roots; Alexiadou *et al.* 2015). Hence, if it is true that a COS verb can be conceived of as being able to occur without causation (Levin & Rappaport 2010), SCCs support the idea that, at least in Spanish, so-called 'COS' verbs can be conceived of as being able to occur without *undergoer*, and, consequently, without process, thus being eligible for non-eventive, non-transitive uses not systematically allowed in other languages.