

Internally caused change as change by inner predisposition: Comparative evidence from Romance

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This article investigates the morphosyntax of verbs of internally caused scalar change and the main facets of their meaning. Availing ourselves of primary evidence from Italian, French, and Spanish corpora, we argue that the verbs under scrutiny divide into three subclasses whose common denominator is that they encode ‘change by inner predisposition’ or change that is possible because of inherent propensities of specific entities. We understand inner predisposition as a feature of the content of the verbs investigated, which has relevance to the choice of the undergoer, alongside the cause of two of the subclasses. Apart from this feature verbs of change by inner predisposition are indistinguishable from other verbs of change. We argue against an agentive or generalized causative analysis, and we advance a proposal for the lexical semantics of representatives of each of the three subclasses and for the alternations in which they participate.

KEYWORDS: Anticausativization, change of state, external causation, inner predisposition, internal causation, Romance

1. INTRODUCTION

Differently from inherent properties, for example the colour of a flower or the sweetness of honey, changing states of affairs can have, and indeed often do have, contingent causes which are external to the individuals undergoing the change. The degree to which changes are caused externally, however, varies a great deal, as does the range of causers and undergoers that any given change is possible for. Whereas blossoming is due to the genetic predisposition of specific entities to react to specific ambient conditions, opening changes are not similarly restricted.

The linguistic encoding of different kinds of change has fascinated linguists since Jespersen’s (1927: 332–337) identification of Move and Change verbs (see, e.g. Haspelmath 1993). Drawing on Smith (1970) (see also Nedjalkov & Silnitsky 1973; Labelle 1992; Levin 1993), Levin & Rappaport Hovav (1995: 89–98) drew a distinction between external and internal causation. In their analysis, the former type of causation characterizes eventualities which are brought about under immediate control by an external cause. Internally caused eventualities, instead, lack an

external cause and ensue from an inherent property of the argument of the verb. In Levin & Rappaport Hovav's (1995) proposal, the lexical semantic representation of verbs of internal causation does not include a component of CAUSE.

Subsequent scholarship has brought to light non-trivial evidence of transitive–intransitive alternations with verbs which intuitively classify as internally caused (McKoon & Macfarland 2000; Wright 2001, 2002; Rodríguez 2011). A distinction has been drawn between agentive and causative internal causation roots (Alexiadou 2014). It has also been argued that verbs of internally caused change are not characterized by a grammatically relevant property of their own and are indistinguishable from verbs of externally caused change (Rappaport Hovav 2020).

This article seeks to enhance the understanding of the linguistic encoding of internal causation. We focus exclusively on verbs of internally caused scalar change,¹ addressing the question of whether these verbs can be characterized as a single class and whether they include causation or agentivity as facets of their semantic make-up. Reporting the findings of comparative analysis of Italian, French, and Spanish, we observe that, in the languages under scrutiny, putative verbs of internally caused change divide into three formal groups: (i) non-alternating verbs which do not exhibit the anticausative morpheme SE in the intransitive (e.g. verbs for 'blossom'); (ii) alternating verbs which do not take anticausative SE in the intransitive (e.g. Italian and French verbs for 'ferment'); (iii) verbs which exhibit little propensity for transitivization but are instead characterized by \pm SE intransitive realizations (e.g. verbs for 'rust'). The variation in the morphosyntactic behaviour of the verbs under scrutiny, and in their range of meanings and transitive subjects, supports the insight of previous research that verbs of internally caused change are not a homogeneous class (McKoon & Macfarland 2000; Beavers & Koontz-Garboden 2018) and that they include a subclass which can take human instigators (Alexiadou 2014). Adducing evidence from both the range of arguments admitted by the verbs under scrutiny and periphrastic causation (Donazzan, Raffy & von Heusinger 2020; Floricic 2022), we contend that the common denominator of the meaning of the verbs under analysis is 'change by inner predisposition', i.e. change that is driven by the inherent propensity of an entity to change, reacting to, or interacting with, specific triggers. Comparative evidence from agentive and external causation verbs rules out agentivity as a facet of the meaning of the verbs in our sample, suggesting that one subset is also not causative.

We thus identify three subclasses: we argue that the verbs of the one class are not causative, while the verbs of the other two classes alternate as non-causative/causative pairs in the lexicon. The behavioural differences between the last two classes depend on the causes that the content component of their meaning is compatible with. We claim that a key component of the content of one of the two classes is understood as a process. This class thus has duration and manner inferences and can describe complex causation chains, whereby human causers

[1] By 'scalar change', we mean change that is characterized by the progression of a theme along a scale in a particular dimension (Beavers 2013 and references therein).

manipulate inanimate triggers, consistently with the tendency for manner verbs to take animate actors (Beavers & Koontz-Garboden 2012). The animacy of the manipulator results in agentivity inferences (Van Valin & Wilkins 1996) and the propensity towards transitivity (Hopper & Thompson 1980). In contrast, the content of the other causative class is construed in terms of the result of the change, and thus this class does not lend itself to manner inferences or the description of complex causation chains. This class encodes changes which are brought about by the interaction of the undergoer with specific inanimate triggers, which are licensed by the result in the content. The different causes of the two classes are a factor in their different propensities towards SE anticausativization. Assuming SE marks the silent realization of the causer in the lexical phase of the semantics–syntax linking (understood in Van Valin’s 2023 terms), and allowance being made for non-trivial differences between the languages investigated, our analysis of this contrast rests on the claim that this strategy is sensitive to the satisfaction of Wolff’s (2003) conditions on direct causation.

In the sections that follow, we make some preliminary observations on verbs of internally caused change, explaining which expectations and predictions informed our research (§2). We then discuss our methodology and findings (§3). In Section 4, we introduce the notion of change by inner predisposition and we analyse the lexico-semantic structure of the subclasses emerging from the investigation. SE anticausativization is discussed in Section 5. We draw our conclusions in Section 6.

2. RESEARCH CONTEXT AND PREDICTIONS

Chierchia (1989) characterized the contrast between the verbs that participate in the causative alternation and those that do not in terms of the divide between unaccusatives, which are expected to alternate, and unergatives, which are not. Noting that some unaccusatives (i.e. verbs of change of state, e.g. *bloom*, *blossom*, *flower*, etc.) lack a transitive counterpart, Levin & Rappaport Hovav (1995) departed from Chierchia’s proposal and instead based their treatment of non-alternating verbs on the absence of an external cause. They proposed the lexical semantic templates in (1) and (2) for internally and externally caused verbs, respectively.

- (1) [x *PREDICATE*]
 (2) [[x-DO-SOMETHING] CAUSE [y BECOME *STATE*]]

Levin & Rappaport Hovav (1995: 110–119) did note that some putative internally caused verbs – specifically, agentive verbs of manner of motion and verbs of emission – have transitive counterparts. For Levin & Rappaport Hovav (1995), the transitive counterpart of agentive verbs of manner of motion derives from the intransitive form. As for verbs of emission, the authors suggest that some such verbs must be compatible with a dual classification as internally or externally caused. A relevant example is English *burn*, which means ‘emit light, heat, or flames’ or ‘consume by fire or combustion’ and only alternates with the latter meaning.

Although verbs of external causation unsurprisingly received the most attention in subsequent literature, McKoon & Macfarland (2000) and Wright (2001, 2002) brought to light some intriguing properties of verbs of internally caused change. Particularly relevant to our present purposes is McKoon & Macfarland (2000)'s observation that such verbs offer robust evidence of intransitive–transitive alternations, although their transitive exhibits a more limited range of causes than that of verbs of externally caused change. Their explanation for this contrast relies on the notion that the lexical semantic template of internally caused verbs only licenses one participant (cf. 1). Another participant may be licensed by the content component of the template and must thus be compatible with the change of state that this describes. Instead, externally caused templates license two participants (cf. 2), the one being independent of the change of state and hence free from selectional restrictions. Similarly, Wright suggested that verbs of internally caused change select for inanimate, non-agentive, and controllable causes that are ‘inherent to the meaning associated with the verbs themselves’ (2002: 344).

Subsequent literature shed light on key differences between subclasses of putative internal causation verbs. Rappaport Hovav (2020) drew a distinction between verbs meaning ‘blossom’ and ‘flower’, which she analysed as non-causative verbs of emission, and the remaining ones, which she claimed to be causative. Alexiadou (2014) noted that a subclass of Greek internal causation roots (e.g. ‘ferment’) takes agentive transitive subjects, in contrast with another subclass (e.g. ‘blossom’, see also Lavidas 2007: 118), which takes causer transitive subjects. Alexiadou (2014) proposed a syntactic analysis which predicted that only the former subclass would occur in the passive.²

Based on the above literature, the expectation was that Romance verbs of internally caused change either do not alternate or select [-animate] causes, exception being made for a class represented by ‘ferment’, which should take [+animate] transitive subjects. We thus examined the behaviour of a sample of putative verbs of internally caused change in the Romance languages under scrutiny, comparing it to that of verbs of external causation, which normally alternate (cf. 3), passivize (cf. 4), and take [±animate] transitive subjects and *by*-phrases (cf. 3–4).³

(Italian)

- (3) Il peso / Sam ha rotto la sedia. – La sedia si
 the weight Sam have.3SG broken the chair the chair SE
 è rotta.
 be.3SG broken
 ‘The weight / Sam broke the chair - the chair broke.’

[2] This analysis was pursued in Alexiadou et al. (2015:36), who claim that non-alternating internal causation verbs like *blossom* do not have an external argument theta role, but are part of causative event structures, as testified by their compatibility with prepositional phrases expressing cause in Greek and German.

[3] Apart from anticausative or passive morpheme SE and GER (= gerund), the abbreviations in the glosses are drawn from the Leipzig Glossing Rules (<https://www.eva.mpg.de/lingua/pdf/Glossing-Rules.pdf>).

- (4) La sedia è stata rotta dal peso / da Sam.
 the chair be.3SG been broken by.the weight by Sam
 ‘The chair was broken by the weight / by Sam.’

We also considered the distribution of the morpheme *SE* with the verbs in our sample, since this morpheme can figure in the intransitive member of the causative alternation in Romance (cf. 3) and other languages (Haspelmath 1993).

Anticausative *SE* has, on the one hand, been analysed as an argument realization strategy: the marker of an unexpressed causer (Rothenberg 1974; Labelle 1992; Cennamo 1995; Centineo 1995; Van Valin & LaPolla 1997: 416–418, etc.), of an external argument position in a syntactic Voice projection (Alexiadou et al. 2006, 2015; Schäfer 2008), or, alternatively, a reflexivizer (Koontz-Garboden 2009). On the other hand, *SE* has also been analysed as the marker of aspectual properties of verbs or constructions normally described in terms of telicity, resultativity, or more fine-grained scalar notions (Zribi-Hertz 1987; Cennamo 1999, 2012, 2015; Folli 2002; Jezek 2003; Manente 2008; Labelle & Doron 2010; Cennamo & Jezek 2011; Vivanco 2021, etc.).

The aspectual approach explains the language-specific distribution of *SE* with some non-alternating unaccusatives (De Miguel & Fernández Lagunilla 2000) and the diachronic development of *SE* in some Romance languages (Cennamo 2021). Nonetheless, this approach is challenged by evidence of *SE* marking of verbs or constructions lacking the relevant aspectual properties (see Schäfer 2008; Martin & Schäfer 2014; Alexiadou et al. 2015; and, for counterarguments regarding Spanish, Vivanco 2021). While we do not define *SE* in aspectual terms, we shall note the relevance of aspectual considerations in the discussion of the *-SE* attestations of the $\pm SE$ verbs.

The analysis of *SE* as an argument realization strategy has the non-trivial advantage that it can capture the syncretism of anticausative, passive, reflexive, and impersonal *SE* (see Bentley 2006 for Italian; Alexiadou et al. 2015). It is the approach adopted in this article, where we assume that *SE* marks a silent argument in the highest-ranking argument position in the lexical semantic structure of the predicate in the clause. In the case of causatives, this is the position of the causer, which cannot then be realized overtly as an argument of the verb. A prediction of this analysis is that all causatives should, in principle, permit *SE* anticausativization. The failure for any causatives to anticausativize with *SE* requires an explanation.

3. A COMPARATIVE ANALYSIS OF VERBS OF INTERNALLY CAUSED CHANGE

3.1 *Methodology*

The findings reported in this article were obtained as follows. To begin with, we gathered and examined the first 500 hits of a sample of verbs in the itTenTen16,

frTenTen17, and esTenTen18 corpora of Sketch Engine (Jakubíček et al. 2013).⁴ The verbs were searched as Lemmas, with Verb being specified under Part of Speech. Some clarification on the verbs chosen for the investigation is necessary. These were deemed to be rough translational equivalents of eight verbs of internally caused change listed by Levin & Rappaport Hovav (1995: 282) (*blossom, burn, ferment, flower, germinate, rot, rust, wither*), to which we added Romance verbs for ‘(cause to) become mouldy’, henceforth named ‘mould-v(erb(s))’, and *age*.⁵ To identify appropriate counterparts of the English verbs, we relied on the advice of native speaker consultants and the use of dictionaries.⁶ Despite working with genetically related languages, we did not find exact synonyms for all the verbs to be included in the sample. This should not come as a surprise. Lexical items which share the same etyma may undergo divergent semantic developments or become obsolete, or stylistically marked, in one language, but not its sisters. We attempted to select verbs that are ‘characteristic’ in Talmy’s (2007[1985]: 72) sense, i.e. the most colloquial in style and frequent in speech among quasi-synonymous alternatives, although this was not possible to the same extent for all the verbs (see, for example, Spanish ‘mould-v’ or two of the ‘burn’ verbs, which are not colloquial).

With respect to the specific verbs that we chose for the investigation, we should note, first, that in accordance with insights discussed in Section 2, we distinguished two meanings of ‘burn’: ‘consume or destroy with fire, heat, or a metabolic process’ and ‘be incandescent, produce heat and flame’. We thus included two Italian and Spanish translations of English *burn*, namely *ardere/arder*, labelled ‘burn_i’, and *bruciare/quemar*, labelled ‘burn_{ii}’. The first pair was expected to more closely fit the meaning of ‘burn from within’, and the second pair was expected to translate both meanings. Having included two translations for *burn*, we had 11 forms in our Italian and Spanish samples. Although French has a participial adjective *ardent* ‘very hot, burning’, the cognate verb hardly occurs in the modern language (Franck

[4] We are grateful to Elizabeth Tobyn for taking care of the searches of the itTenTen16 corpus and to the School of Arts, Languages and Cultures of the University of Manchester for providing financial support for this help. One of the Italian verbs (*ardere* ‘burn_i’) was searched by the Author in the itTenTen20 corpus. To test the consistency of the searches, for each verb we compared two sets of 250 hits (see note vii).

[5] Levin and Rappaport Hovav (1995) list a verb *molder*, which, however, does not mean ‘become mouldy’, but rather ‘decay, disintegrate’, and is unknown to some native speakers. An anonymous reviewer points out that ‘age’ can have a human intransitive subject. While we acknowledge that this property may be relevant to the behaviour of ‘age’, we note that the Romance ‘age’ verbs were found with [±animate] intransitive subjects and transitive objects.

[6] The Author is a native speaker of Italian. We are grateful to the following native speaker consultants for helping us with the choice of verbs as well as the acceptability judgements discussed in the paper: Elizabeth Tobyn (Italian); Franck Floricic and Barbara Lebrun (French); Avelino Corral Esteban, Julio Villa-García, and Núria Barrios Jurado (Spanish). The dictionaries which we consulted regularly were the *Vocabolario Treccani*, the *Dictionnaire de français Larousse*, and the *Diccionario de la lengua española* of the *Real Academia Española*: <https://www.treccani.it/vocabolario/>; <https://www.larousse.fr/dictionnaires/francais/>; <https://dle.rae.es/>.

English	Italian	French	Spanish
blossom	<i>sbocciare</i>	<i>éclore</i>	<i>brotar</i>
burn _i	<i>ardere</i>		<i>arder</i>
burn _{ii}	<i>bruciare</i>	<i>brûler</i>	<i>quemar</i>
ferment	<i>fermentare</i>	<i>fermenter</i>	<i>fermentar</i>
flower	<i>fiorire</i>	<i>fleurir</i>	<i>florecer</i>
germinate	<i>germinare</i>	<i>germer</i>	<i>germinar</i>
mould-v	<i>ammuffire</i>	<i>moisir</i>	<i>enmohecer</i>
rot	<i>marcire</i>	<i>pourrir</i>	<i>pudrir</i>
rust	<i>arrugginire</i>	<i>rouiller</i>	<i>oxidar</i>
wither	<i>appassire</i>	<i>faner</i>	<i>marchitar</i>
age	<i>invecchiare</i>	<i>vieillir</i>	<i>envejecer</i>

Table 1

The verbs included in the sample.

Floritic, p.c.). When searched, this verb only yielded 22 hits, which had very limited geolinguistic and textual distribution. Therefore, we did not include it in the French sample.

Some of the verbs included in the sample are broader in meaning than their counterparts in the sister languages. Thus, the French verb chosen for ‘blossom’, *éclore*, describes not only the opening of a bud into a flower, like Italian *sbocciare*, but also the hatching of chicks. As for Spanish *brotar*, it can describe the appearance of a flower on a plant, but also, more broadly, the appearance of leaves and greens, or the gushing of water from rocks or fluids from the body. In addition to translating *rust*, Spanish *oxidar* describes a wider range of processes involving oxidation. Other verbs included in the Spanish sample (*enmohecer* ‘mould-v’; *pudrir* ‘rot’) can translate *rust*, alongside those that we considered to be their primary meanings. It is therefore essential to note that in our investigation, we recorded and analysed the profile of individual verbs rather than sets of putatively synonymous verbs taken together. We list in Table 1 the verbs included in our sample.

We measured the propensity of the verbs to occur as transitives, passives, and +SE or -SE intransitives.⁷ We examined the range of transitive subjects occurring with the verbs that were found to alternate, and we compared the meanings of the verbs when transitive and intransitive. Following McNally & Spalek (2022), we included in the investigation the metaphorical or extended meanings of the verbs, assuming that grammatically relevant aspects of meaning can be carried over in figurative polysemy. The consideration of this evidence shed light on important aspects of the analysis, including the notion of dual classification (§4.1). The full

[7] Recall from note iv that for each verb, we compared two sets of 250 hits. The difference in the raw counts of each verb in each relevant construction was in no case higher than 20, exception being made for Italian *fiorire* ‘flower’ and *fermentare* ‘ferment’, which yielded two sets of 210 and 189 and, respectively, 55 and 80 non-passive intransitives.

gamut of percentages recorded for each verb in each construction is provided in Appendix 1.⁸

The contrastive analysis of the morphosyntax of the verbs in three languages was expected to shed light on the typology of verbs of internally caused change. Specifically, we assumed that verbs would fall into the same formal subgroups by virtue of shared aspects of meaning. We also hypothesized that should verbs with comparable meanings fall into different formal groups, this would be indicative of facets of meaning that only a subset of the grammars is sensitive to, or, alternatively, of grammatically relevant semantic changes that have affected a given verb but not its counterparts in the sister languages. We should add that key microvariational differences between the sister languages (regarding perfect auxiliary selection and periphrastic causation) allowed us to consider a wider range of diagnostics than we would have been able to rely on, had we worked on a single language.

3.2 *The corpus findings*

3.2.1 *The transitive–intransitive alternations*

Although most verbs turned out to participate in transitive–intransitive alternations, they did so to different extents. This can be seen in Figure 1, which displays the transitive percentages obtained for each verb in each of the three languages. We remind the reader that there are no results for ‘burn_i’ in French.

The lowest transitive percentages (<1%) were found with ‘blossom’ in the three languages; ‘mould-*v*’ in Italian and French; ‘flower’ in Italian and Spanish; ‘rot’ in Italian; ‘burn_i’ in Spanish; and, lastly, ‘germinate’ in French. We classified the few transitive occurrences of these verbs as metonymic, non-literal or non-conventional. The metonymic examples are characterized by a part-whole relationship between the undergoer and the instigator of the change, which are both affected (cf. 5). The non-literal examples describe changes which do not occur in the physical world (cf. 6). Lastly, the non-conventional occurrences departed from the meanings expected from the dictionary descriptions (cf. 7).

- (5) Florece flores blancas. (esTenTen18, 09/02/2022)
 flower.3SG flower.FPL white.FPL
 ‘It flowers white flowers.’

(frTenTen17, 04/01/2022)

- (6) [...] nous battre dans la nuit pour ‘Germer les graines saintes
 SE fight in the night for germinate the seeds holy
 du silence.
 of.the silence
 ‘We need to fight in the night to engender (lit. germinate) the holy seeds of
 silence.’

[8] The irrelevant hits, such as proper names or non-passive adjectives, were included within a category labelled ‘Other’.

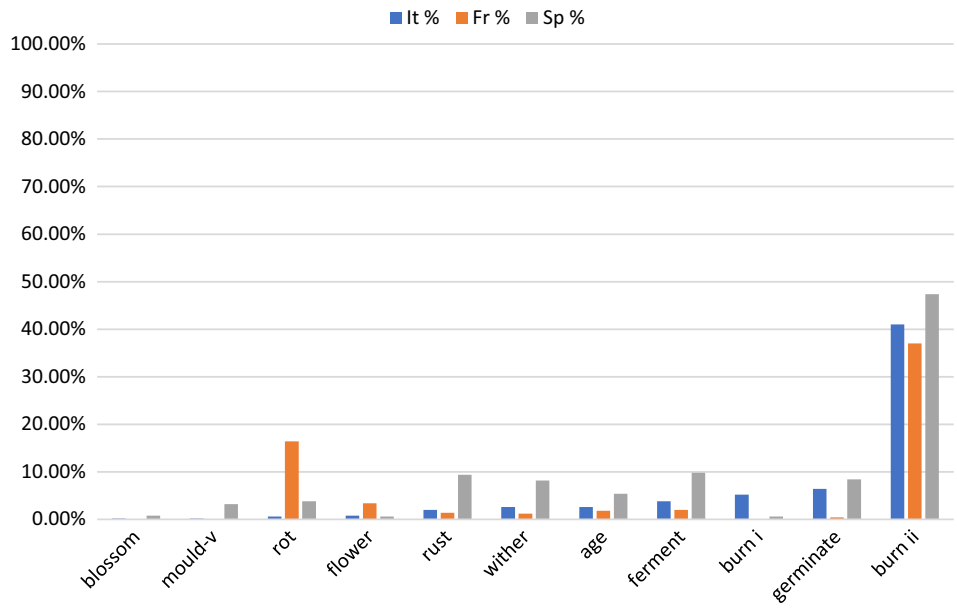


Figure 1
Transitive percentages per verb.

(itTenTen16, 11/03/2022)

- (7) Ho passato la pausa a “ammuffire” l’ agenda dell’
 have.1SG spent the break to mould-v the diary of.the
 anno scorso.
 year past
 ‘I spent the break deleting (lit. mould-verbing) entries in last year’s
 diary.’

The verbs which yielded transitive percentages that were lower than 1% will henceforth be referred to as [-tr(ansitive)], which is not meant to suggest that verbs with these meanings cannot transitivize in principle, but rather that the verbs in question showed very little propensity to occur as transitives in our survey.

The verbs with higher transitive percentages will be labelled as [+tr]. ‘Burn_{ii}’ turned out to have the highest transitive frequency (>37%), which is unsurprising, given that it not only describes internally caused change but also an externally caused change of ‘consuming or destroying with fire, heat, or a metabolic process’ (recall that externally caused verbs transitivize (cf. 3)). In the three languages, this verb occurred with [±animate] causes, describing various processes of combustion. For brevity, we only provide Italian examples.

(itTeTen16, 15/03/2022)

- (8) (a) [...]’ energia [...] viene prodotta bruciando combustibili fossili.
 the energy PASS.AUX produced burning fuels fossile
 ‘[...] Energy is produced by burning fossil fuels.’
 (b) Eccessiva pressione contro al legno p[uò] bruciare il legno
 excessive pressure against to.the wood can burn the wood
 a contatto.
 at contact
 ‘[...] Excessive pressure against the wood can burn the touching
 surface.’

The remaining [+tr] verbs subdivided into three subgroups, characterizable as follows:

- verbs which were attested with [±human] transitive subjects with the same meanings as in the intransitive (‘ferment’ and ‘age’ in the three languages; ‘germinate’ in Italian and Spanish);
- verbs which occurred with [±human] transitive subjects with meanings which could extend, or be a subset of, the meanings of the intransitive (Italian ‘burn_i’ and ‘wither’, French ‘flower’, French and Spanish ‘rot’, Spanish ‘wither’);
- verbs which only occurred with [-animate] transitive subjects (‘rust’ in the three languages; ‘mould-v’ in Spanish; French ‘wither’).

The key property of the (a) group is that these verbs take human transitive subjects when describing the same physical changes as they describe in the intransitive. In (9)–(11), we provide examples with ‘ferment’.

- (9) [...] *sto tentando di fermentare l' okara con il tempeh.*
 am trying of ferment the okara with the tempeh
 ‘[...] I am trying to ferment okara with tempeh...’
 (itTenTen16, 09/03/2022)
- (10) [...] *recettes illustrées pour fermenter à la maison une grande*
recipes illustrated for ferment at the home a great
variété d'aliments.
 variety of foods
 ‘[...] illustrated recipes to ferment a wide variety of foods at home.’
 (frTenTen17, 03/01/2022)
- (11) *Estamos fermentando la selección de todos los vinos catados.*
 be.1PL ferment.GER the selection of all the wines tested
 ‘We are fermenting the selection of all the tested wines.’
 (esTenTen18, 11/02/2022)

Similarly, the transitive attestations of Italian and Spanish ‘germinate’ can describe processes of germination which have a human instigator. We did not record the same results with French ‘germinate’.

- (12) *Hai intenzione di germinare dei semi per coltivarli*
 have.2SG intention of germinate some seeds for grow.them
 in terra...
 in ground...
 ‘Are you going to germinate some seeds to grow them in the ground...’
 (itTenTen16, 07/03/2022)
- (13) [...] *si una planta se estropea, sólo deberemos germinar otra...*
 if a plant SE damage.3SG only must.FUT.1PL germinate other
 ‘If a plant gets damaged, all we need to do is germinate another one...’
 (esTenTen18, 13/02/2022)

The case of ‘age’ is comparable, insofar as in the three languages the relevant verbs combine with human instigators ‘making someone/something look/become older’.

- (14) [...] *per non invecchiare la pelle ed evitare problemi*
 for NEG age the skin and avoid problems
 seri sanitari
 serious of.health
 ‘[...] in order not to age one’s skin and to avoid serious health problems...’
 (itTenTen16, 13/03/2022)

- (15) [...] des parents qui trichent en vieillissant la photo de leur
 some parents REL cheat by aging the photo of their
 propre enfant
 own child
 ‘[There are] parents who cheat, aging their child’s photo...’
 (frTenTen17, 09/01/2022)
- (16) [...] los colores que el utiliza para envejecer la piel del actor.
 the colours REL he use.3SG for age the skin of.the actor
 ‘[...] the colours that he uses to age the actor’s skin.’
 (esTenTen18, 14/02/2022)

In the three languages, the ‘age’ verbs were also attested with [-animate] transitive subjects, and the ‘ferment’ ones with [-human] ones, with the same meaning as in the intransitive.

- (17) La douleur semblait l’ avoir vieilli de (frTenTen17, 09/01/2022)
 the pain seemed her have aged.FSG of
 dix ans.
 ten year
 ‘Pain seemed to have aged her by 10 years.’
- (18) [...] la levadura que fermentaba el zumo. (esTenTen18, 11/02/2022)
 the yeast REL fermented the juice
 ‘[...] the yeast which fermented the juice.’

The (b) group was characterized by idiosyncratic meaning differences between intransitive and transitive and by discrepancies between the sister languages. Thus, Italian *ardere* ‘burn_i’, in contrast with its Spanish cognate, was found to alternate like burn_{ii}’.

- (19) In quel tempo andarono ardendo quante case, palazzi
 in that time go.PST.3PL burn.GER many houses palaces
 e fortezze.
 and fortresses
 ‘During that time, they were burning houses, palaces and fortresses.’
 (itTenTen20, 14/03/2022)
- (20) Ha in una mano una fiaccola, che arde di giorno e
 have.3SG in a hand a torch REL burn.3SG of day and
 di notte.
 of night
 ‘In his hand he holds a torch, which burns day and night.’

French ‘flower’ occurred transitively in the sense of ‘make flowery’ or ‘embellish with flowers’, a meaning that was not attested with the Italian and Spanish cognates.

(frTenTen17, 30/12/2021)

- (21) [L]es enfants des écoles, qui ont fleuri leurs
 the children of.the schools REL have.3PL flowered their
 établissements...
 establishments
 ‘School children, who have embellished their establishments with flowers...’

When transitive, French *pourrir* was only attested in the sense of ‘ruin’ (cf. 22), which is one of its intransitive meanings, ‘rot’ and ‘ruin’ (cf. 23–24).

(frTenTen17, 27/12/2021)

- (22) [...] la corruption [...] qui pourrit le sport de l’ intérieur
 the corruption REL rot.3SG the sport from the inside
 ‘[...] corruption [...] which ruins (lit. rots) sport from inside...’
- (23) [...] nos péchés sont sur nous, nous pourrissons à cause d’ eux.
 Our sins are on us we rot.1PL at cause of them
 ‘Our sins are on us, because of them we are ruined.’
- (24) Les fruits pourrissent sur l’ arbre.
 The fruits rot.3PL on the tree
 ‘Fruit rots on the tree.’

Similar observations were made with Spanish *podrir* ‘rot’/‘rust’/‘spoil’/‘ruin’ and *marchitar* ‘wither’/‘spoil’/‘ruin’, although we found some examples meaning ‘rot’ and, respectively, ‘wither’ with inanimate transitive subjects. Italian *appassire* occurred both in the sense of ‘wither’ and of ‘soften or brown from cooking or exposure to heat’ in the intransitive (cf. 25–26). In contrast, only the latter meaning was attested in the transitive (cf. 27).

(itTenTen16, 03–4/03/2022)

- (25) Alcune piante sono sensibili al terreno troppo caldo e
 some plants are sensitive to.the ground too hot and
 appassiscono velocemente.
 wither.3PL fast
 ‘Some plants are sensitive to heat in the ground and wither fast.’
- (26) Appena la cipolla inizia ad appassire...
 as.soon.as the onion start.3SG to wither
 ‘As soon as the onion starts to soften...’
- (27) Nel frattempo [...] ho appassito la cipolla tagliata fine.
 in.the meantime have.1SG withered the onion cut fine
 ‘In the meantime, I softened the finely cut onion.’

In sum, the verbs of group (b) only tend to transitivize with a selection of their meanings, and the analysis of the transitive occurrences highlighted differences between the three languages.

Lastly, group (c) gathers ‘rust’, Spanish ‘mould-v.’ and French ‘wither’, which were found to take [-animate] transitive subjects with no meaning differences between transitive and intransitive. The following examples illustrate the alternation with Spanish *enmohecer* ‘mould-v’ (but also ‘rust’ or ‘tarnish’).

(esTenTen18, 10/02/2022)

- (28) Evita que la humedad reblandezca o enmohezca
 avoid.3SG that the dampness soften.SBJV.3SG or mould-v.SBJV.3SG
 alimentos.
 edibles
 ‘It stops dampness from softening edibles or making them become mouldy.’
- (29) La gamuza puede enmohecerse en condiciones húmedas.
 the chamois.leather can mould-v.SE in conditions humid
 ‘Chamois leather can become mouldy in humid conditions.’

Italian and French ‘rust’ can describe the rusting of metals or, alternatively, inactivity and the loss of physical or mental abilities. Below, we exemplify the former meaning with Italian *arrugginire* and the latter with French *rouiller*.

(itTenTen16, 03/03/2022)

- (30) [...] il cavo d’ acciaio [...] Si arrugginisce in fretta.
 the cable of steel SE rust.3SG in rush
 ‘The steel cable [...] rusts quickly.’
- (31) Ai robot, si sa, non piace l’ acqua: gli arrugginisce
 to.the robots SE know.3SG NEG please the water to.them rust.3SG
 i bulloni.
 the bolts
 ‘Robots, as is well-known, do not like water: it makes their bolts become rusty.’

(frTenTen17, 29/12/2021)

- (32) Grâce à cette pratique les articulations ne se rouillent pas.
 thanks to this exercise the articulations NEG SE rust.3PL NEG
 ‘Thanks to this exercise your articulations will not rust.’
- (33) [...] pour que les grains de sable ne rouillent pas votre cerveau...
 for that the grains of sand NEG rust.3PL NEG your brains
 ‘So that the grains of sand [a holiday, DB] will not make your brains become rusty.’

To recapitulate, non-trivial contrasts were found both in the respective transitive propensities of the verbs in our sample and in whether the transitive attestations had the same meanings as the intransitives. Only some of the [+tr] verbs turned out to take human transitive subjects when describing the same physical changes as are described in the intransitive: ‘ferment’ and ‘age’ in the three languages and ‘germinate’ in Italian and Spanish. Where we observed meaning differences

between transitive and intransitive, we also found contrasts between the sister languages. Lastly, when [+tr], ‘rust’ and ‘mould-v’ stood out as verbs which occur with the same meanings in transitive and intransitive domains, exclusively taking [-animate] transitive subjects.

3.2.2 *The passive*

Figure 2 shows the percentages of passives recorded with each of the verbs in our sample.

Since the languages under scrutiny have a passive formed with *SE* and an active form of the verb, we should clarify that the *SE* passives, included in the passive counts, were distinguished from the non-passive +*SE* intransitives in terms of the presence of another unambiguous passive in the previous, the same, or the following sentence. To give but one example, since *se cosecha* ‘it is harvested’ is unambiguously passive, the verb *cosechar* being agentive rather than causative, the form *se germina* was also analysed as a passive in (34).

(esTenTen18, 13/02/2022)

- (34) [...] desde que se germina se cosecha en 70 días.
 from that *SE* germinate.3SG *SE* harvest.3SG in 70 days.
 ‘After being germinated it is harvested in 70 days.’

Admittedly, some *SE* passives may not have been detected with this criterion and may instead have been classified as non-passive +*SE* intransitives (see note xv).

A difference emerged between the (a) and (b) groups of [+tr] verbs (those attested with [±animate] transitive subjects) and the (c) group (attested with [-animate] transitive subjects). The verbs of the last group were only found as stative passives

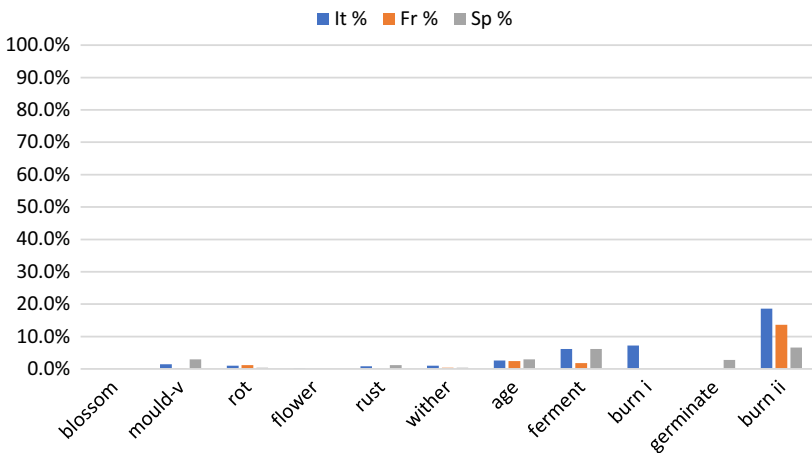


Figure 2
 Passive percentages per verb.

with auxiliary *estar* in Spanish (Cabredo Hofherr 2017: 242) or as participles lacking an auxiliary but followed by a *by*-phrase. The actors in these *by*-phrases pertained to the conceptual domains of ‘water’ (humidity, rain, etc.) or ‘time’ (age, boredom, death).

(esTenTen18, 10/02/2022)

- (35) La parte superior [...] estaba enmohecida por la acción de
 the part.FSG upper PASS.AUX mould-V.PTCP.FSG by the action of
 la intemperie.
 the bad.weather
 ‘The upper part had become mouldy because of the effect of the bad weather.’

(itTenTen16, 03/03/2022)

- (36) [...] il cancello oramai devastato e completamente arrugginito
 the gate by.now destroyed and completely rusted
 dal tempo
 by.the time
 ‘[...] the gate by now destroyed and completely rusted by time.’

The verbs of the first two groups were not restricted in terms of the passive structures they occurred in, although they were not all attested in the passive. Examples (37) and (38) feature verbs from group (a), (39) a verb from group (b).

(itTenTen16, 09/03/2022)

- (37) Una piccola percentuale delle uve (circa il 10%) viene
 a small percentage of.the grapes circa the 10% PASS.AUX
 fermentata in barrique.
 fermented in barrique
 ‘A small percentage of the grapes is fermented in barriques.’

(frTenTen17, 09/01/2022)

- (38) Ce très vieux rhum cubain a été vieilli en très
 this very old rum Cuban have.3SG PASS.AUX aged.MSG in very
 vieux fûts de chêne.
 old barrels of oak
 ‘This very old Cuban rum has been aged in very old oak barrels.’

(itTenTen20, 14/03/2022)

- (39) Giordano Bruno fu arso vivo in questa piazza.
 Giordano Bruno PASS.AUX burned.MSG alive in this square
 ‘Giordano Bruno was burned alive in this square.’

3.2.3 *The distribution of SE*

The distribution of *SE* in non-passive intransitives brought to light a divide between two verb groups, the one being characterized by the absence of *SE*, the other

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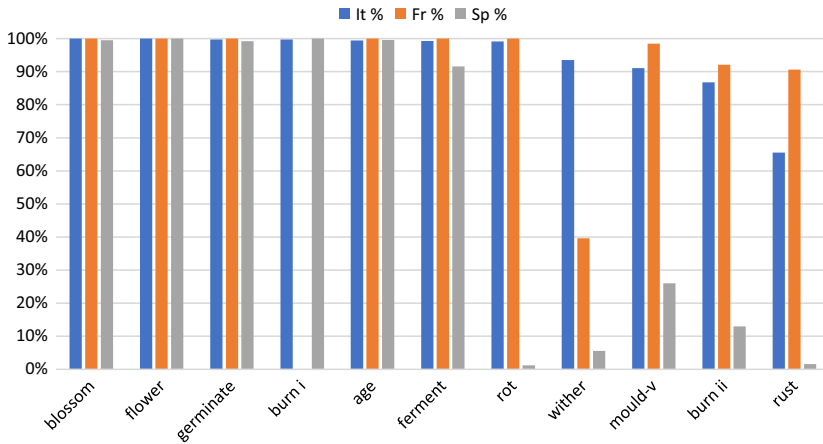


Figure 3
-SE marking of intransitives.

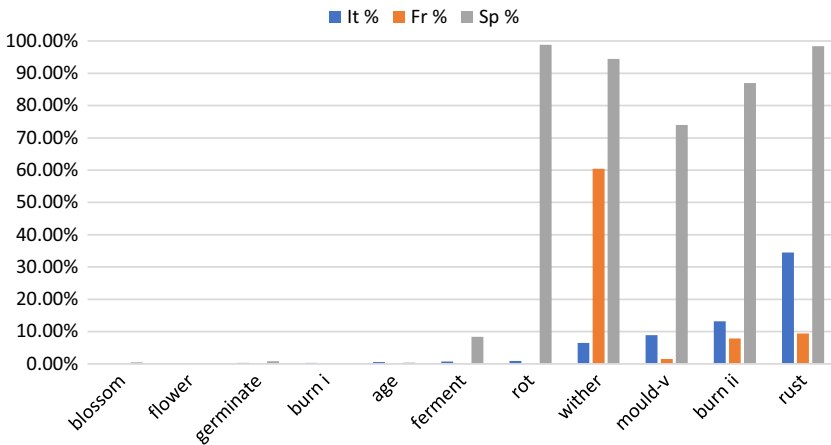


Figure 4
+SE marking of intransitives.

exhibiting non-trivial percentages of +SE intransitives, though more conspicuously so in Spanish than in the other languages (see also Heidering 2015). More specifically, while ‘blossom’, ‘flower’, ‘germinate’, ‘burn_i’, and ‘age’ only yielded -SE intransitives in the three languages, ‘wither’, ‘mould-v’, ‘rust’, and ‘burn_{ii}’ provided evidence of ±SE variation. These findings are shown in Figures 3 and 4.⁹ Differently from the transitive and passive percentages, which were calculated over the whole set of examples collected for each verb, the ±SE percentages pertain to the

[9] Figures 3 and 4 are not collapsed into one to maximize clarity in non-colour printing.

non-passive intransitive subsets (for the non-passive intransitive counts, see Appendix 1). We should also note that 8.4% of the 143 non-passive intransitives of Spanish *fermentar* ‘ferment’ and 98.8% of the 162 non-passive intransitives of Spanish *podrir* ‘rot’ exhibited SE. These verbs thus behave differently from their counterparts in Italian and French, which belong to the -SE group.

Recall now that SE has been analysed as the marker of aspectual properties of verbs or constructions normally described in terms of telicity or resultativity (§2). Consideration of the -SE verbs in our sample suggests that the contrast between the -SE and the \pm SE groups cannot be reduced to the former group being non-resultative, i.e. lacking a result state in their semantic make-up. Two resultativity diagnostics challenge this hypothesis: the selection of the perfect auxiliary *essere* ‘be’ in Italian (Sorace 2000; Cennamo 2008; Bentley and Eythórsson 2004) and the occurrence of the -SE verbs as resultative adjectives or absolute participles (van Hout 2004; Bentley 2006: 355; Legendre 2017: 283–284).¹⁰ With respect to perfect auxiliary alternation, we refer the reader to Appendix 2, which shows a clear preference for *essere* ‘be’ over *avere* ‘have’ for all verbs, except *fermentare* ‘ferment’, with which *avere* slightly outnumbered *essere*, and *ardere* ‘burn_i’, which was not attested in the perfect.¹¹ As for the second diagnostic, in (40)–(42) we provide authentic examples of the -SE verbs, bar ‘burn_i’, which did not yield any evidence of resultativity and will be assumed to be non-resultative (§4.1).

- (40) *fiore sbocciato* ‘blossomed flower’; *piantine [già] fiorite* ‘small flowered plants’; *grani germinati* ‘germinated grains’; *un aceto invecchiato* ‘aged vinegar’; *le vinacce fermentate* ‘fermented pomace’; *patate marcite* ‘rotten potatoes.’ (itTenTen16).
- (41) *fleurs écloses* ‘blossomed flowers’; *prairies fleuries* ‘flowered grassland’; *graines germées* ‘germinated grains’; *cuir vieilli* ‘aged leather’; *céréales fermentées* ‘fermented cereal’; *bois pourri* ‘rotten wood.’ (frTenTen17).
- (42) *vides brotadas* ‘blossomed vines’; *bulbos ya florecidos* ‘bulbs already flowered’; *semillas germinadas* ‘germinated seeds’; *aspecto envejecido* ‘aged look.’ (esTenTen18)

To be sure, this evidence is not indicative of the precise scalar properties of the verbs under analysis. While not being activities in Vendlerian terms, the verbs in (40)–(42) could be degree achievements (Dowty 1979: 88–90), or verbs of non-quantized change, i.e. verbs that describe the progression of a theme along a scale, introducing a measure of the amount to which the theme varies along the scale (Hay, Kennedy & Levin 1999), but failing to lexicalize a specific final state (Beavers 2011).

[10] We should add that the reversative prefix *s-*, found on Italian *sbocciare* ‘blossom’, normally occurs on verbs that describe the attainment of a result state (Iacobini 2004: 112, 146, 159).

[11] We only mention Italian because diachronic generalization of ‘have’ has drastically reduced the domains of perfect ‘be’ in French and ousted this perfect auxiliary in Spanish (Ledgeway 2012; Lopocaro 2016). Given that SE obligatorily requires perfect *essere* ‘be’, the counts in Appendix 2 pertain exclusively to the -SE non-passive perfect intransitives.

Taking ‘blossom’ and ‘ferment’ as representatives of the -SE verbs (‘ferment’ only in Italian and French) and ‘rust’ as a \pm SE verb, we found that the notion of quantized change cuts across the -SE vs. \pm SE distinction, with ‘blossom’ describing quantized change and the other two verbs failing to do so. Known tests to diagnose degree achievements are the entailment of the perfect by the progressive and the compatibility with additions indicating change by some amount (Bertinetto & Squartini 1995). All the ‘blossom’, ‘ferment’, and ‘rust’ verbs were attested in the progressive form or in aspectual predication with ‘begin’, which suggests that they are not punctual or allow readings whereby the event is extended.¹² For brevity, we only give Italian examples here.

- (43) [...] essere come un fiore che sta (itTenTen16, 05/05/2022)
 be.INF like a flower REL be.3SG
 sbocciando...
 blossom.GER
 ‘[...] to be like a flower which is blossoming...’
 (itTenTen16, 09/03/2022)
- (44) [...] l’ inconfondibile aroma del liquore che sta fermentando.
 the unmistakable aroma of.the liquor REL be.3SG ferment.GER
 ‘[...] the unmistakable aroma of the liquor which is fermenting...’
 (itTenTen16, 05/05/2022)
- (45) [...] per non parlare della ringhiera che sta arrugginendo...
 for NEG speak of.the rail REL be.3SG rust.GER
 ‘[...] not to mention the rail which is rusting.’

We tested the compatibility with ‘a little’/‘a lot’ and whether the progressive entails the perfect. The Italian and Spanish speakers (see note vi) judged the verbs to split into two groups: ‘blossom’ failed the tests, whereas ‘rust’ and ‘ferment’ did not. The judgements of the French speakers were more nuanced, but we found evidence of modification of both *rouiller* ‘rust’ and *fermenter* ‘ferment’ with ‘a lot’, while we did not find any comparable evidence with *éclore* ‘blossom’.

- (frTenTen17, 28/05/2022)
- (46) Si les premières HPE rouillent beaucoup en raison de tôles de
 if the first HPE rust.3PL a.lot in reason of sheets of
 mauvaise qualité
 bad quality
 ‘If the first HPE [Hewlett Packard, DB] rust a lot because of metal sheets of
 bad quality...’

[12] Although the progressive periphrasis (*être en train de plus infinitive*) is not common in modern French and tends to be replaced by aspectually unmarked forms (Bertinetto & Squartini 2016), we found attestations of the progressive of the verbs under scrutiny whether in our dataset or in the broader frTenTen17 corpus.

- (47) Si le miel a vraiment beaucoup (frTenTen17, 28/05/2022)
 if the honey has really a.lot
 fermenté...
 fermented
 ‘If the honey really has fermented a lot...’

We shall thus assume that ‘rust’ and ‘ferment’ are degree achievements, whereas the ‘blossom’ verbs are not.¹³ If the -SE group is aspectually varied as discussed above and there are verbs of the same lexical aspectual type on both sides of the -SE vs. ±SE split, then this cannot be reduced to a ±result contrast.¹⁴

Turning now to the ±SE variation with individual verbs (see Figure 4), this lends support to the hypothesis that the +SE intransitives involve a cause that is not expressed as an argument of the verb, while also indicating that the aspectual properties of the construction have a bearing on the intransitive realization of the ±SE verbs (§2). To begin with, the +SE intransitives of ‘burn_{ii}’ mean ‘scald oneself’ or ‘be burned by something’, which are externally caused meanings.

- (48) Per evitare che il fogliame più esterno si bruci a causa
 for avoid that the leaves more external SE burn.SBJV.3SG at cause
 del freddo.
 of.the cold
 ‘[...] to stop the outer leaves from burning because of the cold
 temperature...’

- (49) Nettoyez le tuyau de débit de la vapeur, en faisant attention à
 clean.IMP the pipe of flow of the steam in making attention to
 ne pas vous brûler.
 NEG NEG SE burn
 ‘Clean the flow pipe for the steam, paying attention not to scald
 yourselves.’

[13] We judge the three Italian verbs to require a counterfactual reading when combined with ‘almost’. Following Hay et al. (1999), this supports the view that *fermentare* ‘ferment’ and *arrugginire* ‘rust’ are degree achievements, while also suggesting that *sbocciare* might be an achievement, rather than an accomplishment, as the compatibility with the progressive and the occurrence as a resultative adjective would at first suggest. Indeed, achievements admit the progressive in a delayed or slow-motion reading (Bertinetto & Squartini 2016; Vivanco 2021). We shall not investigate whether ‘blossom’ verbs are achievements or accomplishments since this has no bearing on our key claims.

[14] Vivanco (2021) proposes a different aspectual analysis of Spanish SE, arguing that SE occurs with accomplishments and with a subclass of achievements, which describe a transition from the end of a result state to the beginning of another. It is not within the scope of this work to test this proposal. What matters for our purposes is that the aspectual considerations do not alone explain the -SE vs. ±SE split with the verbs under investigation (§§ 4.3.1, 5.2).

(esTenTen18, 02/03/2022)

- (50) No tocar el fuego con la mano porque sabes que
 NEG touch the fire with the hand because know.2SG that
 te quemarás
 SE burn.FUT.2SG
 ‘Do not touch the fire with your hands because you know that you will scald yourself.’

The -SE intransitives, however, primarily mean ‘be incandescent, be in flames’, being synonymous with intransitive ‘burn_i’.

(itTenTen16, 15/03/2022)

- (51) [...] come le fiamme dei ceri che bruciano crepitando adagio.
 like the flames of.the candles REL burn.3PL crackling softly
 ‘[...] like the flames of the candles, which burn crackling softly.’

(frTenTen17, 04/02/2022)

- (52) Le charbon, grâce à un dispositif spécial, brûle lentement.
 the coal thanks to a device special burn.3SG slowly
 ‘Coal burns slowly, owing to a special device.’

(esTenTen18, 02/03/2022)

- (53) [...] bario, que al quemar da un color de llama rojo brillante.
 barium REL at.the burn gives a colour of flame red bright
 ‘[...] barium, which when burning emits a bright red flame colour.’

Recall that, different from its cognates, Spanish *fermentar* ‘ferment’ yielded a non-trivial +SE percentage (8.4% of the non-passive intransitives). Interestingly, a cause is frequently mentioned with the +SE intransitives of this verb.¹⁵

(esTenTen18, 11/02/2022)

- (54) Debido a la baja concentración de bacterias, aún no se ha
 owing to the low concentration of bacteria yet NEG SE has
 fermentado la lactosa.
 fermented the lactose
 ‘Owing to a low concentration of bacteria, the lactose has not yet fermented.’

[15] In some cases, a passive interpretation could not be ruled out, although we counted such instances as non-passive intransitives for reasons explained in Section 3.2.2.

(esTenTen18, 11/02/2022)

- (i) Tras una especial maceración durante 6 horas, el vino se fermenta a
 after a special maceration during 6 hours the wine SE ferment.3SG at
 16 oC.
 16 degrees Celsius
 ‘After a special process of maceration which lasts 6 hours, wine ferments/is fermented at 16°C.’

Similar considerations can be made for Italian and French ‘mould-v’ and ‘rust’, which were unmarked when describing the condition of ‘being abandoned or stuck somewhere’. In contrast, they exhibited SE when describing physical changes of ‘becoming mouldy’ and ‘rusting’, the cause occurring in the surrounding context. Italian examples are provided here.

- (55) [...] mentre ammuffivo in fondo a (itTenTen16, 11/03/2022)
 while rust.PST.1SG in bottom to
 una cella.
 a cell
 ‘[...] while I was rusting at the bottom of a prison cell.’

(itTenTen16, 11/03/2022)

- (56) Guai se il tabacco si bagnava! Le foglie [...] si sarebbero
 problems if the tobacco SE wet.PST.3SG the leaves SE be.COND.3PL
 ammuffite!
 mould-v.PTCP
 ‘It was a problem if tobacco got wet! The leaves [...] would become mouldy!’

(itTenTen16, 03/03/2022)

- (57) La Monorotaia era troppo futuribile e dopo anni passati ad
 the monorail was too future and after years spent at
 arrugginire [...]
 rust
 ‘The monorail was a thing of the future and after years spent rusting...’

(itTenTen16, 03/03/2022)

- (58) Ma l’ acciaio armonico non si arrugginisce a contatto con
 but the steel harmonic NEG SE rust.3SG at contact with
 l’ acqua?
 the water
 ‘But does harmonic steel not become rusty when in contact with water?’

Given that the +SE intransitives presuppose a cause or exhibit one in the context, these findings lend support to the analysis of SE as an argument realization strategy (§2). At the same time, the examples in (55)–(58) are suggestive of a distinction between the description of processes or conditions (cf. 55, 57) and completed events of change (cf. 56, 58). The same contrast is found with Italian and French ‘wither’. Observe how readings of potentiality or inception, coerced by *sans* ‘without’ in (60) and *inizia a* ‘begins to’ in (62), correlate negatively with SE.

(frTenTen17, 03/02/2022)

- (59) Il laisse [...] certaines fleurs suivre leur temps et se faner
 it lets certain flowers follow their time and SE wither
 doucement.
 slowly
 ‘It simply lets certain flowers follow their course and wither slowly.’

- (60) La pomme, d' un grain très fin, se conserve plusieurs jours
 the apple of a texture very fine SE keep several days
 sans faner.
 without wither
 'This apple, which has very fine texture, keeps several days without
 withering.'
 (itTenTen16, 03–4/03/2022)
- (61) [...] quel fiore si sarebbe appassito e quindi sarebbe
 that flower SE be.COND.3SG withered and thus PASS.AUX
 stato reciso.
 been cut
 'That flower would wither and thus would soon be cut.'
 (itTenTen16, 17/03/2023)
- (62) [...] dopo 4–6 settimane dalla fioritura il fogliame inizia
 after 4–6 weeks from.the blooming the foliage begins
 ad appassire.
 to wither
 'Four to six weeks after blooming the foliage begins to wither.'

We conclude that the \pm SE variation is found with verbs which lexicalize both cause and result when the cause fails to be expressed as an argument of the verb (cf. 48–50; 54; 56; 58–59; 61). When one such verb is polysemous, one of its meanings may not encompass a cause and hence fail to be marked by SE. This is the case with 'burn_{ii}', which has both externally and internally caused meanings (cf. 48–50 vs. 51–53), and with the figurative extensions of 'rust' and 'mould-v' (cf. 55, 57). Lastly, the durative component of the verb meaning may be the only grammatically relevant component because of contextual coercion, with the consequent lack of SE marking (cf. 57, 60, 62). Our proposal on SE will be formalized in Section 5.2.

3.3 *The verbs under investigation: Formal groups*

The results of our investigation support the insight of previous literature that the verbs of internally caused change (henceforth VICCs) constitute a composite class. Adopting as above a membership threshold of 1%, the morphosyntax of the verbs in our sample divides them into the groups shown in Table 2.

The finding that the Romance VICCs in the top left cell show no propensity to transitivize, passivize, or SE intransitivize suggests that, in the languages under investigation, these verbs must be distinguished from the verbs of externally caused change (VECCs). Some evidence on the behaviour of the VECCs was given in Section 2 (cf. 3–4). In addition, in Figures 5 and 6, we contrast the transitive percentages and, respectively, the +SE percentages found with three VECCs and a representative from each of the three columns in Table 2. The data on the VECCs

I	II	III
-transitive, -SE	+transitive, -SE	±SE
-passive	+passive	+transitive,+passive
It., Fr. Sp. 'blossom'	It., Fr. 'ferment'	Sp. 'ferment'
It., Sp. 'flower'	It. 'burn _i '	It. 'wither'
Fr. 'germinate'	It., Fr., Sp. 'age'	Sp. 'mould-v.'
Sp. 'burn _i '	Fr. 'rot'	Sp. 'rust'
	Sp. 'germinate'	It., Fr., Sp 'burn _{ii} '
+passive	-passive	+transitive, -passive
It. 'rot'	Fr. 'flower'	Fr., Sp. 'wither'
	It. 'germinate'	Sp. 'rot'
		Fr., It. 'rust'
		-transitive, +passive
		It. 'mould-v.'
		-transitive, -passive
		Fr. 'mould-v.'

Table 2
The verbs under scrutiny: Formal groups.

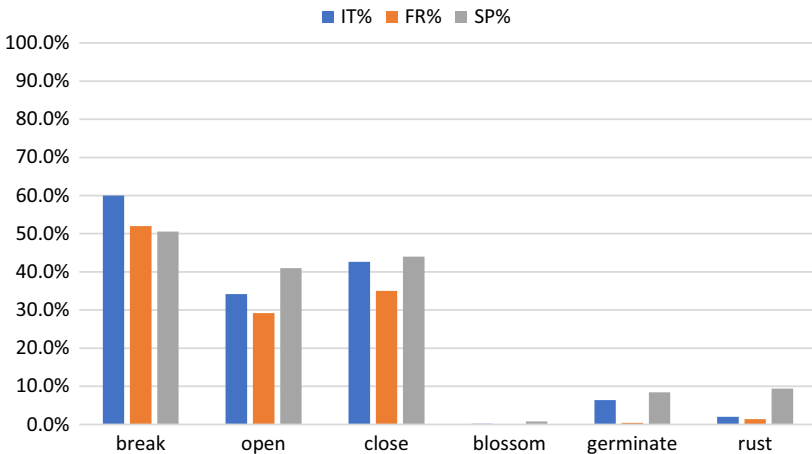


Figure 5
Transitive percentages with VECCs and VICCs.

were drawn from the same Sketch Engine corpora as mentioned in Section 3.1, using the same methodology.¹⁶ As above, the transitive percentages were calculated

[16] We list here the VECCs that we considered, with the respective non-passive intransitive counts in brackets: for 'break' Italian *rompere* (133), French *casser* (72), and Spanish *romper* (153); for 'open', Italian *aprire* (116), French *ouvrir* (25), and Spanish *abrir* (79); for 'close' Italian *chiudere* (99), French *fermer* (40), and Spanish *cerrar* (82).

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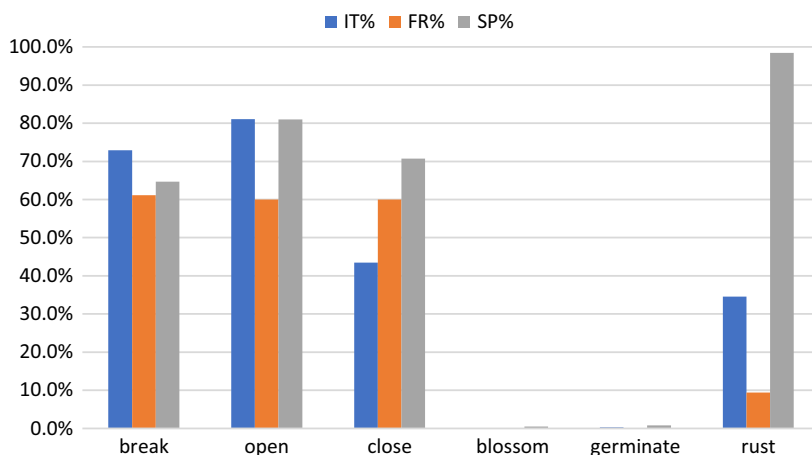


Figure 6
+SE marking of intransitive VECCs and VICCs.

over the whole set of examples collected per each verb, the +SE ones over the subset of intransitive examples.

Figures 5 and 6 bring to light noticeable behavioural differences between VECCs and VICCs, with the ‘blossom’ verbs failing to transitivity or SE intransitivity altogether.

Rappaport Hovav (2020) claimed that English *blossom* and *flower* should be analysed as verbs of emission. However, this analysis is problematic for Romance ‘blossom’ and ‘flower’, which occur as resultative participles modifying not only the putative emittee, but also the putative emitter (cf. 63 and 40–42). This behaviour is unknown to verbs of emission (cf. 64) (Levin 1993: 238).

(itTenTen16, 06/03/2022)

(63) [...] coltivazione [...] di tutte le piante verdi, fiorite o
growing of all the plant.FPL green flowered.FPL or
da frutto
of fruit
‘the growing of evergreen, flowered or fruit plants...’

(64) *un rubinetto gocciolato / *una scarpa puzzata. (Italian)
a faucet.MSG dripped.MSG a shoe.FSG smelled.FSG
Lit. ‘a dripped faucet / a smelled shoe.’

In addition, the perfect auxiliary *essere* ‘be’ is prevalent with Italian ‘blossom’ and ‘flower’, which further suggests that these verbs are resultative (Appendix 2, §3.2.3). Instead, Rappaport Hovav’s (2020) analysis suits intransitive ‘burn’, which does describe emission (cf. 20) and provided no evidence of resultativity (§3.2.3). In the last

analysis, the results captured in Table 2 and Figures 5 and 6 do not warrant a generalized account of the Romance VICCs as VECCs, while also suggesting that many VICCs share behavioural properties of the VECCs (see the middle and right-hand columns of Table 2). In the next sections, we make proposals for the common denominator of the meaning of verbs of internally caused change first, and then for the meaning differences between the formal groups emerging from Table 2.

4. INTERNALLY CAUSED CHANGE AS ‘CHANGE BY INNER PREDISPOSITION’

4.1 *Change by inner predisposition and dual classification*

Although the literature has placed emphasis on the selectional restrictions on the transitive subjects of internally caused verbs of change (§2), we note, in line with Levin’s (1993: 246–247) analysis of English, that most of the verbs under discussion here take a limited range of undergoers. In their literal meanings, ‘blossom’ verbs describe changes that occur to flowers or buds; ‘flower’ verbs are predicated of plants, flowers, or places where flowers grow (e.g. grassland); ‘germinate’ verbs describe processes affecting seeds, grains, or bulbs; ‘ferment’ verbs are predicated of fruit, dairy, and other organic products; ‘rust’ verbs are predicated of metals, etc. To be sure, some of the verbs included in our sample are broader in meaning than their rough translational counterparts (§3.1). We also noted that some of the verbs have figurative extensions, in which case they do not impose as strict selectional restrictions on their undergoer as their literal counterparts (see also McKoon & Macfarland 2000; Rappaport Hovav 2020). Nonetheless, it can be argued that the common denominator of the verbs in the sample, in their non-figurative senses, i.e. when describing scalar change in the physical world, is that they describe ‘change by inner predisposition’ or change that is only possible because of the inherent propensity of specific entities to change. This claim builds on, and at the same time departs from, Levin & Rappaport Hovav’s (1995) proposal that internally caused eventualities are triggered by properties of the entities undergoing the change. First, the said properties are qualified as a propensity, which can be genetic programming or a tendency towards reacting to specific triggers. We believe that this addresses the objection that externally caused change can also be enabled by properties of the undergoer, as with the flexibility of certain metals enabling bending or the friability of certain rocks enabling crumbling (Rodríguez 2011: 245). Second, in light of the differences between VICCs and VECCs (§ 3.3), our proposal is not formulated in terms of causation.¹⁷

[17] An anonymous reviewer pointed out that as is typical for Siouan, most Lakota transitive verbs are causativized state or change of state predicates, and the causativization is marked in most cases by instrumental prefixes meaning ‘by striking’, ‘by action from a distance’, or ‘by biting’. There is one prefix, *na-*, however, which does not derive a transitive predication but rather appears on many of the same verbs discussed in our work and is usually characterized as meaning ‘by inner force’. For example, Lakota *nabléčá* means ‘to open out of its own accord, to blossom’ (Ullrich 2011: 374). These data offer some support to the proposed notion of change by inner predisposition.

Having introduced the notion of change by inner predisposition, we can reconsider the mismatches between the intransitive and transitive meanings of the [+tr] verbs that we referred to as group (b) in Section 3.2.1 ('flower', 'wither', 'rot', alongside the two 'burn' verbs). Exception being made for a handful of examples of Spanish 'wither' and 'rot', the transitives of these verbs do not describe changes for which specific entities are predisposed: vegetables are not genetically programmed to be softened by cooking, buildings do not have a propensity towards being embellished with flowers, and so on. Thus, these are verbs of inner predisposition when intransitive, whereas most of their transitive occurrences describe external causation. Because of this polysemy, these verbs require dual classification as verbs of inner predisposition and external causation (§2). In this perspective, the verbs whose meanings do not change in accordance with transitivity, including those that allow [+human] transitive subjects (group a of Section 3.2.1), do not require dual classification.

4.2 *Change by inner predisposition and periphrastic causation*

The conceptual shift to change by inner predisposition is supported by the observation that in our dataset 'let' causatives were prevalent with French and Spanish 'ferment', 'age', 'rot', 'wither' and 'mould-v', as well as French 'rust'.

(frTenTen17, 03/01/2022)

- (65) Il s' agit d' un jus de fruit qu' on laisse fermenter dans
 it SE deal.3SG of a juice of fruit REL one let.3SG ferment in
 un récipient fermé.
 a container closed
 'It is a fruit juice that one leaves to ferment in a closed container.'

(esTenTen18, 14/02/2022)

- (66) Antes de ser embotellado, se deja envejecer durante un
 before of PASS.AUX bottled SE let.3SG age during a
 periodo de entre 8 y 15 años
 period of between 8 and 15 years
 'Before bottling it, one lets it age for a period of 8 to 15 years.'

We did not find equally robust evidence of 'let' causatives in Italian, in accordance with Floricic's (2022) claim that Italian periphrastic causatives tend to generalize *fare* 'make', in contrast with their French counterparts, which alternate *faire* 'make' with *laisser* 'let' depending on the meaning of the embedded verb (see also Cerbasi 1998).

These results can be understood with reference to Donazzan, Raffy & von Heusinger's (2020) treatment of the French *laisser* 'let' causative. The authors analyse this construction in terms of a property of the causee, which is a disposition towards the behaviour described by the embedded verb, and a property of the causer, which is a disposition to prevent the causee from following their tendency.

The *laisser* causative is felicitous if the causer refrains from stopping the causee, whilst being understood to be able to do so. In the case of the VICCs, the disposition of the causee is the predisposition of specific entities to react to specific external triggers.

‘Blossom’ and ‘flower’ verbs hardly occurred in ‘let’ causatives and were instead found in non-literal or metonymic ‘make’ causatives. A non-literal example is given here.

(esTenTen18, 27/03/2022)

- (67) Es la persona [...] que hace brotar en mí lo mejor.
 is the person REL make.3SG blossom in me the best
 ‘S/he is the person who brings out the best of me.’

These findings suggest that the two verbs resist causation, presumably because they describe processes which specific entities are genetically programmed to undergo. An anonymous reviewer provided evidence of ‘make’ causatives with literal ‘blossom’ and ‘flower’, an example being Italian *Come far fiorire l’orchidea?* ‘How can one enable (lit. make) orchids to flower?’ (<http://www.ideegreen.it>). We note that the ‘make’ “causer” of this example cannot be understood to be the effector of the ‘flowering’ change. Instead, it must be construed as a potential facilitator of the ambient conditions which the undergoer is programmed to respond to. Therefore, not only does periphrastic causation differentiate ‘blossom’ and ‘flower’ from the other verbs of inner predisposition, which lend themselves to embedding in ‘let’ causatives, but also from the VECCs, which, when embedded in the ‘how to make’ structure, admit a single-cause and a two-cause reading; in the single-cause reading, the ‘make’ causer is the effector of the change (Italian *Come far rompere il guscio?* ‘How can one break the shell / make someone else break the shell?’).

4.3 *Classes of verbs of change by inner predisposition*

Factoring out the external causation meanings of the verbs that require dual classification (§4.1), we propose the following tripartite classification.

- (68) Three classes of verbs of change by inner predisposition
 (i) {-causative};
 (ii) {±causative; ±intervening cause};
 (iii) {±causative; -intervening cause}

Prime examples of class (i) are ‘blossom’ and ‘flower’. Recall that the morpho-syntax of these verbs offers no evidence for a causative analysis, in that they do not exhibit a propensity towards transitivization, passivization, or SE intransitivization, which are key behavioural properties of external causation verbs (see (3)–(4) and Figures 5–6). Periphrastic causation also sets ‘blossom’ and ‘flower’ apart from other verbs of inner predisposition and from VECCs (§4.2). We thus assume that

these verbs are not causative. With respect to ‘blossom’ verbs, considering that they describe events that can be extended but include a specific result state (§ 3.2.3), we represent them as non-causative verbs of quantized change.

(69) PROC **becoming.higher.on.[blossom]scale**′ (x) \wedge FIN **blossomed**′ (x)

Elaborating Van Valin’s (2023: 94–102) lexical decomposition system, ‘blossom’ is broken down into a process (PROC **becoming.higher.on.[blossom]scale**′ (x)), or the progression of a theme along the scale of becoming blossomed, and a specific final result (FIN **blossomed**′), which is reached with the culmination of the process (the symbol \wedge indicates such concomitance). In this representation, the capitalized operators identify the Aktionsart class which the predicate belongs to (see note xiii), whereas the parts in bold combine grammatically relevant and idiosyncratic aspects of meaning: the one part indicates that the relevant scale is one of becoming blossomed, the other that the specific result state is that of being blossomed. We shall henceforth refer to the parts in bold of the lexical representations as ‘the content’. It is the [**blossom**] component of the content that makes ‘blossom’ a verb of inner predisposition because it is this component that selects specific undergoers.

Although Italian ‘rot’ occurs in the left-hand column of Table 2, alongside ‘blossom’ and ‘flower’, it does not squarely fit the characterization of class (i) because 1% of its attestations were passive (§3.2.2). It is possible that this verb is a member of another class for some speakers or is being reanalysed as such, an issue to which we return below. Lastly, intransitive ‘burn_i’ belongs to class (i) insofar as it is not causative. However, the fact that it describes emission, and that it provided no evidence of resultativity, sets it apart from the other verbs under investigation. In fact, following Rappaport Hovav (2020), it should not be included in the verb class under investigation here.

Examples of class (ii) are ‘ferment’ and ‘age’. Although these verbs can take human transitive subjects, an agentive analysis is challenged by the fact that the ‘age’ verbs were also attested with [-animate] transitive subjects, and the ‘ferment’ ones with [-human] ones (cf. 17–18). In addition, when these verbs are embedded in causative periphrases, they can be understood as mono-argumental, which is in fact the most natural reading in (70a–b) and is the only possible reading when the causer of the periphrasis is [-human] (cf. 71).

- (70) (a) Il casaro fermenta = fa fermentare (Italian)
 the cheese maker ferment.3SG make.3SG ferment.INF
 il latte.
 the milk
 ‘The cheese maker ferments the milk = makes the milk ferment.’
- (b) Il casaro fa fermentare il latte
 the cheese maker make.3SG ferment.INF the milk
 (?dall’ assistente).
 by.the assistant
 ‘The cheese maker ferments the milk / ?makes the assistant ferment the milk.’

- (71) [...] il lievito che fa fermentare la pasta.
 the yeast REL make.3SG ferment.INF the
 dough
 ‘[...] the yeast which makes the dough ferment.’

In contrast, when embedded in a causative periphrasis, non-causative agentive verbs only admit a reading whereby an agent that is different from the causer is understood to be their higher argument.

- (72) Il criminale ha ammazzato ≠ fatto ammazzare molte persone.
 the criminal have.3SG murdered made murder.INF many people
 ‘The criminal has murdered many people ≠ made someone murder many people.’

The agentive analysis of class (ii) is thus to be ruled out. The quasi-synonymy of these verbs with their periphrastic causative counterparts (cf. 70a) is a hallmark of causative behaviour (Zribi-Hertz 1987: 26–27), which, together with the transitivization and passivization facts (see Figures 1, 2, 5), supports a causative analysis. At the same time, since the periphrastic causative can be understood to have a single causer, the *fare* causer, and indeed this is the most natural reading of (70a–b), we propose that the verbs of class (ii) are not simply causative, but rather stored as non-causative/causative lexical pairs. This analysis follows the framework adopted here (Van Valin 2005: 46, 2023: 95), which takes monoradical process/accomplishment pairs or state/process/accomplishment clusters to be stored as derivationally related members of complex lexical entries.¹⁸ The lexico-semantic representations for ‘ferment’ are given here.

- (73) PROC **becoming.higher.on.[ferment]scale'** (x) ∧ FIN **fermented.by.some.amount'** (x)
- (74) [**do'** (x, [Ø])] CAUSE PROC **becoming.higher.on.[ferment]scale'** (y) ∧ FIN **fermented.by.some.amount'** (y)

These representations assume that the ‘ferment’ verbs are degree achievement/causative degree achievement pairs (§3.2.3), thus encoding the progress of a theme along the inner predisposition scale [**ferment**] without encoding a specific result

[18] Although this analysis is not vastly dissimilar from Piñon’s (2001) proposal that all causative alternations are equipollent (in Haspelmath’s 1993 terms), with both inchoative and causative-inchoative verbs deriving from alternating stems, for us, SE is not the spellout of a derivation, but the marker of an operation on the highest argument position of a lexical-semantic structure. This assumption has important consequences discussed in Section 5.2.

state (Van Valin 2023: 98). The representation of the causer as an argument of [**do**' (x,...)] in (74) indicates that this argument is an effector (Van Valin & Wilkins 1996) rather than an agent. The symbol \emptyset in the square brackets indicates that the lexicon does not specify exactly how the cause brings about the change.

Italian and Spanish 'germinate' patterned with 'ferment' and 'age', while French 'germinate' was classified as [-tr] (§3.2.1). The mismatches in the behaviour of cognate verbs suggest that verbs may oscillate between non-causative and causative realizations in different varieties or over time (see also the case of Italian 'rot'). This hypothesis is further supported by the observation that the meaning of some transitives differs from that of the intransitive counterparts (group (b) of Section 3.2.1). Assuming the transitive can derive by labile causativization, the evidence suggests that this derivation may occur diachronically alongside idiosyncratic meaning changes. The same changes need not affect the cognate verbs.

Let us now compare the verbs of class (ii) with 'mould-v.', 'rust', alongside inner predisposition 'wither' and 'rot' (in Spanish), which we take to be members of class (iii). These verbs can also be paraphrased with periphrastic causatives. In fact, since they only take inanimate subjects, *qua* inner predisposition verbs, the single cause reading is the only possible one.

(Italian)

- (75) La pioggia ha arrugginito il cancello = la pioggia ha fatto
 the rain has rusted the gate the rain has made
 arrugginire il cancello.
 rust the gate
 'The rain has rusted the gate / made the gate become rusty.'

We thus propose that class (iii) verbs are also stored as non-causative/causative pairs in the lexicon and, in light of the results discussed in Section 3.2.3, we represent 'rust' as an alternating degree achievement.

- (76) PROC **becoming.higher.on.[rust]scale'** (x) \wedge FIN **rusted.by.some.amount'** (x)
 (77) [**do**' (x, [\emptyset])] CAUSE PROC **becoming.higher.on.[rust]scale'** (y) \wedge FIN **rusted.by.some.amount'** (y)

Having discussed how classes (ii) and (iii) are similar, and how they differ from class (i), we now turn to their differences.

4.3.1 Class (ii) vis-à-vis class (iii)

In morphosyntactic terms, class (ii) transitivizes and passivizes but rejects *SE* (we shall return to Spanish 'ferment'). In contrast, class (iii) does not give as much evidence of transitivization and passivization but exhibits the \pm *SE* variation. Starting from the consideration that class (ii) verbs admit human causers, while class (iii) verbs do not, as inner predisposition verbs, the higher propensity towards

transitivization and passivization (Hopper & Thompson 1980) of the former class could be explained by the agentivity inferences of the animate manipulator (Van Valin & Wilkins 1996).

The question that arises is why only class (ii) verbs allow human causers. We suggest that the idiosyncratic component of the content of class (ii) verbs (**[ferment]** in 73–74) is understood in terms of the process in the scale of change and, thus, lends itself to manner inferences. The idiosyncratic component of class (iii) verbs is construed in terms of the result (**[rust]** in 76–77) and is not as compatible with such inferences. We have two pieces of evidence in support of this hypothesis. First, the class (ii) verbs are more readily embedded in the frame *take x time verbing* than the class (iii) ones. This test is cited by Beavers & Koontz-Garboden (2012: 343–349) as a manner diagnostic because of the association of manner with duration and complexity. Compare *this wine takes ten years to age* with *#this bike takes ten years to rust*. There is no grammaticality contrast, but the different felicitousness of the examples depends on encyclopaedic knowledge about human attitudes towards the relevant processes. Humans normally facilitate the aging of wine but not the rusting of bikes. Second, Italian *fermentare* ‘ferment’ stood out for the alternation of the two perfect auxiliaries (Appendix 2), the possibility of selection of ‘have’ being suggestive of construals that bring duration and manner to the fore (see Section 3.2.3 for relevant references). ‘Age’ and ‘germinate’ did not exhibit a similar alternation, and, indeed, we do not analyse class (ii) as manner verbs. Instead, we claim that they lend themselves to manner inferences because of a key component of their content.

Verbs that have a manner component in their meaning tend to select human transitive actors (Van Valin & Wilkins 1996; Beavers & Koontz-Garboden 2012). Similarly, the class (ii) verbs are readily compatible with human causers: the relevant change can be acted upon by humans providing the necessary triggers for it to obtain.

Instead, the idiosyncratic meaning of class (iii) verbs is construed in terms of the result and is not as easily combined with causation chains of the type described above. The relevant verbs select inanimate causes, which are the kinds of trigger that can interact with the selected undergoer in the way that yields the result encoded in the content. In this perspective, the class (iii) verbs are true verbs of internal causation because their causes are licensed in terms of the result in the content. The incompatibility of inanimates with inferences of agentivity results in low transitivity (§3.2.1). Our hypothesis on the salience of the result in the content of these verbs also explains the occurrence of these verbs in passive structures that describe the result of a change rather than an event of change (§3.2.2).¹⁹

[19] The fact that the result is in the name of some of these verbs (e.g. It. *ruggine*, French *rouille* ‘rust’, etc.) may be relevant to their construal as class (iii) verbs. Broader surveys would be necessary, however, to assess the importance of the morphological make-up of the verbs vis-à-vis their meaning and behaviour. Similarly, the prefixes *AD* and *IN*, which occur in some of these verbs, have received ingressive (Iacobini 2004: 157–158) or causative analyses and have been claimed to be relevant to *SE* marking (see Martin 2021 for relevant discussion). We note that there are

Recall now that we take *SE* anticausativization to be a strategy of realization of the causer (§§2, 3.2.3). We propose that the different type of causation described by the verbs of the two classes is a factor in *SE* anticausativization. In accordance with Wolff's (2003: 4–5) no-intervening-cause criterion, which spells out the conceptual–perceptual conditions to distinguish direct from indirect causation, direct causation obtains if:

- (78) (a) There are no intervening entities at the same level of granularity as initial causer and final causee
OR
(b) Any intervening entity is construable as an enabling condition rather than a cause.

Our proposal is that *SE* anticausativization is sensitive to the conditions in (78a–b). Compare ‘ferment’ with ‘break’ changes. Although an animate causer of the latter type of change can avail herself of an instrument (e.g. *she broke the door with a hammer*), the participation of the instrument in the event satisfies the intention of the causer, and the instrument cannot effect the change by itself. Therefore, the instrument is an enabler and the link between the initial causer and the causee is construed as direct. ‘Ferment’ changes are different, not only because they cannot be effected by a human cause without specific triggers, but also because such triggers are not instruments, since they can bring about the change by themselves (as with lactobacilli fermenting milk). They are thus causers, not enablers, which means that condition (78b) is violated. In contrast, the cause of class (iii) verbs does not violate either of the conditions on direct causation and can be marked by *SE* as an inherent facet of the event of change (§2, 3.2.3, 5). In Section 5.2, we will reformulate this proposal as a constructional constraint on *SE* anticausativization.

5. *SE* ANTICAUSATIVIZATION: A LINKING ACCOUNT

5.1 *The linking*

The framework adopted here (Van Valin and LaPolla 1997; Van Valin 2005, 2023) assumes a direct mapping between syntactic and semantic representation, called linking, which is an idealization of what speaker and hearer do in actual communication. The speaker's perspective is represented in the semantics to syntax linking, whereas the hearer's perspective is represented in syntax to semantics linking. It would be beyond the scope of this article to discuss the universal and language specific steps of the algorithm which governs the linking. We will, instead, briefly go over the steps in the semantics–syntax linking which are relevant to *SE* anticausativization. The first phase, called ‘lexical’, involves the construction of the semantic representation of the clause, starting from the semantic

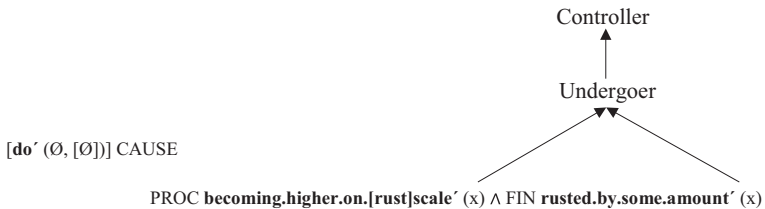
prefixed verbs in the *-SE* groups (e.g. It., Sp. ‘age’) and, therefore, the morphological structure of these verbs does not alone explain their behaviour.

representation, or logical structure, of the predicate. The latter is usually a verb, which is retrieved from the lexicon, where it is stored as the mapping of a form with a logical structure. The second step involves the assignment of values to the argument variables figuring in the logical structure of the predicate. Actor or undergoer assignment follows (cf. 79), a key step in the interface with syntax, which for brevity will not be discussed here. The morphosyntactic coding of argument–predicate relations abides by alignment principles: in accusative alignment the default controller of verb agreement is the highest-ranking argument in logical structure.

5.2 *SE anticausativization*

Building on Centineo (1995), Van Valin & LaPolla (1997: 416–418), and Bentley (2006: 126–136), we analyse *SE* anticausativization as an operation which occurs in the lexical phase of the linking and concerns the realization of the highest argument in the causative logical structure, [**do'** (x,...)] in (77). The causer position is saturated with a silent argument, indicated with \emptyset in [**do'** (\emptyset ,...)] in (79). This operation blocks the projection of the causer as an argument of the verb, although *SE* marking will signal that a cause is a facet of the event. Since the highest position is unavailable for morphosyntactic purposes, the controller of person–verb agreement will be linked from the lower argument position.

(79)



This analysis of *SE* anticausativization can capture the syncretism of anticausative, passive, reflexive, and impersonal *SE* (§2), assuming that these are variations of a single operation of suppression of the highest-ranking argument in the lexical phase of the linking (see Bentley 2006 for Italian). Treating anticausative *SE* as the spellout of an operation on the causative member of a non-causative/causative pair, it is also possible to explain key aspects of the \pm *SE* variation with the verbs of class (iii) and the absence of *SE* on the intransitive of the verbs of class (ii).

The *-SE* attestations of both classes are realizations of the non-causative logical structure (see 73 for ‘ferment’ and 76 for ‘rust’). This is also the lexical input when a durative or inceptive reading is coerced (cf. 57, 60, 62). In such cases, the process component of the non-causative logical structure (PROC **becoming.higher.on.[α] scale'** (x)) will alone be grammatically relevant because of the aspectual inferences that arise from the context.

Turning now to the failure of the class-(ii) verbs to anticausativize, recall that we proposed that SE anticausativization is sensitive to the conditions in (78). In the terms proposed here, a complex causation chain is not normally realized as a silent argument in the position [**do**' (x,...)]. In turn, the verbs that admit such complex causes do not normally participate in SE anticausativization, even though a priori they could (see the case of Spanish 'ferment').

The comparison of the class (ii) verbs with external causation verbs which are known only to exhibit -SE intransitives in Italian (e.g. *guarire* 'heal'; *affondare* 'sink'; *cambiare* 'change'; *migliorare* 'improve' and *peggiore* 'worsen'; *aumentare* 'increase' and *diminuire* 'decrease') provides relevant independent evidence, suggesting that, in this language, a constructional constraint is at work beyond the specific case of inner predisposition verbs. Indeed, the -SE verbs listed above also describe complex causation events with potential intervening causes between the initial causer and the final causee (as with doctors healing patients by prescribing drugs or lifestyle changes).

The framework adopted here conceives of the architecture of grammar in terms of cross-linguistically and cross-constructionally valid linking principles (§5.1), which are complemented by constructional instructions stored in language-specific inventories of C(onstructional) S(chemas). We thus propose that in Italian SE anticausativization is subject to a construction-specific instruction which discerns between different types of cause. Specifically, the CS of SE anticausativization in Italian will include an instruction stating: <SE anticausativize iff conditions on direct causation are satisfied>.

We acknowledge that other constraints must be at work when considering SE anticausativization more broadly. In cross-linguistic terms, the -SE classes do not exactly coincide. In French, the incidence of anticausative SE is known to be historically low, albeit on the rise diachronically (Heidinger 2014; Cennamo 2021). It was very low in our sample, exception being made for *faner* 'wither'. In Spanish, the incidence of SE was generally higher and the morpheme was attested with two verbs that do not take SE in the sister languages: *fermentar* 'ferment' (though see note xiv) and *podrir* (which took [-animate] transitive subjects when meaning 'rust' and 'rot' in an inner predisposition sense, thus being unproblematic for our proposal). The development and distribution of SE in these languages has been discussed in term of aspectual criteria (Zribi-Hertz 1987; Cennamo 2021; Vivanco 2021) and attempts have been made to reconcile the argument realization approach with the aspectual one (Jiménez-Fernández & Tubino-Blanco 2017 on Southern Peninsular Spanish). Our claim is, therefore, that although the comparison of the sister languages suggests that different language-specific factors, including aspectual ones (§3.2.3), are at work in the distribution and frequency of SE, the evidence of inner predisposition verbs supports the analysis of SE as an argument realization strategy, in that the type of cause which different subclasses of verbs are compatible with has a bearing on SE marking of the intransitive. The other relevant criteria should be factored into this broad understanding of SE.

6. CONCLUSION

Verbs of internally caused change were first characterized by Levin & Rappaport Hovav (1995) as monovalent verbs whose argument has an inherent property that is responsible for bringing about the eventuality of change. Subsequently, the same verbs were claimed to take inanimate causes or agent subjects (Alexiadou 2014), or to be causative verbs with a lower propensity towards transitivity than the known verbs of external causation (Rappaport Hovav 2020).

Availing ourselves of corpus evidence on a sample of putative verbs of internally caused change in Italian, French, and Spanish, we have proposed that the key property of the verbs in question is a predisposition of the undergoer: genetic programming for a given change or a propensity to react to specific triggers in specific ways. Building on Van Valin's (2005, 2023) system of lexical decomposition, we have proposed a threefold classification of verbs of inner predisposition in Romance, with one class being non-causative and the other two alternating as causative/non-causative pairs in the lexicon. A key observable difference between the two alternating classes is that the one takes [\pm human] transitive subjects, whilst the other takes [-animate] transitive subjects. We have suggested that the content of the former class lends itself to manner inferences and, hence, to the description of complex causation chains whereby human instigators manipulate the process availing themselves of inanimate triggers. In contrast, the content of the latter class is construed in terms of the result. These verbs do not lend themselves to the description of complex causation chains and select specific causes that interact with specific types of undergoer to yield the result that is salient in the content. Importantly, this was the only subclass that was found to *SE* anticausativize. While the existing literature has placed emphasis on the aspectual conditions on the \pm *SE* variation, we noted that the types of cause which verbs are compatible with play a role in the licensing of *SE* anticausativization. With specific reference to Italian, we proposed a construction-specific instruction which constrains *SE* anticausativization to cases which fully satisfy Wolff's (2003) conditions on direct causation.

The results discussed in this study indicate that inner predisposition is a property of the content of verbs, which has a bearing on the selection of the undergoer, and, in two of the subclasses, the cause. In other respects, verbs of inner predisposition are indistinguishable from other verbs of change.

APPENDIX 1

In the columns named *transitive*, *passive*, *intr+SE*, *intr-SE*, *faire/laisser causative*; *se laisser/faire inf* and *other*, the percentages were calculated over the whole sample of 500 attestations per verb. The percentages in the *+SE intr* and the *-SE intr* columns pertain exclusively to the intransitive attestations. The intransitive counts per verb are given in the right-hand column, named *N_Intr*.

Verb (E)	Verb (IT)	Transitive	Passive	Intr +SE	Intr -SE	Faire/laisser causative	Se laisser / faire inf	Other	+SE Intr	-SE Intr	N_Intr
blossom	<i>sbocciare</i>	0.2%	0.0%	0.0%	80.0%	6.2%	0.0%	13.6%	0.0%	100.0%	400
flower	<i>fiorire</i>	0.8%	0.2%	0.0%	79.8%	6.2%	0.0%	13.0%	0.0%	100.0%	399
germinare	<i>germinare</i>	6.4%	0.0%	0.2%	64.6%	9.8%	0.0%	19.0%	0.3%	99.7%	324
burn i	<i>ardere</i>	5.2%	7.2%	0.2%	57.0%	2.6%	0.0%	27.8%	0.3%	99.7%	286
age	<i>invecchiare</i>	2.6%	2.6%	0.4%	61.6%	3.6%	0.2%	29.0%	0.6%	99.4%	310
ferment	<i>fermentare</i>	3.8%	6.2%	0.2%	26.8%	12.2%	0.0%	50.8%	0.7%	99.3%	135
rot	<i>marcire</i>	0.6%	1.0%	0.6%	68.8%	13.8%	0.4%	14.8%	0.9%	99.1%	347
wither	<i>appassire</i>	2.6%	1.0%	1.8%	26.0%	32.2%	0.2%	36.2%	6.5%	93.5%	139
mould-v	<i>ammuffire</i>	0.2%	1.4%	3.6%	36.8%	10.8%	0.0%	47.2%	8.9%	91.1%	202
burn ii	<i>bruciare</i>	41.0%	18.6%	4.0%	26.4%	2.8%	0.4%	6.8%	13.2%	86.8%	152
rust	<i>arrugginire</i>	2.0%	0.8%	5.8%	11.0%	1.8%	0.0%	78.6%	34.5%	65.5%	84

Table 3.
Italian data.

Verb (E)	Verb (FR)	Transitive	Passive	Intr +SE	Intr -SE	Faire/laisser causative	Se laisser /faire inf	Other	+SE Intr	-SE Intr	N_Intr
blossom	<i>éclore</i>	0.0%	0.0%	0.0%	66.4%	19.8%	0.0%	13.8%	0.0%	100.0%	332
flower	<i>fleurir</i>	3.4%	0.0%	0.0%	36.0%	1.4%	0.0%	59.2%	0.0%	100.0%	180
germinate	<i>germer</i>	0.4%	0.0%	0.0%	66.8%	12.6%	0.0%	20.2%	0.0%	100.0%	334
age	<i>viellir</i>	1.8%	2.4%	0.0%	73.2%	2.2%	0.2%	20.2%	0.0%	100.0%	366
ferment	<i>fermenter</i>	2.0%	1.8%	0.0%	21.6%	6.8%	0.0%	67.8%	0.0%	100.0%	108
rot	<i>pourrir</i>	16.4%	1.2%	0.0%	16.4%	4.2%	1.4%	60.4%	0.0%	100.0%	82
wither	<i>faner</i>	1.2%	0.4%	18.6%	12.2%	0.2%	0.0%	67.4%	60.4%	39.6%	154
mould-v	<i>moisir</i>	0.0%	0.2%	0.4%	25.6%	3.8%	0.0%	70.0%	1.5%	98.5%	130
burn ii	<i>brûler</i>	37.0%	13.6%	2.2%	25.8%	3.0%	0.4%	18.0%	7.9%	92.1%	140
rust	<i>rouiller</i>	1.4%	0.0%	2.4%	23.0%	1.0%	0.0%	72.2%	9.4%	90.6%	127

Table 4.
French data.

Verb (E)	Verb (SP)	Transitive	Passive	Intr +SE	Intr -SE	Faire/laisser causative	Se laisser / faire inf	Other	+SE Intr	-SE Intr	N_Intr
blossom	<i>brotar</i>	0.8%	0.0%	0.4%	78.0%	4.8%	0.0%	16.0%	0.5%	99.5%	392
flower	<i>floreecer</i>	0.6%	0.0%	0.0%	91.4%	4.4%	0.0%	3.6%	0.0%	100.0%	457
germinate	<i>germinar</i>	8.4%	2.8%	0.4%	50.0%	3.0%	0.0%	35.4%	0.8%	99.2%	252
burn i	<i>arder</i>	0.6%	0.0%	0.0%	79.4%	0.6%	0.0%	19.4%	0.0%	100.0%	397
age	<i>envejecer</i>	5.4%	3.0%	0.2%	54.8%	1.2%	0.0%	35.4%	0.4%	99.6%	275
ferment	<i>fermentar</i>	9.8%	6.2%	2.4%	26.2%	6.6%	0.0%	48.8%	8.4%	91.6%	143
rot	<i>podrir</i>	3.8%	0.4%	32.0%	0.4%	1.6%	0.0%	61.8%	98.8%	1.2%	162
wither	<i>marchitar</i>	8.2%	0.4%	77.6%	4.6%	2.0%	0.0%	7.2%	94.4%	5.6%	411
mould-v	<i>enmohecer</i>	3.2%	3.0%	21.6%	7.6%	1.0%	0.0%	63.6%	74.0%	26.0%	146
burn ii	<i>quemar</i>	47.4%	6.6%	16.0%	2.4%	0.2%	0.0%	27.4%	87.0%	13.0%	92
oxidate	<i>oxidar</i>	9.4%	1.2%	37.4%	0.6%	0.2%	0.0%	51.2%	98.4%	1.6%	190

Table 5.
Spanish data.

APPENDIX 2

Verb	<i>Avere</i> 'have'	<i>Essere</i> 'be'
<i>Sbocciare</i> 'blossom'	2	54
<i>Ardere</i> 'burn _i '	0	0
<i>Brucciare</i> 'burn _{ii} '	0	2
<i>Fermentare</i> 'ferment'	3	2
<i>Fiorire</i> 'flower'	4	29
<i>Germinare</i> 'germinate'	9	53
<i>Ammuffire</i> 'mould-v'	0	12
<i>Marcire</i> 'rot'	1	19
<i>Arrugginire</i> 'rust'	0	1
<i>Appassire</i> 'wither'	0	7
<i>Invecchiare</i> 'age'	1	44

Table 6.

Perfect auxiliary counts in -SE intransitives in Italian.

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