

# The lexical pragmatics of reflexive marking\*

Fabienne Martin<sup>1</sup>, Florian Schäfer<sup>2</sup> and Itamar Kastner<sup>3</sup>

<sup>1</sup>Utrecht University; <sup>2</sup>Humboldt-Universität zu Berlin; <sup>3</sup>University of Edinburgh

*manuscript under review, comments very welcome (2nd-revised version)*

October 30, 2024

**Abstract.** In French, a subclass of anticausative verbs is optionally marked with the clitic *se*, traditionally considered a reflexive marker. We show that this optionality does not consist of free variation. Rather, the presence or absence of *se* is influenced by lexical-pragmatic considerations: while by default, both variants are equally acceptable, in the context of a human subject, cooperative speakers strongly prefer the variant that in certain cases avoids and in other cases maintains ambiguity with the semantically reflexive interpretation which arises in parallel with the intended (anticausative) interpretation. Understanding these preferences requires taking into account the agent bias, i.e. the tendency to interpret human nouns as agents whenever is possible, and the multifunctionality of *se*, which is not only used in the formation of (non-agentive) anticausative predicates, but also in (agentive) semantically reflexive ones. Depending on whether the alternative (agentive) reflexive parse is in line with shared assumptions about the event, the preference for the presence vs. absence of *se* is predicted. The interaction between the choice of form by the cooperative language user and individual verb subclasses is an example of what we call lexical-pragmatic effects.

**Keywords:** causative alternation, reflexive, French, limited-control change-of-state verbs, in-control change-of-state verbs, lexical pragmatics, agentivity

## 1 Introduction

Change-of-state verbs with a transitive and an intransitive use, such as English *break* and *open*, are said to undergo the CAUSATIVE/ANTICAUSATIVE ALTERNATION. In their intransitive use, they describe a change-of-state event undergone by the internal argument. In their transitive use, the entity causing the change-of-state is named by the external argument of the (now two-place) predicate. The transitive use is sometimes paraphrased as ‘cause to V[intransitive]’ (Levin and Rappaport Hovav, 1995: 79), although finding the exact characterisation across languages raises a range of questions for theories of syntax, morphology and semantics (Haspelmath, 1993, Alexiadou et al., 2015).

In French, as in other Romance languages and beyond, verbs undergoing the causative/ anticausative alternation are divided into two morphological and three distributional classes, depending

---

\*Acknowledgements omitted for review. Abbreviations used: AC = anticausative.

31 on whether their anticausative variant does or does not co-occur with the “reflexive” or more ac-  
 32 curately NON-ACTIVE clitic *se* (Zribi-Hertz 1982, 1987; Labelle 1992; Schäfer 2008; Heidinger 2010,  
 33 2015, Alexiadou et al. 2015 among others). With verbs of the first class illustrated in (1), the  
 34 anticausative variant (AC) is necessarily *unmarked*, not differing morphologically from its causative  
 35 counterpart; we call these anticausatives UNMARKED ANTICAUSATIVES and notate them as “*-se*”  
 36 AC-verbs, because they are incompatible with *se* under the anticausative reading.<sup>1</sup>

37 (1) Unmarked anticausative, *-se* AC

- 38 a. *Ana change la couleur du mur.*  
 Ana changes the color of the wall  
 ‘Ana is changing the color of the wall.’  
 39 b. *La couleur du mur (#se) change.*  
 the color of the wall SE changes  
 ‘The color of the wall is changing.’

40 With verbs of the second class, illustrated in (2), the anticausative variant is obligatorily marked  
 41 with *se*. We call these MARKED ANTICAUSATIVES and notate them as “*+se*” AC-verbs.

42 (2) Marked anticausative, *+se* AC

- 43 a. *Le temps qui passe amoche tout.*  
 the time that passes damages everything  
 ‘The passage of time damages everything.’  
 44 b. *Tout \*(s’)amoche avec le temps qui passe.*  
 everything SE damages with the time that passes  
 ‘Everything gets damaged with the passage of time.’

45 The third class is illustrated in (3). Since the anticausative variants of these verbs allow both  
 46 markings, we label them OPTIONALLY MARKED ANTICAUSATIVES, “*±se*” AC-verbs.

47 (3) Optionally marked anticausative, *±se* AC

- 48 a. *Gaston casse le vase.*  
 Gaston breaks the vase  
 ‘Gaston is breaking the vase.’

---

<sup>1</sup>The restrictions on the distribution of *se* illustrated in (1b) only hold for the anticausative use of these verbs. Since verbs undergoing the causative alternation have a transitive variant, and since reflexivization can apply to all transitive predicates, all these verbs can undergo literal reflexivization. Thus, *changer* in (1b) can in fact combine with *se* in the context of a single DP, but the verb is then part of a semantically reflexive construal. Semantically reflexive construals can be distinguished from *se*-marked anticausatives in various semantic ways, for example, in that only the former allow modification by an intensifier, as in (i) (e.g. Schäfer and Vivanco 2016).

- (i) *Celui qui se change lui-même change le monde.*  
 the one who SE changes himself changes the world  
 ‘The one who changes themselves changes the world.’

([instagram.com](https://www.instagram.com))

- 49        b. *Le vase (se) casse.*  
          the vase SE    breaks  
          ‘The vase is breaking.’

50        A decisive difference between the forms with and without *se* is that the form without *se* has  
51 only one parse and interpretation, where the DP’s referent is a theme (and not an agent) of the  
52 VP-event, while the corresponding form marked with *se* is formally ambiguous (Ruwet 1972, Zribi-  
53 Hertz 1982, 1987, Martin and Schäfer 2014; see also Bahrt 2020 and literature cited therein on  
54 the reflexive-anticausative syncretism cross-linguistically): it can either involve an anticausative  
55 verb denoting a one-place predicate of change, whose sole internal argument is associated with the  
56 theme role only, or a two-place predicate of caused change that underwent reflexivization, such  
57 that the nominative DP is associated with both the theme and agent roles. In principle then, the  
58 form marked with *se* in (2b) and (3b) can be either interpreted as an anticausative verb, or as a  
59 semantically reflexive verb.

60        Many Indo-European languages show a similar distribution, with the qualification that the  
61 morphological marker found with a subset of anticausatives can be either a clitic as in French (e.g.  
62 all Romance languages), a weak pronoun (e.g. German) or a verbal affix (e.g. Icelandic, Russian,  
63 Greek). However, French is special insofar as the set of  $\pm se$  AC-verbs as in (3b) is rather big in this  
64 language compared to other Indo-European languages (e.g. Schäfer 2008, Alexiadou et al. 2015).

65        In this paper, we investigate whether the choice between the variant with or without *se* in  
66 (3b) is really free or whether there are semantic or pragmatic factors that enforce the presence or  
67 absence of the clitic *se* with  $\pm se$  AC-verbs. We argue that while the two variants are generally in free  
68 variation, this overall optionality tends to be resolved in specific contexts to either the presence  
69 or the absence of *se* due to what we consider LEXICAL PRAGMATIC CONSIDERATIONS. While,  
70 by default, both variants of the AC are equally acceptable and semantically identical, cooperative  
71 speakers following the Gricean conversational maxims (Grice 1975) favor the presence or the absence  
72 of *se* in particular contexts, if they, thereby, can avoid unintended inferences on the part of the  
73 hearer, by avoiding or maintaining the ambiguity of the *se*-form, which can be interpreted not only  
74 as an anticausative verb but also as a semantically reflexive verb.

## 75 1.1 The unmarked limited-control and the marked in-control preferences with humans

76        Our main empirical contribution consists of three interrelated generalizations, each substanti-  
77 ated by an acceptability rating study presented in Section 3. This contribution rests on the idea  
78 that the semantic information conveyed by so-called “in-control” or “limited-control” verbal mor-  
79 phologies familiar from some work on Tagalog and Salish (Dell 1983, Thompson 1988, Jacobs 2011  
80 a.o) can be lexicalized by alternating verbs in languages like French or English.<sup>2</sup> What we call  
81 IN-CONTROL VERBS denote changes typically under the control of humans involved; see *smash the*  
82 *window*.<sup>3</sup> LIMITED-CONTROL VERBS denote changes typically not under the control of humans

---

<sup>2</sup>On this point, we thank XX for discussion.

<sup>3</sup>Control is independent from desire and foreknowledge, which are two dimensions involved in the concept intentionality for Egré (2014) and in the concept of agency for Martin et al. (2023). For instance, humans typically exert control on their changes in position or posture, but such changes can be performed while the agent does not know that their action can be described with the VP. As an example, I can get closer to a location and control my movements while doing so without knowing that I’m getting closer to this location (because I ignore its existence, for instance).

83 involved; see *drop the glass*. Other verbs are neutral with respect to the control exerted or not  
 84 by humans involved in the events in their denotation; see *break the glass*. These distinctions are  
 85 also operational when alternating verbs are used as anticausatives: we have default assumptions  
 86 about the degree of control human *undergoers* exert on changes they endure; compare for instance  
 87 *to age* (human undergoers typically have little control on ageing) and *to move* (human undergoers  
 88 typically control their movements).

89 It turns out that such lexical biases reflecting general assumptions on changes involving human  
 90 undergoers are very relevant for the choice between the variant with and without *se* of  $\pm se$  ACs in  
 91 the context of a human DP in French. What we see is that while  $\pm se$  AC-verbs always allow both the  
 92 uses with and without *se* in the context of an inanimate undergoer as in (3b), the lexical-semantic  
 93 sub-classes of  $\pm se$  AC-verbs just distinguished tend to enforce or prohibit the appearance of *se*, but  
 94 only when the sole DP-argument of the anticausative predicate is *human*. With limited-control  
 95 verbs like (*se*) *rougir* ‘blush/redden’, the variant with *se* of  $\pm se$  verbs becomes dispreferred if the  
 96 nominative DP-argument is human, as in (4a/b). When the DP is non-human, the two variants  
 97 are in free variation, see (4c). We refer to this first generalization as the *unmarked limited-control*  
 98 *preference* (for human arguments). But with in-control verbs like (*se*) *plier* ‘bend, fold’, it is the  
 99 variant without *se* which becomes dispreferred, and this when the DP-argument is human only,  
 100 as illustrated in (5a-c). We refer to this second generalization as the *marked in-control preference*  
 101 (for human arguments). While the anticausative variants (5b) and (6a) are clearly dispreferred,  
 102 they are not ungrammatical, however. Although much less frequent, they do occasionally appear in  
 103 corpora (see section 3 and Appendix 2 for some naturally occurring examples from native speakers  
 104 of French).

105 (4) *Unmarked limited-control preference with  $\pm se$  anticausatives*

- 106 a. *Jeanne a rougi (sous l'effet des compliments).* (limited-control verb)  
 Jeanne has reddened under the effect of.the compliments  
 ‘Jeanne blushed/reddened (under the effect of the compliments).’  
 107 b.# *Jeanne s'est rougie (sous l'effet des compliments).*  
 Jeanne SE is reddened under the effect of.the compliments  
 ‘Jeanne blushed/reddened under the effect of the compliments.’  
 108 c. *La peau de Jeanne a rougi/ s'est rougie (sous l'effet du soleil).*  
 the skin of Jeanne has reddened SE is reddened under the effect of the sun  
 ‘Jeanne’s skin reddened (from the sun).’

109 (5) *Marked in-control preference with  $\pm se$  anticausatives*

- 110 a.# *Jeanne a plié en deux (de douleur).* (in-control verb)  
 Jeanne has bent in two from pain  
 Intended: ‘Jeanne bent over (in pain).’  
 111 b. *Jeanne s'est pliée en deux (de douleur).*  
 Jeanne SE is bent in two from pain  
 ‘Jeanne bent over (in pain).’

- 112 c. *La branche a plié/ s'est plié en deux (sous l'effet du vent).*  
the branch has bent SEis bent in two under the effect of the wind  
‘The branch bent in two (from the wind).’

113 In each of the examples in (4) and (5), a PP introduces the causer of the event. This reinforces  
114 an anticausative construal of the verb (Schäfer 2009), and weakens the (competing) semantically  
115 reflexive reading of the form with *se*, where the DP is an agent, and not only a theme in the  
116 semantic representation.

117 We propose that the above preferences follow from the interplay of default expectations about  
118 the role of humans in the events in the denotation of verbs like in (4) and (5) with the set of semantic  
119 parses made available by the grammar for the strings with and without *se*: the strings in (5a) and  
120 (6a) without *se* only have one parse and interpretation (the DP’s referent is associated with the  
121 role of theme but not the role of agent), while the corresponding strings marked with *se* in (5b)  
122 and (6b) are ambiguous (the DP is associated with the role of theme only, or with both the theme  
123 and agent roles). On this view, the unmarked limited control and marked in-control preferences  
124 reflect the most cooperative choice between forms, as the alternative form triggers unintended  
125 inferences on the part of the hearer. This idea is supported by the fact that these preferences  
126 exclusively arise with  $\pm se$  AC-verbs, for which there is a choice between forms. The class of  $-se$   
127 AC-verbs (i.e., verbs for which the anticausative must be formed without *se*) includes in-control  
128 verbs (e.g., *changer de position* ‘change in position’) and the class of  $+se$  AC verbs (for which  
129 the anticausative must be marked with *se*) includes limited-control verbs (e.g., *s’affaiblir* ‘weaken’,  
130 *s’anémier* ‘become anaemic’). Despite the forced absence or presence of *se* for the anticausative  
131 parse, they are completely fine with a human DP. Therefore, the infelicitous cases observed with  
132 verbs cannot be just due to some inherent incompatibility between the presence or absence of *se*-  
133 marking and the default meaning of the verb (in-control or limited-control). Otherwise, infelicity  
134 should be observed with limited-control/in-control verbs across the three morphological subclasses  
135 of ACs. Instead, what we see is that  $-se$  and  $+se$  verbs superimpose their limited-control or  
136 in-control lexical bias onto whatever form they must get when used as ACs.<sup>4</sup>

## 137 1.2 The marked responsibility preference with non-humans

138 Our third generalization, which is ultimately related to the first two (the unmarked limited-  
139 control preference and the marked in-control preference with humans), describes the circumstances  
140 under which the *se*-marked form of  $\pm se$  AC-verbs is preferred *even with non-human* nominative  
141 DPs. As just illustrated in (4c) and (5c), the choice between the variants with and without *se*  
142 within  $\pm se$  AC-verbs is completely free with a non-human DP across the subclasses of verbs just  
143 distinguished. However, construing inanimate entities as endowed with some agency is very common  
144 across languages (Cruse 1973, Delancey 1985, Fauconnier 2012, Piñón 2001, Koontz-Garboden 2007  
145 a.m.o). If we explicitly ask French speakers to choose the verbal form that makes the non-human  
146 more agentive, we expect them to select the variant with *se*. Thus for instance, if asked to choose  
147 which of the two forms (6a) vs. (6b) presents the rose as more responsible for its change, we expect  
148 French speakers to choose (6b). This third generalization is what we call the *marked responsibility*  
149 *preference*.

---

<sup>4</sup>We thank XX for pushing us to emphasize this point.

- 150 (6) a. *Marked responsibility preference with  $\pm se$  anticausatives*  
 151 *La rose  $\emptyset$  a flétri.* (less responsibility attributed to the rose)  
 the rose has faded  
 ‘The rose faded.’
- 152 b. *La rose s’est flétrie.* (more responsibility attributed to the rose)  
 the rose SE is faded  
 ‘The rose faded.’

153 We relate this preference to the fact that only the string with *se* allows, besides an anticausative  
 154 parse, for a semantically reflexive parse, where the sole nominative DP is construed both as a theme  
 155 and a responsible agent, ‘performing’ its own change.

156 Concluding this introduction, Table 1 summarizes our generalizations, where the two rows of the  
 157 “Human” column correspond to the unmarked limited-control preference found with limited-control  
 158 verbs and the marked in-control preference found with in-control verbs. The “Non-human” column  
 159 corresponds to the marked responsibility preference, which arises only when the speaker explicitly  
 160 aims to present the inanimate as agentive. In brackets, we refer to the experiments presented later  
 161 on to substantiate these generalizations.<sup>5</sup>

	Human argument	Non-human argument
$\pm se$ limited-control verbs ( <i>se</i> ) <i>rougir</i> ‘reddden/blush’	variant without <i>se</i> preferred ( <i>Experiment 1a</i> )	no preference between variants ( <i>Experiment 1a</i> )
$\pm se$ in-control verbs ( <i>se</i> ) <i>plier</i> ‘bend, fold’	variant with <i>se</i> preferred ( <i>Experiment 1b</i> )	no preference between variants ( <i>Experiment 1b</i> )
All $\pm se$ verbs		variant with <i>se</i> preferred to convey responsibility of Non-human ( <i>Experiment 2</i> )
All + <i>se</i> verbs (including limited-control) <i>s’affaiblir</i> ‘become weak(er)’	no choice	no choice
All – <i>se</i> verbs (including in-control) <i>changer de position</i> ‘change in position’	no choice	no choice

Table 1: Claims in the current paper on French *se* across AC verbs and related experiments.

162 The remainder of this paper is structured into two parts. Section 2 presents our competition-  
 163 based lexical pragmatic account of the three generalizations. Section 3 critically discusses a previous  
 164 prominent claim in the literature, according to which the morphological marking of French anti-  
 165 causatives goes along with a general and systematic meaning differences. We contrast this claim  
 166 with our three novel generalizations, and present our acceptability rating studies which support  
 167 these generalizations.

---

<sup>5</sup>We remain noncommittal in this paper whether the relevant contrast is between humans and non-humans or animates and inanimates; the strongest intuitions concern humans, but there could well be a cline of relevant animacy, with animals or even artefacts patterning more with humans in some contexts than in others.

## 2 A lexical pragmatic account

Understanding the three effects experimentally supported in section 3 (and summarized in Table 1) requires taking into account the multifunctionality of the morpheme *se*. More concretely, *se* is used to form different verbal diatheses (or Voices) which cannot be distinguished on the basis of the surface string. For the above biases, the relevant diatheses are anticausative predicates and semantically reflexive predicates.<sup>6</sup> A surface string of the form [DP *se* verb] is formally ambiguous between different diatheses, given the REFLEXIVE-ANTICAUSATIVE SYNCRETISM: the clitic *se* is used in French (and in many languages beyond) both as a morphological device forming reflexive verbs (reflexivizer) and as a morphological device forming anticausative verbs (anticausative morphology).

In the next subsection, we first flesh out our assumptions about the semantic interpretations going along with these diatheses. In section 2.2, we then present our account for the three biases. This account only hinges on the existence of a different semantics for each diathesis in competition and the assumption that anticausative structures with or without *se* have the same meaning, and not on the specific syntactic properties assumed to underlie them. Any theory sharing these assumptions (see e.g. Reinhart 2002, Reinhart and Siloni 2005 or Schäfer 2008, Alexiadou et al. 2015 for two different proposals) can equally derive the tendencies we are interested in.<sup>7</sup>

### 2.1 The syncretism of anticausative morphology

French alternating verbs can be used as lexical-causative verbs, semantically reflexive verbs (necessarily marked with *se*), and anticausative verbs (marked with or without *se*). We remain here largely noncommittal with regard to the syntax of these different uses and only give the semantics of untensed sentences illustrating the relevant diatheses, which is sufficient for our purposes.

The logical form in (7b) provides the semantic interpretation of the sentence (7a) involving the agentive, lexical causative use of the predicate *plier* ‘bend/fold’ (we ignore the contribution of tense/aspect). We call the thematic role of the subject DP ‘agent’ and assume that it can be assigned both to human and non-human entity-denoting DPs serving as the external argument of eventive predicates (see Cruse 1973, Fauconnier 2012, Folli and Harley 2005, Koontz-Garboden 2009 a.o.; cf. also the theta-role ‘instigator’ in Borer 2005 or Ramchand 2008).

(7) Transitive verb/lexical-causative verb:

- a. Ana a plié le guidon. ‘Ana folded/bent the handlebars.’  
 b.  $\rightsquigarrow \lambda e. \exists s(\mathbf{agent}(e, \mathbf{ana}) \wedge \mathbf{cause}(e, s) \wedge \mathbf{bent}(s) \wedge \mathbf{theme}(s, \mathbf{the\ handlebars}))$

Next, the simplified meaning for semantically reflexive construals is illustrated in (8b), which gives the semantics of (8a) (again ignoring tense and aspect). The agent can also be an inanimate, as in (8c), the semantics of which is given in (8d). The semantically reflexive reading can be enforced by adding an intensifier.<sup>8</sup>

<sup>6</sup>One further verbal diathesis formed with *se* in French and other Romance languages is the *se*-passive (or medio-passives). We believe that *se*-passives are sometimes involved in competition-based effects similar to those identified with *se*-marked anticausatives, but we leave this topic for another occasion.

<sup>7</sup>We leave aside the interesting question of whether the French data under discussion can also be accounted for adopting an analysis of marked anticausatives as semantically reflexive, discussed in Chierchia (2004), Koontz-Garboden (2009) and Lundquist et al. (2016). A detailed comparison of these two analyses is beyond the scope of this paper, but see Horvath and Siloni (2011, 2013), Beavers and Koontz-Garboden (2013a, b) and Schäfer and Vivanco (2016) for relevant discussion.

<sup>8</sup>French semantically reflexive verbs are analyzed as transitive in Sportiche (2014) and Alexiadou et al. (2015),

202 (8) Semantically reflexive causative verbs:

- 203 a. Ana s'est pliée. 'Ana bent.' (animate agent)  
 204 b.  $\sim \lambda e. \exists s(\mathbf{agent}(e, \mathbf{ana}) \wedge \mathbf{cause}(e, s) \wedge \mathbf{bent}(s) \wedge \mathbf{theme}(s, \mathbf{ana}))$   
 205 c. Le guidon s'est plié. 'The handlebars folded.' (inanimate agent)  
 206 d.  $\sim \lambda e. \exists s(\mathbf{agent}(e, \mathbf{the\ handlebars}) \wedge \mathbf{cause}(e, s) \wedge \mathbf{folded}(s) \wedge$   
 207  $\mathbf{theme}(s, \mathbf{the\ handlebars}))$

208 Unmarked anticausative verbs lack any agent-related (or more generally, external argument-related)  
 209 entailments and denote one-place predicates of change such that the sole DP is interpreted as the  
 210 undergoer of the event. The anticausative sentences in (9a) and (9c) (with animate and inanimate  
 211 undergoer DP) have the semantics in (9b/d) (ignoring tense/aspect).

212 (9) Unmarked AC:

- 213 a. #Ana a pliée. 'Ana bent.' (animate undergoer)  
 214 b.  $\sim \lambda e. \exists s(\mathbf{cause}(e, s) \wedge \mathbf{bent}(s) \wedge \mathbf{theme}(s, \mathbf{ana}))$   
 215 c. Le guidon a pliée. 'The handlebars bent.' (inanimate undergoer)  
 216 d.  $\sim \lambda e. \exists s(\mathbf{cause}(e, s) \wedge \mathbf{bent}(s) \wedge \mathbf{theme}(s, \mathbf{the\ handlebars}))$

217 With Reinhart (2002), Reinhart and Siloni (2005) or Schäfer (2008), Alexiadou et al. (2015),  
 218 Schäfer and Vivanco (2016) among many others, we assume that anticausatives with *se* also denote  
 219 one-place predicates of change. The meaning of (10a) and (10b) is therefore identical to the meaning  
 220 of (9a/c) given in (9b/d) (recall that *plier* is a  $\pm se$  AC-verbs).<sup>9</sup>

221 (10) Marked AC:

- 222 a. Ana s'est pliée. 'Ana bent.' (animate undergoer)  
 223 b. Le guidon s'est plié. 'The handlebars bent.' (inanimate undergoer)

224 To conclude, two different diatheses are realized with the very same surface string [DP *se* verb]:  
 225 semantically reflexive verbs or *se*-marked anticausatives, and the meaning of *se*-anticausatives can  
 226 in principle also be expressed with unmarked anticausatives.

227 We now present the pragmatic account of the three preferences presented in section 1, starting  
 228 with the effects that arise in the context of a human DP with limited-control verbs (2.2.1) and  
 229 in-control verbs (2.2.2).

## 230 2.2 Reasoning about the choice of the anticausative form with human DPs

231 Our analysis for the two effects involving human DPs is diagrammed in Figure 1 and rests  
 232 on the assumption that when hearing or reading *se* in a clause headed by a  $\pm se$  AC-verb *with a*  
 233 *human argument*, the reflexive parse (under which the DP is associated both with the theme and  
 234 agent roles) will always be among the salient parses as a consequence of the well-known *agent bias*

---

and as intransitive in e.g. Reinhart and Siloni (2004); see also Labelle (2008) for arguments against generating *se* in object position. But all analyses converge in the view that reflexive construals assign an agentive role to the DP, which is the most relevant point here.

<sup>9</sup>For Reinhart (2002), Reinhart and Siloni (2005), *se* is a meaningless case absorber in anticausatives (and beyond), for Schäfer (2008), Alexiadou et al. (2015), *se* is an expletive (i.e. meaningless) external argument in anticausatives.



235 (or *agent preference*) in comprehension studies: we tend to preferentially interpret thematic role-  
 236 ambiguous DPs as agents (Bickel et al. 2015, Sauppe et al. 2023 and references therein), at least  
 237 when the DP is *human*.

238 The basic idea is that when the language user intends to express an anticausative statement with  
 239 a human subject and a limited-control or an in-control  $\pm se$  verb such as in (4)–(5), they will choose  
 240 between the forms with or without *se* so as to manage the ambiguity induced by the *se*-morpheme  
 241 in the most perspicuous way, following Grice’s (1975) Manner supermaxim *Be perspicuous*. When  
 242 faced with a forced choice as the case with  $\pm se$  anticausative verbs, being clear/perspicuous amounts  
 243 among others to avoiding forms that trigger misleading inferences and preferring forms that trigger  
 244 inferences in line with shared assumptions.<sup>10</sup>

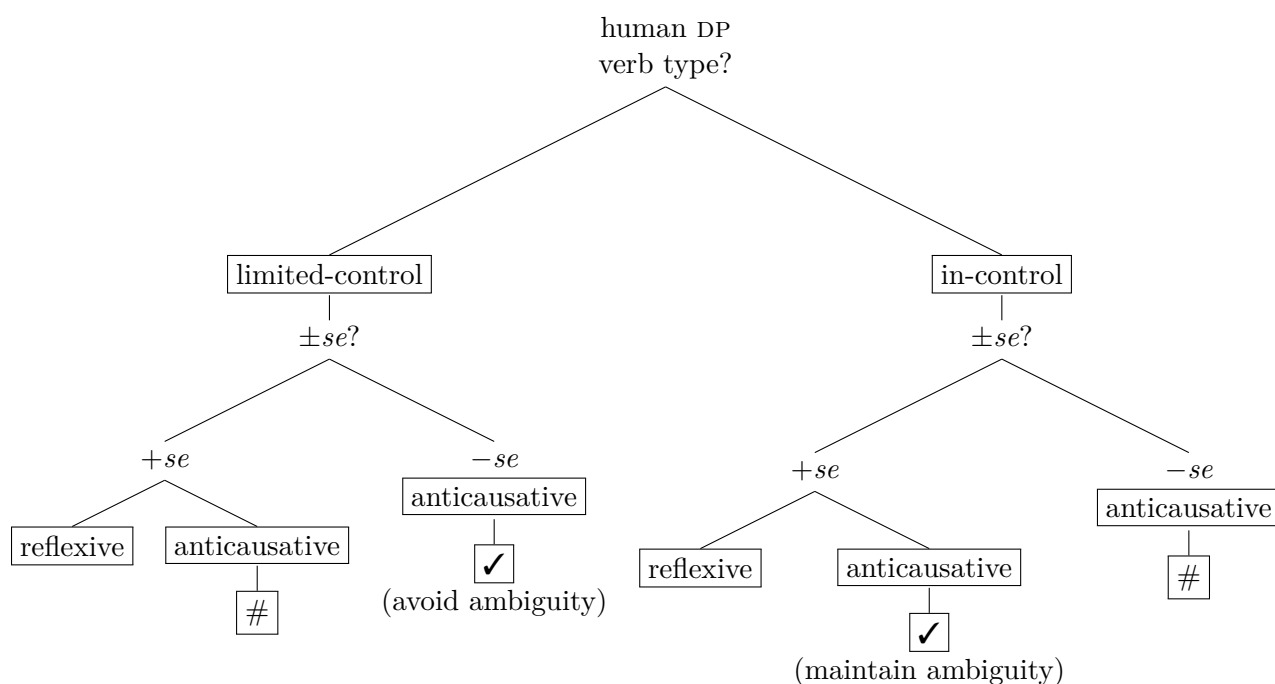


Figure 1: Pragmatic reasoning and resulting preferences with human subjects and  $\pm AC$ s (‘reflexive’= semantically reflexive reading, ‘anticausative’ = anticausative reading).

<sup>10</sup>For the phenomenon we look at, search for perspicuity plays the central role. The free variation between forms with and without *se* observed with  $\pm se$ -ACs in the context of a non-human subject (and confirmed in Experiments 1a/b presented in section 3) shows that economy constraints (and the related submaxim of Manner *Be Brief*) do not seem to play a role in the distribution of *se* with  $\pm se$  verbs, as it should prohibit  $\pm se$  optionality without further qualifications. Economy does not account either for the distribution of  $\pm se$  forms in the context of human DPs, since the clearest/most perspicuous form is sometimes the shortest one, without *se* (with limited-control  $\pm se$  verbs), sometimes the longest one, with *se* (with in-controls verbs).

Many pragmatic studies resorting to the maxim of Manner have concentrated on *Be brief* and the related *Avoid obscurity of expression* submaxims, a common assumption being that the choice for a more prolix form over a simpler form conveying the same truth-conditions signals the intention to convey a marked meaning (Horn 1989, Levinson 2000, Rett 2015, 2020 among others). The phenomenon we are looking at here is different in nature, as the morphologically marked form (with *se*) does not systematically signal a marked meaning compared to the morphologically unmarked form (without *se*).

## 2.2.1 The unmarked limited-control preference

With a human DP and a limited-control  $\pm se$  AC-verb such as *rougir* ‘redden/blush’ in (4), a cooperative speaker will typically *avoid* the ambiguity and therefore choose the form without *se*, which unambiguously conveys the (non-agentive) anticausative meaning. For if they chose the ambiguous  $+se$  form instead, the hearer will reason that the speaker did so because they were after the agentive use (which cannot be conveyed by the unchosen  $-se$  form). That is, given that both the variants with and without *se* can in principle be used for the AC reading (which is non-agentive), while only *se* can be used for the reflexive reading (which is agentive), then if the speaker chooses  $+se$ , the hearer will reason that it is because they are after the reflexive, agentive, reading. This inference is misleading with limited-control verbs, for that goes against prior shared assumptions about events denoted by these verbs, *when such events involve a human*.

That the effect reflects an optimal choice between forms is supported by the fact that this preference exclusively arises with  $\pm se$  AC-verbs (for which there is a choice between forms). The class of  $+se$  AC-verbs includes limited-control verbs (e.g., *s'affaiblir* ‘weaken’, *s’anémier* ‘become anaemic’), and despite the presence of *se*, they are completely fine with a human DP; see (11), in contrast with (4b). That is, with a human DP, the  $+se$  form of these verbs can be understood as conveying a change typically not controlled by its theme, despite the fact that the subject is potentially presented as an agent in the grammar, given that the presence of *se* makes a semantically reflexive parse possible. This is because the use of *se* is imposed by grammar for the anticausative use of these verbs and cannot therefore be interpreted as a way to convey the inference that the DP’s referent is agentive.

- (11) *limited-control +se anticausatives*  
*Chaiïm s’est affaibli/ s’est anémié.*  
 Chaiïm SE is weakened SE is gotten.anaemic  
 ‘Chaiïm weakened/got anaemic.’

Degen (2013) and Degen and Tanenhaus (2015) discuss a similar case in the domain of determiners, relying on Manner as we do. As they observe, the vague plural indefinite *some* is suboptimal in cases where a less ambiguous cardinal indefinite like *two* can apply and *is a salient alternative*. For instance, in a situation where there are two boys, two girls, four socks and four soccer balls, and one of the girls is given two socks while one of the boys is given two soccer balls, (12) is not very natural (and note that in this example, *two* is clearly a salient alternative to *some*, since it is used in the previous clause).<sup>11</sup>

- (12) One of the girls got two of the socks and one of the boys got some of the soccer balls. (Degen and Tanenhaus 2015: 675).

They propose that the problem is due to a misleading determiner choice. In a situation where *two* is a salient alternative to *some* and applies to the situation, the speaker should use it. If the speaker uses *some* instead, the hearer reasons on the basis of the Manner maxim that the speaker

<sup>11</sup>Degen and Tanenhaus (2015) ultimately aim to explain why the vague indefinite *some* triggers delays in response time when a cardinal indefinite such as *two* is a salient alternative, as in experiments by Huang and Snedeker (2011) they are discussing, challenging the view that these delays result from the costly computation of the quantity implicature from *some* to *not all*.

280 must not have in mind a set of two elements. This turns out confusing in a situation where the  
 281 relevant set counts two elements.

282 The common point with our case is the hearer’s reasoning, which goes as follows: if the speaker  
 283 faces a choice and chooses the more ambiguous form (*some* for Degen and Tonenhaus’s 2015 case,  
 284 or the *se*-marked anticausative for us), it is because this speaker is after the meaning which is not  
 285 conveyable by the less ambiguous form.<sup>12</sup> In both cases, this choice is confusing as it does not align  
 286 with shared contextual assumptions.

287 Of course, it is totally fine to use *some* to describe the same situation above when *two* is *not* a  
 288 salient alternative. This is because in such a case, the use of *some* is not interpretable as a choice  
 289 *against* the use of the less ambiguous expression *two*, just as the use of the *+se*-form with *+se*-ACs  
 290 is not interpreted as a choice *against* the use of the *–se*-form, since the latter is not a grammatical  
 291 alternative with *+se*-ACs. The misleading inference is only triggered when the use of the more  
 292 ambiguous form is clearly the result of a choice between forms made by the speaker.

### 293 2.2.2 The marked in-control preference

294 With a human DP and an in-control  $\pm se$  verb such as *plier* ‘bend/fold’ in (5), the most perspic-  
 295 uous way to handle the ambiguity amounts on the contrary to *preserving* it: the speaker intending  
 296 to express an anticausative statement with an in-control  $\pm se$  verb and a human DP will typically  
 297 choose the ambiguous variant with *se*. If they chose the variant without *se* instead, the hearer  
 298 would think that the speaker did so in order to explicitly exclude the reflexive reading. This would,  
 299 in turn, signal that the DP’s referent is devoid of all agency. This ‘no-agent’ inference goes against  
 300 shared default expectations about the way human undergoers participate in the changes-of-state  
 301 denoted by in-control verbs: they are often conceived minimally as ‘doers/effectors’ in such changes.  
 302 The *se*-variant is the optimal choice, as it does not close the door to the (agentive) reflexive parse.<sup>13</sup>

<sup>12</sup>“The motivation of this interference, in Gricean terms, comes from the maxim of Manner: if there is a less ambiguous quantifier (e.g. *two*) that could have been chosen to refer to a particular set size, the speaker should have used it. If she didn’t, it must be because she meant something else.” (Degen 2013: 68)

<sup>13</sup>In contexts strengthening the anticausative construal such as in sentences containing a causer-PP (making clear that the human undergoer is not the instigator of the change), the DP’s referent cannot be associated with ‘strong’ agentive properties such as those presupposed by agent-adverbials like *cautiously* or *skillfully*. This is why in the presence of such agent-oriented adverbials, a causer-PP is not felicitous anymore, as shown in the example below:

- (i) *Jeanne s’est (#élégamment/ #prudemment/ #doucement) pliée en deux de douleur.*  
 Jeanne SE is elegantly cautiously gently bent in two from pain  
 ‘Jeanne elegantly/ cautiously/ gently bent over in pain.’

But in such contexts enhancing the anticausative construal, the human DP can still be conceived as an agent in a weak sense, under which agency is reduced to the property of effectivity (in this weak sense of ‘agent’, Jeanne just needs to be the doer/effector of her bodily movements). (We refer to Martin et al. 2022 and Joo et al. 2023 for an analysis of the role of agent as ambiguous between a weak, ‘effector’ meaning, and a stronger meaning involving more agentive dimensions than effectivity, such as agent control.) Therefore, even if the causer-PP in sentences like (i) enforces the anticausative reading, the competing semantically reflexive reading remains possible in the presence of such PPs (if ‘agent’ is taken in the weak ‘effector’ sense). Such sentences with the *+se* variant of in-control verbs are thus potentially ambiguous, even if the anticausative reading is preferred. For instance, *Il s’est plié de douleur* ‘He bent over in pain’ is more natural after a *What happened to him?* question than after a *What did he do?* question, but the latter is also possible (see also the discussion on examples (34) in section 3).

In contrast, the *–se*-variant of limited-control verbs being unambiguously anticausative, it does not constitute a felicitous answer to a *What did they do?* question (see *Qu’est-ce qu’il a fait? #Il a pâli/rougi*. ‘What did he do? He turned pale/blushed.’).

303 Again, the effect arises because the speaker faces a choice with  $\pm se$  in-control verbs. There is in  
 304 principle nothing wrong with the fact of presenting the human DP's referent as an undergoer only  
 305 in the syntax and semantics (for instance using an anticausative sentence), in a situation where this  
 306 referent clearly is the agent of their change to some degree.<sup>14</sup> In-control  $-se$  ACs (like e.g. *changer de*  
 307 *position* 'change in position', *entrer* 'enter'), for which the  $+se$ -form is not available in the grammar,  
 308 are here instructive. When the change of location expressed by the anticausative variants of these  
 309 verbs involves a human undergoer, it is also often assumed by default that this undergoer has some  
 310 agentive properties. For instance in (14), the cosmonaut Valentina Tereshkova is typically conceived  
 311 as contributing to the event as an agent to some degree (a cosmonaut who changes their place in  
 312 space because of a slight change in pressure 'does' something to some degree). But she is encoded  
 313 as a pure undergoer in the grammar, as the PP enforces the anticausative reading of the verb and  
 314 no reflexive pronoun is present. The reason for why (14) is unproblematic is simple: since the form  
 315 without *se* is the only grammatical form for the anticausative of  $-se$  verbs, choosing this form is  
 316 not understood as a choice made to signal the lack of agency of the human undergoer. Therefore,  
 317 (14) does not trigger the kind of misleading inference making sentences like (5a) infelicitous.

- 318 (14) *in-control -se anticausatives*  
 319 *Valentina a changé de position/ est montée/ est descendue de deux mètres à cause*  
 Valentina has changed of position is ascended is descended of two meters because  
*d'un léger changement de pression dans le vaisseau spatial.*  
 of a light change of pressure in the ship spatial  
 'Valentina changed in position/ ascended/ descended by two meters due to a light change  
 change in pressure in the spacecraft'.

320 The reason of why a problem arises when the speaker chooses the anticausative form without *se*  
 321 of  $\pm se$  in-control verbs as in (5a) is precisely because the speaker *makes a choice against* the form  
 322 ambiguous with the (agentive) reflexive meaning: this choice is confusing *because* of the possibility,  
 323 for  $\pm se$  verbs, to form the anticausative with *se*, *and* in the same time leaving the door open for a  
 324 reflexive parse, under which the DP's referent is also an agent.

325 [de Swart and Farkas \(2010\)](#) discuss a similar case in the domain of determiners. The common  
 326 point with our effect is that the most optimal choice is to maximize underspecification (i.e., choose

<sup>14</sup>More generally, there is in principle nothing wrong with the use of anticausative construals in agentive situations. While anticausatives remove the agent from the syntax/semantics and thereby de-emphasize this role, they do not entail the absence of an agent (*pace Zúñiga and Kittilä 2019: 43*, for whom "what distinguishes the anticausative from the active diathesis expressing a transitive event is that the former is not caused intentionally and purposefully by a salient agent"). As [Rappaport Hovav \(2014: 23\)](#) notes after [McCawley \(1978\)](#) for instance, anticausatives are completely fine in a context making clear that an agent causes the reported change, see (13a). One can similarly observe that unaccusative verbs with a human DP are acceptable in a context making clear that the human undergoer is also the agent of the change; see e.g. (13b).

- (13) a. I pushed and pushed on the door, and finally it opened. ([McCawley 1978](#), cited in [Rappaport Hovav 2014: 23](#))  
 b. John squeezed the trigger, and thereby died.

The case of  $\pm se$  in-control verbs is different, precisely because the choice of the  $-se$ -variant is interpreted as signalling the lack of agency of the DP's referent.

327 the form maintaining the ambiguity) rather than to use the form univocally expressing the target  
328 meaning, and this in order to align with contextual shared assumptions.

Their case concerns the competition between bare plurals (*brooms*) and singular indefinites (*a broom*). As is well-known, plural forms such as *brooms* can in some environments (such as questions) range over sums *and* atoms (*Do you have children? Yes, I have a daughter*). By contrast, the singular indefinite has atomic reference only. Now suppose that you want to buy a broom and visit a shop in order to do so. Typically, you want to buy one broom only (atomic reference), but as [de Swart and Farkas \(2010: 37\)](#) rightly observe, the most natural question in such a context is (15b), which contains the ambiguous form, rather than (15a), which unambiguously has atomic reference.

- 329 (15) a. Do you have a broom?  
330 b. Do you have brooms?

331 As they argue convincingly, the ambiguous, plural form is preferred over the singular one not  
332 because the speaker is interested in buying more than one broom, but because by maintaining the  
333 referential ambiguity with sums, they align with shared default assumptions, since stores normally  
334 sell more than one item of a specific type.

335 Similarly, the speaker who chooses the *+se*-form of  $\pm se$  in-control ACs does so not because they  
336 are after the reflexive reading, but because by maintaining the ambiguity with the reflexive reading,  
337 they align with shared assumptions about in-control events involving human undergoers.

338 The two effects we just explored showed us that while the speaker choosing an anticausative  
339 construal is in principle neutral about whether the human argument is agentive in the event (after  
340 all, *anticausative* construals are typically used to de-emphasize the entity causing the change),  $\pm se$   
341 verbs force the speaker to take a stance on the matter. Choosing the variant with *se* amounts  
342 to presenting the human argument as potentially endowed with agency (since the form with *se*  
343 is ambiguous); choosing the variant without *se* amounts to presenting this argument as lacking  
344 agency (since the form without *se* is unambiguous). With  $\pm se$  verbs, neutrality about agency is  
345 thus precluded by grammar; the speaker automatically convey a stance via the (forced) choice.  
346 With *-se* or *+se* limited-control or in-control verbs, on the other hand, the presence or absence of  
347 *se* does not convey any belief on the part of the speaker about the degree of agency of the human  
348 DP, since the morphology is grammatically fixed and therefore does not reflect a choice by the  
349 speaker.

### 350 2.2.3 Manage (rather than avoid) ambiguity as a submaxim of Manner

351 According to the analysis presented in the previous subsections, maintaining an ambiguity  
352 sometimes serves the communicative purposes better than avoiding ambiguity. This goes against  
353 the idea that ambiguity should always be avoided if possible, as suggested by the Gricean submaxim  
354 of Manner *Avoid ambiguity*. But this has already been called into question before (see [Wasow 2015](#)  
355 and references therein). Recent research makes clear that ambiguity has many *raisons d'être*: it is a  
356 feature of efficient communication systems, allowing a smaller lexicon and better signal compression,  
357 among other advantages ([Brochhagen 2018, 2020](#), [Achimova et al. 2022](#) and references therein).<sup>15</sup> It

---

<sup>15</sup>In the approach developed in [Brochhagen \(2018, 2020\)](#), a speaker judges whether their addressee will be able to find the intended meaning via an ambiguous message, and avoids ambiguity when it decreases the risk of misunderstanding. Ambiguity is harmless for instance when alternative unintended meanings are nonsensical or when

also has been acknowledged that in some cases, the speaker intends to leave the hearer uncertain as to the intended interpretation (Poesio 1996, 2020), or even intends to communicate more than one (see Grice 1975: 54-55, Lewiński 2021). The marked in-control preference we look at here, as well as the preference for the plural form in some contexts such as (15), illustrate another interesting case, namely one where *preserving an ambiguity is the most perspicuous way to handle it*. In that sense, something like *Manage ambiguity* is more appropriate as a submaxim of manner centered on how ambiguities should be dealt with in cooperative communication.

In summary, the unmarked limited-control preference and the marked in-control preference with human DPs both reflect a search for the most optimal way to handle the ambiguity induced by one of the available forms to express an anticausative with a  $\pm se$  verb, namely the  $+se$  variant. *When se-marking is optional* and therefore the speaker faces a choice between forms, they will prefer the form reinforcing prior shared assumptions on the events expressed by the verb used in the anticausative statement. With in-control ACs, this is the form with *se* (the ambiguity is preserved to avoid signalling a lack of any agentive properties) while with limited-control ACs, this is the form without *se* (the ambiguity is avoided to avoid attributing agency). Alternative choices are *suboptimal* because they invite the hearer to conclude either that the undergoer of the in-control event is devoid of any agentive property, or that the theme of the limited-control event has such properties. In both cases, this inference is confusing because it clashes with default assumptions.<sup>16</sup>

#### 2.2.4 The marked responsibility preference with non-humans

The effects just discussed do not arise with non-human DPs, because the lexical bias of limited-control or in-control verbs is inert with non-humans (the notion of control is typically irrelevant for inanimate agents). Similarly, the reflexive parse does not enter the set of salient parses by default, because there is no agent preference for non-humans. Non-humans can be construed as agents in language, but there is no *a priori* preference to do so. Thus the anticausative parse remains the most salient and obvious parse for the strings marked with or without *se*. As a result, there is no difference in interpretation between a marked or unmarked form, and the speaker's choice ends up completely uninformative.

That being said, non-human and more specifically inanimate entities are often associated with an agentive thematic role (Cruse 1973, Delancey 1990, Folli and Harley 2005, Koontz-Garboden 2009 a.o.). For instance, across languages, we find agent-introducing 'control' morphologies that are compatible with DPs referring to inanimates, not necessarily with the effect of personification of the inanimate (Fauconnier 2012; see e.g. Jacobs 2011 on control morphology in Salish). Similarly, agentive verbs can be combined with non-human subjects across languages. For example, in English,

discrimination of the different interpretations does not matter for communication (see also Wasow 2015: 9). In the case of the *se*-morpheme, the difference between anticausative and the reflexive meanings is often crucial in the context of a human DP, as the DP's referent is grammatically encoded as an agent of the event (and therefore as potentially responsible of this event) in one of the two readings only. In that sense, the ambiguity of *se* is often *not* harmless and therefore has to be managed carefully in the context of a human DP.

<sup>16</sup>An interesting question concerns the high degree of grammaticalization of the optimal choices discussed here. As a reviewer rightly notices, the suboptimal forms just discussed do not look like cases of deliberate violation of a pragmatic maxim, but rather like grammatically marked utterances. For instance, instances of *se rougir* to mean *blush* collected in Appendix 2 are not perceived as attempts by the speaker to make the 'blushee' more of a 'blusher', but rather as atypical ways to speak. Such a situation is, in fact, expected under our assumption that the choice between forms is guided by Manner. Indeed, it is well known that manner implicatures are more prone to conventionalization and grammaticalization (Levinson 2000). It may even be that the conventionalization process is more advanced for some verbs than others, making the suboptimal form more marked for some verbs than for others.

391 as in French, unergative verbs like *whistle* can take an inanimate subject (Folli and Harley 2005).  
 392 Likewise, non-alternating manner verbs of contact like *frapper* ‘hit’ or *toucher* ‘touch’ select for an  
 393 agent (or instrumental) subject (see Fillmore 1970, Cruse 1973 on English), at least when they are  
 394 used in their eventive (non-stative) meaning.<sup>17</sup> Such verbs, too, can have non-human subject DPs,  
 395 as illustrated in (16) in French and (17) in English.

396 (16) *La pierre a frappé la fenêtre.*  
 the stone has hit the window  
 ‘The stone hit the window.’

397 (17) a. A rock hit the tree. (Fillmore 1970: 14)  
 398 b. What the bullet did was smash John’s collar-bone. (Cruse 1973: 16)  
 399 c. What did the roses do? They bloomed. (Piñón 2001: 14)

400 Alternating verbs combined with a non-human external argument can obviously also be used  
 401 agentively in reflexive construals. This means that for  $\pm se$  alternating verbs, it is in principle  
 402 possible to associate a non-human DP with the role of agent in the syntax/semantics when the  
 403 verbal form is *se*-marked. It is not, however, when the verbal form is unmarked, since reflexive  
 404 semantics must be expressed with the reflexive morpho-syntax in French (Reinhart and Siloni 2004,  
 405 Kayne 1975).

406 Therefore, if a French speaker aims to endow a non-human entity with agentive properties with  
 407 a  $\pm se$  AC-verb (such as the flower in (18)), we expect them to choose the marked variant, because  
 408 the *se*-marked variant is the only form able to yield a semantically reflexive parse of the clause.  
 409 Under the latter, the referent of the sole DP is not only assigned the internal theta role of an  
 410 undergoer, but also the external argument theta role of an agent of the lexical-causative variant of  
 411 the verb. As a result, it is grammatically encoded as the agent (or effector) of an event.

412 (18) *La fleur {a flétri / s’est flétrie}.*  
 the flower has wilted SE is wilted  
 ‘The flower wilted.’

413 This observation (supported by the results of experiment 2 reported in section 3.4) is easy  
 414 to explain. Only the marked string is compatible with an agentive derivation, different from the  
 415 anticausative one. Language users effectively endorse a reflexive parse if they are asked to endow  
 416 the non-human entity with responsibility/agency, considering that the *se*-marked variant is the  
 417 most effective way to do so, as the agentive semantics is never available for the unmarked form.

418 Our three lexical pragmatic generalizations about the use of  $\pm se$  ACs are substantiated by three  
 419 experiments presented in the next section. In the same section, we critically discuss a prominent  
 420 alternative view on French anticausatives, according to which so-called “external causation” leads  
 421 to ACs marked with *se* and so-called “internal causation” to ACs without *se*. We call this view the  
 422 Causation Claim.

---

<sup>17</sup> Jackendoff (1972: 44) argues that on its stative use, English *touch* associates the roles Theme and Goal/Location to its arguments.

### 3 Three lexical pragmatic generalizations about the use of $\pm se$ anticausatives

Labelle (1992), Labelle and Doron (2010) and Doron and Labelle (2011) suggest that meaning differences distinguish ACs marked with *se* and ACs marked without *se*. According to what we call the Causation Claim, ACs marked with *se* denote an “externally caused event”, where some entity different from the sole argument DP is assumed to be the causal force responsible for the coming about of the event. ACs formed without *se* express “internally caused events”, such that the sole DP itself is understood as being responsible for the coming about of the event, the latter being conceived as internally driven, that is, “as unfolding naturally without obvious external control” (Labelle 1992: 401). To derive these alleged differences in meaning, fundamentally different syntactic structures have been proposed for ACs with and without *se*. Labelle (1992) argues that ACs marked with *se* are unaccusative, while ACs without *se* are unergative, whereas Doron and Labelle (2011) and Labelle and Doron (2010) propose that both forms are unaccusative but differ substantially in their event decomposition and the position where the lexical root is merged in the structure. While we do not go into the details of these proposals, we point out a crucial point of such syntactic analyses. Since the presence vs. absence of *se* is correlated with different syntactic structures, and since the alleged meaning differences are assumed to be grounded in these different syntactic structures, these proposals wrongly predict these meaning differences not only to hold between the two variants of  $\pm se$  AC-verbs, but also globally, between  $-se$  AC-verbs and  $+se$  AC-verbs. As mentioned above and as we return to below, this is not supported by the empirical picture since the effects of our three generalizations only occur with  $\pm se$  AC-verbs.<sup>18</sup>

#### 3.1 The Causation Claim

The distinction between EXTERNAL CAUSATION and INTERNAL CAUSATION was originally proposed by Levin and Rappaport Hovav (1995: chapter 3), building on Smith (1970), in order to answer the question of when an intransitive verb has a transitive, lexical-causative counterpart. The idea is that *externally caused change-of-state verbs* such as English *break* and *open* imply some external cause which brings about the breaking and opening event. The external cause can be, for example, an agent or a natural force (Levin and Rappaport Hovav, 1995: 108). While these verbs are assumed to be basically transitive, they allow an intransitive (AC) construal because their external cause argument can be *lexically bound* at the level of lexical semantic representation and, consequently, is not projected to argument structure and syntax. *Internally caused change-of-state verbs* such as English *rust*, *decay* and *wilt*, on the other hand, were taken to be inherently intransitive predicates, characterized as describing events where something inherent to the sole argument of the verb has brought about the eventuality (Levin and Rappaport Hovav, 1995: 91). The single

<sup>18</sup>According to what we call the ‘Aspectual Claim’, ACs marked with *se* focus on the achievement of the result state, while ACs without *se* focus on the process of the verbal event (Labelle 1992, Labelle and Doron 2010). In a distinct variant of the Aspectual Claim, Legendre et al. (2016) and Legendre and Smolensky (2017) propose that only with  $\pm se$  AC-verbs, that is, if a choice is available, the marked variant necessarily carries a ‘completion interpretation’, while the variant without *se* necessarily carries a ‘partial completion interpretation’. For them, this amounts to saying that the former are interpreted as telic, and the latter as atelic predicates. However, differently from Labelle (1992) and Labelle and Doron (2010), these authors explicitly assume that no such specialization in meaning holds for  $-se$  AC-verbs and  $+se$  AC-verbs. They analyse their specific version of the Aspectual Claim within a bi-directional optimality theoretic system that involves blocking and antiblocking of particular meaning-form pairs. Martin and Schäfer (2014) showed on the basis of attested examples found in corpora that the Aspectual Claim is based on faulty generalizations. As they show, AC-verbs with and without *se* do not consistently differ in terms of completion entailment.



456 test offered for internal vs. external causation is the (non-)existence of a causative counterpart,  
 457 illustrated in (19)-(20).<sup>19</sup>

458 (19) a. The door opened.  
 459 b. John opened the door. (externally caused)

460 (20) a. The flower blossomed.  
 461 b. \*The gardener/\*The sun blossomed the flower. (internally caused)

462 A number of authors have suggested that when a French anticausative verb is attested in both  
 463 constructions ( $\pm se$  AC-verbs), the change-of-state is presented as *externally caused* when expressed  
 464 with *se* and as *internally caused* when expressed without *se* (Bernard, 1971, Rothemberg, 1974,  
 465 Burston, 1979, Labelle, 1992, Labelle and Doron, 2010, Doron and Labelle, 2011). The idea is  
 466 that the sole DP is identified as ‘the’ cause of the change (the change is ‘internally driven’), and is  
 467 consequently presented as responsible for the coming about of the event only if the verb appears  
 468 without *se*.

469 This reasoning should explain the alleged contrast between (21a) and (21b) (examples and judg-  
 470 ments from Labelle 1992): A handkerchief cannot be held responsible for its becoming red and,  
 471 thus, this change cannot be internally driven. The verb must therefore be marked to indicate ex-  
 472 ternal causation. By contrast, a human who is blushing is necessarily physiologically co-responsible  
 473 for their change-of-state, which is conceived as internally driven, and thus the verb must remain  
 474 without *se*.

475 (21) a. *Il vit le mouchoir #(*se*) rougir.* (externally caused)  
           he saw the handkerchief SE    reddden  
           ‘He saw the handkerchief getting red.’  
 476 b. *Jeanne (#*se*) rougit.* (internally caused)  
           Jean (se) reddened  
           ‘Jeanne blushed/reddened.’

477 While we agree that the overall optionality that characterizes  $\pm se$  AC-verbs like *rougir* is sus-  
 478 pended in examples like (21b) *with a human subject*, it is actually not in examples *with a non-human*  
 479 *subject* like (21a). As discussed in the previous section and experimentally supported below, the  
 480 correct empirical (and, in turn, theoretical) divide is thus between human and non-human under-  
 481 goers of the change-of-state event, *not* by the distinction between internal and external causation.  
 482 Furthermore, the effect of a human argument is not the same across the whole set of  $\pm se$  AC-verbs:  
 483 among  $\pm se$  AC-verbs, in-control and limited-control verbs need to be distinguished.

---

<sup>19</sup>Later work has argued that the distinction between internal and external causation is empirically and conceptually problematic, and grammatically irrelevant (see in particular Alexiadou 2014 and Rappaport Hovav 2014, 2020). An obvious problem is the circularity in the argumentation: “verbs are classified in an intuitive way and then when the data go contrary to the classification, verbs are suggested to be either wrongly classified or to allow more than one classification” (Rappaport Hovav 2020: 227). Relatedly, in some languages (including English), verbs typically classified as internally caused like *wilt* can be used transitively with an external causer subject, and sometimes even with an agentive subject (Wright, 2002). For Rappaport Hovav (2020: 245), the reason why internally caused change-of-state verbs are most of the time used intransitively is not grammatical, but rather conceptual: external causal factors for the changes expressed by these verbs are just very expected to occur, which is why they remain unnamed.

484 **3.2 Limited-control verbs**

## 485 3.2.1 Verb class and human undergoer, not causation

486 According to the Causation Claim, all  $\pm se$  AC-verbs should behave the same and enforce the  
 487 presence of *se* if the event is characterized as externally caused, while disallowing *se* if the event is  
 488 internally caused.

489 Apart from the conceptual problem raised by the distinction between internal/external causa-  
 490 tion, a further problem for this view is that, under closer scrutiny, only limited-control  $\pm se$  AC-verbs  
 491 such as *rougir* in (21) become problematic with *se*, and this only if their sole argument is human.

492 More French examples of limited-control verbs include the verbs in (22), all of which denote  
 493 events which, under their most salient readings, describe changes which are typically not controlled  
 494 by a human undergoer. In this class, we only put verbs compatible with human subjects, which  
 495 can in principle exert control on some of the changes they endure.<sup>20</sup> Limited-control verbs occur  
 496 in all three morphological classes of French anticausatives, as the examples in (22a-c) show.<sup>21</sup>

497 (22) Some Limited Control anticausative verbs in French:

- 498 a.  $\pm se$  ACS: *(se) brunir* ‘brown’, *(se) foncer* ‘darken’, *(se) noircir* ‘blacken’, *(se) pâlir* ‘turn  
 499 pale’, *(se) rajeunir* ‘become young’, *(se) rougir* ‘redden, blush’.
- 500 b.  $+se$  ACS: *s’affaiblir* ‘weaken’, *s’amaigrir* ‘get thinner’, *s’amoindrir* ‘weaken’, *se fortifier*  
 501 ‘get stronger’, *s’anémier* ‘become anaemic’, *s’arrondir* ‘put on weight’
- 502 c.  $-se$  ACS: *grossir* ‘become bigger’, *maigrir* ‘get thinner’, *grandir* ‘grow’, *vieillir* ‘grow  
 503 older’

504 Example (23a) is actually fine both with and without *se* (against Labelle’s judgment reported in  
 505 (21a)), but (23b) is indeed degraded for us with *se*, in line with Labelle’s (1992) judgment. We  
 506 called this the unmarked limited control preference (with human DPs).

- 507 (23) a. *Le fleuve (se) rougit.*  
 the river SE reddens  
 ‘The river is reddening.’
- 508 b. *Jeanne (#se) rougit.*  
 Jean SE reddens  
 ‘Jeanne is blushing/reddening.’

509 The examples in (24), which all have human subjects with  $\pm se$  limited-control verbs, show that  
 510 the unmarked limited control preference holds irrespective of the type of causation involved. The  
 511 examples with *se* in (24a-b) are predicted to be odd also under the Causation Claim because they  
 512 denote spontaneous events (internally caused). But the examples in (24c-d) (again with *se*) are

<sup>20</sup>We therefore do not put in our class of limited-control verbs so-called internally-caused change-of-state  $\pm se$  verbs such as *flétrir* ‘wilt’ or *rouiller* ‘rust’. The latter verbs only combine with a human subject if its referent is metaphorically reinterpreted as a (non-agentive) vegetal or mineral entity (as in e.g., *je (me) flétris* ‘I’m wilting’ or *je (me) rouille* ‘I’m rusting’). Verbs like *sleep* or *hiccup* also take a human subject and also express events that cannot be controlled, but these events are activities, not changes. These verbs are thus limited-control *activity* (intransitive) verbs. We are not concerned with these verbs here.

<sup>21</sup>All these verbs alternate in French, but  $-se$  verbs tend to be more often used in intransitive construals, while  $+se$  verbs tend to be more often used in transitive construals (Heidinger 2010, 2015).

513 equally bad, even though the adjuncts in these examples make it clear that the change expressed  
 514 by their AC verb is externally caused. (24a-d) are all fully acceptable without *se*.

- 515 (24) a. # *Djamal s'est beaucoup rajeuni ces derniers temps.* (internal cause)  
 Djamal SE is a lot rejuvenated these last times  
 Intended: 'Djamal rejuvenated a lot lately.'
- 516 b. # *Soumia s'est beaucoup pâlie ces derniers temps.* (internal cause)  
 Soumia SE is a lot got-paler these last times  
 Intended: 'Soumia became much paler lately.'
- 517 c. # *Ada s'est beaucoup rajeunie grâce à cette nouvelle relation.* (external cause)  
 Ada SE is a lot rejuvenated thanks to this new relationship  
 Intended: 'Ada rejuvenated a lot thanks to this new relationship.'
- 518 d. # *Les gens se rougissent sous l'effet de ces lunettes.* (external cause)  
 the people SE turn.red under the effect of these glasses  
 Intended: 'People turn red under the effect of these glasses.' (Zribi-Hertz 1987: 45)

A common point to all the examples in (24) is that the context easily accommodates the default inference triggered by limited-control verbs that the human enduring the change does not control this change. But verbs that, by default, are interpreted as limited-control predicates can also be used in contexts that make explicitly clear that the human DP is associated not only with the theme but also the agent role in the syntax/semantics (the change is then often different from the one described by the default use of the verb; for instance, the AC *rajeunir* by default means *take years off/rejuvenate*, but can also mean *make oneself look younger*). In such semantically reflexive contexts, we predict the opposite pattern than in (24): the marked form of the verb should be preferred to the unmarked one, because reflexive semantics must be expressed with the reflexive marker *se* in French (Kayne 1975, Reinhart and Siloni 2004).<sup>22</sup> This is indeed the case; for instance, the reflexive has to appear in the example (25), because it is clear that the adults consciously make themselves look younger. The same example without *se* would be very strange, because the purpose clause requires the subject's referent to be an agent, but the limited-control AC indicates that it is not one (cf. English #*He rejuvenated in order to speak with his students*).

- 519 (25) *Certains adultes vont tenter de #(se) rajeunir pour rentrer en contact avec vos progénitures*  
 'certain adults will try to SE get.younger to enter in contact with your children'  
 'Some adults will try to make themselves look younger in order to enter into contact with your children.'  
 (Frtenten20, horizonnm.fr)

The next set of examples shows that *non-human* DPs are generally acceptable with both morphological variants irrespective of the distinction between internal and external causation. The examples in (26a-b) mention the existence of an external cause in a prepositional phrase, and the examples in (26c-d) express changes conceived as spontaneous. All these examples, which were

---

<sup>22</sup>Reflexive semantics is morphologically or lexically marked across languages (e.g. Reinhart and Reuland 1993, Kastner 2017).

taken from corpora and double-checked with additional speakers, are fully acceptable irrespective of whether the AC verb appears marked or unmarked.

- 520 (26) a. *Le métal s'est rougi sous l'effet de la chaleur.* (+*se*, external cause)  
the metal SE is reddened under the effect of the warmth  
'The metal reddened under the effect of the warmth.' (Zribi-Hertz 1987: 45)
- 521 b. *La pierre avait rougi sous l'effet du feu.* (-*se*, external cause)  
the stone has reddened under the effect of the fire  
'The stone reddened under the effect of the fire.' (FrTenTen20, chaslerie.fr)
- 522 c. *L'air se noircit (...) et la tempête arrive.* (+*se*, internal cause)  
the air SE blackens and the storm arrives
- 523 d. *Le papier thermique (...) a tendance à noircir spontanément.* (-*se*, internal cause)  
the paper thermal has tendency to blacken spontaneously  
'Thermal paper tends to get black spontaneously.' (FrTenTen20, docplayer.fr)

524 In sum, the data confirms the empirical picture given in section 1: in a default context (i.e., not  
525 a semantically reflexive context as in (25)), the variant without *se* of limited-control  $\pm se$  verbs  
526 is very much preferred if the sole argument is human, but both variants can be used if the sole  
527 argument is non-human. The distinction between internal and external causation does not interfere  
528 in the distribution of the morphological marking in  $\pm se$  ACs.<sup>23</sup> Furthermore, the unmarked limited-  
529 control preference for humans does not arise with limited-control +*se* AC verbs, for which there is  
530 no choice between forms either (recall example (11) and the discussion around it).

---

<sup>23</sup>The distinction is equally irrelevant for ACs with a fixed morphological behavior. With such verbs, non-human subjects are unproblematic in an internally caused as well as an externally caused setting, as illustrated with the +*se* AC *se briser* 'break' in (27a–b) and with the –*se* AC *exploser* 'explode' in (28a–b).

- (27) a. *le téléphone construit par Huawei rencontrerait (...) de gros soucis de fragilité au*  
the telephone built by Huawei meet.COND.3SG of big problems of fragility at.the  
*niveau de ses vitres qui se briseraient toutes seules selon de nombreux utilisateurs.*  
level of its glasses which SE break all alone according to of a lot of users  
'The phone built by Huawei has many problems of fragility with regard to its panes which break by  
themselves according to many users.' (internal cause, Frtnten20, be geek.fr)
- b. *la majorité des noyaux se brisent sous l'action des photons.*  
the majority of.the kernel SE break under the.action of.the photons  
'the majority of kernels break under the action of photons.' (external cause, Frtnten20, astrosurf.com)
- (28) a. *L'Iphone a vraiment explosé de lui-même.*  
the.Iphone has really exploded by itself  
'The iPhone really exploded by itself.' (internal cause, Frtnten20, iphon.fr)
- b. *Certaines vitres explosent sous l'action du vent.*  
some glasses explode under the.action of.the wind  
'Some glasses explode under the action of the wind.' (external cause, Frtnten20, keraunos.org)

Est-ce que la phrase suivante est naturelle?  
 Djamila a pâli à l'annonce de l'infidélité de son amoureux.  
**Tout à fait naturelle** ○○○○○○ **Pas du tout naturelle**

Figure 2: Example of stimuli of Experiment 1a rating scale task

531 3.2.2 Experiment 1a

To test whether the unmarked limited-control preference is robust, we conducted an online acceptability study with native speakers of French (N = 154) (Full details of the experiment can be found in the Appendix 1 and online materials). Participants were asked to read example sentences built with one of the five *±se* limited-control verbs listed in (29) and to rate them for acceptability on a 7-point Likert scale (an additional verb, namely *foncer* ‘darken’, was used with non-human subjects only, as it does not combine naturally with human subjects in French). Distractors were mixed with the test items. An example of the test items is given in Figure 2. The example is translated into English in (31b).

- 532 (29) *±se* limited-control verbs used in Experiment 1a  
 533 *brunir* ‘brown’, *noircir* ‘blacken’, *pâlir* ‘get pale’, *rajeunir* ‘get young(er), rejuvenate’, *rougir*  
 534 ‘redden, blush’

The 2x2x3 design manipulated the following factors:

- 535 (30) a. SE: whether the verb of the sentence appeared with *se*-marking or without.  
 536 b. ANIMACY: whether the sole argument was human or not.  
 537 c. CONTEXT: whether the sentence was presented without context (we call this ‘neutral  
 538 context’), in an inchoative context, or in a semantically reflexive context.

539 Examples of the three contexts are given in (31) for the verb (*se*) *pâlir* ‘fade, go pale, make  
 540 oneself pale’ in the context of a human argument and an unmarked version of the verb (example  
 541 (31c) is predicted to be bad due to the absence of *se*, recall (25)). Each trial with a human argument  
 542 contained a proper name in subject position.

- 543 (31) a. NEUTRAL CONTEXT  
 544 *Rachida a pâli.*  
 Rachida has gone.pale  
 ‘Rachida went pale.’  
 545 b. INCHOATIVE CONTEXT  
 546 *Djamila a pâli à l'annonce de l'infidélité de son amoureux.*  
 Djamilia has gone.pale at the.announcement of the affair of her lover.  
 ‘Djamila went pale when she heard about her lover’s affair.’  
 547 c. REFLEXIVE CONTEXT  
 548 *Khadija a pâli pour les besoins de son personnage de théâtre.*  
 Khadija has gone.pale for the needs of her role of theater  
 ‘Khadija went pale for her theater role.’

Context	Animacy	+se M	SE	-se M	SE
Inchoative	Human	4.109	0.197	6.321	0.110
	Non-human	5.167	0.190	5.583	0.173
Neutral	Human	3.218	0.203	6.526	0.109
	Non-human	4.616	0.200	5.2821	0.183
Reflexive	Human	4.904	0.189	3.551	0.198
	Non-human	5.917	0.156	6.449	0.112

Table 2: Raw means (M) and standard errors (SE) for Experiment 1a.

549 Inchoative contexts were set up with a prepositional causal adjunct specifying an external cause  
550 of the change. This context enforces an inchoative/anti-reflexive parse of the clause (an alternative  
551 reflexive parse is very implausible across target items; for instance, in (31b), it is very implausible to  
552 come up with a scenario where Djamila made herself pale when she heard about her lover’s affair).  
553 Reflexive contexts were set up with the help of an adjunct reason clause or a purpose adjunct PP  
554 as in (31c), which indicates that the human subject of the main clause is ascribed control over the  
555 event (we return to inanimate subjects in reflexive contexts in section 2.4).

556 With the reason clause or purpose-PP, we enforce a construal where the human sole DP is  
557 understood as an external argument. Since no second DP is available that could be interpreted  
558 as the internal undergoer argument, the most plausible parse is one where the sole DP is both  
559 the external and the internal argument, thus a reflexive interpretation. Given that in French, a  
560 reflexive interpretation is obligatorily marked with the clitic *se*, we predict the variant with *se* to  
561 be rated high and the variant without *se* to be rated low in a reflexive context.

Based on the discussion above, our predictions were as follows:

- 562 (32) a. With human arguments, the variant without *se* will be rated higher than the variant  
563 with *se* in the neutral and inchoative contexts. Non-human arguments will not show this  
564 preference. This is our unmarked limited-control preference for humans.  
565 b. With human arguments, the variant with *se* will always be rated higher than the variant  
566 without *se* in the reflexive context. With non-human arguments, we do not expect such  
567 a difference in the ratings of forms with and without *se* (we come back to this point in  
568 section 3.4).

569 The results are summarized in Table 2, which gives raw means and standard errors for each  
570 condition, and in Figure 3, where each dot indicates a single trial (one sentence rated by one par-  
571 ticipant) and error bars give 95% confidence intervals. The confidence intervals can be understood  
572 as follows: if we ran the same experiment many times, we expect the mean rating to fall some-  
573 where between these error bars 95% of the time; this “spread” of values gives a better indication of  
574 uncertainty than a single mean value (the sample mean can still be seen in the black dot halfway  
575 between the two ends of the error bars). Informally, when the error bars of two conditions do not  
576 overlap, this is evidence that the two conditions differ. So for example, in the Inchoative and Neu-  
577 tral panes, looking at human subjects, there is evidence that participants rate examples without *se*  
578 substantially higher than sentences with *se*. In these two panels, most ratings are high for the no-*se*  
579 conditions, but more varied and negative overall for the yes-*se* condition. By contrast, turning to

580 non-human subjects in the same Inchoative and Neutral panes, there is no visible difference in  
 581 the ratings for sentences with and without *se* (the ratings and error bars for the two conditions  
 582 overlap). In the Reflexive pane with human subjects, participants rated the forms with *se* higher  
 583 than the forms without *se*, which were negative overall. This difference is again not observed with  
 584 non-human subjects in the same reflexive pane. The individual dots reflect the overall variation in  
 585 our sample.

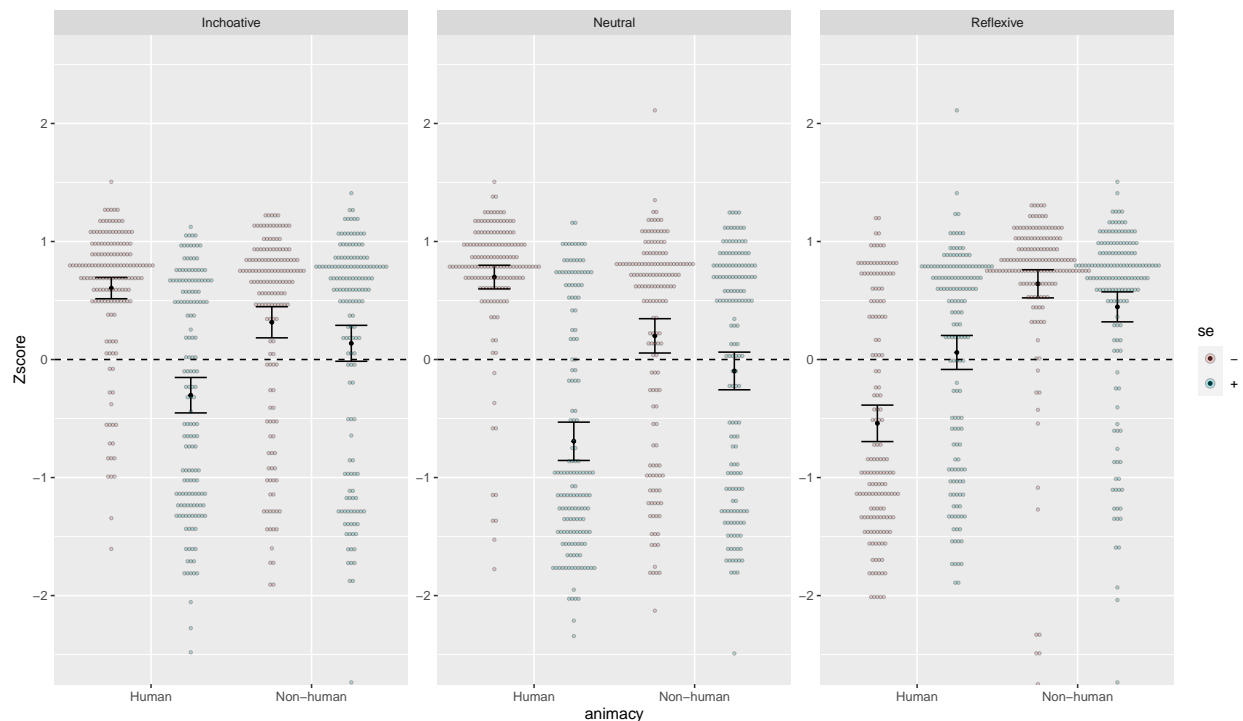


Figure 3: Results of Experiment 1a (limited-control verbs).

586 These findings were evaluated using an ordinal Bayesian analysis (see the Appendix 1 for full  
 587 model output and the online repository for additional confirmatory analyses). Our prediction was  
 588 that we would see lower ratings when human arguments have *se* in the neutral and inchoative  
 589 contexts. The relevant effects whose estimate is reliably different from zero are given in Table 3,  
 590 with the full output reproduced in the Appendix 1.

591 The model’s 95% Credible Interval for the interaction of Human and *se* lies in the range [–  
 592 3.58, –2.15], meaning that a *se*-marked human clause is rated almost 3 likert points less (estimate =  
 593 –2.87) than a human clause without *se*, before considering Context. This effect is then immediately  
 594 qualified by additional interactions; we simplify slightly now by focusing on the three-way inter-  
 595 action between Animacy, Se and Context. The effect just mentioned means that examples with  
 596 human arguments receive lower ratings when they have *se*, but this assumes the baseline context  
 597 Neutral. In Inchoative contexts (interaction of Human:Se:Context), this effect is about 1.5 likert  
 598 points less strong than in the Neutral context, but still substantial overall. The pattern is therefore  
 599 confirmed for the Inchoative and Neutral contexts, as predicted. In other words, this is the human  
 600 unmarked limited-control preference. The three-way interaction of Human:Se:Inchoative indicates  
 601 that the effect is slightly stronger in the Neutral context than the Inchoative one, a pattern that

602 can be seen in Figure 3 as well, and not one we had any prior hypotheses for.<sup>24</sup>

Table 3: *Relevant predictors from the Bayesian ordinal model, Experiment 1a (limited-control).*

	Estimate	Est. Error	95% CI
AnimacyHuman	1.66	0.79	[0.12,3.22]
Se	-0.78	0.23	[-1.25,-0.35]
ContextInchoative	0.46	0.24	[-0.01,0.92]
ContextReflexive	1.11	0.36	[0.42,1.81]
AnimacyHuman:Se	-2.87	0.36	[-3.58,-2.15]
AnimacyHuman:ContextInchoative	-1.28	0.38	[-1.99,-0.56]
AnimacyHuman:ContextReflexive	-4.50	0.46	[-5.43,-3.61]
Se:ContextReflexive	-0.10	0.36	[-0.79,0.60]
AnimacyHuman:Se:ContextInchoative	1.35	0.49	[0.37,2.30]
AnimacyHuman:Se:ContextReflexive	4.82	0.51	[3.84,5.81]

603 The next prediction concerns the behavior of human and non-human arguments in the reflexive  
 604 context. Here we predicted no difference for non-humans, but a preference for *se* for humans. This  
 605 is what we found: the interaction of *Se* and Reflexive was not reliably different from 0, meaning  
 606 there was no difference for non-humans whether they had *se* or not. However, the effect for human  
 607 arguments was robust: the three-way interaction of Human:Se:Reflexive had a very high estimate  
 608 (4.82), reflecting the preference of *se* for reflexive clauses with humans, effectively reversing the  
 609 patterns discussed above when Neutral was the reference level. Additional inferential statistics,  
 610 described in the Appendix 1 and OSF repository, show for example that the model would predict  
 611 high ratings for no-*se* sentences with humans in the non-reflexive contexts.

612 In sum, we found evidence for the unmarked limited-control preference with limited-control  
 613 verbs. These  $\pm se$  limited-control verbs, such as *rougir* ‘blush’, *rajeunir* ‘rejuvenate’ and *pâlir*  
 614 ‘get pale’ remain preferably unmarked when used as anticausatives with human subjects. This  
 615 preference does not hold with a non-human subject. We next carry out the same exercise with the  
 616 second set of  $\pm se$  AC-verbs, namely in-control verbs.

### 617 3.3 In-control verbs

#### 618 3.3.1 Verb class and human undergoer, not causation

The limited-control verbs of the previous section contrast with in-control  $\pm se$  verbs, which denote changes a human undergoer typically exerts some control over. More examples of this class of in-control anticausative verbs are given in (33).<sup>25</sup> These predicates are typically used as motion or

<sup>24</sup>Our post-hoc account for this pattern is that the overt inchoative context helps the interpreter to understand that they should *not* conclude from the speaker’s choice of the *se*-variant that they were after the (agentive) reflexive parse, which is precisely according to our analysis the confusing inference typically drawn on the basis of the maxim of Manner (see section 2).

<sup>25</sup>Some of the verbs listed under (33c) can be used *se*-marked with a single human argument, see (ia) below. However, they must remain unmarked when used with a single non-human argument (see (ib)), which we take to indicate that the *se*-marked variant with a human DP is always semantically reflexive, and never anticausative.

- (i) a. Pierre (se) bouge/ (se) recule.  
 Pierre SE moves/ SE stepsbackwards  
 b. La pierre (#se) bouge/ le ballon (#se) recule.  
 the stone SE moves/ the ball SE steps backwards



posture verbs when combined with a human subject (called auto-causatives by [Geniušienė 1987](#) and [Creissels 2003](#) and endo-reflexives by [Haspelmath 1987](#)), as well as degree achievements expressing a behavioral change, such as the last five verbs in (33a) taken in their behavior-related use. The relevant use is exemplified in (36b) and (37b).

619 (33) Some In-Control anticausatives in French:

- 620 a.  $\pm se$  ACs: (*s'*)*allonger* ‘get longer/lie’, (*s'*)*approcher de* ‘get close(r) to’, (*s'*)*avancer* ‘move  
621 forward’, *reculer* ‘step backwards, diminish’, (*se*) *plier* ‘bend’, (*se*) *radoucir* ‘soften’, (*se*)  
622 *balancer* ‘swing, rock’, (*s'*) *arrêter (de marcher)* ‘stop (walking/working)’, (*se*) *courber*  
623 ‘bend, curve’, (*se*) *loger* ‘fit, stay’, (*se*) *nicher* ‘squeeze in, tuck oneself in’, (*se*) *dur-*  
624 *cir* ‘harden’, (*se*) *raidir* ‘stiffen, harden’, (*se*) *ramollir* ‘melt/soften’, (*se*) *refroidir* ‘get  
625 cold(er)’, (*se*) *dégeler* ‘unfreeze’  
626 b.  $+se$  ACs: *s’abaisser* ‘get lower, bend’, *se lever* ‘raise, stand up’, *se déplacer* ‘move’, *se*  
627 *mouvoir* ‘move’, *se rapprocher* ‘get closer’, *se relever* ‘got up, get back on one’s feet’, *se*  
628 *retourner* ‘turn over, around’  
629 c.  $-se$  ACs: *bouger* ‘move’, *remuer* ‘move’, *changer (de place)* ‘change (one’s position)’,  
630 *monter* ‘climb, go up’, *plonger* ‘dive into, get immersed’, *entrer* ‘get in’

631 A natural construal for in-control verbs with a single human DP is the reflexive, agentive use, and  
632 since reflexive semantics requires an overt reflexive marker in French, the *se*-form must be selected  
633 by a speaker who intends to convey this reading. But we are here interested in the case where  
634 in-control verbs enter into an anticausative construal, where the human DP is only encoded as an  
635 undergoer in the grammar. This is for instance the use selected for *se plier* ‘SE bend’ in (34c) when  
636 it is used as an answer to (34a). Note that the exchange (34a/c) sounds more felicitous than the  
637 exchange (34b/c), which is unsurprising given the choice of the unaccusative verb *tomber* ‘fall’ and  
638 the modification of *se plier* by the cause-PP *de douleur* ‘from pain’.

639 (34) ...*Et alors Judy a tiré sur Jim.*

640 ‘...And then Judy shot Jim.’

- 641 a. *Oh wow, et qu’est-ce qu’il lui est arrivé?*  
642 ‘Oh wow, and what happened to him?’  
643 b. *Oh wow, et qu’est-ce qu’il a fait?*  
644 ‘Oh wow, and what did he do?’  
645 c. *Il est tombé à genoux et s’est plié de douleur.*  
he is fallen to knees and SE has bent from pain  
‘He fell to his knees and bent over in pain.’

646 As already mentioned in section 1, with in-control  $\pm se$  ACs and human subjects, it is the *unmarked*  
647 form which is problematic. This is what we called the *marked in-control preference* (for humans),  
648 illustrated with more examples (35)–(37) below. In the (a)-examples a non-human subject is fine  
649 with or without *se*; in the (b)-examples, a human subject is fine with *se*, and the (c)-examples show  
650 the degradedness of human subjects in the absence of *se*. We add a cause-PP across examples to  
651 enforce the inchoative reading.

- 652 (35) a. *La tôle*  $\emptyset$  *a plié/ s'est pliée en deux (sous le poids).*  
the metal sheet has folded SE is folded in half under the weight  
‘The metal sheet folded in half under the weight.’
- 653 b. *Jeanne s'est pliée en deux (de douleur).*  
Jeanne SE is bent in two from pain  
‘Jeanne bent over (in pain).’
- 654 c. # *Jeanne*  $\emptyset$  *a plié en deux (de douleur).*  
Jeanne has bent in two from pain  
Intended: ‘Jeanne bent over (in pain).’
- 655 (36) a. *Ici le temps*  $\emptyset$  *a radouci/ s'est radouci avec l'arrivée de*  
here the weather has gotten-milder SE is gotten-milder with the arrival of  
*l'été.*  
the summer  
‘Here the weather got milder with the start of the summer.’
- 656 b. *Xiao s'est radouci sous la pression et a libéré les pratiquantes.*  
Xiao SE is gotten-milder under the pressure and freed the churchgoers  
‘Xiao mellowed under the pressure and freed the churchgoers.’  
(fr.clearharmony.net)
- 657 c. # *Xiao*  $\emptyset$  *a radouci sous la pression.*  
Xiao has gotten-milder under the pressure.  
‘Xiao mellowed under the pressure.’
- 658 (37) a. *Le métal*  $\emptyset$  *a durci/ s'est durci sous la chaleur.*  
the metal  $\emptyset$  has hardened SE is hardened under the heat  
‘The metal got hard with the heat.’
- 659 b. *Laeticia Hallyday s'est durcie après la mort de Johnny.*  
Laeticia Hallyday SE is hardened after the death of Johnny  
‘Laeticia Hallyday became harder after Johnny’s death.’ (leparisien.fr)
- 660 c. # *Après la mort de Johnny Hallyday, Laeticia*  $\emptyset$  *a durci.*  
after the death of Johnny Hallyday Laeticia has hardened  
Intended: ‘After Johnny Hallyday’s death, Laeticia became harder.’

661 The intuitions reported in (35)-(37) were also tested in an online acceptability study to which we  
662 turn next.

### 663 3.3.2 Experiment 1b

664 Experiment 1b was carried out with the same participants as Experiment 1a (N = 154) during  
665 the same session, though items were counterbalanced across participants (see the Appendix 1 and  
666 online materials). The experimental setup was the same, except that we used five in-control verbs  
667 and appropriate contexts, within the same 2x2x3 design. Verbs used in Experiment 1b are listed  
668 in (38) (distractors were again mixed with the test items).

Context	Animacy	+se M	SE	-se M	SE
Inchoative	Human	5.590	0.167	3.506	0.201
	Non-human	6.051	0.147	6.237	0.124
Neutral	Human	5.904	0.154	3.628	0.200
	Non-human	5.641	0.172	5.269	0.192
Reflexive	Human	5.891	0.153	2.994	0.196
	Non-human	6.308	0.124	5.654	0.165

Table 4: Raw means and standard errors for Experiment 1b.

669 (38)  $\pm se$  in-control verbs used in Experiment 1b  
670 *approcher de* ‘get close(r) to’, *durcir* ‘harden’, *plier* ‘bend’, *radoucir* ‘get soft(er)’, *refroidir*  
671 ‘get cold(er)’

Our predictions were as follows (predictions about non-human arguments are discussed in more detail in section 3.4):

- 672 (39) a. For human arguments, the marked variant will be preferred across all contexts (neutral,  
673 inchoative and reflexive contexts). (This is our marked in-control preference for humans.)  
674 b. Non-human arguments will not show this preference: both forms will be acceptable across  
675 contexts.

676 Raw means and standard errors are given in Table 4. The results are summarized in Figure 4,  
677 where each dot indicates a rating and error bars give 95% confidence intervals. Figure 4 shows that  
678 in the Inchoative and Neutral panes, looking at human subjects, there is evidence that participants  
679 rate examples with *se* higher than sentences without *se*. Most ratings are high for the yes-*se*  
680 conditions, but more varied and negative overall for the no-*se* condition. By contrast, turning to  
681 non-human subjects in the same Inchoative and Neutral panes, there is no obvious difference in the  
682 ratings for sentences with and without *se* (both forms receive positive ratings overall, confirming  
683 that the verbs tested are  $\pm se$  ACs). In the Reflexive pane with human subjects, participants rated  
684 again the forms with *se* higher than the forms without *se*. This difference is again not observed  
685 with non-human subjects in the same reflexive pane (we come back to this last point in section  
686 3.4).

687 These findings were evaluated using an ordinal Bayesian analysis (see the Appendix 1 for full  
688 model output and the online repository for additional confirmatory analyses). Our prediction  
689 was that we would see higher ratings when human arguments have *se* in all three contexts. The  
690 relevant effects whose estimate is reliably different from zero are given in Table 5, with the full  
691 output reproduced in the Appendix 1.

692 The model’s 95% Credible Interval for the interaction of Human and *se* lies in the range  
693 [0.93,2.21], meaning that a *se*-marked human clause is rated one and a half likert points higher  
694 (estimate = 1.57) than a human clause without *se*, across contexts. This effect is qualified by  
695 additional interactions; we simplify by focusing on the three-way interaction between Animacy, Se  
696 and Context. The effect just mentioned means that examples with human arguments receive higher  
697 ratings when they have *se*; the interaction of Human:Se:Context shows that the same happens in  
698 Inchoative, which is not reliably different from Neutral (the 95% Credible Interval covers zero,

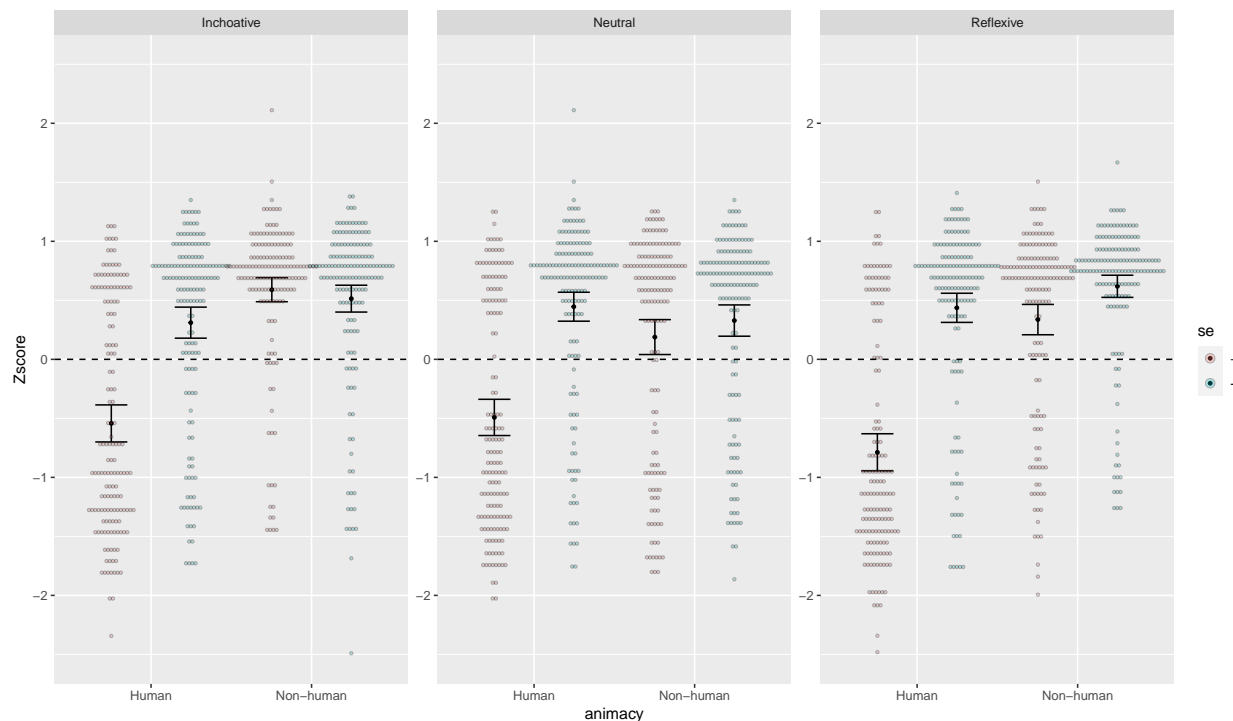


Figure 4: Results of Experiment 1b (in-control verbs).

699 meaning the low estimate of 0.29 is not particularly strong). In other words, there is no differ-  
 700 ence between Inchoative and Neutral, unlike in Experiment 1a. The general pattern is therefore  
 701 confirmed, as predicted. This is the human marked in-control preference.

Table 5: *Relevant predictors from the Bayesian ordinal model, Experiment 1b (in-control).*

	Estimate	Est. Error	95% CI
AnimacyHuman	-1.32	0.68	[-2.63,0.09]
Se	0.38	0.23	[-0.07,0.85]
ContextInchoative	0.87	0.25	[0.39,1.39]
ContextReflexive	0.22	0.23	[-0.21,0.67]
AnimacyHuman:Se	1.57	0.32	[0.93,2.21]
AnimacyHuman:ContextInchoative	-1.25	0.34	[-1.93,-0.61]
AnimacyHuman:ContextReflexive	-1.06	0.32	[-1.69,-0.45]
Se:ContextReflexive	0.44	0.34	[-0.24,1.09]
AnimacyHuman:Se:ContextInchoative	0.29	0.47	[-0.61,1.22]
AnimacyHuman:Se:ContextReflexive	0.08	0.47	[-0.84,0.99]

702 The next prediction concerns the behavior of human and non-human arguments in the reflexive  
 703 context. Here we predicted no difference for non-humans, but a preference for *se* for humans. This  
 704 is what we found: the interaction of *Se* and Reflexive was not reliably different from 0, meaning  
 705 there was no difference for non-humans whether they had *se* or not. Additional inferential statistics  
 706 and model predictions are available in the OSF repository.

707 In sum, this section provided evidence for the marked in-control preference with in-control

708 verbs. It also showed that the distinction between in-control and limited-control ACs (anticipated  
 709 by authors such as [Creissels 2003](#) or [Haspelmath 1987](#)) is crucial, as these verbs give rise to op-  
 710 posite patterns *with human subjects*. With non-human subjects, the distinction between these two  
 711 subclasses is largely irrelevant: both forms are accepted across contexts, which also confirm that  
 712 the verbs at hand are  $\pm se$  ACs.

713 The marked in-control preference is the opposite of what the Causation Claim predicts (but  
 714 remember that proponents of this claim did not distinguish between limited-control and in-control  
 715 verbs like we do). The Causation Claim says that across ACs, the presence of *se* generally char-  
 716 acterizes the event as being externally caused. But the marked in-control preference confirmed by  
 717 the results of Experiment 1b shows that that *se* is favored when there is a shared assumption that  
 718 the sole human argument probably exerts some agency in the event they undergo.

719 In the next section, we evaluate our third effect against one final set of data involving non-human  
 720 arguments.

### 721 3.4 Agency and non-human arguments

722 Recall the marked responsibility preference with non-human DPs: given pairs such as those  
 723 in (40)–(41), we expect participants to be more likely to choose the marked variant if explicitly asked  
 724 to attribute responsibility to the subject, as responsibility is a key property of agents or effectors.  
 725 The reason for this is that while the unmarked variant of the verb only has an anticausative parse,  
 726 the variant with *se* allows besides its anticausative parse a semantically reflexive parse. But if, as  
 727 suggested by the Causation Claim, the absence of *se* indicates greater responsibility of the subject  
 728 for the event, we expect the opposite choice.

729 (40) a. *La rose*  $\emptyset$  *a flétri.*  
 the rose has faded  
 ‘The rose faded.’

730 b. *La rose s’est flétrie.*  
 the rose SE is faded  
 ‘The rose faded.’

731 (41) a. *Le métal*  $\emptyset$  *a rouillé.*  
 the metal has rusted  
 ‘The metal rusted.’

732 b. *Le métal s’est rouillé.*  
 the metal SE is rusted  
 ‘The metal rusted.’

#### 733 3.4.1 Experiment 2

734 This prediction was also tested in an online study (see again the Appendix and online materials).  
 735  $N = 33$  native speakers of French participated in the experiment, none of whom participated in  
 736 Experiments 1a/1b. They were given 12 minimal pairs like those in (40a/b) and (41a/b) and asked  
 737 which of the two sentences assigns more responsibility to the subject (*Quelle forme attribue le plus*  
 738 *de responsabilité à la rose/au métal dans le procès?* ‘Which form assigns more responsibility to the

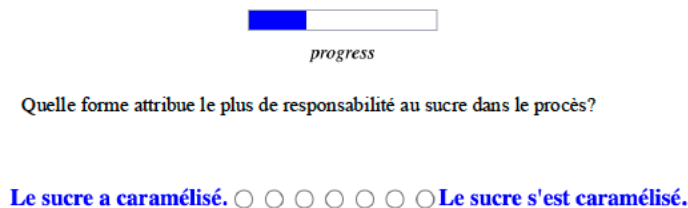


Figure 5: Experiment 2 responsibility scale task

739 rose/the metal in the event?’). Judgments were provided on a 7-point scale with the two sentences  
 740 at the extremes (1 for unmarked, 7 for marked, although the scale was not labelled). Participants  
 741 were introduced to the responsibility scale through training items, translated under (42). An  
 742 example of test items is given in Figure 5 (‘The sugar caramelized’).<sup>26</sup>

- 743 (42) Q: On essaie. Quelle forme attribue le plus de responsabilité à la grand-mère/Yining dans le  
 744 procès?  
 745 ‘Let’s try. Which form assigns more responsibility to the grandma/Yining in the event?’
- 746 a. La grand-mère donne à manger au bébé/ Le bébé mange à côté de la grand-mère.  
 747 ‘The grandma feeds the baby/ The baby is eating next to the grandma.’
- 748 b. Yining et Jinhong réparent le bateau ensemble/ Jinhong et Yining réparent le bateau  
 749 ensemble.  
 750 ‘Yining and Jinhong are repairing the boat together/ Jinhong and Yining are repairing  
 751 the boat together.’

752 Our test items were formed with the verbs listed in (43a-c). While these verbs come from  
 753 different sub-classes, we did not expect these classes to matter in the responsibility attribution: the  
 754 responsibility effect should hold across all subtypes of  $\pm se$  ACs, as the ambiguity of the reflexively  
 755 marked form is exactly the same across subclasses.<sup>27</sup> All verbs have transitive uses beyond their  
 756 intransitive uses, and thus can enter reflexivization. Verbs in (43a) are examples of internally-  
 757 caused change-of-state verbs (cf. Wright 2002 and see footnote 19). Those in (43b) and (43c) are  
 758 a subset of verbs used in Experiments 1a and 1b. Thus when applied to human arguments, verbs  
 759 in (43b) are limited-control verbs and those in (43c) are in-control verbs, but this difference is  
 760 irrelevant for non-human subjects.

761 Furthermore, 8 pairs of distractors were mixed with the test items. The task was the same, but  
 762 this time participants had to choose either between a lexical-causative statement (*Hamida a bougé*  
 763 *la chaise* ‘Hamida moved the chair’) and the corresponding  $-se$  anticausative statement from the  
 764 verbs in (44a) (*La chaise a bougé* ‘The chair moved’); or between a  $se$ -passive sentence (*La voiture*

<sup>26</sup>We choose to probe the intuition of participants on the dimension of responsibility rather than agency, since graded responsibility attribution is more frequent in the layman language than graded agency attribution, and relatedly, it is more usual to attribute overtly responsibility rather than agency to non-human entities in ordinary language (e.g., *Which sentence assigns more agency to the chair/the car in the event* is a less natural question than our test question in usual language).

<sup>27</sup>Thus the lexical semantic subclasses of  $\pm se$  ACs discussed in the previous sections do not matter here, because they can be contrasted only via the assumptions we hold by default about human participants in the events respectively denoted by verbs of each subclass.

765 *s'est lavée au garage* 'The car *se*-is washed in the garage') and a corresponding periphrastic passive  
 766 sentence from the verbs in (44b)) (*La voiture a été lavée au garage* 'The car was washed in the  
 767 garage'). The question for distractors was the same as for test items (*Which sentence assigns more*  
 768 *responsibility to the chair/the car in the event?*).

769 (43) Verbs used in the test items of Experiment 2:

- 770 a. "internally caused" verbs: (*se*) *caraméliser* 'caramelize', (*se*) *fâner* 'wilt, decay', (*se*)  
 771 *flétrir* 'wilt, decay', (*se*) *rouiller* 'rust'.  
 772 b. Verbs from Experiment 1a: (*se*) *brunir* 'turn brown(er)', (*se*) *foncer* 'darken', (*se*) *raje-*  
 773 *unir* 'get younger', (*se*) *rougir* 'redden'.  
 774 c. Verbs from Experiment 1b: (*se*) *baisser* 'lower', (*se*) *durcir* 'harden', (*se*) *plier* 'bend',  
 775 (*se*) *refroidir* 'get cold(er)'.

776 (44) Verbs used in the filler items of Experiment 2:

- 777 a. Alternating verbs: *bouger* 'move', *brûler* 'burn', *fondre* 'melt', *ramollir* 'soften'.  
 778 b. Non-alternating verbs: *laver* 'wash', *nettoyer* 'clean', *jeter* 'throw', *tuer* 'kill'.

779 The results of the experiment are summarized in Figure 6, where it can be seen that participants  
 780 predominantly used the points at the *se*-marked half of the scale, as opposed to the unmarked one,  
 781 when choosing the form assigning more responsibility to the subject.

782 An ordinal Bayesian model confirmed the tendency to pick the marked form as the one assigning  
 783 more responsibility to the single (non-human) DP; this intercept-only model can be found in the  
 784 Appendix 1. Results did not differ considerably between verb types, although the preference might  
 785 be slightly weaker with limited-control verbs; see the OSF repository for post-hoc analyses including  
 786 model fits.

### 787 3.4.2 Experiments 1a/b with non-human subjects

We now come back to Experiments 1a/b, more specifically to the condition with a non-human  
 subject in the reflexive context (see sections 3.2 and 3.3 for the predictions for the inchoative/neutral  
 contexts with a non-human subject). Recall that in Experiments 1a/b, participants were just asked  
 to rate the acceptability of sentences; they were not asked to choose which sentence attributes the  
 most responsibility to the non-human entity. Sentence (45) is an example of a test items with a  
 non-human subject and limited-control verb (Experiment 1a), and (46) is an example built with  
 an in-control verb (Experiment 1b).<sup>28</sup>

788 (45) *Dans cette situation, la carapace de l'insecte (se) noircit pour échapper aux*  
 in this situation the carapace of the.insect SE blackened in order to escape the  
*prédateurs.*  
 predators

'In this situation, the insect's carapace turns black in order to escape the predators.'

---

<sup>28</sup>Items with a non-human subject in the reflexive context were put in the present tense rather than the *passé composé*, for the latter tense/aspect morphology would trigger an anomaly in this context independently of whether the reflexive morphology is present or not. Since our goal was to test how the presence vs. absence of reflexive marker affects the acceptability of the sentence, we built the examples so as to make them as natural as possible independently of this factor.

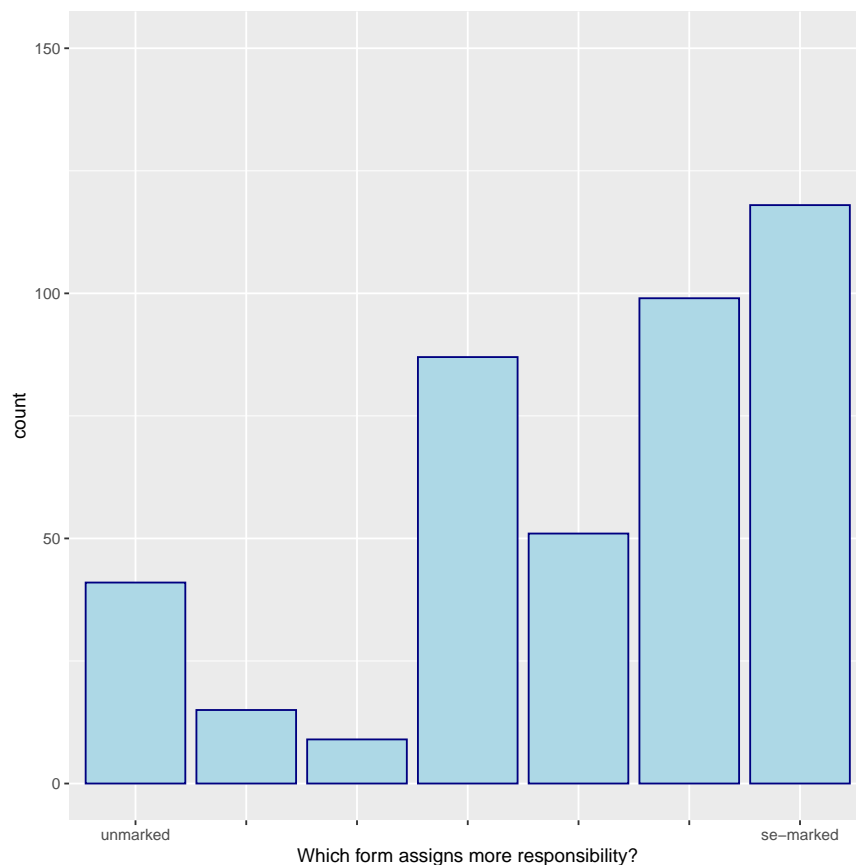


Figure 6: Results of Experiment 2 (non-human responsibility, inanimate subjects).

- 789 (46) *Certains chargeurs solaires (se) plient pour mieux s'incorporer dans un sac*  
 some chargers solar SE fold.up in order to better SE.incorporate in a bag  
*à dos.*  
 to back  
 'Some solar chargers fold up in order to better fit into a backpack.'

Differently from what we observed with human subjects, the reason clause does not force an agentive construal for the referent of the matrix subject. Neither (45) nor (46) force the charger or the carapace to be construed as external arguments. The reason clause can be understood as just giving the teleological explanation for why the event described in the matrix clause holds. It does not have to be interpreted as the motive behind the behavior of the subject's referent (which therefore does not have to be interpreted as an agent). This conforms to what has been repeatedly observed for English for examples such as (47) (cf. Williams 1974, Williams 2005, Bhatt and Pancheva 2017).

- 790 (47) Grass is green to promote photosynthesis. (Williams 1974, cited in Williams 2005)



791 Given that the reason clause does not enforce an agentive construal with a non-human subject, it  
 792 does not trigger a reflexive construal of the matrix clause. We thus did *not* expect a preference for  
 793 the reflexively marked form in the reflexive context with non-human subjects. Results summarized  
 794 in Figures 3 and 4 confirmed this prediction.<sup>29</sup>

### 795 3.5 Experimental results: summary and discussion

796 In summary, what the experimental results show us is that with non-human subjects, the  
 797 morphological marking in  $\pm se$  verbs remains uninformative and unconstrained (Experiments 1a/b):  
 798 participants equally like both forms across contexts with non-human subjects. However, if the  
 799 speaker aims to present the non-human entity as agentive and responsible for the change it endures,  
 800 they will favour the reflexively marked form over the unmarked form (Experiment 2). As for human  
 801 arguments, results of Experiment 1a on limited-control verbs show that participants like the form  
 802 without *se* in the neutral or inchoative contexts, and on average do not like the form with *se* in  
 803 the same context. The opposite pattern is observed in the reflexive context. Again with human  
 804 subjects, results of Experiment 1b on in-control verbs show that participants like the form with *se*  
 805 across contexts, and do not like the form without *se* across contexts.

We can further observe that in both experiments 1a/b, the ratings of the unexpected form with human subjects are not only more negative but also appear to be more varied overall than the ratings for the expected form: while the ratings for the preferred forms follow a roughly normal

<sup>29</sup>A reviewer suggests that examples such as (45) may receive an analysis as a *se*-passive with the implicit agent being identified with the possessor of the internal argument DP (e.g., the insect in (45)). In this perspective, examples such as (45) are derived from an active string such as [i.] below (see [Lundquist 2016](#): 184-185 for an analysis of similar examples involving the syncretic morpheme *-s* in Swedish).

- (i.) *Dans cette situation, l'insecte noircit sa carapace pour échapper aux prédateurs.*  
 'In this situation, the insect blackens its carapace in order to escape the predators.'

While this analysis has some appeal, we see a number of reasons speaking against it. First, it is not entirely clear to us how a sentence such as (45), where the possessor of the internal argument is a referential expression, could technically be derived as a passive of (i.), where the possessor of the internal argument is a possessive pronoun. Second, it is not clear how the implicit external argument could be co-valued with the possessor of the internal argument, the latter being an R-expression. Third, there is a difference in meaning between (45) and (i.), namely that (45) does not agentivize the insect the way (i.) definitely does. We take this to indicate that the *se*-variant of examples such as (45) well and truly has an anticausative reading ((45) also has, in principle, a semantically reflexive reading, which can be enforced by adding the intensifier *elle-même* ('itself'), the latter being bound by the possessee DP *carapace*).

In general, the passive reading is not a viable option for the *se*-marked test items across our experiments, for they contain no contextual element hinting at the involvement of an implicit agent, which is for [Zribi-Hertz \(1982\)](#) a condition for the *se*-passive to arise. The single exception is one of the 8 items with non-human subject in the reflexive context, namely example (46), where the implicit agent (understood as the user of the charger) controls into the purpose clause (this example, however, can also have an anticausative reading). (46) is also the single item where the *se*-variant can be felicitously replaced with a standard *be*-passive. In the other examples including (45), a paraphrase with a *be*-passive is odd, as it suggests the involvement of an agent different from the possessor in the DP (due to the well-known disjoint reference effect holding between the implicit external argument of passives and any R-expression inside the VP; see e.g. [Bhatt and Pancheva 2017](#), [Schäfer et al. 2021](#)). For instance, *#La carapace de l'insecte est noircie pour échapper aux prédateurs* 'The carapace of the insect is blackened in order to escape the predators' is quite odd in French, just like its English counterpart. That being said, even if some participants accessed a passive reading for some items of the  $+se$ .Non-human.ReflexiveContext condition, this would not affect our general point that the preference we observe for the *se*-marked variant with a human DP in the reflexive context does not hold with a non-human DP.

distribution around a high rating (that is, they are centered around this high rating), the ratings for the dispreferred forms are more uniform (i.e. responses are found throughout the scale). While evaluating this idea properly is a matter for future work, we take this indicative pattern to support the view that the unmarked limited-control preference is pragmatic in nature: the high level of variation in the ratings for the suboptimal forms suggest that some participants ignore to some extent the information conveyed through the choice between forms. In particular, some participants seem to accept the +*se*-form with limited-control verbs and a human subject. Importantly, these higher ratings cannot reflect a semantically reflexive parse for the *se*-marked form, for as we mentioned in section 3.2.2, this reading is implausible in the target items. For instance, it is unlikely that participants come to a reflexive reading for (48), as it would require that Djamilia agentively controlled her change of skin color as a result of hearing about her lover's affair.

- 806 (48) # *Djamila s'est pâlie à l'annonce de l'infidélité de son amoureux.*  
 Djamilia SE has gone.pale at the.announcement of the affair of her lover  
 'Djamilia went pale when she heard about her lover's affair.'

807 Another relevant point is that the unexpected form is occasionally attested in corpora, suggest-  
 808 ing that this form is suboptimal but not plainly ungrammatical. Examples (49) below are attested  
 809 examples of native speakers of French where the limited-control  $\pm se$  verb very clearly instantiates  
 810 the anticausative use while they are used with *se* (see the Appendix 2 for more examples).

- 811 (49) a. *Son armée avait les yeux braqués sur lui, tandis que sa garde rapprochée*  
 his army had the eyes turned on him whereas that his guard close-knit  
*l'aïda à se relever alors que la plupart du reste de la troupe se*  
 him helped to SE stand up while that the most of the rest of the troop SE  
*pâlit à la vue d'un tel spectacle.*  
 got pale to the view of a such spectacle  
 'His army had all the eyes on him, and whereas his bodyguard helped him to his feet  
 while most of the rest of the troops turned pale at the view of such a spectacle.'  
[madelle.1fr1.net/t2050p10-event-4-le-tremblement-de-la-guerre](http://madelle.1fr1.net/t2050p10-event-4-le-tremblement-de-la-guerre)
- 812 b. *J'ai les yeux dans mon café (...) et quand je relève les yeux, elle se rougit*  
 I have my eyes in my coffee and when I raise the eyes she SE reddens  
*et se détourne.*  
 and SE turns away  
 'I keep my eyes in my coffee (...) and when I raise my eyes she gets red and turns away.'  
[forum.canardpc.com/archive/index.php/t-56652-p-18.html](http://forum.canardpc.com/archive/index.php/t-56652-p-18.html)

813 Similarly, the results of Experiment 1b on in-control verbs suggest that some participants simply  
 814 ignore the confusing 'no-agent' inference triggered by the choice of the unambiguous –*se* variant  
 815 of the anticausative: while ratings for the form without *se* of in-control verbs in the neutral or  
 816 inchoative contexts are overall negative, they also show a lot of variation. Furthermore, this sub-  
 817 optimal variant of in-control  $\pm se$  verbs is also occasionally found in corpora. Examples (50) below  
 818 are attested cases where the in-control  $\pm se$  verbs *plier* 'bend' and *approcher de* 'get close(r) to' are  
 819 used as anticausatives without *se* in the presence of a human subject (see again the Appendix 2 for  
 820 more examples).

- 821 (50) a. *À ce moment, j'ai saisi la première chose que j'ai vue et je*  
 at that moment I have grasped the first thing that I have seen and I  
*l'ai frappé. Il a plié en deux, mais il a lâché un sacre avant*  
 him have hit he has bent in two but he has dropped a curse word before  
*de me donner un coup de poing.*  
 to me give a punch  
 'At that moment, I grasped the first thing I saw and hit him. He bent in two, but he  
 dropped a curse word before giving me a punch.' ([www.lecitoyenrouynlasarre.com](http://www.lecitoyenrouynlasarre.com))
- 822 b. *dès qu'il approche d'un homme, il crie sans relâche: Ne me touchez*  
 as soon as he gets.closer of a man he shouts without stopping NEG me touch  
*pas!*  
 NEG  
 'As soon as he gets closer to a man, he shouts without stopping: don't touch me!'  
 (Gaston Paris, 1880, *Légendes du Moyen-Age*)

Interestingly, it seems that in situations similar to those explored experimentally in Joo et al. (2023) where the human DP is fully incapacitated, e.g. completely unconscious or in a coma, the version without *se* becomes preferred over the version with *se*; see e.g. (51).

- 823 (51) *Paul est très rapidement entré dans le coma quand le camion a foncé dans*  
 Paul is very quickly entered in the coma when the truck has crashed in  
*la voiture, et ensuite a plié en deux/ #s'est plié en deux sous le poids de*  
 the car and then has bent in two SE is bent in two under the weight of  
*la tôle du camion.*  
 the sheet metal of.the truck  
 'Paul quickly fell into a coma when the truck crashed into the car, and then folded in half  
 under the weight of the truck's metal.'

824 We can easily account for why maintaining the ambiguity with the agentive reflexive reading is  
 825 odd: Paul is here not even a performer of his change of position. The unmarked form is therefore  
 826 more appropriate in this context, as the 'no-agent' inference triggered by this choice fits perfectly  
 827 with the default assumptions in a context of full incapacity.

#### 828 4 Conclusions

829 In this paper, we looked at the ways lexical-semantic biases of verbal predicates interact with  
 830 general conversational principles, focusing on the Manner supermaxim *Be perspicuous*. Starting  
 831 with the assumption that French anticausatives marked with *se* or left unmarked do not differ  
 832 in meaning, we examine how cooperative language users are guided in their choice between the  
 833 marked and unmarked forms. We showed that while the choice between the forms is completely  
 834 uninformative when the (unique) overt DP is non-human, it becomes strategic when the DP is  
 835 human. The reason why this choice becomes laden with consequences when the DP is human is  
 836 that when syntax makes several parses available such that one of this parse associates the role  
 837 of agent to the human DP, then this parse is always among the salient parses (this is the *agent*  
 838 *bias*). We argued that in such situations, a cooperative speaker will handle the ambiguity of *se*

839 with perspicuity, in line with the Manner supermaxim *Be perspicuous*. This amounts primarily to  
840 aligning with shared assumptions about events denoted by the VP. In this respect, we argued that  
841 two subclasses of verbs are particularly relevant: limited-control verbs express events that tend  
842 to be understood as not under the control of a human undergoer, while in-control verbs express  
843 events that tend to be understood as under the control of a human undergoer. Aligning with these  
844 shared assumptions means preferring the unmarked variant of limited-verbs, to avoid an ambiguity  
845 with the semantically reflexive reading which endows the human DP with agency, but preferring  
846 the *se*-marked variant of in-control verbs, to maintain the ambiguity with the reflexive reading  
847 and as such avoid triggering the inference that the human DP is not agentive at all. These two  
848 preferences (the unmarked limited-control and the marked in-control preferences) are only at play  
849 with verbs for which there is a choice between form ( $\pm se$  verbs), which supports our view that  
850 these preferences result from a pragmatic reasoning on the basis of general Gricean principles of  
851 conversation. We call such effects lexical pragmatic effects. While our empirical study was based  
852 on French, we expect related effects in other languages once they show diathesis syncretisms and  
853 optionality in the morphological realization of particular diatheses.

## 854 **A Appendix 1: Experimental design**

855 This appendix contains additional details on our experimental setup. Data from both exper-  
856 iments and the analysis script can be found in the OSF repository on [https://osf.io/4jqhn/  
857 ?view\\_only=aafec40636bd468eaa3c52b4cf7691e4](https://osf.io/4jqhn/?view_only=aafec40636bd468eaa3c52b4cf7691e4).

### 858 **A.1 Experiment 1**

#### 859 **A.1.1 Participants**

860 Participants were recruited on Prolific and paid EUR 1.70 for participation. All participants self-  
861 reported as native speakers of French aged 18 or over, and born in a Francophone European country  
862 (France, Belgium, Switzerland). Since we had no hypotheses about variation, no demographic  
863 information was collected. A total of  $N = 154$  (161 before exclusions) participants took part, divided  
864 randomly into four lists for counterbalancing purposes (A: 37, B: 36, C: 39, D: 42). Experiments  
865 1a and 1b ran in the same session.

#### 866 **A.1.2 Procedure**

867 Participants rated the acceptability individual sentences on a 7-point Likert scale. The radio  
868 button on one edge was labeled *Pas du tout naturelle* ‘not natural at all’ and the opposite one was  
869 labeled *Tout à fait naturelle* ‘completely natural’. Materials were presented visually using PCibex  
870 (Drummond, n.d, Zehr and Schwarz, 2018). Four practice trials preceded the main experiment, in  
871 which the order of trials was randomized.

#### 872 **A.1.3 Materials**

873 Experiment 1 was comprised of two verb classes, limited-control in Experiment 1a and in-control  
874 in Experiment 1b. Six limited-control verbs were used in Experiment 1a and five in-control verbs  
875 were used in Experiment 1b. In each of these two sub-experiments, items were constructed by  
876 crossing three conditions: ANIMACY, SE and CONTEXT.

ANIMACY indicated whether the subject was human or non-human:

- 877 (52) a. *Adèle a rougi sous l'effet des moqueries et de l'humiliation.*  
 Adèle has reddened under the effect of.the teasings and of the shame  
 'Adèle got red under the effect of the teasing remarks and the shaming.'
- 878 b. *L'eau a rougi à cause du sang sur ses mains.*  
 the water has reddened because of.the blood on his hands  
 'The water got red because of the blood on her hands.'

SE indicated whether *se*-marking appeared or not:

- 879 (53) a. *Adèle a rougi sous l'effet des moqueries et de l'humiliation.*  
 Adèle has reddened under the effect of.the teasings and of the shame  
 'Adèle got red under the effect of the teasing remarks and the shaming.'
- 880 b. *Adèle s'est rougie sous l'effet des moqueries et de l'humiliation.*  
 Adèle SE is reddened under the effect of.the teasings and of the shame  
 'Adèle got red/made herself red under the effect of the teasing remarks and the shaming.'

CONTEXT coded whether the verb was placed in neutral, anticausative or reflexive context, repeated here from (31) in the main text:

- 881 (54) a. NEUTRAL  
 882 *Rachida a pâli.*  
 Rachida has gone.pale  
 'Rachida went pale.'
- 883 b. INCHOATIVE  
 884 *Djamila a pâli à l'annonce de l'infidélité de son amoureux.*  
 Djamila has gone.pale at the.announcement of the affair of her lover  
 'Djamila went pale when she heard about her lover's affair.'
- 885 c. REFLEXIVE  
 886 *Khadija a pâli pour les besoins de son personnage de théâtre.*  
 Khadija has gone.pale for the needs of her role of theater  
 'Khadija went pale for her theater role.'

887 Four lists were created, such that the three conditions were counterbalanced per verb. In total,  
 888 these crossed conditions and the controls resulted in four counterbalanced lists of 10 experimental  
 889 trials and 2 control trials in each list, such that each of the ~ 40 participants in each list saw a  
 890 given verb only twice, regardless of which of the 12 conditions it was in (Animacy x Se x Context).  
 891 Trials from Experiments 1a and 1b were randomized, so each participant responded to 24 trials in  
 892 total. This low number stems from the limited number of verbs we could use from the language,  
 893 on the one hand, and the constraints of a between-participants design in which we did not want a  
 894 participant to see the same verb twice, on the other hand.

#### 895 A.1.4 Analysis

896 For outlier removal, responses were z-transformed into a continuous variable. Participants were  
 897 removed from analysis if their responses on the gold standard items are, on average, more than 2  
 898 SDs away from the mean ratings across all participants.

899 Raw ratings on the Likert scale (not z-transformed) were fed into a Bayesian ordinal model  
900 (White et al., 2018, Veríssimo, 2021) implemented in the R package brms (Bürkner, 2017) using  
901 the `cumulative()` family in `cmdstanr`. Animacy, Se and Context were included as population-  
902 level effects (“predictors”), with Animacy as a random slope by subject and item (group-level or  
903 “random” effects). While the choice of priors for Bayesian models can be the subject of its own  
904 analysis, two things to keep in mind are the value of prior/posterior predictive checks (Nicenboim  
905 et al., 2023) and that the brms default priors often provide good starting points, as does any  
906 weakly informative prior compared to a uniform prior (e.g. Veríssimo 2021). Since we did not have  
907 previous hypotheses or results to draw on, we chose to use the default priors (Stan’s “improper flat”  
908 prior for predictor means; half-Student t-distribution with 3 degrees of freedom and scale factor 2.5  
909 for random intercepts and predictor standard deviations; all correlation matrices equally likely for  
910 calculation of random slopes). The results of the predictive checks can be found in the OSF script.  
911 ANIMACY and SE were sum coded. Context was treatment coded with Neutral as the baseline  
912 level (intercept). The model outputs are given in tables 6–7.

Table 6: *Full results of the Bayesian ordinal model, Experiment 1a (limited-control).*

	Estimate	Est. Error	95% CI
Intercept[1]	-2.15	0.56	[-3.18,-0.95]
Intercept[2]	-1.62	0.56	[-2.66,-0.44]
Intercept[3]	-1.30	0.56	[-2.33,-0.12]
Intercept[4]	-1.09	0.56	[-2.13,0.09]
Intercept[5]	-0.67	0.56	[-1.71,0.50]
Intercept[6]	-0.06	0.56	[-1.11,1.13]
AnimacyHuman	1.66	0.79	[0.12,3.22]
Se	-0.78	0.23	[-1.25,-0.35]
ContextInchoative	0.46	0.24	[-0.01,0.92]
ContextReflexive	1.11	0.36	[0.42,1.81]
<b>AnimacyHuman:Se</b>	-2.87	0.36	[-3.58,-2.15]
AnimacyHuman:ContextInchoative	-1.28	0.38	[-1.99,-0.56]
AnimacyHuman:ContextReflexive	-4.50	0.46	[-5.43,-3.61]
Se:ContextInchoative	0.22	0.33	[-0.42,0.88]
Se:ContextReflexive	-0.10	0.36	[-0.79,0.60]
AnimacyHuman:Se:ContextInchoative	1.35	0.49	[0.37,2.30]
AnimacyHuman:Se:ContextReflexive	4.82	0.51	[3.84,5.81]

913 Given the small number of observations per condition, the models vary in how well they can  
914 estimate group-level (“random”) effects. The brms output shows correlations between each group-  
915 level effect and the slope for Animacy to be, in Experiment 1a, 0.73 for Verb and 0.04 for Participant;  
916 and in Experiment 1b, 0.70 for verb and 0.54 for Participant.

917 These models can also generate predicted ratings. The OSF repository contains code and figures  
918 which model two-way and three-way interactions, showing how likely the model would find a specific  
919 rating on the Likert scale for each conditions, for example how likely a “7” rating is.

## 920 A.2 Experiment 2

### 921 A.2.1 Participants

922 Recruitment followed the same procedure as for Experiment 1, resulting in N = 33 (40 before  
923 exclusions).

Table 7: Full results of the Bayesian ordinal model, Experiment 1b (in-control).

	Estimate	Est. Error	95% CI
Intercept[1]	-2.05	0.53	[-3.04,-0.94]
Intercept[2]	-1.59	0.53	[-2.60,-0.49]
Intercept[3]	-1.21	0.53	[-2.21,-0.10]
Intercept[4]	-1.01	0.53	[-2.00,0.09]
Intercept[5]	-0.63	0.53	[-1.62,0.48]
Intercept[6]	-0.12	0.53	[-1.11,0.99]
AnimacyHuman	-1.32	0.68	[-2.63,0.09]
Se	0.38	0.23	[-0.07,0.85]
ContextInchoative	0.87	0.25	[0.39,1.39]
ContextReflexive	0.22	0.23	[-0.21,0.67]
<b>AnimacyHuman:Se</b>	1.57	0.32	[0.93,2.21]
AnimacyHuman:ContextInchoative	-1.25	0.34	[-1.93,-0.61]
AnimacyHuman:ContextReflexive	-1.06	0.32	[-1.69,-0.45]
Se:ContextInchoative	-0.50	0.35	[-1.20,0.17]
Se:ContextReflexive	0.44	0.34	[-0.24,1.09]
AnimacyHuman:Se:ContextInchoative	0.29	0.47	[-0.61,1.22]
AnimacyHuman:Se:ContextReflexive	0.08	0.47	[-0.84,0.99]

## 924 A.2.2 Procedure

925 Participants were presented with two sentences, lying on opposite sides of an unlabeled 7-point  
926 Likert scale. They were asked which of the sentences ascribes greater responsibility to the subject.

927 Materials were presented visually using PCIbex (Drummond, n.d, Zehr and Schwarz, 2018).

928 Two practice trials preceded the main experiment, in which the order of trials was randomized.

## 929 A.2.3 Materials

930 Verbs in Experiment 2 were either internally caused, limited-control or in-control, although this  
931 difference was not coded as a condition. Four verbs were sampled from each verb class. All subjects  
932 for these verbs were inanimate. The contrast of interest was between the *se*-marked form and the  
933 unmarked form. All contexts were “neutral”, in the terminology of Experiment 1:

934 (55) *Quelle forme attribue le plus de responsabilité au sabre dans le procès?*

935 ‘Which form attributes more responsibility to the sabre in the process?’

936 a. *Le sabre a rouillé.*

the sabre has rusted

‘The sabre rusted.’

937 b. *Le sabre s’est rouillé.*

the sabre SE is rusted

‘The sabre rusted.’

938 Control items were created by using four alternating causatives (with a choice between a  
939 causative statement and the corresponding unmarked anticausative statement), two naturally re-  
940 flexive verbs and two naturally disjoint verbs (with a choice between a *se*-passive statement and  
941 the corresponding periphrastic passive statement). We expected the causative statement and the  
942 *se*-passive statement to be judged as assigning more responsibility to the theme (the latter be-

943 cause the *se*-marked form was the only one yielding a semantically reflexive reading, which was  
 944 pragmatically odd but nevertheless possible).

945 Since verbs did not repeat from trial to trial, each participant saw all 3\*4=12 critical items, as  
 946 well as 8 control items.

#### 947 A.2.4 Analysis

948 The analysis followed the same procedure as in Experiment 1, except that the choice on the  
 949 likert scale was converted to a preference between 1 for the unmarked variant and 7 for the marked  
 950 variant.

951 Since there was no manipulation between conditions, the regression consisted of a population-  
 952 level (“fixed”) intercept and two group-level (“random”) intercepts. Results are given in Table 8.

Table 8: *Results of Experiment 2, ordinal Bayesian model.*

	Estimate	Est. Error	95% CI
Intercept[1]	-3.67	0.52	[-4.69,-2.63]
Intercept[2]	-3.03	0.50	[-4.01,-2.02]
Intercept[3]	-2.17	0.49	[-3.68,-1.73]
Intercept[4]	-0.85	0.48	[-1.78,0.09]
Intercept[5]	0.04	0.48	[-0.90,0.97]
Intercept[6]	1.83	0.49	[0.89,2.78]

## 953 B Appendix 2: corpus data

954 This appendix contains natural occurrences of grammatical but suboptimal construals with  
 955 limited-control and in-control verbs used as anticausatives. Recall that with human DPs, we expect  
 956  $\pm se$  limited-control verbs to generally form anticausatives without *se*, and  $\pm se$  in-control verbs to  
 957 generally form anticausatives with *se*. Although suboptimal, these forms are nevertheless part of  
 958 the grammar and should therefore be occasionally found in corpora. We list some natural examples  
 959 of these unexpected forms below (there were found on the internet or via Sketchengine).

960 (56) *limited-control  $\pm se$  anticausatives with *se**

961 a. *Arff, merci; Teret (me rougi[s] d’être comparé à Léonardo (Da Vinci, arff, thanks teret me blush.PRST.1SG to.be compared with Léonardo da Vinci pas l’autre))*  
 not the other

‘Arff thanks, I’m blushing to be compared to Leonardo (da Vinci, not the other one).’

[forum.millesaisons.fr/forum/viewtopic.php?t=3624&start=20](http://forum.millesaisons.fr/forum/viewtopic.php?t=3624&start=20)

962 b. *Arrête tu va[s] me faire me rougir, mon cœur. Il[s] m’appartiennent tous! Et stop you will me make me blush my heart they me belong all and toi avec!*  
 you with

‘Stop, you’ll make me blush, my sweetheart. They all belong to me, including yourself!’

[lemondededuralas.org/t57p75-demande-de-classe-de-changement-de-classe](http://lemondededuralas.org/t57p75-demande-de-classe-de-changement-de-classe)



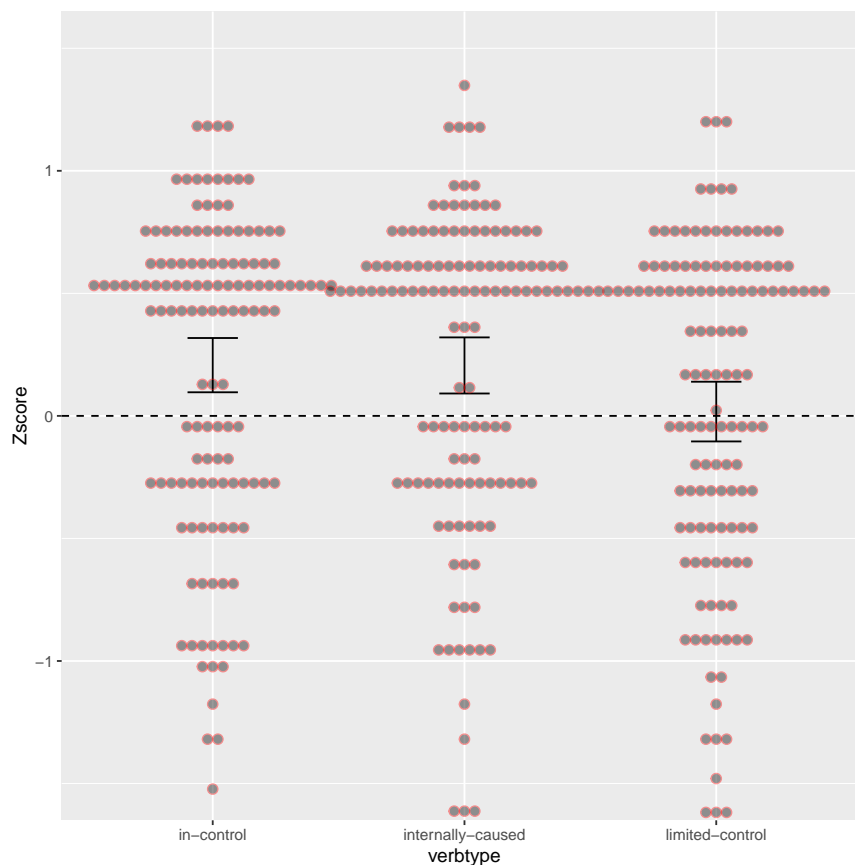


Figure 7: Experiment 2: Ratings by Verb Type.

963

- c. *Deux magnifiques jumelles, une, aux cheveux d'argents et l'autre au[x] cheveux plutôt rosâtre[s]. Le jeune homme ne put s'empêch[er] de se rougir, face [à] cette vision paradisiaque.*  
 two magnificent twins one with hair of silver and the other with the hair rather pinkish the young man NEG could SE help to SE blush front to this vision heavenly

‘Two magnificent twins, one with silver hair, the other one with rather pinkish hair. The young man couldn’t help blushing in front of this heavenly vision.’

[orkna.forumsrpg.com/t255-pervers-ou-pas-alexander-rina](http://orkna.forumsrpg.com/t255-pervers-ou-pas-alexander-rina)

964

- d. *Je me rougis encore en pensant à un moment où j'ai utilisé un slur et après coup j'ai réalisé que c'était inapproprié.*  
 I SE redden still while thinking at a moment where I have used a slur and after the fact I have understood that it was inappropriate

‘I’m still blushing while thinking at a moment where I used a slur and realized after the fact that it was inappropriate.’

[x.com/sinusoid\\_wave/status/1232733463415054336?s=20](http://x.com/sinusoid_wave/status/1232733463415054336?s=20)

- 965 e. *Dans mon cas, il n’y a pas eu de perte de poids, parce que je n’avais pas*  
in my case there hasn’t been of lose of weight because I NEG had NEG  
*besoin, mais je me suis rajeuni, ma peau a retrouvé beaucoup d’éclat.*  
need but I ME got younger my skin has found back a lot of brilliance  
‘In my case, I didn’t lose any weight, because I didn’t need to, but I looked younger and  
my skin was much more radiant.’

[www.calculersonimc.fr/189-des-proteines-et-du-soja-contre-lobesite/](http://www.calculersonimc.fr/189-des-proteines-et-du-soja-contre-lobesite/)

966 (57) *in-control ±se anticausatives without se*

- 967 a. *Moi aussi j’ai plié de rire lors du montage aussi.*  
me too I have bent from laugh during the editing  
‘Me too I bent over in laughter during the editing too.’

[www.rc-decouverte.com/t181-nouveau-du-var-scaleou-83](http://www.rc-decouverte.com/t181-nouveau-du-var-scaleou-83)

- 968 b. *Bojack apparu[t] genou en avant dans le thorax de Trunks, qui plia sous*  
Bojack appeared knee forward in the thorax of Trunks who bent over under  
*la douleur.*  
the pain

‘Bojack appeared knee first in Trunks’ chest, who buckled under the pain.’

[www.lunionsacre.net/viewtopic.php?f=42&t=7116&p=279441](http://www.lunionsacre.net/viewtopic.php?f=42&t=7116&p=279441)

- 969 c. *il ne cessait de le prouver depuis qu’il avait approché d’elle.*  
he NEG stopped to it prove since that he had approached of her  
‘He didn’t stop proving it since he approached her.’

[www.letempsdunrp.com/t4654p10-adrielle-beneath-your-beautiful](http://www.letempsdunrp.com/t4654p10-adrielle-beneath-your-beautiful)

- 970 d. *On dirait qu’il a ramolli à leur contact. C’était le seul normal.*  
one WOULD SAY that he has melted at their contact. He was the single normal  
‘One would say he melted at their contact. He was the single normal guy.’

[www.psychiatries.be/reconnaissance-et-emancipation](http://www.psychiatries.be/reconnaissance-et-emancipation)

## 971 References

- 972 Achimova, Asya, Gregory Scontras, Christian Stegemann-Philipps, et al. 2022. Learning about  
973 others: Modeling social inference through ambiguity resolution. *Cognition* 218:104862.  
974 Alexiadou, Artemis. 2014. The problem with internally caused change-of-state verbs. *Linguistics*  
975 52:879–909. URL [doi.org/10.1515/ling-2014-0011](https://doi.org/10.1515/ling-2014-0011).  
976 Alexiadou, Artemis, Elena Anagnostopoulou, and Florian Schäfer. 2015. *External arguments in*  
977 *transitivity alternations: A layering approach*. Oxford: Oxford University Press.  
978 Bahrt, Nicklas. 2020. Towards a typology of voice syncretism. Doctoral Dissertation, University of  
979 Helsinki, Helsinki.  
980 Beavers, John, and Andrew Koontz-Garboden. 2013a. Complications in diagnosing lexical meaning:  
981 A rejoinder to Horvath and Sioni (2013). *Lingua* 134:210–218.  
982 Beavers, John, and Andrew Koontz-Garboden. 2013b. In defense of the reflexivization analysis of  
983 anticausativization. *Lingua* 131:199–216.  
984 Bernard, Georges. 1971. La transitivité en français contemporain. Doctoral Dissertation, Université  
985 de Rennes, Rennes.

- 986 Bhatt, Rajesh, and Roumyana Pancheva. 2017. Implicit arguments. In *The Wiley Blackwell*  
987 *Companion to Syntax*, ed. Martin Everaert and Henk van Riemsdijk. John Wiley & Sons.
- 988 Bickel, Balthasar, Alena Witzlack-Makarevich, Kamal K Choudhary, Matthias Schlesewsky, and  
989 Ina Bornkessel-Schlesewsky. 2015. The neurophysiology of language processing shapes the evo-  
990 lution of grammar: Evidence from case marking. *PLoS One* 10:e0132819.
- 991 Borer, Hagit. 2005. *Structuring sense*, volume 2. Oxford University Press.
- 992 Brochhagen, Thomas. 2018. Signaling under uncertainty. Doctoral Dissertation, University of  
993 Amsterdam, Amsterdam, The Netherlands.
- 994 Brochhagen, Thomas. 2020. Signalling under uncertainty: Interpretative alignment without a  
995 common prior. *The British Journal for the Philosophy of Science* 471–496.
- 996 Bürkner, Paul-Christian. 2017. brms: An R package for Bayesian multilevel models using Stan.  
997 *Journal of Statistical Software* 80. URL <http://dx.doi.org/10.18637/jss.v080.i01>.
- 998 Burston, Jack. 1979. The pronominal verb construction in French: an argument against the fortu-  
999 itous homonymy hypothesis. *Lingua* 48:147–176.
- 1000 Chierchia, Gennaro. 2004. A Semantics for Unaccusatives and its Syntactic Consequences. In *The*  
1001 *unaccusativity puzzle: Explorations of the syntax-lexicon interface*, ed. Artemis Alexiadou, Elena  
1002 Anagnostopoulou, and Martin Everaert, 22–59. Oxford: Oxford University Press.
- 1003 Creissels, Denis. 2003. Réflexivisation, transitivité et agent affecté. In *L'énoncé réfléchi*, ed. André  
1004 Rousseau, Didier Bottineau, and D. Roulland, 83–106. Rennes: Presses Universitaires de Rennes.
- 1005 Cruse, D. 1973. Some thoughts on agentivity. *Journal of Linguistics* 47.
- 1006 Degen, Judith. 2013. Alternatives in pragmatic reasoning. Doctoral Dissertation, University of  
1007 Rochester, Rochester.
- 1008 Degen, Judith, and Michael K. Tanenhaus. 2015. Processing scalar implicature: A constraint-based  
1009 approach. *Cognitive Science* 39:667–710.
- 1010 Delancey, Scott. 1985. On active typology and the nature of agentivity. In *Relational typology*, ed.  
1011 F. Plank, 47–60. Berlin, New York, Amsterdam: Mouton Publishers.
- 1012 Delancey, Scott. 1990. Cross-linguistic evidence for the structure of the agent prototype. *Papers*  
1013 *and Reports on Child Language Development* 29:141–147.
- 1014 Dell, François. 1983. An aspectual distinction in Tagalog. *Oceanic Linguistics* 22:175–206.
- 1015 Doron, Edith, and Marie Labelle. 2011. An ergative analysis of French valency alternation. In  
1016 *Romance Linguistics 2010 : Selected Papers from the 40th Linguistic Symposium on Romance*  
1017 *Languages (LSRL)*, ed. Julie Herschensohn, 137–154. Amsterdam & Philadelphia: Benjamins.
- 1018 Drummond, Alex. n.d. Ibex 0.3.8. Spellout.net/ibexfarm.
- 1019 Egré, Paul. 2014. Intentional action and the semantics of gradable expressions (on the Knobe effect).  
1020 In *Causation in grammatical structures*, ed. Bridget Copley and Fabienne Martin, Oxford Studies  
1021 in Theoretical Linguistics, 176–205. Oxford: Oxford University Press.
- 1022 Fauconnier, Stefanie. 2012. Constructional effects of involuntary and inanimate agents: A cross-  
1023 linguistic study. Doctoral Dissertation, Katholieke Universiteit Leuven, Leuven.
- 1024 Fillmore, Charles. 1970. The grammar of hitting and breaking. In *Readings in English transfor-*  
1025 *mational grammar*, ed. R.A. Jacobs and P.S. Rosenbaum. Waltham: Ginn.
- 1026 Folli, Raffaella, and Heidi Harley. 2005. Consuming Results in Italian and English: Flavours of v.  
1027 In *Aspectual enquiries*, ed. P. Kempchinsky and R. Slabakova, 95–120. Dordrecht: Springer.
- 1028 Geniušienė, Emma. 1987. *The typology of reflexives*. Berlin: Mouton de Gruyter.
- 1029 Grice, Paul. 1975. Logic and conversation. In *Syntax and semantics 3, speech acts*, ed. Peter Cole  
1030 and Jerry L. Morgan, 41–58. New York: Academic Press.

- 1031 Haspelmath, Martin. 1987. Transitivity alternations of the anticausative type. Köln: Institut für  
 1032 Sprachwissenschaft der Universität zu Köln (Arbeitspapiere, N.F).
- 1033 Haspelmath, Martin. 1993. More on the typology of inchoative/causative verb alternations. In  
 1034 *Causatives and transitivity*, ed. Bernard Comrie and Maria Polinsky, 1038–1050. Berlin: Walter  
 1035 de Gruyter.
- 1036 Heidinger, Steffen. 2010. *French anticausatives: a diachronic perspective*. Berlin: De Gruyter.
- 1037 Heidinger, Steffen. 2015. Causalness and the encoding of the causative–anticausative alternation  
 1038 in French and Spanish. *Journal of Linguistics* 51:562–594.
- 1039 Horn, Laurence. 1989. *A natural history of negation*. Chicago: Chicago University Press.
- 1040 Horvath, Julia, and Tal Siloni. 2011. Anticausatives: Against reflexivization. *Lingua* 121:2176–2186.
- 1041 Horvath, Julia, and Tal Siloni. 2013. Anticausatives have no cause(r): A rejoinder to Beavers and  
 1042 Koontz-Garboden. *Lingua* 131:217–230.
- 1043 Huang, Yi Ting, and Jesse Snedeker. 2011. Logic and conversation revisited: Evidence for a division  
 1044 between semantic and pragmatic content in real-time language comprehension. *Language and*  
 1045 *Cognitive Processes* 26:1161–1172.
- 1046 Jackendoff, Ray S. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge: MIT Press.
- 1047 Jacobs, Peter. 2011. Control in Skwxwú7mesh. PhD Thesis, University of British Columbia.
- 1048 Joo, Sehrang, Sami Yousif, Fabienne Martin, Frank Keil, and Joshua Knobe. 2023. No privi-  
 1049 leged link between intentionality and causation: Generalizable effects of agency in language.  
 1050 Manuscript, Princeton University, UPenn, Utrecht University and Yale University.
- 1051 Kastner, Itamar. 2017. Reflexive verbs in Hebrew: Deep unaccusativity meets lexical semantics.  
 1052 *Glossa* 2:75.
- 1053 Kayne, Richard S. 1975. *French syntax : the transformational cycle*. Cambridge, Mass.: MIT Press.
- 1054 Koontz-Garboden, Andrew. 2007. States, changes of state, and the monotonicity hypothesis. Doc-  
 1055 toral Dissertation, Stanford University.
- 1056 Koontz-Garboden, Andrew. 2009. Anticausativization. *Natural Language and Linguistic Theory*  
 1057 1:77–138.
- 1058 Labelle, Marie. 1992. Change of state and valency. *Journal of Linguistics* 28:375–414.
- 1059 Labelle, Marie. 2008. The french reflexive and reciprocal se. *Natural Language & Linguistic Theory*  
 1060 26:833–876.
- 1061 Labelle, Marie, and Edit Doron. 2010. Anticausative derivations (and other valency alternations)  
 1062 in French. *Probus* 22:303–316.
- 1063 Legendre, Géraldine, and Paul Smolensky. 2017. A competition-based analysis of French anti-  
 1064 causatives. *Linguisticæ Investigationes* 40:25–42.
- 1065 Legendre, Geraldine, Paul Smolensky, and Jennifer Culbertson. 2016. Blocking effects at the lexi-  
 1066 con/semantics interface and bidirectional optimization in French. In *Optimality-theoretic syntax,*  
 1067 *semantics, and pragmatics*, 276–299. Oxford: Oxford University Press.
- 1068 Levin, Beth, and Malka Rappaport Hovav. 1995. *Unaccusativity : at the syntax-lexical semantics*  
 1069 *interface*. Cambridge, Mass: MIT Press.
- 1070 Levinson, Stephen C. 2000. *Presumptive meanings: The theory of generalized conversational im-*  
 1071 *plicature*. MIT Press.
- 1072 Lewiński, Marcin. 2021. Illocutionary pluralism. *Synthese* 199:6687–6714.
- 1073 Lundquist, Björn. 2016. The role of tense-copying and syncretism in the licensing of morphological  
 1074 passives in the nordic languages. *Studia Linguistica* 70:180–220.
- 1075 Lundquist, Björn, Martin Corley, Mai Tungeth, Antonella Sorace, and Gillian Ramchand. 2016.

- 1076 Anticausatives are semantically reflexive in norwegian, but not in english. *Glossa: a journal of*  
1077 *general linguistics* 1.
- 1078 Martin, Fabienne, Sehrang Joo, Sami Yousif, Frank Keil, and Josh Knobe. 2022. Scaling agents via  
1079 dimensions. Talk at IATL 37, HUJI, Jerusalem.
- 1080 Martin, Fabienne, and Florian Schäfer. 2014. Anticausatives compete but do not differ in meaning:  
1081 a French case study. In *ShS web of conferences. 4e Congrès Mondial de Linguistique Française*,  
1082 volume 8, 2485–2500. EDP Sciences.
- 1083 Martin, Fabienne, Florian Schäfer, and Christopher Piñón. 2023. Transitives with inchoative se-  
1084 mantics. Manuscript, Utrecht University, Humboldt-Universität zu Berlin and Université de Lille  
1085 3.
- 1086 McCawley, J.D. 1978. Conversational implicature and the lexicon. In *Syntax and semantics 9:*  
1087 *Pragmatics*, ed. P. Cole, 245–259. New York: Academic Press.
- 1088 Nicenboim, Bruno, Daniel Schad, and Shravan Vasishth. 2023. *An introduction to bayesian data*  
1089 *analysis for cognitive science*. CRC Press.
- 1090 Piñón, Christopher. 2001. A finer look at the causative-inchoative alternation. In *Proceedings of*  
1091 *semantics and linguistic theory 11*, ed. Rachel Hastings, Brendan Jackson, and Zsafia Zvolenszky.  
1092 Ithaca, New-York: CLC Publications, Cornell University.
- 1093 Poesio, Massimo. 1996. Semantics ambiguity and perceived ambiguity. In *Semantic ambiguity and*  
1094 *underspecification*, ed. Kees van Deemter and Stanley Peters, 159–201. Stanford: CSLI.
- 1095 Poesio, Massimo. 2020. Ambiguity. In *The Wiley Blackwell Companion to Semantics*, ed. Daniel  
1096 Gutzmann, Lisa Matthewson, Cécile Meier, Hotze Rullmann, and Thomas Ede Zimmermann.  
1097 Wiley.
- 1098 Ramchand, Gillian C. 2008. *Verb Meaning and the Lexicon. A First Phase Syntax*. Cambridge:  
1099 Cambridge University Press.
- 1100 Rappaport Hovav, Malka. 2014. Lexical content and context: The causative alternation in English  
1101 revisited. *Lingua* 78:8–29.
- 1102 Rappaport Hovav, Malka. 2020. Deconstructing internal causation. In *Perspectives on causation*,  
1103 ed. Elitzur Bar-Asher Siegal and Nora Boneh, 219–256. Berlin: Springer.
- 1104 Reinhart, Tanya. 2002. The theta system. *Theoretical Linguistics* 28:229–290.
- 1105 Reinhart, Tanya, and Eric Reuland. 1993. Reflexivity. *Linguistic Inquiry* 24:657–721.
- 1106 Reinhart, Tanya, and Tal Siloni. 2004. Against the unaccusative analysis of reflexives. In *The*  
1107 *unaccusativity puzzle: Explorations of the syntax-lexicon interface*, ed. Artemis Alexiadou, Elena  
1108 Anagnostopoulou, and Martin Everaert, 159–180. Oxford: Oxford University Press.
- 1109 Reinhart, Tanya, and Tal Siloni. 2005. The lexicon-syntax parameter: Reflexivization and other  
1110 arity operations. *Linguistic inquiry* 36:389–436.
- 1111 Rett, Jessica. 2015. *The semantics of evaluativity*. Oxford: Oxford University Press.
- 1112 Rett, Jessica. 2020. Manner implicatures and how to spot them. *International Review of Pragmatics*  
1113 12:44–79.
- 1114 Rothenberg, M. 1974. *Les verbes à la fois transitifs et intransitifs en français contemporain*.  
1115 Amsterdam: La Haye.
- 1116 Ruwet, Nicolas. 1972. *Théorie syntaxique et syntaxe du français*. Paris: Seuil.
- 1117 Sauppe, Sebastian, Åshild Næss, Giovanni Roversi, Martin Meyer, Ina Bornkessel-Schlesewsky,  
1118 and Balthasar Bickel. 2023. An agent-first preference in a patient-first language during sentence  
1119 comprehension. *Cognitive Science* 47.
- 1120 Schäfer, Florian. 2008. *The syntax of (anti-)causatives. external arguments in change-of-state*

- 1121 *contexts*. Amsterdam & Philadelphia: John Benjamins.
- 1122 Schäfer, Florian. 2009. The causative alternation. *Language and linguistics compass* 3:641–681.
- 1123 Schäfer, Florian, Onur Özsoy, and Daniil Bondarenko. 2021. On Disjoint Reference Effects in Short  
1124 Passives. In *West coast conference on formal linguistics (WCCFL) 39*. Somerville, MA: Cascadilla  
1125 Proceedings Project. To appear.
- 1126 Schäfer, Florian, and Margot Vivanco. 2016. Anticausatives are weak scalar expressions, not re-  
1127 flexive expressions. *Glossa: a journal of general linguistics* 1.
- 1128 Smith, Carlota. 1970. Jespersen’s ‘move and change’ class and causative verbs in English. In  
1129 *Linguistic and literary studies in honor of archibald a. hill*, ed. Ali Jazayery, Edgar Polomé, and  
1130 Werner Winter, 101–109. The Hague: Mouton de Gruyter.
- 1131 Sportiche, Dominique. 2014. Assessing unaccusativity and reflexivity: Using focus alternatives to  
1132 decide what gets which  $\theta$ -role. *Linguistic Inquiry* 45:305–321.
- 1133 de Swart, Henriëtte, and Donka Farkas. 2010. The semantics and pragmatics of plurals. *Semantics  
1134 and pragmatics* 3:6–1.
- 1135 Thompson, Sandra. 1988. A discourse approach to the cross-linguistic category ‘adjective’. In  
1136 *Explaining linguistic universals*, ed. John Hawkins, volume 61, 167–185. Oxford: Blackwell.
- 1137 Veríssimo, João. 2021. Analysis of rating scales: A pervasive problem in bilingualism research and  
1138 a solution with bayesian ordinal models ordinal models. *Bilingualism: Language and Cognition*  
1139 24:842–848.
- 1140 Wasow, Thomas. 2015. Ambiguity avoidance is overrated. In *Ambiguity: Language and communi-  
1141 cation*, ed. Susanne Winkler, 21–51. Berlin: De Gruyter.
- 1142 White, Aaron Steven, Valentine Hacquard, and Jeff Lidz. 2018. Semantic information and the  
1143 syntax of propositional attitude verbs. *Cognitive Science* 42:416–456.
- 1144 Williams, Alexander. 2005. *Arguments in syntax and semantics*. Cambridge, MA: Cambridge  
1145 University Press.
- 1146 Williams, Edwin. 1974. Rule ordering in syntax. Doctoral Dissertation, MIT.
- 1147 Wright, Sandra. 2002. Transitivity and change of state verbs. In *Proceedings of the Annual Meeting  
1148 of the Berkeley Linguistics Society*, volume 28, 339–350.
- 1149 Zehr, Jeremy, and Florian Schwarz. 2018. Penncontroller for internet based experiments (IBEX).  
1150 Doi:10.17605/OSF.IO/MD832.
- 1151 Zribi-Hertz, Anne. 1982. La construction ‘se-moyen’ et son statut dans le triangle moyen-passif-  
1152 réfléchi. *Linguisticae Investigationes* 6:345–501.
- 1153 Zribi-Hertz, Anne. 1987. La réflexivité ergative en français moderne. *Le Français Moderne* 55:23–54.
- 1154 Zúñiga, Fernando, and Seppo Kittilä. 2019. *Grammatical voice*. Cambridge: Cambridge University  
1155 Press.