



# (Anti)Causativization of psych verbs in Spanish and Japanese

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## ABSTRACT

There is a notable typological contrast between psych verbs in Japanese and Spanish. Japanese derives Experiencer-Object verbs (e.g. *yorokob-ase-ru* 'to please') from specific Experiencer-Subject verbs (e.g. *yorokobu* 'to become pleased') via a morphological causativization. Spanish, on the other hand, presents so-called reflexive psych verbs (e.g. *alegrarse* 'to feel happy'), most of which can be analyzed as outputs of an anticausativization from certain Experiencer-Accusative verbs (e.g. *alegrar* 'to make happy'). Simply put, these languages derive psych verbs with procedures that reversely mirror each other. This paper will elucidate the characteristics of the causativization used to produce Japanese Experiencer-Object causatives and the anticausativization associated with Spanish Reflexive Psych Verbs and demonstrate that the typological contrast between Japanese and Spanish psych verbs results in semantic variation, e.g. differences in the entailment relation, absence/presence of ambiguity in negation, aspectual diversity. Semantic differences between psych verbs in these languages are ascribed to specific features of the (anti) causative operations employed to generate the predicates.

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## 1. Introduction

### 1.1. The causative-anticausative contrast in psych verbs

Psychological verbs, also known as psych verbs, are predicates that denote a mental state or a change of mental states, e.g. *fear*, *like*, *frighten*, and *please* in English. These predicates are associated with two thematic roles: Experiencer and Stimulus (or Theme)<sup>1</sup>. According to the grammatical configurations of these thematic roles, psych predicates are divided into Experiencer-Subject verbs (henceforth, 'ExpSubj verbs'), as shown in (1a), and Experiencer-Object verbs ('ExpObj verbs'), as in (1b).

- (1) a. John likes the fireworks. [Experiencer – Stimulus (or Theme)]  
b. The fireworks please John. [Stimulus (or Theme) – Experiencer]

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<sup>1</sup> Thematic roles are relations between predicates and their arguments in sentences, or relations between an event described by a verb and a participant in that event (Carlson 1984). 'Experiencer' is "a participant who is characterized as aware of something" (action or state) but who is not in control of it (Andrews 1985:8, Dowty 1989), and 'Stimulus' is "a participant that "causes some emotional reactions or cognitive judgments in the Experiencer" (Dowty 1991:579, following Talmy 1985). 'Theme,' with psych verbs, refers to the content or object of the described mental state, although the traditional definition of this role is "a participant which is characterized as changing its position or condition, or as being in a state or position" (Andrews 1985:8). Some landmark works favored the label 'Theme' for the non-Experiencer argument of psych verbs (e.g. Belletti and Rizzi 1988; Grimshaw 1990, among others).

The grammatical configurations of the thematic roles vary intralinguistically and crosslinguistically. In Spanish, in addition to those whose Experiencer appears as the nominative subject ('ExpNOM verb'), as in (2a), there are predicates whose Experiencer is expressed in the dative case ('ExpDAT verbs'), as in (2b), and others whose Experiencer is encoded in the accusative case ('ExpACC verbs'), as in (2c)<sup>2</sup>. ExpACC verbs include those that show the accusative-dative case alternation. Moreover, Spanish presents several types of reflexive psych verbs, many of which are reflexive variants of ExpACC verbs, as shown in (3)<sup>3</sup>.

- (2) a. *Ana odia eso.* ExpNOM verb  
Ana hates that  
'Ana hates that.'
- b. *A Ana le gusta eso.* ExpDAT verb  
to Ana DAT pleases that  
'That pleases Ana (Ana likes that).'
- c. *Eso la / le asustó.* ExpACC verb  
that ACC / DAT frightened  
'That frightened her/That was frightening for her.'
- (3) a. *Eso la / le alegró.* ExpACC verb  
that ACC / DAT made happy  
'That made her happy.'
- b. *Ana se alegró de eso.* Reflexive Psych Verb  
Ana SE made happy of that  
'Ana felt happy about that.'

In Japanese, psych predicates are typically ExpSubj verbs<sup>4</sup>. However, there are subclasses depending on the grammatical configurations of their Stimulus (or Theme) objects. Some ExpSubj verbs mark their object by the particle *-o* ('ExpSubj-O verbs'), as in (4a), and others, by the particle *-ni* ('ExpSubj-NI verbs'), as in (4b)<sup>5</sup>. Some verbs can mark their object by *-o* or *-ni*, as shown in (4c). As for ExpObj verbs, Japanese displays the causative variants of ExpSubj-NI verbs, as in (5)<sup>6</sup>.

<sup>2</sup> This study uses the terms 'ExpNOM verbs,' 'ExpDAT verbs,' and 'ExpACC verbs' for Spanish psych verbs, following Belletti and Rizzi's (1988) tradition for Italian that has been applied to Spanish psych verbs in the literature.

<sup>3</sup> Here is the list of some Spanish psych verbs (collected from Cano Aguilar 1999, Gutiérrez, 1999; De Miguel 1999, Vanhoe 2002, Romero, 2008; RAE 2009, Marín 2011, 2015, Marín and McNally 2011):

a. ExpNOM verbs (e.g. *odiar* 'to hate'): *admirar* 'to admire,' *adorar* 'to adore,' *amar* 'to love,' *apreciar* 'to appreciate,' *detestar* 'to detest,' *lamentar* 'to be sorry for,' *querer* 'to like,' *temer* 'to fear,' etc.

b. ExpDAT verbs (e.g. *gustar* 'to please'): *agradar* 'to please,' *apetecer* 'to feel like,' *desagradar* 'to annoy,' *importar* 'to matter,' *placer* 'to please, to enjoy,' *repugnar* 'to disgust,' etc.

c. ExpACC verbs (e.g. *asustar* 'to frighten'): *aburrir* 'to bore,' *agobiar* 'to overwhelm,' *alegrar* 'to make happy,' *angustiar* 'to upset,' *asombrar* 'to astonish,' *aterrorizar* 'to terrorize,' *cabrear* 'to piss off,' *complacer* 'to please,' *contentar* 'to satisfy,' *deprimir* 'to depress,' *desesperar* 'to exasperate,' *disgustar* 'to upset,' *distracer* 'to distract,' *divertir* 'to amuse,' *encantar* 'to please,' *enfadar* 'to make angry,' *enojar* 'to anger,' *entretener* 'to distract,' *entristecer* 'to sadden,' *espantar* 'to scare,' *excitar* 'to excite,' *extrañar* 'to puzzle,' *entusiasmar* 'to excite,' *fascinar* 'to fascinate,' *fastidiar* 'to disgust,' *horrorizar* 'to horrify,' *humillar* 'to humiliate,' *ilusionar* 'to inspire to hope,' *impresionar* 'to impress,' *interesar* 'to interest,' *inquietar* 'to worry,' *irritar* 'to irritate,' *molestar* 'to bother,' *ofender* 'to offend,' *satisfacer* 'to satisfy,' *preocupar* 'to worry,' *sorprender* 'to surprise,' etc.

<sup>4</sup> In Japanese, subjects can be marked by the nominative case marker *-ga* or a topic marker *-wa*.

<sup>5</sup> The particle *-ni* can mark many different types of elements: e.g. indirect objects (dative case or 'to'), location ('at, in'), direction ('to'), purpose ('to, for'), passive agent ('by'), etc. For convenience, we gloss the particle *-ni* as *NI* in this study, unless its use is easily identifiable.

<sup>6</sup> Here is the list of some Japanese psych verbs (collected from Teramura 1982, Bando 1996, Bando and Matsumura, 2001, Endo and Zushi 1993, Matsumura 1996, Yamakawa 2004, Shimizu 2007, Yoshinaga 2008; Isse 2008, among others):

a. ExpSubj-O verbs (e.g. *nikumu* 'to hate'): *aisuru* 'to love,' *ayasimu* 'to suspect,' *awaremu* 'to feel pity for,' *hajiru* 'to be ashamed,' *higamu* 'to take a jaundiced view of,' *hossuru* 'to want,' *itamu* 'to lament,' *itsukusimu* 'to cherish,' *itoosimu* 'to love,' *kirau* 'to dislike,' *konomu* 'to like,' *kuyamu* 'to repent,' *natukasimu* 'to miss,' *netamu* 'to envy,' *nozomu* 'to wish, to desire' *osimu* 'to regret, to spare,' *osoreru* 'to fear,' *sitau* 'to adore,' *suku* 'to like,' *tanosimu* 'to enjoy,' *toutobu* 'to respect,' *utagau* 'to doubt,' *uramu* 'to have a grudge against,' *urayamu* 'to envy,' etc.

b. ExpSubj-NI verbs (e.g. *odoroku* 'to get surprised'): *akiru* 'to get bored,' *ikaru* 'to get mad,' *iradatu* 'to get impatient,' *komaru* 'to be troubled,' *koriru* 'to learn one's lesson,' *kurusimu* 'to suffer,' *mairu* 'to feel beaten,' *mayou* 'to waver,' *megeru* 'to lose hope,' *meiru* 'to get depressed,' *nayamu* 'to be bothered,' *obieru* 'to be scared,' *okoru* 'to get angry,' *ononoku* 'to tremble,' *otituku* 'to calm down,' *syogeru* 'to get depressed,' *tereru* 'to be bashful,' *tomadou* 'to be confused,' *ukareru* 'to be in high spirits,' *urotaeru* 'to be upset,' *kanasimu* 'to be sad,' *yorokobu* 'to get pleased,' etc.

- (4) a. *Hana-ga kare-o nikumda.* ExpSubj-*O* verb  
 Hana-NOM he-ACC hate.PST  
 'Hana hated him.'
- b. *Hana-ga sore-ni odoroit.* ExpSubj-*Ni* verb  
 Hana-NOM that-/ *Ni* get surprised.PST  
 'Hana was surprised by that.'
- c. *Hana-ga sore {-o / -ni} yorokonda.*  
 Hana-NOM that{-ACC / -*Ni*} get pleased.PST  
 'She felt happy about/because of that.'
- (5) a. *Hana-ga sore {-ni / -o} kanasimda.* ExpSubj-*Ni*/verb  
 Hana-NOM that -*Ni* / -ACC feel sad.PST  
 'Hana felt sad by/about that.'
- b. *Sore-ga Hana-o kanasim-ase-ta.* ExpObj causatives  
 that-NOM Hana-ACC feel sad-CAUS-PST  
 'That made her sad.'

Psych predicates have received linguists' great attention because of the variation in their argument realizations. To preserve the theories of argument realization that assume a uniform and universal mapping between semantic relations and syntactic realizations, such as the Universal Alignment Hypothesis (Perlmutter and Postal 1984) and the Uniformity of Theta Assignment Hypothesis (Baker 1988)<sup>7</sup>, there have been many attempts to account for this *psych verbs puzzle* (Belletti and Rizzi 1988; Grimshaw 1990; Croft 1993; Pesetsky 1995; Arad 1998; Pykkänen 2000, and many others)<sup>8</sup>. This paper, nevertheless, focuses on the causativization and anticausativization observed in the predicates in question.

As mentioned above, Japanese shows ExpObj causatives (e.g. *odorok-ase-ru* 'to surprise') that are morphologically derived from specific ExpSubj verbs (e.g. *odoroku* 'to get surprised'). On the other hand, Spanish displays Reflexive Psych Verbs (e.g. *asustarse* 'to get frightened'), most of which are the *se* variants of ExpACC verbs (e.g. *asustar* 'to frighten'). In other words, Spanish and Japanese psych verbs show a typological contrast regarding the directionality of the derivation. Japanese ExpObj verbs are derived from ExpSubj verbs via a causativization, as shown in (6), while Spanish Reflexive Psych Verbs can be analyzed as results of an operation called anticausativization, as in (7).

- (6) a. *Maki-ga kaminari-ni odoroit.*  
 Maki-NOM thunder-/ *Ni* get surprised.PST  
 'Maki got surprised at the thunder.'
- b. *Kaminari-ga Maki-o odorok-ase-ta.*  
 thunder- Maki-ACC get surprised-CAUS-PST  
 NOM  
 'The thunder surprised Maki.'
- (7) a. *El trueno asustó a Lucía.*  
 the thunder frightened to Lucía  
 'The thunder frightened Lucía.'
- b. *Lucía se asustó (por el trueno).*  
 Lucía SE frightened by the thunder  
 'Lucía got surprised at the thunder.'

This is not a phenomenon limited to psych verbs but also part of a more general trend that could characterize these two languages as a typologically opposing pair.

## 1.2. Typological contrast between Japanese and Spanish

According to Talmy (1985), languages may differ in the lexicalization patterns of certain domains of meaning. For instance, 'posture' notions are generally lexicalized in the 'being-in-a-state' type of verbs in English (e.g. *lie*, *sit*, *stand*), whereas they tend to be lexicalized in the 'putting-into-a-state' type in Spanish (e.g. *acostar* 'to lay someone down') and in the 'getting-into-a-state' type in Japanese (e.g. *tatu* 'to stand up,' *suwaru* 'to sit down'). In Talmy's (1985) terms, 'being-in-a-state,' 'getting-in-a-

<sup>7</sup> According to the *Universal Alignment Hypothesis* ('UAH'), "there exist principles of universal grammar which predict the initial relation borne by each nominal in a given clause from the meaning of the clause" (Perlmutter and Postal 1984:97). Similarly, the *Uniformity of Theta Assignment Hypothesis* ('UTAH') states that "identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure" (Baker 1988:46) (in the Chomskyan tradition, d(eep)-structure is the underlying syntactic structure of a sentence from which the s(urface)-structure is derived).

<sup>8</sup> For a summary of landmark works and our discussion about the *psych verbs puzzle*, see the author's previous article, Author (2023).

state' and 'putting-into-a-state' are stative, inchoative, and agentive types of lexicalizations, respectively. Once lexicalized in a particular type, the other types are derived from it by different grammatical strategies.

Applying [Talmy's \(1985\)](#) generalization to psych predicates, mental states tend to be lexicalized in the 'getting-into-a-state' type of verbs in Japanese, while the corresponding notions are lexicalized in the 'putting-into-a-state' type in Spanish. Japanese lexicalizes mental states in inchoative type verbs, from which stative and agentive/causative types of verbs are derived, while Spanish lexicalizes mental states in agentive/causative type of verbs, from which stative and inchoative types of verbs.

(8) Lexicalization patterns for psych verbs (based on Talmy 1985: 87):

	'be in a mental state' STATIVE	'get into a mental state' INCHOATIVE	'put into a mental state' AGENTIVE/CAUSATIVE
English	be + V <sub>PP</sub> (e.g. <i>be frightened</i> )	get/become + V <sub>PP</sub> (e.g. <i>get frightened</i> )	V (e.g. <i>frighten</i> )
Spanish	'be' + V <sub>PP</sub> (e.g. <i>estar asustado</i> )	V + SE (e.g. <i>asustarse</i> )	V (e.g. <i>asustar</i> )
Japanese	'be' + V <sub>PP</sub> (e.g. <i>odoroi-te i-ru</i> )	V (e.g. <i>odoroku</i> )	V + CAUS (e.g. <i>odorok-ase-ru</i> )

(V = verb root; pp = past participle; arrows = derivational directions)

This typological contrast between Spanish and Japanese also relates to [Ikegami's \(1981\)](#) "do" languages/ "become" languages distinction. Languages differ in the type of expression they use to describe a particular situation. Some languages preferably use a 'someone does (causes someone to do) something' type of expression to describe an actual situation (i.e. "do" languages), while others show a tendency to describe the same situation in a 'something becomes so (by itself)' type of construction (i.e. "become" languages). Languages describe a situation from different perspectives, focusing on the doing/ causing part of the event or only on its result portion. In this respect, Spanish and Japanese represent "do" languages and "become" languages, respectively ([Deguchi 1982](#); [Fukushima 1990](#)).

Nevertheless, it does not mean that all verbs in a language are lexicalized in a single pattern ([Noda 1997](#)). Concerning psych predicate, Spanish uses not only agentive/causative expressions (i.e. ExpACC verbs) to express a change of psychological state or mental reaction but also displays inchoative type expressions (i.e. Reflexive Psych Verbs). Japanese employs not only inchoative expressions (i.e. ExpSubj verbs) but also presents causative expressions (i.e. ExpObj causatives). Since both Spanish and Japanese have verbs whose Experiencer appears as the (nominative) subject and verbs whose Experiencer appears as an (accusative or dative) object, what interests us here is whether the corresponding expressions in these languages are semantically equal.

### 1.3. Structure of the work

In this study, we will examine some Japanese and Spanish psych verbs from a typological point of view in a (formal) semantic framework. Spanish and Japanese derive some psych verbs in a reverse procedure. Therefore, the corresponding expressions in these languages differ in the derivational status: Spanish ExpACC verbs are lexical verbs, while Japanese ExpObj causatives are derived predicates; and Japanese ExpSubj-*NI* verbs are lexical verbs, while Spanish Reflexive Psych Verbs are derived predicates. Nevertheless, ExpObj verbs have been treated similarly across various languages despite the apparent lexical/derived distinction. In this paper, we will demonstrate that the typological contrast observed between Spanish and Japanese psych predicates results in some semantic differences between the corresponding expressions in these languages.

In Section 2, we will examine the nature of the causative formation present in Japanese ExpObj causatives and tackle whether Japanese ExpObj causatives are like ExpObj lexical verbs of other languages in grammatical terms. Section 3 will show the details of the anticausative operation and apply it to Spanish Reflexive Psych Verbs. In Section 4, we will discuss the semantic differences between ExpObj verbs and between ExpSubj verbs of Spanish and Japanese and demonstrate how the derivational diversity can be reflected in the semantic variation of the predicates in question.

## 2. Causativization in Japanese psych verbs

### 2.1. Experiencer-Object causatives

In Japanese, ExpObj verbs (e.g. *odorok-ase-ru* 'to surprise,' *kanasim-ase-ru* 'to sadden,' *yorokob-ase-ru* 'to please,' *tanosim-ase-ru* 'to amuse') are morphologically derived from specific ExpSubj verbs by attaching a causative morpheme *-(s)ase*. In other words, Japanese ExpObj causatives are morphologically overt causatives, in contrast to ExpObj lexical verbs of other languages like English and Spanish (e.g. *frighten*, *please*, *asustar* 'to frighten,' *alegrar* 'to make happy').

Not all ExpSubj verbs can form ExpObj counterparts. ExpSubj-*NI* verbs (ExpSubj verbs whose object is marked by the particle *-ni*) mostly can form ExpObj causatives, as shown in (9), whereas ExpSubj-*O* verbs (ExpSubj verbs whose object is marked by the accusative case marker *-o*) generally cannot, as in (10).

- (9) a. *Taro-ga kaminari-ni odoroi*ta.  
Taro-NOM thunder-NI get surprised.PST  
'Taro got surprised at the thunder.'
- b. *Kaminari-ga Taro-o odorok*-ase-ta.  
thunder- Taro-ACC get surprised-CAUS-PST  
NOM  
'The thunder surprised Taro.'
- (10) a. *Taro-ga Hanako-o nikum*da.  
Taro-NOM Hanako-ACC hate.PST  
'Taro hated Hanako.'
- b. *\*Hanako-ga Taro-o nikum*-ase-ta.  
Hanako- Taro-ACC hate-CAUS-PST  
NOM  
Intended: 'Hanako disgusted (caused hatred in) Taro.'

The distribution of ExpObj causatives relates to the 'Cause of Emotion'/'Object of Emotion' distinction between the objects of ExpSubj-NI verbs and ExpSubj-O verbs. A significant difference between ExpSubj-NI verbs and ExpSubj-O verbs is that the object of the former is interpreted as 'Cause of Emotion' while that of the latter is considered as 'Object of Emotion' (Teramura, 1984, [Endo and Zushi 1993](#); [Bando 1996](#), and other related works)<sup>9</sup>. Since ExpObj causatives seem only possible for specific ExpSubj-NI verbs, ExpObj causatives are formed from ExpSubj verbs whose object is 'Cause of Emotion.' For instance, some ExpSubj verbs allow both -o and -ni case markers for their objects, and the o-marked object is 'Object of Emotion' while the ni-marked element is 'Cause of Emotion.' For such verbs, ExpObj counterparts are possible without problem.

- (11) a. *Taro-ga purezento {-o / - yorokond*a.  
*ni}*  
Taro-NOM present -ACC / -NI get pleased.PST  
'Taro was pleased about/got pleased at the present.'
- b. *Purezento-ga Taro-o yorokob*-ase-ta.  
present-NOM Taro-ACC get pleased-CAUS-PST  
'The present pleased Taro.'

Moreover, there are some ExpSubj verbs whose object is instead 'Object of Emotion' even though it is marked by -ni, and such verbs sound unnatural in the ExpObj counterparts, as shown below.

- (12) a. *Taro-ga sensei-ni akogare*ta.  
Taro-NOM teacher-NI long.PST  
'Taro longed for the teacher.'
- b. *??Sensei-ga Taro-o akogare*-ase-ta.  
teacher-NOM Taro-ACC long-CAUS-PST  
Intended: 'The teacher attracted Taro.'

Furthermore, the verb *tanosimu* 'enjoy' can form an ExpObj causative even though it is an ExpSubj-O verb. The o-marked objects are normally considered as 'Object of Emotion,' but the o-marked object of this verb may not be an 'Object of Emotion.' That is, the *eiga* 'the movie' in (13a) is not a target of emotional evaluation, i.e. it is not necessarily that *Taro* evaluated the movie as enjoyable, but rather *Taro* just enjoyed watching it. If so, the watching movie is a mere cause of *Taro*'s enjoyment.

<sup>9</sup> Notice that this 'Object of Emotion'/'Cause of Emotion' distinction looks similar to [Pesetsky's \(1995\)](#) 'Target or Subject Matter (T/SM)'/ 'Causer' distinction. Pesetsky actually states that 'Target of Emotion' and 'Subject Matter of Emotion' are generally lumped together under the term 'Object of Emotion.' Note, however, that in Japanese both 'Object of Emotion' and 'Cause of Emotion' appear as object elements of ExpSubj verbs, while Pesetsky's 'T/SM' and 'Causer' are coined to distinguish between the objects of ExpSubj verbs and the subjects of ExpObj verbs.'

- (13) a. *Taro-ga eiga-o tanosinda.*  
 Taro-NOM movie-ACC enjoy.PST  
 'Taro enjoyed the movie.'
- b. *Eiga-ga Taro-o tanosim-ase-ta.*  
 movie-NOM Taro-ACC enjoy-CAUS-PST  
 'The movie entertained Taro.'

Therefore, ExpObj causatives are possible for the ExpSubj verbs whose objects, whether marked by *-ni* or *-o*, can be interpreted as 'Cause of Emotion,' i.e. the element that can only be the 'Object of Emotion' cannot be the subject of ExpObj causatives.

## 2.2. Causative construction

A causative construction in Japanese is formed by attaching a morpheme *-(s)ase* to the verb root (for landmark works about Japanese causativization, see Kuroda 1965; Shibatani 1973, 1976; Kitagawa, 1974; Nakamura 1999, among many others). The subject of the base verb changes its case marking from nominative to other cases. For instance, the subject of transitive and ditransitive verbs becomes a causee marked by a dative case marker *-ni*.

- (14) a. *Taro-ga ringo-o tabeta.*  
 Taro-NOM apple-ACC eat.PST  
 'Taro ate an apple.'
- b. *Maki-ga Taro-ni ringo-o tabe-sase-ta.*  
 Maki-NOM Taro-DAT apple-ACC eat-CAUS-PST  
 'Maki made Taro eat an apple.'
- (15) a. *Taro-ga oya-ni tegami-o kaita.*  
 Taro-NOM parent-DAT letter-ACC write.PST  
 'Taro wrote a letter to his parents.'
- b. *Maki-ga Taro-ni oya-ni tegami-o kak-ase-ta.*  
 Maki-NOM Taro-DAT parent-DAT letter-ACC write-CAUS-PST  
 'Maki made Taro write a letter to his parents.'

Regarding intransitive verbs, the causee is typically marked by the accusative *-o*, as shown in (16b). However, there are instances where the causee can be marked by the dative *-ni*, as in (16c). When the causee is marked by the dative *-ni*, it would be interpreted as having some volition towards the denoted action. For instance, in (16b), *kanjya* 'the patient' marked by *-ni* can be regarded as not being forced to walk by the doctor, but as walking on her (his) own will.

- (16) a. *Kanjya-ga aruita.*  
 patient-NOM walk.PST  
 'The patient walked.'
- b. *Isya-ga kanjya-o aruk-ase-ta.*  
 doctor-NOM patient-ACC walk-CAUS-PST  
 'The doctor made the patient walk.'
- c. *Isya-ga kanjya-ni aruk-ase-ta.*  
 doctor-NOM patient-DAT walk-CAUS-PST  
 'The doctor let the patient walk.'

Not all intransitive verbs can form causative constructions with a *-ni* marked causee. The intransitive verbs whose only argument tends to be a non-volitional participant, such as *saku* 'to bloom,' can form causative constructions with an *-o* marked causee but cannot with a *-ni* marked causee, as shown in (17b).

- (17) a. *Hana-ga saita.*  
flower-NOM bloom.PST  
'The flower came out.'
- b. *Maki-ga sono hana [-o /\*-ni] sak-ase-ta.*  
Maki-NOM that flower -ACC / -DAT bloom-CAUS-PST  
'Maki made the flower bloom.'

Some intransitive verbs are not compatible with the *-sase* causative constructions, regardless of case marking, as shown in (18b). These verbs have lexical causative counterparts, as in (18c). In other words (18a) and (18c) are unaccusative-causative lexical pairs.

- (18) a. *Kabin-ga kowareta.*  
vase-NOM break.INTR.PST  
'The vase broke.'
- b. \**Maki-ga kabin [-o / -ni] koware-sase-ta.*  
Maki-NOM vase -ACC / -DAT break.INTR-CAUS-PST  
'Maki made the vase break.'
- c. *Maki-ga kabin-o kowasita.*  
Maki-NOM vase-ACC break.TRANS.PST  
'Maki broke the vase.'

The verb *saku* 'to bloom' in (17a) and the verb *kowareru* 'to become broken' in (18a) are both unaccusative verbs. Unaccusative verbs have only one argument, which is a THEME that undergoes a change of state. However, *saku* 'to bloom' is considered an internally caused change-of-state verb, while *kowareru* 'to become broken' is regarded as an externally caused change-of-state verb (Levin and Rappaport Hovav 1995; Alexiadou 2014; Kageyama 1993; Sugimura 2007:102, and many others)<sup>10</sup>. In (17a), the flower bloomed due to its inherent ability to bloom, with or without external support such as watering, applying fertilizer, or growing it in a greenhouse. On the other hand, in (18a), the vase broke due to an external cause, such as someone's action, a natural force, or a causal event.

So far, we have described the main features of the *-sase* causative construction. Transitive and ditransitive verbs can create a causative construction where the causee (i.e. the original agent of the denoted action) is marked by the dative marker *-ni*, as shown in (19b) and (19a), respectively. Intransitive verbs can also form a causative construction where the causee is marked by the accusative marker *-o*, as in (19c), although in some cases the causee can be marked by *-ni*. Among intransitive verbs, internally caused change-of-state verbs (e.g. *saku* 'to bloom') can form a *-sase* causative construction, while externally caused change-of-state verbs (e.g. *kowareru* 'to become broken') cannot.

- (19) Causative construction:
- a. x-NOM y-DAT z-ACC *V<sub>itr</sub>*. → w-NOM [x-DAT y-DAT z-ACC V]-CAUS
- b. x-NOM y-ACC *V<sub>tr</sub>*. → w-NOM [x-DAT y-ACC V]-CAUS
- c. x-NOM *V<sub>itr</sub>*. → w-NOM [x(-ACC/-DAT)] V]-CAUS
- d. x-NOM *V<sub>itr</sub>*. (internally caused change of state) → w-NOM [x(-ACC/\*-DAT)] V]-CAUS
- e. x-NOM *V<sub>itr</sub>*. (externally caused change of state) → w-NOM [x(\*-ACC/\*-DAT)] V]-CAUS

The formation of ExpObj verbs, which we have seen previously in section 2.1, appears distinct from the regular *-sase* causative construction that we have summarized in this section. While the regular causative constructions add an external argument as the causer subject, ExpObj causatives appear to have the same number of arguments as their ExpSubj variants, only in a reverse configuration.

ExpSubj verbs are generally incompatible with the regular causative construction, as shown in (20c). However, among the ExpSubj verbs that cannot form ExpObj causatives, a few cases sound relatively fine in the regular causative construction, as in (21c).

<sup>10</sup> "Intuitively, an internally caused change of state is a change of state for which the means of bringing about the change-of-state event is conceptualized as residing in the entity undergoing the change," while "externally caused change of state is conceptualized as coming about because of something external to the entity that undergoes the change of state" (McKoon 2000: 833).

- (20) a. *Taro-ga kaminari-ni odoroit.*  
Taro-NOM thunder-NI get surprised.PST  
'Taro got surprised at the thunder.'
- b. *Kaminari-ga Taro-o odorok-ase-ta.*  
thunder-NOM Taro-ACC get surprised-CAUS-PST  
'The thunder surprised Taro.'
- c. *[\*Sono oto-ga / \*Maki-ga] [Taro-ni kaminari-ni odorok]-ase-ta.*  
that sound-NOM/Maki-NOM Taro-DAT thunder-NI  
get surprised-CAUS-PST  
'(The loud sound/Maki) made Taro get surprised at the thunder.'
- (21) a. *Taro-ga Hanako-o nikumda.*  
Taro-NOM Hanako-ACC hate.PST  
'Taro hated Hanako.'
- b. *\*Hanako-ga Taro-o nikum-ase-ta.*  
Hanako-NOM Taro-ACC hate-CAUS-PST  
Intended: 'Hanako disgusted (caused hatred in) Taro.'
- c. *[?Sono hanasi-ga / ?Maki-ga] [Taro-ni Hanako-o nikum]-ase-ta.*  
that story-NOM / Maki-NOM Taro-DAT Hanako-ACC  
hate-CAUS-PST  
'Those stories made Taro hate Hanako.'

Suppose the regular causative construction requires the causee to be a volitional argument, as noted above. In that case, ExpSubj verbs generally cannot appear in the regular causative construction because an Experiencer is a less volitional participant. That is to say, the Experiencer subject of *odoroku* 'to get surprised' in (20c) does not have control over his/her feeling surprised. Similarly, we could explain that the example (21c) is relatively fine because the Experiencer subject of *nikumu* 'to hate' has some control over her/his feeling hatred towards the object, or at least some control regarding the direction of aiming such emotion.

So far, we have seen the essential characteristics of the formation of ExpObj verbs and the causative construction in Japanese. The following section will discuss whether the causativization in ExpObj causatives differs from "regular" causativization.

### 2.3. Discussion about the causativization in ExpObj causatives

#### 2.3.1. Valence-increasing or valence-unchanging

ExpObj causatives look different from the regular causative construction concerning the number of arguments. While the regular causative construction adds an extra argument as the causer subject, as described in (22), ExpObj causatives seemingly exchanges the syntactic roles of a stimulus and experiencer arguments, as in (23).

- (22) a. *Taro-ga hon-o yonda.*  
Taro-NOM book-ACC read.PST  
'Taro read a book.'
- b. *Maki-ga Taro-ni hon-o yom-ase-ta.*  
Maki-NOM Taro-DAT book-ACC read-CAUS-PST  
'Maki made Taro read a book.'
- (23) a. *Taro-ga sono sirase-ni odoroit.*  
Taro-NOM that news-NI get surprised.PST  
'Taro got surprised at the news.'
- b. *Sono sirase-ga Taro-o odorok-ase-ta.*  
that news-NOM Taro-ACC get surprised-CAUS-PST  
'The news surprised Taro.'

In other words, a single language seems to have two types of causativization: valence-increasing and valence-unchanging.



- (24) a.  $\text{Pred}(x, y) \rightarrow z$  CAUSE [ $\text{Pred}(x, y)$ ] valence-increasing causativization  
 b.  $\text{Pred}(x, y) \rightarrow$  CAUSE- $\text{Pred}(y, x)$  valence-unchanging causativization

Some languages have different types of causativization. For instance, in Finnish, there are stative ExpSubj verbs and nonstative ExpSubj verbs, and both classes have ExpObj causative counterparts (see [Pylkkänen 2000](#)). The interesting point here is that there is an important difference between stative and nonstative pairs concerning causativization. In the stative pairs, the selectional restriction of the object of ExpSubj verbs applies to the subject of the ExpObj causatives. For example, just like the object of a stative ExpSubj verb *sääli* ‘pity’ cannot be inanimate, the subject of its causative ExpObj variant cannot be inanimate.

- (25) a. *Minna sääli-i Matti-a.*  
 Minna.NOM pity-3SG Matti-PAR  
 ‘Minna pities Matti.’  
 b. ??*Minna sääli uutisi-a.*  
 Minna.NOM pity-PST.3SG news-PAR  
 ‘Minna pities the news.’  
 c. ??*Untiset sääli-tt-i-vät Minna-a.*  
 news.NOM pity-CAUS-PST-3PL Minna-PAR  
 ‘The news caused pity in Minna.’

(Pylkkänen 2000:434-435)

In the nonstative pairs, conversely, the selectional restriction of the object of ExpSubj verbs does not apply to the subject of the ExpObj causatives. For example, while a nonstative ExpSubj verb *viha-stu* ‘become angry’ precludes an animate object, its causative ExpObj counterpart admits an animate subject.

- (26) a. *Majja viha-stu-i Jussi-n kommenti-sta.*  
 Majja.NOM anger-INCH-PST Jussi-GEN comment-ELA  
 ‘Majja became angry because of Jussi’s comment.’  
 b. ??*Majja viha-stu-i Jussi-sta.*  
 Majja.NOM anger-INCH-PST Jussi-ELA  
 ‘Majja became angry because of Jussi.’  
 c. *Jussi viha-stu-tti Majja-n.*  
 Jussi.NOM anger-INCH-CAUS-PST Majja-ACC  
 ‘Jussi caused Mari to become angry.’

(Pylkkänen 2000:434-436)

The causativization in the stative pairs can differ from that in the nonstative pairs. The causativization in the stative pairs can be a ‘valence-unchanging (switching)’-type of operation since the object of an ExpSubj verb and the subject of its ExpObj counterpart share the same selectional restriction.

Now, consider Japanese ExpObj causatives. Although limited to a few instances, the ExpSubj-*NI* verbs’ selectional restriction disappears in their ExpObj causative variants. For example, an ExpSubj-*NI* verb *meiru* ‘to get depressed’ disallows an animate object, but its ExpObj causative variant allows an animate subject.

- (27) a. *Taro-ga warui sirase-ni meitta.*  
 Taro-NON bad news-*NI* get depressed.PST  
 ‘Taro got depressed at the bad news.’  
 b. ??*Taro-ga Maki-ni meitta.*  
 Taro-NON Maki-*NI* get depressed.PST  
 ‘Taro got depressed at Maki.’  
 c. *Maki-ga Taro-o meir-ase-ta.*  
 Maki-NOM Taro-ACC get depressed-CAUS-PST  
 ‘Maki depressed Taro.’

Therefore, despite the appearance, causativization in Japanese ExpObj causatives is not a valence-unchanging (switching) type of operation. Instead, it is a valence-increasing type of causativization, just like regular causativization. This becomes obvious if we accept the idea that the objects of ExpSubj-*NI* verbs are adjuncts<sup>11</sup>. Namely, if ExpSubj-*NI* verbs are one-place predicates that only require an Experiencer argument, the ExpObj variants can be formed by adding an external causer, as sketched in (28).

(28) ExpObj causatives in Japanese:  $\text{Pred}(x) \rightarrow y \text{ CAUSE } [\text{Pred}(x)]$

In the previous section, we observed that ExpSubj-*NI* verbs can form ExpObj causatives but cannot appear in the regular causative construction. If the *ni*-marked 'Cause of Emotion' is an adjunct, no difference exists between its ExpObj causative and its regular causative construction. Then (29c(=20c)) is not grammatical because two 'Causes of Emotion' exist in a single sentence.

- (29) a. *Taro-ga (kaminari-ni) odorita.*  
Taro-NOM thunder-*NI* get surprised.PST  
'Taro got surprised (at the thunder).'
- b. *Kaminari-ga [Taro-o odorok-ase-ta.]*  
thunder- Taro-ACC get surprised-CAUS-PST  
NOM  
'The thunder surprised Taro.'
- c. *[\*Sono oto-ga / \*Maki-ga] [Taro-ni kaminari-ni odorok]-ase-ta.*  
that sound-NOM / Maki-NOM Taro-DAT thunder-*NI*  
get surprised-CAUS-PST  
'(The loud sound/Maki) made Taro get surprised at the thunder.'

ExpSubj-*O* verbs cannot form ExpObj causatives, as in (30b(=21b)), but are relatively fine in the regular causative construction (30c(=21c)). Again, this is because the *o*-marked objects are verb-selected arguments, and the causativization is a valence-increasing operation, not a valence-switching type.

- (30) a. *Taro-ga Hanako-o nikumda.*  
Taro-NOM Hanako-ACC hate.PST  
'Taro hated Hanako.'
- b. *\*Hanako-ga Taro-o nikum-ase-ta.*  
Hanako-NOM Taro-ACC hate-CAUS-PST  
Intended: 'Hanako disgusted (caused hatred in) Taro.'
- c. *[?Sono hanasi-ga / ?Maki-ga] [Taro-ni Hanako-o nikum]-ase-ta.*  
that story-NOM / Maki-NOM Taro-DAT Hanako-ACC  
hate-CAUS-PST  
'Those stories made Taro hate Hanako.'

In summary, ExpObj causatives formed from ExpSubj-*NI* verbs in Japanese are the results of a valence-increasing type of causativization since ExpSubj-*NI* verbs are one-place predicates to which an external 'Cause of Emotion' can be added. ExpObj causatives are not different from regular causatives because both are constructed via a causativization that adds an external causer. It is not surprising that causativization is an operation that adds a causer argument. However, our point is that even ExpObj causatives, which look like outputs of a valence-switching type operation, are formed by a valence-increasing type causativization. Moreover, as we will demonstrate below, the *-(s)ase* causativization is not adding an external causer to create lexically formed causative verbs but embedding the whole base predicate just like syntactic causative constructions.

### 2.3.2. Lexical or syntactic

Suppose Japanese ExpObj causatives are formed via a valence-increasing type of causativization. In that case, these expressions are more like periphrastic causative constructions, e.g. *They {made/let} her cry* (cf. Katada 1995, 1997; Kuroda 1965). In this section, we will demonstrate that the causativization in Japanese ExpObj causatives is indeed a syntactic operation, which makes them differ from lexically formed expressions in the causativity they denote.

Causativization is not a uniform operation across languages or even in a single language if it has more than one type of causative operation, as mentioned for Finnish in the previous section. According to Horvath and Siloni (2011a), causatives in Hungarian are productively constructed by attaching a causative morpheme to the verb roots, just like Japanese *-(s)ase*

<sup>11</sup> In the author's previous work, Author (2023), the grammatical nature of the *ni*-marked elements of psych verbs is examined in terms of Miyagawa's (1989a, 1989b) floated numeral quantifier test and a few more other tests, and it is concluded that the *ni*-marked elements of psych verbs are instead adjuncts than verb-selected arguments.

causatives. However, some different behaviors between them indicate that Japanese causative constructions consist of two predicates, a cause predicate and an embedded predicate, while Hungarian ones involve only one predicate (see Horvath and Siloni 2011a for the details of Hungarian causativization).

For instance, in Japanese causatives, negation can either follow the causative morpheme *-(s)ase* to negate the causative predicate, as in (31a), or intervene between the base verb and the causative morpheme to negate the base verb, as in (31b).

- (31) a. *Taro-wa kodomo-o gakkou-ni ik-ase-nakatta.*  
 Taro-NOM child-ACC school-to go-CAUS-NEG.PST  
 'Taro did not make his child go to the school.'
- b. *Taro-wa kodomo-o gakkou-ni ikanak-sase-ta.*  
 Taro-NOM child-ACC school-to go.NEG-CAUS-PST  
 'Taro made his child not go to the school.'

This is a characteristic of the *-(s)ase* causative construction since lexical causative transitive verbs do not allow negation to intervene between the base verb and the transitive morpheme (e.g. *kowasu* '(x) breaks (y)' vs. *kowareru* '(y) breaks'), as below.

- (32) a. *Taro-ga omocha-o kowasanakatta.*  
 Toro-NOM toy-ACC break.TRANS.NEG.PST  
 'Taro did not break the toy.'
- b. \**Taro-ga omocha- kowanakasata.*  
 o  
 Toro-NOM toy-ACC break.NEG.TRANS.PST

Whether or not negation can intervene between the base verb and the causative morpheme relates to whether the causative expressions involve two separable predicates. The following diagnostics indicate two agents in Japanese productive causatives. For instance, in Japanese productive causatives, agent-oriented adverbials can modify either the causer or the causee, as shown in (33).

- (33) *Sono bengoshi-wa [tyuchonaku / yorokonde] John-ni*  
 that lawyer-TOP without hesitation/with pleasure John-DAT  
*keiyakusyo-ni sain-s-ase-ta.*  
 contract-DAT sign-do-CAUS-PST  
 (i) 'The lawyer made [John sign the contract] without hesitation/with pleasure.'  
 (ii) 'The lawyer made [John sign the contract without hesitation/with pleasure].'  
 (Horvath and Siloni 2011a: 669)

Similarly, the VP-ellipsis construction (i.e. *do so* substitution) can also detect two agents in Japanese causatives. The *do so* substitution is possible either for the causer's VP or the causee's VP, as shown in (34).

- (34) *Yoko-ga [musuko-ni [huku-o kij-sase]-ru to,*  
 Yoko-NOM son-DAT clothes-ACC wear-CAUS-NPST and  
*Junko-mo soo sita.*  
 Junko-also so do.PST  
 (i) 'Yoko made her son wear clothes, and Junko made her son wear clothes, too.'  
 (ii) 'Yoko made her son wear clothes, and Junko wore clothes, too.'  
 (Horvath and Siloni 2011a: 666)

Now, we apply this analysis to Japanese ExpObj causatives. In the previous section, we proposed that ExpObj causatives are apparently different from regular causative constructions, but both are actually made of a uniform causativization. Do ExpObj causatives also comprise two separable predicates? Firstly, the negation test can successfully detect two predicates in ExpObj causatives. Namely, just like productive causatives we have seen above, ExpObj verbs can be intervened by the negation, and the negation can scope over either the causative predicate or the base verb, as shown in the following examples.

- (35) a. *Taro-wa kodomotati-o odorok-ase-nakatta.*  
 Taro-TOP children-ACC get surprised-CAUS-NEG.PST  
 'Taro did not cause children to get surprised (did not surprise children).'
- b. *Taro-wa kodomotati-o odorokanak-sase-ta.*  
 Taro-TOP children-ACC get surprised.NEG-CAUS-PST  
 'Taro caused children not to get surprised.'
- (36) a. *Taro-wa kodomotati-si-o osore-sase-nakatta.*  
*ni*  
 Taro-TOP children-DAT death-ACC fear-CAUS-NEG.PST  
 'Taro did not cause children to fear death.'
- b. *Taro-wa kodomotati-si-o osorenak-sase-ta.*  
*ni*  
 Taro-TOP children-DAT death-ACC fear.NEG-CAUS-PST  
 'Taro caused children not to fear death.'

Other tests like agent-oriented adverbials and *do so* substitution have little use here since the causee of ExpObj causatives is not an agent but an experiencer. Naturally, agent-oriented adverbials and *do so* substitution only apply to the causer's portion.

- (37) *Taro-ga kodomotati-o {koini / yorokonde}*  
 Taro-NOM children-ACC intentionally / with pleasure  
*odorok-ase-ta.*  
 get surprised-CAUS-PST  
 (i) 'Taro surprised children intentionally/with pleasure.'  
 (ii) '\*Children got surprised intentionally/with pleasure.'
- (38) *Taro-ga Maki-o odorok-ase-ru to, Jiro-mo*  
 Taro-NOM Maki-ACC get surprised-CAUS-NPST and Jiro-also  
*soo sita.*  
 so do.PST  
 (i) 'Taro surprised Maki, and Jiro surprised Maki too.'  
 (ii) '\*Taro surprised Maki, and Jiro got surprised too.'

Is there any adverb that is oriented to both agent and Experiencer? For instance, *zonbunni* 'sufficiently, to one's heart's content' can modify both the causer's triggering an emotion part and the causee's experiencing the emotion part.

- (39) *Maki-ga Taro-o zonbunni {obie-sase-ta /*  
 Maki-NOM Taro-ACC sufficiently be scared-CAUS-PST /  
*odorok-ase-ta}.*  
 get surprised-CAUS-PST  
 (i) 'Maki scared/surprised Taro to her heart's content.'  
 (ii) 'Taro got scared/got surprised to his heart's content.'

Moreover, temporal adverbials also show a similar result. For instance, *-kan* 'for' adverbials can modify either the causer's triggering the denoted emotion or the causee's (i.e. Experiencer's) being in such emotional state, as shown below.

- (40) *Maki-ga Taro-o mikka-kan nayam-ase-ta.*  
 Maki-NOM Taro-ACC three.days-for be bothered-CAUS-PST  
 (i) 'Maki caused bother in Taro for three days.'  
 (ii) '(Maki did something and) Taro was bothered for three days.'

Some ExpObj causatives with these adverbials are only possible in the first interpretation, and this tends to be an iterative reading, as shown in (41).

- (41) *#Maki-ga Taro-o mikka-kan odorok-ase-ta.*  
 Maki-NOM Taro-ACC three.days-for get surprised-CAUS-PST  
 (i) 'Maki caused surprise in Taro (repeatedly) for three days.'  
 (ii) '??(Maki did something and) Taro was surprised for three days.'

Notice that their ExpSubj variants behave just like them. This suggests that ExpObj causatives embed the whole ExpSubj predicates, and the temporal adverbials modify both the causing and embedded parts of the described event.

- (42) a. *Taro-ga mikka-kan nayamda.*  
 Taro-NOM three.days-for be bothered.PST  
 'Taro was bothered for three days.'
- b. # *Taro-ga mikka-kan odoroit.*  
 Taro-NOM three.days-for get surprised.PST  
 ??'Taro was surprised for three days.'

Summarizing Section 2, we have outlined the essential characteristics of the regular causative construction and ExpObj causatives. ExpObj causatives are mostly derived from ExpSubj verbs whose objects are 'Cause of Emotion.' Then, we demonstrated that ExpObj causatives are, despite their appearance, results of valence-increasing type causativization. Moreover, we showed how causativization in both regular causatives and ExpObj causatives in Japanese is a single uniform operation that embeds the whole base predicate just like syntactically constructed causative constructions.

Causativity can vary depending on the derivational procedures the expressions undergo. ExpObj verbs in some languages are lexical verbs, while in others, they are derived verbs. For instance, *annoy* in English and *asustar* 'to frighten' in Spanish are lexical verbs, while Japanese ExpObj verbs are produced from ExpSubj verbs by overt causativization. Nevertheless, ExpObj verbs have been considered causative across languages, independently of the apparent lexical/derived distinction. For instance, Pesetsky (1995) proposes that ExpObj verbs such as *annoy* and *depress* are bimorphemic words containing a bound root and a phonologically null causative morpheme (e.g. *depress*: [[ $\sqrt{\text{depress}}$ ]<sub>CAUS</sub> <sub>v</sub>]). This proposal is based on the assumption that similar verbs in other languages like Japanese are indeed morphologically causative (e.g. *kanasim-ase-ru* 'to sadden').

However, suppose Japanese ExpObj causatives are formed by a syntactic causative operation that makes them differ from lexically formed causative expressions, as we have just demonstrated. In that case, they can also be distinguished from ExpObj lexical verbs. Horvath and Siloni (2011a) divide causative expressions into three types: causatives formed in the lexicon (e.g. Hungarian *-(t)at/-(t)et* causativization), causatives formed in the syntax (e.g. Japanese *-(s)ase* causativization), and causative transitive verbs which are subject to decausativization (a.k.a. anticausativization). The last type refers to those typically appearing in the transitive-unaccusative (or causative-anticausative) alternation (e.g. *John broke the window/ The window broke*).

As we see below, Spanish ExpACC verbs resemble lexical causative transitive verbs. Japanese ExpObj causatives would be crucially different from Spanish ExpACC verbs. In the following sections, we will deal with Spanish Reflexive Psych Verbs formed from ExpACC verbs (e.g. *asustar(se)* 'to get frightened'), which are analyzed as results of anticausativization.

### 3. Anticausativization in Spanish psych verbs

#### 3.1. Spanish reflexive psych verbs

There are several types of reflexive psych verbs in Spanish. This study will mainly deal with the following type of verbs, which are seemingly derived from ExpACC verbs (e.g. *asustar(se)* 'to get frightened,' *preocupar(se)* 'to get worried')<sup>12</sup>.

- (43) a. *El trueno la asustó (a María).* ExpACC verbs  
 the thunder ACC frightened to María  
 'The thunder frightened María.'
- b. *María se asustó del trueno.* Reflexive Psych Verbs  
 María SE frightened of the thunder  
 'María got frightened at the thunder.'

Spanish *se* is used in grammatically manifold ways. For instance, using Mendikoetxea's (2012:477) terminology, there are "anaphoric uses" of the clitic *se*, e.g. reciprocal (*Los hermanos se miraron* 'The brothers looked at each other') (true) reflexive (*Los niños se lavaron* 'The kids washed themselves'), pseudo-reflexive (*Ana se desmayó* 'Ana fainted'), unaccusative (*El cristal se rompió* 'The glass broke'); "arbitrary uses," e.g. impersonal or passive (*Se observan cambios de economía* 'They observe changes

<sup>12</sup> The other types of reflexive psych verbs are: inherently reflexive ones (e.g. *arrepentirse* 'to regret,' *jactarse* 'to boast'), as in (a); and others seemingly derived from ExpNOM verbs (e.g. *compadecer(se)* 'to feel pity,' *lamentar(se)* 'to feel sorry'), as in (b).

- a. (Yo) *me* *arrepiento* *de haber mentado.*  
 I SE regret of have lied  
 'I regret having lied.'
- b. (i) (Tú) *compadeces* *siempre* *a los pobres.*  
 you feel sorry always to the poor  
 'You always pity the poor.'
- (ii) (Tú) *te* *compadeces* *siempre* *de los pobres.*  
 you SE feel sorry always of the poor  
 'You always feel pity for the poor.'

of the economy'), middle (*Las casas prefabricadas se construyen fácilmente* 'Prefabricated houses are easy to construct'); and additionally, an "aspectual use" (*Juan se comió las manzanas* 'Juan ate up the apples'). Basically, in the anaphoric use, the clitic *se* agrees with the expressed argument in person and number, i.e. *me/nos* '1SG/1 PL,' *te/os* '2SG/2 PL,' *se* '3(SG or PL).' The arbitrary *se*, on the other hand, is used exclusively in the third person. The aspectual *se* is called so because the variants with *se* and without *se* only differ in a shade of meaning related to the aspectual interpretation (see Sanz 1995; Sanz and Laka 2002 for the details of the aspectual *se*).

Spanish reflexive psych verbs are associated with the anaphoric use of *se* rather than with the others because the clitic *se* that appears with them agrees with the Experiencer argument in person and number. It is not the aspectual *se* either because it is not grammatical without *se*. Among anaphoric *se* constructions, Reflexive Psych Verbs are close to unaccusatives. Unaccusatives are traditionally distinguished from "true" reflexives (and reciprocals), the former being known as 'quasi-reflexives' or 'Romance reflexives' in contrast to the 'regular reflexives' (see García 1975). In brief, the subject acts on itself in true reflexives, while it does not in unaccusatives. This intuitive difference can be observed in the (in)compatibility with *a sí mismo* 'oneself.' True reflexives are compatible with this expression, while unaccusatives are not, as shown in (44). Reflexive Psych Verbs pattern like unaccusatives in this respect, as in (45).

- (44) a. *Los niños se lavaron a sí mismos.* True reflexive  
 the children SE washed to SI self  
 'The kids washed themselves.'
- b. \**El cristal se rompió a sí mismo.* Unaccusative  
 the glass SE broke to SI self  
 'The glass broke itself.'
- (45) \**Mi amiga se asustó a sí misma.*  
 my friend SE frightened to SI self  
 'My girlfriend frightened herself.'

This study analyzes Reflexive Psych Verbs, such as *asustar(se)*, as anticausatives. 'Anticausative' refers to the output of an anticausativization or detransitivizing operation, such as unaccusative variants of the transitive-unaccusative (or causative-inchoative) alternation that is typical of many change-of-state verbs (the details of the alternation will be discussed in the next section). The derivation from ExpACC verbs to reflexive variants resembles the transitive-unaccusative alternation. Some studies group both unaccusatives and reflexive psych verbs under the same category (Mendikoetxea 1999b, 2012), whereas others see a difference between them with respect to the acceptance of a prepositional phrase: namely, reflexive psych verbs accept a prepositional phrase, but unaccusatives do not (Masullo 1992). However, consider the examples (46b) and (47b). Unaccusatives are incompatible with a *de* phrase, unlike Reflexive Psych Verbs. Nevertheless, both unaccusatives and Reflexive Psych Verbs can appear with a *por* phrase if it does not refer to an agent but a cause: i.e. *por el viento* in (46b) and *por el trueno* in (47b) are causes of the described events; *Juan* can be agentive or nonagentive, but the *por* phrase is only accepted in a nonagentive reading.

- (46) a. *{Juan / El viento} rompió la ventana.*  
 Juan / the wind broke the window  
 'Juan/The wind broke the window.'
- b. *El vaso se rompió ({\*del viento / por el viento / #por Juan}).*  
 the glass SE broke of.the wind / by the wind / by Juan  
 'The glass broke {of the wind/ by the wind/ by Juan}.'
- (47) a. *{Juan / El trueno} asustó a María.*  
 Juan / the thunder frightened to María  
 'Juan/The thunder frightened María.'
- b. *María se asustó ({del trueno / por el trueno / #por Juan}).*  
 María SE frightened of.the thunder / by the thunder / by Juan  
 'María became frightened {of the thunder/ by the thunder/ by Juan}.'

Summarizing the points so far, Reflexive Psych Verbs (e.g. *asustar(se)* 'to get frightened') share with true reflexives (e.g. *lavar(se)* 'to wash themselves') and unaccusatives (e.g. *romper(se)* 'to break (int.)') the anaphoric use of the clitic *se*, and especially they are close to unaccusatives. As unaccusatives are analyzed as anticausatives, we would like to apply an anticausative analysis to Spanish Reflexives Psych Verbs. In the following sections, we will first describe the basic idea of anticausativization.

### 3.2. Anticausative operation

The anticausative operation is typically mentioned in studies of so-called change-of-state verbs. Verbs of change of state such as *break*, *open*, *close*, and *melt* are characterized by the transitive-unaccusative (or causative-inchoative) alternation, e.g. *J. broke the toy/The toy broke*. This phenomenon has been accounted for in various ways: the transitive variants are formed from the unaccusative variants by causativization (Pesetsky 1995; Pytkkänen 2008); the unaccusatives are derived from the transitives by anticausativization (Grimshaw 1982, Chierchia, 1989[2004], Levin and Rappaport Hovav 1995; Reinhart 2002; Reinhart and Siloni 2004, 2005; Koontz-Garboden 2009); both unaccusative and transitive variants come from a single abstract root (Doron 2003; Alexiadou et al., 2006); or languages may differ in which strategy they use (Haspelmath 1990, 1993; Piñón 2001).

Among these different approaches to change-of-state verbs, the anticausativization approach is the best account for Romance languages such as Italian and Spanish. That is, *si/se* unaccusatives in Italian/Spanish are derived from the causative transitives by reducing or deleting the causative portion of meaning. For instance, Grimshaw's (1982) 'inchoativization rule' clearly shows how the causative meaning is removed from the causative variants to produce the inchoative variants.

$$(48) \text{ Pred}_{\text{CAUSE}}: \text{CAUSE} (x \text{ BECOME}(\text{Pred} (y))) \rightarrow \text{Pred}_{\text{INCH}}: \text{BECOME}(\text{Pred} (y))$$

(Grimshaw 1982:104)

Chierchia (1989[2004]), in turn, considering the fact that these languages use the same morphology for both unaccusatives and reflexives, proposes that *si/se* unaccusatives are a special type of reflexives formed by a lexical reduction operation, and the clitic *se* is regarded as a trace of the reduction operation that took place. In his proposal, therefore, *si/se* constructions in Italian/Spanish could be accounted for uniformly by a single reduction operation, only these constructions differ in which argument is reduced: i.e. in true reflexives, the object argument; and in unaccusatives, the subject argument.

There is a controversy about whether the anticausativization deletes or retains the causative portion of meaning<sup>13</sup>. From Levin and Rappaport Hovav's (1995) description, for instance, we could assume that not only the transitive variants but also the unaccusative ones imply the existence of an external cause in the denoted events. According to Levin and Rappaport Hovav (1995:92–93), only verbs that denote 'externally caused' eventualities participate in the transitive-unaccusative alternation, and such 'externally caused' verbs imply the existence of an external cause (e.g. agent, instrument, natural force, or circumstance), even when used as intransitives (i.e. unaccusatives) without the expression of an external cause.

Koontz-Garboden (2009) claims that anticausativization is a reflexivization that does not involve any deletion of the CAUSE portion of meaning (see also Koontz-Garboden 2012; Beavers and Koontz-Garboden 2013a, 2013b; Beavers and Zubair 2013). This idea is based on the Monotonicity Hypothesis, which states that "word formation operations do not remove operators from lexical semantic representations" (Koontz-Garboden, 2007:43, 2009:80, and 2012; also Kiparsky 1982). Anticausativization is an operation that "takes a relation as an argument, setting both arguments of the relation to be the same" (Koontz-Garboden 2009:83, supporting Chierchia, 1989[2004]:29), as represented in (49). The advantage of this proposal is that both true reflexives and *se* unaccusatives in Spanish can be accounted for by this single operation.

$$(49) \text{ The reflexivization operator (Koontz-Garboden 2009:86):}$$

$$\llbracket se \rrbracket = \lambda x \lambda x [\lambda (x, x)]$$

For instance, there are some transitive verbs, such as *asesinar* 'to assassinate,' whose *se* variants can be true reflexives but not unaccusatives, as shown in (50b), and other transitive verbs, such as *romper* 'to break,' whose *se* constructions can be unaccusatives but not true reflexives, as in (51b).

<sup>13</sup> Reinhart (2002) proposes a clear reduction operation. According to her system, only transitive verbs that involve an external cause role ([+c]) are subject to the reduction operation that produces unaccusatives. Other verbs with an agent role ([+c + m], where 'm' stands for 'mental state') are subject to another operation that produces reflexives. Reflexives are the results of a reduction of an internal theme argument ([-c-m]), while unaccusatives are outputs of a reduction of an external cause argument ([+c]). This works mainly for languages whose true reflexives and unaccusatives can be separated (see also Reinhart and Siloni 2004, 2005; Horvath and Siloni 2011b, 2013).

Reinhart (2002) and Reinhart and Siloni's (2004) Reduction operation:

a. Internal reduction (Reflexivization):  $V(\theta_1, \theta_2) \rightarrow R_R(V)(\theta_1) = \lambda x(V(x, x))(\theta_1)$   
 b. External reduction (Expletivization):  $V(\theta_1 [+c], \theta_2) \rightarrow R_E(V)(\theta_2) = \lambda x(V(x)(\theta_2))$

For instance, the verb *shave* requires an agent role ([+c + m]), and it is only subject to reflexivization that reduces the internal theme argument ([-c-m]). The verb *open*, on the other hand, has an external cause role ([+c]), which is not required to be an agent, and this verb is subject to the external reduction operation that produces unaccusatives.

a. *shave* ([+c+m], [-c-m])  $\rightarrow R_R(\text{shave})([+c+m])$   
 eg. Lucie shaved Max.  $\rightarrow$  Max shaved. (Reflexive)

b. *open* ([+c], [-c-m])  $\rightarrow R_E(\text{open})([-c-m])$   
 eg. The key/The wind/Max opened the door.  $\rightarrow$  The door opened. (Unaccusative)



- (50) a. *Kim asesinó al senador.*  
Kim assassinated to.the senator  
'Kim assassinated the senator.'
- b. *El senador se asesinó (a sí mismo) / (\*por sí solo).*  
the senator SE assassinated to SI self / by SI alone  
'The senator killed himself/\*by himself.'
- (51) a. *Juan rompió el vaso.*  
Juan broke the glass  
'Juan broke the glass.'
- b. *El vaso se rompió (\*a sí mismo) / (por sí solo).*  
the glass SE broke to SI self / by SI alone  
'The glass broke \*itself/by itself.'

One of the grammatical differences between these transitive verbs is that the verb *asesinar* requires an agent to be the subject, while the verb *romper* allows other elements than the agent (e.g. instrument, natural force, and causing event) to be the subject.

- (52) a. *(La terrorista / \*El hacha / \*El huracán / \*La explosión) asesinó al senador.*  
the terrorist / the axe / the hurricane / the explosion assassinated to the senator  
'(The terrorist/\*The axe/\*The hurricane/\*The explosion) assassinated the senator.'
- b. *(Juan / El hacha / El huracán / La explosión) rompió el coche.*  
Juan / the axe / the hurricane / the explosion broke the car  
'(Juan/The axe/The hurricane/The explosion) broke the car.'

Therefore, the lexical representations of these verbs are different in which thematic relations are present. Koontz-Garboden (2009) states that the verb *asesinar* entails AGENT and PATIENT in its denotation, while the verb *romper*, EFFECTOR and THEME. 'EFFECTOR' (Van Valin and Wilkins 1996) is used for the arguments of the verbs that can take agents, instruments, natural forces, etc<sup>14</sup>.

- (53) a.  $\llbracket asesinar \rrbracket = \lambda x \lambda y \lambda s \lambda e [\exists v [\text{CAUSE}(v, e) \wedge \text{AGENT}(v, y) \wedge \text{BECOME}(e, s) \wedge \text{PATIENT}(s, x) \wedge \text{not-whole}(s)]]$
- b.  $\llbracket romper \rrbracket = \lambda x \lambda y \lambda s \lambda e [\exists v [\text{CAUSE}(v, e) \wedge \text{EFFECTOR}(v, y) \wedge \text{BECOME}(e, s) \wedge \text{THEME}(s, x) \wedge \text{not-whole}(s)]]$
- (Koontz-Garboden 2009:85,89)<sup>14</sup>

These verbs will produce *se* variants via the anticausativization operation described in (49) above. Then, the only argument of *asesinarse* bears a role that is a combination of AGENT and PATIENT roles, as described in (54a), while that of *romperse* is interpreted as EFFECTOR and THEME simultaneously, as in (54b).

- (54) a.  $\llbracket asesinarse \rrbracket = \lambda x \lambda s \lambda e [\exists v [\text{CAUSE}(v, e) \wedge \text{AGENT}(v, x) \wedge \text{BECOME}(e, s) \wedge \text{PATIENT}(s, x) \wedge \text{not-whole}(s)]]$
- b.  $\llbracket romperse \rrbracket = \lambda x \lambda s \lambda e [\exists v [\text{CAUSE}(v, e) \wedge \text{EFFECTOR}(v, x) \wedge \text{BECOME}(e, s) \wedge \text{THEME}(s, x) \wedge \text{not-whole}(s)]]$
- (Koontz-Garboden 2009:86,90)

Mendikoetxea (1999a) takes a similar view regarding the interpretation of the single arguments of *se* constructions. "[E]n las oraciones reflexivas, el sujeto se interpreta a la vez como agente (o experimentante) y tema. Una similar interpretación se puede aplicar a las oraciones inacusativas con el sujeto como causa y tema ([i]n reflexives, the subject is interpreted at the same time as agent (or Experiencer) and theme. A similar interpretation applies to the unaccusatives with the subject as cause and theme)" (Mendikoetxea 1999a:1590, translation mine). The true reflexive reading can be identified with the AGENT = PATIENT interpretation of the single argument, and the unaccusative reading, with the EFFECTOR = THEME interpretation. A single operation can produce both true reflexives and unaccusatives since the difference between them lies in which thematic relations the predicate manifests.

The anticausativization that does not involve any meaning reduction and that can account for both true reflexives and unaccusatives seems more suitable for Spanish *se* constructions because this language uses the same morphology for both true reflexives and unaccusatives, and there are some cases where a *se* construction can have both true reflexive and

<sup>14</sup> Koontz-Garboden's (2009) analysis is developed in the context of Parsons' (1990) Neo-Davidsonian event semantics, where eventualities *v* come in two different sorts, events *e* and states *s* (cf. Bach 1981, 1986).



unaccusative readings. For instance, the *se* variant of *matar* ‘to kill’ can be both true reflexive and unaccusative depending on the context or other elements in the sentence, as in (55) and (56).

- (55) *¡Dios mío, nos vamos a matar!* (García 1975:9)  
 God mine SE go to kill  
 (i) ‘We are going to kill ourselves!’ [True reflexive]  
 (ii) ‘We are going to die!’ (when a plane is about to crash) [Unaccusative]
- (56) a. *Se mató tirándose desde el balcón.* [True reflexive]  
 SE killed throwing.SE from the balcony  
 ‘S/he committed suicide by jumping from the balcony.’  
 b. *Se mató con el coche.* [Unaccusative]  
 SE killed with the car  
 ‘S/he got killed by a car.’

The verb *matar* can take agents and nonagentive causers, as shown in (57). The verb *matar* could be represented as in (58a). The proposed anticausativization constructs its *se* variant as described in (58b). The only argument of the *se* construction will be EFFECTOR = THEME, a characteristic of the unaccusative reading. As for the reflexive reading of *matarse*, recall that EFFECTOR includes both agentive and nonagentive causers. The only argument of *matarse*, which is EFFECTOR = THEME, has a possibility of a reflexive reading because the EFFECTOR can be an agent. Interestingly, this reasoning is only possible if we adopt Koontz-Garboden’s proposal because his anticausativization does not reduce the causative portion of meaning, and the EFFECTOR remains in the denotation of the *se* variants.

- (57) *{Juan / el veneno / el huracán / la explosión} mató a Ana.*  
 Juan / the poison / the hurricane / the explosion killed to Ana  
 ‘{Juan/The poison/The hurricane/The explosion} killed Ana.’
- (58) a.  $[[\text{matar}]] = \lambda x \lambda y \lambda s \lambda e [\exists v [\text{CAUSE}(v, e) \wedge \text{EFFECTOR}(v, y) \wedge \text{BECOME}(e, s) \wedge \text{THEME}(s, x) \wedge \text{not-alive}(s)]]$   
 b.  $[[\text{matarse}]] = \lambda x \lambda s \lambda e [\exists v [\text{CAUSE}(v, e) \wedge \text{EFFECTOR}(v, x) \wedge \text{BECOME}(e, s) \wedge \text{THEME}(s, x) \wedge \text{not-alive}(s)]]$

So far, we have outlined the basic ideas of anticausativization and demonstrated how efficiently an anticausativization that does not reduce the causative meaning from the base verbs accounts for *se* unaccusatives in Spanish. In the following section, we will apply the anticausative analysis to Spanish Reflexive Psych Verbs, such as *asustar(se)* ‘to be frightened.’

### 3.3. An anticausative analysis of reflexive psych verbs

The derivation from ExpACC verbs to Reflexive Psych Verbs resembles the transitive-unaccusative alternation of change-of-state verbs. For instance, the transitive variants of psych verbs can take nonagentive causers as their subjects.<sup>2</sup>

- (59) a. *{Juan / La noticia / La traición de su amiga} enfadó a María.*  
 Juan / the news / the treachery of his girlfriend angered to María  
 ‘{Juan/The news/The treacheries of her friend} angered María.’  
 b. *{José / El trueno / El accidente} asustó a Ana.*  
 José / the thunder / the accident frightened to Ana  
 ‘{José/The thunder/The accident} frightened Ana.’  
 c. *{Juan / El fútbol / La lectura} aburrió a María.*  
 Juan / the soccer / the reading bored to María  
 ‘{Juan/Soccer/Reading} bored María.’  
 d. *{José / La noticia / La ausencia de su marido} preocupó a Ana.*  
 José / the news / the absence of her husband worried to Ana  
 ‘{José/The news/The absence of her husband} worried Ana.’

Therefore, ExpACC verbs have an EFFECTOR role and an EXPERIENCER role in the lexical representation. After anticausativization, we expect a reflexive variant whose only argument combines the EFFECTOR and EXPERIENCER roles, as described below.

- (60) a.  $[[\text{asustar}] = \lambda x \lambda y \lambda s \lambda e [\exists v (\text{CAUSE}(v, e) \wedge \text{EFFECTOR}(v, y) \wedge \text{BECOME}(e, s) \wedge \text{EXPERIENCER}(s, x) \wedge \text{frightened}(s))]]$   
 b.  $[[\text{asustarse}] = \lambda x \lambda s \lambda e [\exists v (\text{CAUSE}(v, e) \wedge \text{EFFECTOR}(v, x) \wedge \text{BECOME}(e, s) \wedge \text{EXPERIENCER}(s, x) \wedge \text{frightened}(s))]]$

Now, how can we verify whether the CAUSE is present in the denotation of the Reflexive Psych Verbs? According to Koontz-Garboden (2009), *se* unaccusatives retain the CAUSE in their lexical representations. *Se* unaccusatives such as *abrirse* ‘to open’ and *romperse* ‘to break’ are compatible with *por sí solo* ‘by itself’ (Chierchia, 1989[2004]). Given that this adverbial means ‘without outside help,’ it presupposes the presence of ‘outside help’ (i.e. external causation) in the denotation of the verbs. In other words, the compatibility/incompatibility with the adverbial *por sí solo* indicates the presence/absence of the causative portion of meaning in the denotation of the verb<sup>15</sup>.

- (61) a. *La puerta se abrió por sí sola.*  
 the door SE opened by SI alone  
 ‘The door opened by itself.’  
 b. ??*La paciente empeoró por sí sola.*<sup>16</sup>  
 the patient worsened by SI alone  
 ‘The patient worsened by himself.’

Reflexive Psych Verbs are compatible with *por sí solo*, as shown in (62a), and they bear an interpretation such as: “the subject got angry (frightened, surprised, etc.) arbitrarily and without a proper reason, from the speaker’s point of view.” The causative meaning is present in the denotation of such reflexive psych verbs. However, the degree of acceptability may depend on the predicates. For example, natives would judge that some verbs like *aburrirse* ‘to get bored’ with *por sí solo* sound more forced or redundant, as in (62b)<sup>16</sup>.

- (62) a. *María [se enfadó / se asustó / se sorprendió] por sí sola.*  
 María SE angered / SE frightened / SE surprised by SI alone  
 ‘María (got angry/got frightened/ got surprised) by herself.’  
 b. ??*Juan [se aburró / se preocupó / se molestó] por sí solo.*  
 Juan SE bored / SE worried / SE bothered by SI alone  
 ‘Juan (got bored/worried/ got bothered) by himself.’

The interpretation of negation also indicates whether the CAUSE portion of meaning is present/absent in the denotation of the predicates. Negation with *se* unaccusatives is ambiguous between the two readings, as shown in (63). However, such ambiguity does not occur with other intransitives such as *empeorar* in (64). If the CAUSE is present, the negation can scope either over the CAUSE part or the rest; therefore, the interpretation is ambiguous.

- (63) a. *El vaso no se rompió sino que se quemó.*  
 the glass NEG SE broke but that SE burned  
 ‘The glass did not break, but rather it burned.’ (The vase did not break.)  
 b. *El vaso no se rompió sino que lo rompiste tú.*  
 the glass NEG SE broke but that ACC broke you  
 ‘The glass did not break (by itself), but you broke it.’ (The vase did break)
- (64) a. *La paciente no empeoró sino que mejoró.*  
 the patient NEG worsened but that got better  
 ‘The patient did not worsen, but rather she got better.’  
 b. ??*La paciente no empeoró sino que la empeoró el tratamiento.*  
 the patient NEG worsened but that ACC worsened the treatment  
 ‘The patient did not worsen; the treatment worsened her.’

<sup>15</sup> Therefore, other intransitives, such as *empeorar* ‘to worsen,’ *hervir* ‘to boil’ and *crecer* ‘to grow,’ show incompatibility with *por sí solo* because these verbs do not imply external causation but internal causation, i.e. “some property inherent to the argument of the verb is responsible for bringing about the eventuality” (Levin and Rappaport Hovav, 1995:91), as mentioned in Mendikoetxea (1999a:1598).

<sup>16</sup> For a native speaker, the verbs, such as *empeorar* ‘to worsen,’ *hervir* ‘to boil’ and *crecer* ‘to grow,’ would be compatible with *por sí solo* only when presupposed that the subject cannot *crecer*, *empeorar*, or *hervir* without outside help. In other words, even events described by the verbs of internal causation “occasionally ... can be [brought about by an external cause], and in such instances, causative uses of these verbs are found” (Levin and Rappaport Hovav, 1995:97).

In this respect, Reflexive Psych Verbs hold the CAUSE portion in the lexical representation. The interpretation of negation can be ambiguous with Reflexive Psych Verbs, and therefore, the following examples are consistent (although some of the examples sound forced without specific contexts).

- (65) a. *Ana no se enfadó (sola), sino que*  
 Ana NEG SE angered alone but that  
*la enfadaste tú.*  
 ACC angered you  
 'Ana did not get angry by herself, but rather you angered her.'
- b. *Ana no se sorprendió (sola), sino que*  
 Ana NEG SE surprised alone but that  
*la sorprendiste tú.*  
 ACC surprised you  
 'Ana did not get surprised by herself, but rather you surprised her.'
- c. *María no se aburrió (sola), sino que*  
 María NEG SE bored alone but that  
*la aburriste tú.*  
 ACC bored you  
 'María did not get bored by herself, but rather you bored her.'
- d. *María no se preocupó (sola), sino que*  
 María NEG SE worried alone but that  
*la preocupaste tú.*  
 ACC worried you  
 'María did not get worried by herself, but rather you worried her.'

Koontz-Garboden (2009) notes that this is not a case of metalinguistic negation. Metalinguistic negation does not license Negative Polarity Items (NPIs), e.g. English *any* as in (66a) or Spanish *ningún* as in (66b). The negation with *se* unaccusatives is not metalinguistic because it does license NPIs, as shown in (66c).

- (66) a. John didn't manage to solve {some/\*any} of the problems-- he managed  
 to solve all of them. (Koontz-Garboden 2009:116, Horn 1985:132-135)
- b. *No consiguió resolver {algún / \*ningún} problema --*  
 NEG obtained solve some / any problem  
*consiguió solucionarlos todos.*  
 obtained solve.them all  
 'S/he did not manage to solve {some/\*any of the} problems-- s/he  
 managed to solve them all.'
- c. *No se rompió ningún vaso; los rompió Andrés.*  
 NEG SE broke any glass ACC broke Andrés  
 'Any glass did not break (by itself); Andrew broke them all.'
- (Koontz-Garboden 2009:116-117)

This is not a case of metalinguistic negation for Reflexive Psych Verbs either because it does license NPIs, as shown below.

- (67) a. *No se enfadó ningún bebé, sino que*  
 NEG SE angered any baby but that  
*tú enfadaste a todos.*  
 you angered to all  
 'No baby got angry (by itself), but rather you angered them all.'
- b. *No se sorprendió ningún niño, sino que*  
 NEG SE surprised any boy but that  
*tú sorprendiste a todos.*  
 you surprised to all  
 'No child got surprised (by itself), but rather you surprised them all.'

- c. *No se aburrió ninguna mujer, sino que*  
 NEG SE bored any woma but that  
 n  
*tú aburríste a todas.*  
 you bored to all  
 'No woman got bored (by herself), but rather you bored them all.'
- d. *No se preocupó ninguna chica, sino que*  
 NEG SE worried any girl but that  
*tú preocupaste a todas.*  
 you worried to all  
 'No girl got worried (by herself), but rather you worried them all.'

Finally, we add a mention about the compatibility with prepositional causer phrases. Unaccusatives do not license 'by-agent' phrases cross-linguistically but do license other prepositional phrases that refer to a causer, as in (68). This indicates that the licensing of a causer phrase reflects the presence of an "implicit causer" in the denotation, as stated in Schäfer (2008:125). Spanish *se* unaccusatives allow a prepositional phrase if it refers to a causer and not an agent, as in (69) (as noted in 46). Therefore, we could assume that *se* unaccusatives involve an implicit causer in the denotation<sup>17</sup>.

- (68) a. \*The window broke/shattered {by John/by a storm/by Will's banging}.  
 b. The window cracked/broke {from the pressure/from the explosion.}
- (69) *La ventana se rompió {#por Juan / por el viento / por el golpe /*  
 the window SE broke by Juan / by the wind / by the hit /  
*por la explosión}.*  
 by the explosion  
 'The window broke {by Juan/from the wind/from the hit/from the explosion}.'

Reflexive Psych Verbs are compatible with *por* phrases if they refer to a cause, not an agent. This indicates that these verbs involve implicit causer in the denotation. (Reflexive psych verbs also allow prepositions such as *de* 'of/from,' *en* 'in,' *con* 'with,' etc. A possible explanation is that these prepositional phrases reflect different implicit meanings of these predicates, just like the compatibility with causer phrases reflects the presence of an implicit causer.)

- (70) a. *María se enfadó por la infidelidad de Juan.*  
 María SE angered by the infidelity of Juan  
 'María got angry from infidelity of Juan.'
- b. *Ana se sorprendió por el regalo.*  
 Ana SE surprised by the present  
 'Ana got surprised at the present.'
- c. *Juan se aburrió {del fútbol / por el partido sin goles}.*  
 Juan SE bored of.the soccer / by the game without goals  
 'Juan got bored {of soccer/at the game without goals}.'
- d. *José se preocupó {por / de} su futuro.*  
 José SE worried by / of his future  
 'José got worried {by/about} his future.'

In summary, the compatibility with *por sí solo* 'by itself,' the ambiguity in the interpretation of negation, and the compatibility with *por* 'by' causer phrases indicate that Spanish reflexive verbs retain the CAUSE component in their denotations. However, some verbs' results are not precise unless specific contexts are provided. For instance, *por sí solo* is possible with *enfadar(se)* type verbs, while it does not sound natural with *aburrir(se)* type verbs. This relates to the aspectual difference between them. As proposed by Marín and McNally (2011), the *enfadar(se)* class is truly punctual inchoative, while the *aburrir(se)* class is stative inchoative. Suppose *aburrirse* verbs involve a CAUSE but are incompatible with *por sí solo*. In that case, the compatibility with *por sí solo* does not only reflect the presence of a CAUSE but also eventivity. Taking the aspectual differences

<sup>17</sup> The other intransitives like *empeorar*, *hervir*, and *crecer* also accept causer *por* phrases, not agent *por* phrases. This is because these predicates can occasionally be associated with an external cause. These verbs can involve an implicit causer; thus, they are compatible with causer *por* phrases.

- a. *La paciente empeoró {por el tratamiento / #por el médico}.*  
 the patient worsened by the treatment / by the doctor  
 'The patient worsened from the treatment/\*by the doctor.'
- b. *El agua hirvió {por el calor que hacía / #por el cocinero}.*  
 the water boiled by the heat that was / by the cook  
 'The water boiled because it was hot/\*by the cook.'
- c. *El niño creció {por la nutrición / #por María}.*  
 the boy grew by the nutrition / by María  
 'The child grew with nutrition/\*by María.'

between the *enfadar(se)* class and *aburrir(se)* class verbs into account, the denotations of these verbs can be represented as below (based on [Marín and McNally's \(2011\)](#) notation, which supports [Piñón's \(1997\)](#) idea of Beginning and Ending).

- (71) a.  $\llbracket enfadar \rrbracket = \lambda y \lambda x \lambda e \exists e', e'' [CAUSE(e''', e) \wedge EFFECTOR(e''', x) \wedge$   
 $Beg(e, e', \lambda e'' [angry(e'') \wedge Happening(e'') \wedge EXPERIENCER(e'', y)])]$   
 b.  $\llbracket enfadarse \rrbracket = \lambda x \lambda e \exists e', e'' [CAUSE(e''', e) \wedge EFFECTOR(e''', x) \wedge$   
 $Beg(e, e', \lambda e'' [angry(e'') \wedge Happening(e'') \wedge EXPERIENCER(e'', x)])]$
- (72) a.  $\llbracket aburrir \rrbracket = \lambda y \lambda x \lambda e \exists e', e'' [CAUSE(e''', e) \wedge EFFECTOR(e''', x) \wedge Beg(e',$   
 $e'', \lambda e'' [bored(e'') \wedge Happening(e'') \wedge EXPERIENCER(e'', y)]) \wedge e = (e' \oplus e'')]$   
 b.  $\llbracket aburrirse \rrbracket = \lambda x \lambda e \exists e', e'' [CAUSE(e''', e) \wedge EFFECTOR(e''', x) \wedge Beg(e',$   
 $e'', \lambda e'' [bored(e'') \wedge Happening(e'') \wedge EXPERIENCER(e'', x)]) \wedge e = (e' \oplus e'')]$

These representations show that Spanish reflexive psych verbs are derived from their transitive variants via an anticausativization that does not reduce the CAUSE. Therefore, their meaning has a CAUSE component, just like their transitive variants.

Summarizing Section 3, we have analyzed Spanish Reflexive Psych Verbs as outputs of anticausativization. The CAUSE is present in the lexical representation of *se* unaccusatives, according to the compatibility with *por sí solo* 'by itself' and the ambiguity of negation, for instance. Then, We applied anticausativization to Spanish Reflexive Psych Verbs and demonstrated that the causative meaning is present in the denotation of these verbs<sup>18</sup>.

#### 4. Typological contrast and semantic variation

##### 4.1. The corresponding expressions

So far, we have examined the causativization of ExpObj causatives in Japanese, such as *odorok-ase-ru* 'to surprise,' and the anticausativization of Reflexive Psych Verbs, such as *asustarse* 'to get frightened.' We proposed that the causativization in ExpObj causatives in Japanese is a 'valence-increasing' type of causativization that is a syntactic formation. The causativization adds an external causer argument to ExpSubj-*NI* verbs that are one-place predicates and embeds the whole base predicates. On the other hand, Reflexive Psych Verbs in Spanish could be analyzed as anticausatives. We adopted the idea that anticausativization does not eliminate CAUSE and demonstrated that the causative meaning is present in Reflexive Psych Verbs.

Spanish and Japanese show a clear typological contrast in the lexicalization patterns of certain psych verbs. Japanese forms ExpObj causatives from ExpSubj-*NI* verbs by causativization, while Spanish forms Reflexive Psych Verbs (i.e. reflexive psych verbs) from ExpACC verbs by anticausativization. ExpObj verbs of these languages differ in derivation status, i.e. lexical or derived, as do ExpSubj verbs. Namely, Japanese ExpObj causatives are derived expressions, while Spanish ExpACC verbs are lexical verbs. Likewise, Spanish Reflexive Psych Verbs are derived verbs, while Japanese ExpSubj verbs are lexical verbs.

- (73) a. Japanese ExpObj causatives derived verbs  
*Kaminari-ga Maki-o odorok-ase-ta.*  
 thunder- Maki-ACC get surprised-CAUS-PST  
 NOM  
 'The thunder surprised Maki.'
- b. Japanese ExpSubj-*NI* verbs lexical verbs  
*Maki-ga kaminari-ni odoroi-ta.*  
 Maki-NOM thunder-NI get surprised.PST  
 'Maki got surprised at the thunder.'
- (74) a. Spanish ExpACC verbs lexical verbs  
*El trueno asustó a Lucía.*  
 the thunder frightened to Lucía  
 'The thunder frightened Lucía.'
- b. Spanish Reflexive Psych Verbs derived verbs  
*Lucía se asustó (por el trueno).*  
 Lucía SE frightened by the thunder  
 'Lucía got surprised at the thunder.'

<sup>18</sup> There is an alternative account for other reflexive psych verbs, such as *compadecer(se)* 'to feel pity' and *lamentar(se)* 'to feel sorry,' which are not derived from ExpACC verbs but from ExpNOM verbs. [Masullo \(1992\)](#) analyzes them as 'antipassives.' Antipassives are detransitivized constructions whose otherwise object is realized as an oblique complement or suppressed. In this study, we did not adopt [Masullo's \(1992\)](#) antipassive account of reflexive psych verbs. Nevertheless, we acknowledge the whole idea since his antipassive approach is adequate to account for the *compadecer(se)* type of reflexive psych verbs, which are not explained by the anticausative analysis in our study.

In this final section of this study, we want to demonstrate semantic differences between Spanish ExpACC verbs and Japanese ExpObj causatives and between Japanese ExpSubj-*NI* verbs and Spanish Reflexive Psych Verbs. The semantic diversity can be ascribed to the different derivational status of these expressions.

#### 4.2. The entailment relation

Firstly, the entailment relation between ExpObj verbs and Reflexive Psych Verbs in Spanish differs from that between ExpObj causatives and ExpSubj verbs in Japanese. An entailment relation is characterized as follows: in example (75), (a) entails (b); (c) cannot be said because the entailment is not cancelable; (d) is not acceptable because the negation of (b) must entail the negation of (a).

- (75) a. Shelby is a dog.  
 b. Shelby is a mammal.  
 c. \*Shelby is a dog but is not a mammal.  
 d. \*Shelby is not a mammal but is a dog.

The transitive variants of the transitive-unaccusative alternation are usually regarded as entailing the unaccusative variants, as shown in (76).

- (76) a. John broke the vase.  
 b. The vase broke.  
 c. \*John broke the vase, but the base did not break.  
 d. \*The vase did not break, but John broke it.

This is indeed the case for Japanese transitive-unaccusative pairs, as in (77). However, it is not entirely true for the Spanish pairs, as shown in (77). That is to say (78a) does not entail (78b) because (78d) can be said.

- (77) a. *Taro-ga kabin-o kowasita.*  
 Taro-NOM vase-ACC break.TRANS.PST  
 'Taro broke the vase.'  
 b. *Kabin-ga kowareta.*  
 vase-NOM break.INTR.PST  
 'The vase broke.'  
 c. \**Taro-wa kabin-o kowasita ga, kabin-wa*  
 Taro-TOP vase-ACC break.TRANS.PST but vase-TOP  
*kowarenakata.*  
 break.INTR.NEG.PST  
 'Taro broke the vase, but the vase did not break.'  
 d. \**Kabin-wa kowarenakata ga, Taro-wa kabin-o*  
 vase-TOP break.INTR.NEG.PST but Taro-TOP vase-ACC  
*kowasita.*  
 break.TRANS.PST  
 'The vase did not break, but Taro broke it.'

- (78) a. *Juan rompió el vaso.*  
 Juan broke the glass  
 'Juan broke the glass.'  
 b. *El vaso se rompió.*  
 the glass SE broke  
 'The glass broke.'  
 c. \**Juan rompió el vaso, pero el vaso no se rompió.*  
 Juan broke the glass but the glass NEG SE broke  
 'Juan broke the glass, but it did not break (by itself).'  
 d. *El vaso no se rompió sino que lo rompiste tú.*  
 ,  
 the glass NEG SE broke but that ACC broke you  
 'The glass did not break (by itself), but you broke it.'

Regarding psych verbs, there is an entailment relation between ExpObj causatives and ExpSubj verbs in Japanese, as in (79). In contrast, no such entailment exists between ExpACC verbs and Reflexive Psych Verbs in Spanish, as shown in (80), because (80d) is possible.

- (79) a. *Kaminari-ga Maki-o odorok-ase-ta.*  
thunder-NOM Maki-ACC get surprised-CAUS-PST  
'The thunder surprised Maki.'
- b. *Maki-ga (kaminari-ni) odoroi-ta.*  
Maki-NOM thunder-*NI* get surprised.PST  
'Maki got surprised by the thunder.'
- c. *\*Kaminari-wa Maki-o odorok-ase-ta ga, Maki-wa*  
thunder-TOP Maki-ACC get surprised-CAUS-PST but Maki-TOP  
*odorokanakatta.*  
get surprised.NEG.PST  
'The thunder surprised Maki, but Maki did not get surprised.'
- d. *\*Maki-wa odorokanakatta. Kimi-ga*  
Maki-TOP get surprised.NEG.PST you-NOM  
*odorok-ase-ta-noda.*  
get surprised-CAUS-PST-NODA  
'Maki did not get surprised. You surprised her.'
- (80) a. El trueno asustó a María.  
the thunder frightened to María  
'The thunder frightened María.'
- b. María se asustó (por el trueno).  
María SE frightened by the thunder  
'María got frightened (at the thunder).'
- c. *\*El trueno asustó a María, pero María no se*  
the thunder frightened to María but María NEG SE  
asustó.  
frightened  
'The thunder frightened María, but María did not get surprised (by herself).'
- d. María no se asustó, sino que la asustaste tú.  
María NEG SE frightened but that ACC frightened you  
'María did not get frightened (by herself), but you frightened her.'

#### 4.3. Semantic differences

The observation about the entailment relation relates to the semantic difference concerning the ambiguity in negation between Spanish Reflexive Psych Verbs and Japanese ExpSubj-*NI* verbs. As we saw in the previous section, Spanish Reflexive Psych Verbs are ambiguous with negation because they retain the CAUSE component in the denotation, and the negation can scope over either the CAUSE part or the rest. The following examples are possible because the negation scopes over such a CAUSE part.

- (81) *María no se enfadó, sino que la enfadaste tú.*  
María NEG SE angered but that ACC angered you  
'María did not get angry (by herself), but you angered her.'

Japanese ExpSubj-*NI* verbs, on the other hand, do not show this ambiguity in negation because they are lexical verbs made of a single predicate. Naturally, the following examples sound contradictory.

- (82) *??Maki-wa okoranakatta. Taro-ga*  
Maki-TOP get angry.NEG.PST Taro-  
NOM  
*okor-ase-ta-noda.*  
get angry-CAUS-PST-NODA  
'Maki did not get angry. Taro angered her.'

There is a semantic difference between Spanish ExpACC verbs and Japanese ExpObj causatives as well. They are aspectually not the same.

According to [Marín and McNally \(2011\)](#), Spanish Reflexive Psych Verbs consist of two classes, *aburrirse* 'to be/become bored' class and *enfadarse* 'to become angry' class<sup>19</sup>. Both classes are inchoative predicates, but the former is stative, and the latter is genuinely punctual. Moreover, [Fábregas et al. \(2012\)](#) claim that psych predicates, whether with *se* or without *se*, mostly maintain the lexical aspects: i.e. *aburrir(se)*-class is stative and *enfadar(se)*-class is nonstative. For instance, Spanish Reflexive Psych Verbs (*aburrirse*-class and *enfadarse*-class) and their corresponding ExpACC verbs are atelic according to their incompatibility with *en* adverbials (for the details of an aspectual analysis of ExpACC verbs and their reflexive variants in Spanish, see [Marín and McNally 2011](#); [Fábregas et al., 2012](#); [Marín 2011, 2015](#), Author, 2016: Section 3.2.2).

- (83) a. *Se aburrió/divirtió/... {\*en / durante} toda la tarde.*  
 SE bored/amused in/for all the afternoon  
 'S/he was bored/amused (continuously) the whole afternoon.'
- b. *Se asustó/enfadó/... {\*en / #durante} toda la tarde.*  
 SE frightened/angered in/for all the afternoon  
 'S/he got frightened/angry (repeatedly) the whole afternoon.'
- (Author 2016: example 187, cited from Marín and McNally 2011:476. # is added to differentiate the iterative reading)

- (84) a. *El ruido molestó a María {\*en / durante} dos horas.*  
 the noise bothered to María in/ for two hours  
 'The noise bothered María in/for two hours.'
- b. *Su voz sorprendió a Ana {\*en / #durante} / dos horas.*  
 her/his voice surprised to Ana in/for two hours  
 'Her/his voice surprised Ana in/for two hours.'
- (Author 2016: example 189)

Regarding Japanese psych verbs, ExpSubj-*NI* verbs are mostly atelic (except some, such as *akiru* 'to get bored'), although their ExpObj causatives can be telic. For instance, *-de* 'in' adverbial becomes tolerable with the causative variants (for the details of an aspectual analysis of Japanese psych verbs, see Author, 2016: Section 3.3 and Author, 2023).

- (85) a. *Taro-ga souon-ni mikka {-kan / \*-de} nayamda.*  
 Taro-NOM noise-*NI* three days -for/-in suffer.PST  
 'Taro suffered the noise for/\*in three days.'
- b. *Taro-ga sono sirase-ni san-pun (#-kan / \*-de) odoroi.ta.*  
 Taro-NOM that news-*NI* three-minute -for/-in get surprised.PST  
 'Taro got surprised at the news \*for/?in three minutes.'
- c. *Taro-ga sono eiga-ni jyu-pun {\*-kan / -de} akita.*  
 Taro-NOM that movie-*NI* ten-minute -for/-in get tired.PST  
 'Taro got tired of the movie \*for/in ten minutes.'
- (Author 2023: example 43)

- (86) a. *Souon-ga Maki-o mikka {-kan / \*-de} nayam-ase.ta.*  
 noise-NOM Maki-ACC three days -for/in suffer-CAUS-PST  
 'The noise made Maki suffer for/ ?in three days.'
- b. *Taro-ga/Sono sirase-ga Maki-o san-pun (#-kan / ?-de) odorok-ase.ta.*  
 Taro-NOM/that news-NOM Maki-ACC three-minute -for/in  
 get surprised-CAUS-PST  
 'Taro/ The news surprised Maki for/?in three minutes.'
- c. *Taro-ga/Sono eiga-ga Maki-o san-pun (#-kan / -de) aki-sase.ta.*  
 Taro-NOM/that movie- Maki-ACC three-minute -for/in  
 NOM  
 get tired-CAUS-PST  
 'Taro/ The movie tired Maki for/in three minutes.'
- (Author 2023: examples 53)

<sup>19</sup> Spanish Reflexive Psych Verbs divided into two classes ([Marín and McNally 2011](#)):

a. *aburrirse* 'to be/become bored' class: e.g. *agobiarse* 'to get/feel overwhelmed,' *angustiar* 'to get/be distressed,' *avergonzarse* 'to get/feel ashamed,' *confundirse* 'to get/be confused,' *distrarse* 'to get/be distracted,' *entretenerse* 'to get/be entertained,' *interesarse* 'to get/be interested in,' *molestarse* 'to get/be bothered,' *obsesionarse* 'to get/be obsessed,' *preocuparse* 'to get/be worried'

b. *enfadarse* 'to become angry' class: e.g. *asombrarse* 'to be amazed,' *asustarse* 'to get frightened,' *cabrear* 'to get really mad,' *enfurecer* 'to get furious,' *enojarse* 'to get annoyed,' *excitarse* 'to get excited,' *indignarse* 'to become indignant,' *mosquearse* 'to get irritated,' *ofenderse* 'to get offended,' *sorprenderse* 'to be surprised'.



Spanish ExpACC verbs are lexical causative verbs subject to anticausativization, while Japanese ExpObj causatives are syntactically formed overt causatives. That is to say, the anticausativization from ExpACC verbs to Reflexive Psych Verbs in Spanish does not cause aspectual change (regarding telicity, at least), while the causativization from ExpSubj-*NI* verbs to ExpObj causatives in Japanese does. The anticausative derivation from ExpACC verbs to Reflexive Psych Verbs in Spanish is a lexical operation, while the causative derivation from ExpSubj-*NI* verbs to ExpObj causatives in Japanese is a syntactic formation. From these observations, we could assume that syntactic causativization alters the aspectual nature of the base predicate, while lexical anticausativization does not.

To sum up, the derivational differences relate to semantic differences. Japanese ExpObj causatives and Spanish ExpObj verbs are not semantically identical because the former are derived verbs resulting from syntactic causativization while the latter are lexical verbs. Spanish Reflexive Psych Verbs and Japanese ExpSubj-*NI* verbs are not semantically identical because the former are derived verbs resulting from anticausativization that retain the CAUSE meaning in the denotation, whereas the latter are lexical verbs that naturally do not involve any causative meaning.

## 5. Conclusion

Certain types of psych verbs in some languages are morphologically derived from other types. In Japanese, ExpObj verbs are formed from specific ExpSubj verbs by causativization. In Spanish, Reflexive Psych Verbs are morphologically related to ExpACC verbs, and we analyzed such reflexive psych verbs as the result of anticausativization. In other words, these two languages contrast in the morphological derivation of psych verbs. In this study, we found that such a contrast produces semantic differences between ExpObj verbs in Spanish and Japanese (i.e. ExpACC verbs in Spanish and ExpObj causatives in Japanese) and between ExpSubj verbs of these languages (i.e. Reflexive Psych Verbs in Spanish and ExpSubj-*NI* verbs in Japanese).

Causativization in Japanese ExpObj causatives is an operation that embeds the whole base predicate just like syntactically constructed causative constructions. ExpObj verbs have often been treated as causatives in a uniform sense despite the apparent lexical/derived distinction. However, suppose Japanese ExpObj causatives are formed by a syntactic causative operation that differentiates them from lexically formed causative expressions. In that case, they can be distinguished from ExpObj lexical verbs, such as *annoy* in English and *asustar* 'to frighten' in Spanish. In contrast, Spanish ExpACC verbs are subject to a lexical anticausative operation. The anticausativization found in Spanish Reflexive Psych Verbs is an operation that does not involve eliminating the CAUSE. Such reflexive verbs maintain the CAUSE portion of meaning just like their ExpACC variants.

Spanish and Japanese derive ExpObj verbs and ExpSubj verbs in opposing ways. Therefore, the corresponding expressions in these languages differ in lexical/derived status. Interestingly, there are semantic differences between ExpObj expressions and between ExpSubj expressions in these languages. We ascribed such semantic differences to the derivational distinction between the expressions. For instance, ExpACC verbs in Spanish and ExpObj causatives in Japanese vary in the aspectual properties of telicity and durativity because the latter are produced by syntactic causativization, while the former are lexical verbs. ExpSubj-*NI* verbs in Japanese and Reflexive Psych Verbs in Spanish, on the other hand, vary in entailment since the latter are formed by the anticausativization that retains the causative meaning in the denotation of the verbs, while the former are lexical verbs that are naturally not causative.

This contrastive analysis of psych verbs between Spanish and Japanese revealed that the semantics of words reflect the derivational status of the words and the nature of the morphological operations employed in forming them. We believe that this is not a language-specific phenomenon, nor is it limited to the two languages analyzed in this paper. Psych verbs are cross-linguistically recognized predicates, and typological contrasts regarding (anti-)causativization can be observed in different language pairs. Furthermore, typological diversity can lead to semantic variation in a broader sense.

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None.

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## Data availability

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