

Psych Predicates in Romance Languages

edited by
Niklas Wiskandt, Elga Cremades Cortiella,
Rolf Kailuweit

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Psych Predicates in Romance Languages

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Psych Predicates in Romance Languages

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Abstract

This volume collects a broad selection of research perspectives on psych predicates in Romance languages. The individual chapters present studies on different languages – Spanish, Catalan, Italian, French, and Latin, among others – as well as sub-phenomena – the psych alternation, dative-experiencer verbs, psych nouns, and light verb constructions. Different methodologies and theoretical approaches complement each other and benefit from discussions across framework boundaries. For instance, there are different opinions across the chapters on how to classify the pronominal constructions of object-experiencer verbs: are they anticausatives, autocausatives, antipassives? The volume also highlights the value of an interaction between theoretical and data-driven approaches, as empirical chapters in the volume show that data sometimes contradict the assumptions made on theoretical grounds. Finally, the cross-linguistic studies in some contributions complement findings on individual languages in the other chapters.

Keywords Psych verbs. Psych nouns. Psych alternation. Experiencers. Corpus linguistics. Experimental linguistics. Romance languages. Typology.

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Psych Predicates in Romance Languages

Introduction

Rolf Kailuweit

Heinrich-Heine-Universität Düsseldorf, Deutschland

Elga Cremades Cortiella

Universitat de les Illes Balears, España

Niklas Wiskandt

Heinrich-Heine-Universität Düsseldorf, Deutschland

Summary 1 The Challenge of Psych Predicates. – 2 From Unaccusativity to Causativity: Theoretical Models and Debates. – 3 Overview of the Volume. – 4 Toward a unified research agenda.

1 The Challenge of Psych Predicates

Within the domain of linguistic theory, *psychological predicates* – often abbreviated as *psych predicates* – have long occupied a central position in debates on the mapping between syntax and semantics. Since the seminal work of Belletti and Rizzi (1988), verbs denoting psychological states, emotions, and perceptions have appeared in discussions regarding the limits of theories of argument and event structure, as well as thematic role assignment. These verbs – such as *to fear*, *to please*, *to worry*, *to interest* – pose a persistent challenge to any model that seeks a systematic link between meaning and morphosyntactic realization.

The difficulty lies in their argument linking. While agentive predicates tend to show a straightforward alignment between the semantic AGENT and syntactic subject, psych predicates frequently invert this relation. The EXPERIENCER, i.e. the individual who feels, perceives, or evaluates an emotional state, may appear as subject, direct object, or indirect object, depending on the predicate type and

the language in question. This variable mapping between semantic and syntactic functions (i.e. between the EXPERIENCER and the non-experiencer argument, which might be a CAUSER or a STIMULUS) has implications for the modeling of the syntax-semantics interface.

A long-standing observation, reiterated across several decades of research, is that psych verbs (at least in Romance languages) divide into *subject-experiencer* (SE) verbs – such as the Catalan *témer* ('to fear'), where the experiencer occupies the canonical subject position –, and *object-experiencer* (OE) verbs – such as the Catalan *preocupar* ('to worry'), where the experiencer surfaces as an object. Whereas SE verbs align with the prototypical transitive schema (EXPERIENCER as subject, STIMULUS as object), OE verbs display non-canonical argument alignment: the STIMULUS is realized as the grammatical subject, while the EXPERIENCER appears as a dative or accusative object. As Belletti and Rizzi (1988) and later Grimshaw (1990) and Landau (2009) have emphasized, this inversion of roles results in a series of “psych properties”: restrictions on reflexivization and passive formation, peculiarities in clitic doubling, differential case marking, and nominalization constraints.

In addition, Romance OE verbs present a particularly rich field for variation. In Spanish and Catalan, for instance, they may appear in either accusative or dative case with some verbs, often with subtle semantic and pragmatic effects. This is the case, for instance, for *preocupar* ('to worry') or *interesar/interessar* ('to interest'). Such variation, as Kailuweit (2018c) and Royo (2017; 2020; 2021) observe, interacts with factors like agentivity, topicality, and even language contact. Indeed, the pluricentric nature of Spanish – with different norms across Europe and Latin America – and the bilingual reality of the majority of the Catalan-speaking territories make this alternation an ideal context for studying the interface of grammar, meaning, and social variation.

Despite decades of work, the theoretical description of psych predicates remains fragmented. Competing accounts – those that attribute their peculiarities to unaccusativity, those that posit causativity, and those that emphasize aspectual or information-structural parameters – have produced multiple interesting insights into this question (Temme 2018). The empirical evidence, moreover, points to a gradient rather than categorical landscape: OE verbs vary along dimensions of agentivity, causativity, and stativity, often combining features traditionally associated with distinct event classes. Recent corpus and experimental studies (e.g. Verhoeven 2010; 2017; Fritz-Huechante et al. 2020) show even within one language, psych predicates form *continua* rather than discrete categories. Complex OE predicates, for instance, light verb constructions with experiencer objects competing with synthetic OE verbs (see e.g. Pisciotta, Masini 2025; Wiskandt 2025a; 2025b), add another dimension of variation.

This volume, *Psych Predicates in Romance Languages*, arises from an international collaboration that aims to reassess these issues by integrating theoretical, empirical, and sociolinguistic approaches. The project thus addresses different fronts: the formal description of argument realization in psych predicates, and the sociolinguistics conditions under which speakers use and vary them.

2 From Unaccusativity to Causativity: Theoretical Models and Debates

The theoretical fascination with psych predicates stems from their ability to reveal tensions between universal principles of argument linking and language-specific patterns of encoding. Since the late 1980s, two major hypotheses have dominated discussion: the *unaccusativity hypothesis* and the *causativity hypothesis*. Each has illuminated aspects of psych predicate behavior but neither has proven exhaustive.

2.1 The Unaccusativity Hypothesis

Belletti and Rizzi (1988) proposed that the peculiar syntactic properties of OE verbs derive from their unaccusative status. In this view, verbs like *piacere* or *gustar* (both of them meaning ‘to please’) pattern with unaccusatives such as *arrivare* or *llegar* (i.e., ‘to arrive’): their subjects originate as internal arguments, and the surface subject position is not a true external argument. The experiencer, typically encoded as a dative, is therefore an oblique argument introduced by a prepositional or applicative structure rather than by the canonical subject position. This model explains certain diagnostics, such as auxiliary selection (*essere* vs. *avere* in Italian), restrictions on passivization, and the impossibility of reflexivization. However, it struggles with the transitive-like behavior of many OE verbs, especially those taking accusative experiencers.

Moreover, the unaccusativity hypothesis implies that all OE verbs share the same underlying structure, an assumption increasingly at odds with empirical evidence. In Italian, only a subset of OE verbs behave like *piacere* in auxiliary selection and cliticization; most, such as *preoccupare* (‘to worry’), use *avere* and allow direct object clitics. In Spanish, nearly all OE verbs may alternate between dative and accusative marking, suggesting a fluid interaction between unaccusative and transitive configurations. The unaccusativity model, though foundational, thus appears too rigid to accommodate the observed variation across verbs and languages.

2.2 The Causativity Hypothesis

Grimshaw (1990) and Pesetsky (1995) proposed an alternative explanation: rather than being unaccusative, OE verbs are causative. They denote events in which the non-experiencer argument brings about a psychological change in the experiencer. Under this analysis, the Spanish *preocupar* ('to worry') and *enfadar* ('to anger') are change-of-state predicates whose subjects occupy the canonical AGENT or CAUSER role. The EXPERIENCER, though syntactically an object, is semantically a PATIENT undergoing a mental or emotional change. This account explains the availability of causative paraphrases (*x worries y* $\approx$ *x causes y to be worried*), the possibility of passivization, and the aspectual properties that distinguish them from purely stative verbs.

However, this approach also faces empirical difficulties. Many OE verbs resist truly eventive or agentive readings. As Kailuweit (2005; 2015) and Temme (2018) argue, their semantics often combine stative and inchoative properties. Moreover, the causativity hypothesis must explain why the causatively affected object of a psych verb behaves morphosyntactically differently from the patient of a canonical causative verb, such as the Spanish *romper* ('to break') or *matar* ('to kill'). The asymmetries observed in clitic doubling, case alternation, and reflexivization suggest that psychological causation is structurally distinct from physical causation.

Recent work has attempted to bridge these perspectives by recognizing the *heterogeneity* of OE verbs. Kailuweit (2015; 2018a) proposes an *activity hierarchy* that maps varying degrees of agentivity and affectedness across arguments, allowing verbs to occupy intermediate positions between causative and stative poles. Marín and McNally (2011) similarly describe psych predicates as denoting *inchoative states*, i.e. states that include a temporal onset but lack a telic endpoint. These approaches avoid the binary opposition between unaccusativity and causativity by positing a continuum of event structures.

2.3 Argument Structure, Aspect, and Voice

Beyond causativity, psych predicates also challenge the interface between aspectual class and argument realization. Vendler's (1967) and Dowty's (1979; 1991) taxonomy – states, activities, accomplishments, achievements – cannot easily accommodate verbs that exhibit both stative persistence and change-of-state features. Verbs such as Spanish *preocupar* ('to worry') or *enfadar* ('to anger') describe enduring emotional conditions initiated by an event but not necessarily culminating in a result. Their pronominal

counterparts (*preocuparse*, *enfadarse*) further complicate the picture by introducing apparent reflexivity or anticausativity.

Alexiadou and Iordăchioaia (2014) term this the *psych causative alternation*, paralleling the causative-inchoative alternation in non-psych domains (e.g. Spanish *romper/romperse*, ‘to break’). Whether these pronominal forms are true reflexives, inchoatives, or passives remains contested. Some authors (e.g. Acedo-Matellán, Mateu 2015; Marín, McNally 2011) view them as inchoative or anticausative constructions with a proto-patient experiencer; others (Härtl 2001; Herslund 1997) analyze them as reflexive or antipassive, with a proto-agentive experiencer.

This ambiguity has motivated experimental and corpus-based studies seeking empirical correlates of agentivity and causality. Several studies across languages (e.g. Verhoeven 2017 for German) show that agentivity in the stimulus argument correlates with reduced acceptability or occurrence of pronominal or anticausative variants, paralleling findings in non-psych domains where volitionality blocks anticausativization. For Spanish, pilot corpus studies conducted by Kailuweit and Wiskandt indicate that verbs allowing frequent pronominal alternants tend to have inanimate or less agentive stimuli. Thus, the alternation between the two constructions – e.g. Spanish *preocupar* vs. *preocuparse* (‘to worry’) – appears to be probabilistically conditioned by semantic features rather than strictly categorical syntactic rules. Recently, typological studies on the alternation (e.g. Rott et al. 2020; 2024) have gained momentum, establishing the “psych alternation” as a widespread cross-linguistic phenomenon conditioned by valence orientation and other syntactic parameters.

2.4 Toward Integrative Models

The theoretical landscape of psych predicates is thus characterized by complementarity rather than exclusivity. Each framework captures a dimension of the phenomenon: unaccusativity accounts for dative marking and syntactic restrictions; causativity explains transitive alignment and aspectual change; aspectual and constructional approaches bridge the two. The current consensus inclines toward multidimensional modeling that integrates argument structure, aspectual composition, and pragmatic prominence. Role and Reference Grammar (RRG), in particular, offers a flexible apparatus for mapping semantic macroroles (ACTOR and UNDERGOER) to syntactic functions, allowing for graded activity hierarchies (Kailuweit 2018a).

By applying such models to cross-Romance data, this volume aims not to adjudicate between unaccusativity and causativity but

to explore the intermediate zones that characterize real language use. These include constructions where the experiencer alternates between accusative and dative marking, where the pronominal form alternates with the active, and where sociolinguistic factors influence grammatical choice. Theoretical adequacy, in this perspective, must be matched by empirical and sociolinguistic realism.

3 Overview of the Volume

The present volume, emerging from a workshop at Heinrich Heine University Düsseldorf in 2023, brings together ten contributions that collectively explore the syntactic, semantic, and sociolinguistic dimensions outlined above. The editors have organized the chapters so as to reflect both theoretical diversity and thematic coherence, and sorted them into three parts: The first part comprises the contributions that investigate the pronominal construction of OE verbs from various perspectives. The contributions in the second part study dative-experiencer verbs. The third part consists of two contributions focussing on constructions with psych nouns.

3.1 The Pronominal Construction

The first part of this volume begins with a chapter by José María García-Miguel and Victoria Vázquez Rozas. They offer a comprehensive quantitative study of diathesis alternation and case marking in Spanish psychological predicates, providing one of the volume's empirical contributions. As said, psych verbs constitute a long-recognized challenge for theories of transitivity because their argument-structure patterns vary substantially both cross-linguistically and within individual languages, and Spanish illustrates this complexity. Within the object-experiencer class, variation arises in morphological case marking. Verbs like *gustar* ('to please') consistently take a dative Experiencer, whereas others, including *asustar* ('to scare'), alternate between accusative and dative (*A ella no la/le asustaba el contagio*. 'The infection did not scare her.'). These same verbs also participate in a voice alternation to the middle or pronominal construction, which promotes the experiencer to subject position (*Ella no se asustaba de nada*. 'She was not scared of anything.'). García-Miguel and Vázquez Rozas investigate the factors conditioning both alternations, using large datasets from ADESSE and CORPES XXI. Their regression analyses show that experiencer person, stimulus person, aspect, verb and geographical zone significantly predict the choice between active object-experiencer constructions and middle subject-experiencer constructions. A

partially overlapping set of predictors – zone, stimulus person, aspect, and verb – also governs the alternation between accusative and dative case for experiencer-objects. Despite these parallels, the authors find no significant correlation between diathesis alternation (subject vs. object experiencer) and morphological case alternation (accusative vs. dative experiencer). They argue instead that the two patterns respond to different communicative and discourse functions, rather than forming a unified or interdependent alternation.

Following this chapter, Sarah Grätz, Armin Sawicki, and Anna Stein present an acceptability-judgment study that compares Spanish and Catalan, which offers experimental evidence on psych-verb alternations within the bilingual Catalan-Spanish community. Their study focuses on object-experiencer (OE) psych-verb constructions and investigates how speakers rate active versus pronominal voice across different animacy conditions. The authors hypothesize that, given the close geographical and sociolinguistic proximity of Spanish and Catalan, bilingual speakers' language attitudes and proficiency profiles may shape their acceptability preferences for particular voice-animacy pairings, making an experimental approach especially informative. Their pilot results shed light on how animacy modulates voice selection in the two languages and begin to show subtle differences in how Spanish and Catalan speakers process OE psych-verb constructions. At the same time, the authors emphasize the methodological dimension of the study: they argue that a full understanding of contemporary syntactic variation requires the combined use of both corpus data and experimental evidence, each contributing complementary strengths.

The volume continues with a chapter by Addison J. Blanchard-Rooney, who contributes a sketch-based elicitation study designed to probe the morphosyntactic and syntactic properties of object-experiencer (OE) psych verbs in Catalan and Spanish. The task contained four sketches depicting basic emotional scenarios, each labeled with a target verb in Catalan and Spanish (*molestar(se)* 'to annoy', *enfadar(se)* 'to anger', *entristecer(se)* 'to sadden', *alegrar(se)* 'to gladden'). Seventy-nine participants produced written descriptions incorporating these verbs, yielding 305 analyzable items annotated for six parameters: morphosyntactic voice, argument type, constituent order, morphological realization of the target, tense/aspect, and prepositional marking. Quantitative and qualitative comparisons reveal systematic cross-linguistic contrasts – most strikingly in voice choice, with Catalan speakers favoring the pronominal construction significantly more than Spanish speakers across verbs. For example, while 73% of Catalan descriptions of *alegrar-se* used pronominal voice, only 43% of Spanish descriptions did so. Additional patterns emerge regarding between-verb flexibility and the interaction of voice with structural choices such as clausal

vs. nominal stimuli. By integrating visual-elicitation methods with statistical analysis, Blanchard-Rooney's study provides new insights into how Romance speakers construct OE psych-verb phrases and illustrates how experimental methodologies complement corpus research in capturing contemporary variation.

Jaume Mateu and Carles Royo examine the diachronic shift from Latin impersonal psychological verbs to their Catalan pronominal counterparts, showing that the rise of reflexive constructions follows systematic pathways of detransitivization. They focus on Latin verbs with the pattern [Experiencer_{AC}/Stimulus_{GEN}], namely MISERET, PAENITET, PIGET, PUDET, TAEDET, arguing that the accusative experiencer occupies a hierarchically prominent, subject-like position within an internal predication, while the genitive stimulus functions as a low adjunct. An empty pronominal element fills the external argument slot and moves to satisfy the EPP, thereby ensuring compatibility with Burzio's Generalization as an A(mbient)-Causer (Pesetsky 1995). As Romance developed, Catalan underwent a grammaticalization of the reflexive pronoun *se* as a marker of middle-related functions, a change that both attracted new lexemes (*avergonyir-se*, 'to be ashamed') and reshaped inherited ones (*penedir-se* < PAENITET, 'to regret'). Importantly, the transition from Latin to Catalan preserves semantic regularities: non-agentive TAEDET and PIGET correspond to anticausatives such as *fastiguejar-se* ('to grow weary') and *afligir-se* ('to grieve'), whereas the more agentive MISERET and PAENITET produce autocausatives like *compadir-se* ('to pity') and *penedir-se* ('to regret'). PUDET maps to *avergonyir-se*, which displays both anticausative and autocausative readings. Through this comparison, Mateu and Royo show that Romance pronominal psych verbs emerge through historically grounded and semantically principled patterns, and that there is certain continuity between Latin impersonals and their modern reflexive descendants.

Next, Rolf Kailuweit addresses the long-debated question of how to classify pronominal constructions of transitive object-experiencer (OE) verbs in accusative languages such as French, Spanish, and German. These constructions differ from canonical reflexives, since the undergoer of the corresponding transitive predicate remains semantically accessible and cannot be replaced by a non-coreferential pronominal argument. Within Role and Reference Grammar (RRG), previous analyses have diverged: some treat these constructions as analogous to pronominal passives or anticausatives, whereas others view them as antipassives involving privileged syntactic argument (PSA) modulation. The chapter re-evaluates these proposals by examining whether the pronominal PSA behaves as an actor or an undergoer, drawing on aktionsart properties and the logical structures of corresponding transitive constructions. The comparison with non-pronominal passives shows that pronominal OE constructions exhibit

a significantly higher degree of participant activity, which undermines a passive or anticausative interpretation. Instead, according to standard criteria for identifying antipassives, the experiencer in these constructions patterns more like an actor, providing a strong argument for analyzing Romance OE-pronominals as instances of antipassives. At the same time, following Standard RRG, the chapter argues that these antipassive-like structures arise through a lexical rule rather than through a productive syntactic operation, given that the construction is restricted to the semantic domain of episodic psych-verbs. The analysis concludes by proposing an explicit RRG model for both the transitive base construction and its pronominal counterpart, clarifying how they are related within the grammar.

Expanding the volume's typological scope, Niklas Wiskandt also addresses the problem of the classification of the pronominal construction, as discussed in the Kailuweit's chapter, but takes a different perspective. The chapter investigates psych verb detransitivization with a focus on Germanic and Romance languages. Across both subfamilies, languages display detransitivized subject-experiencer predicates derived from transitive object-experiencer verbs via markers of reflexive origin. Wiskandt proposes a novel, typologically grounded framework that classifies psych detransitivization according to patterns of voice syncretism. The study draws on a sample of languages with detransitivizing psych alternations, covering several language families beyond Romance and Germanic. It shows that all markers used to detransitivize experiencer verbs also appear in other voice constructions, though the precise range of functions varies widely across languages. Significantly, the only universal denominator across these syncretism patterns is an anticausative function, suggesting that detransitivized psych predicates are best understood as part of a broader cross-linguistic domain of anticausative marking. This finding contrasts with Kailuweit's conclusions in the previous chapter. The typological analysis in the chapter contributes both to clarifying the syntactic status of Romance and Germanic psych alternation constructions and to providing a foundation for future theoretical, typological, as well as family-specific empirical research.

3.2 Dative-Experiencer Verbs

In the second part, Lisa Figura contributes a historical perspective to the volume with her study of Old French psych verbs and the behavior of dative experiencers, focusing in particular on the role of the preposition *à*. Figura examines Old French PV belonging to their third class in Belletti and Rizzi's classification (1988), where the experiencer surfaces as a dative object and the nominative subject

encodes the stimulus. A hallmark of this class is the possibility for the dative experiencer to appear in preverbal position – an option retained today in some Romance languages such as Spanish (e.g. *A Ana le gusta el chocolate* ‘Ana likes the chocolate.’) but lost in Modern French, where preverbal placement is restricted to marked topicalization or dislocation. Old French, however, freely allowed preverbal experiencer datives, as seen in examples such as *A l’abé e a monies plut mult sa compaignie* (‘The abbot and the monks liked his company a lot.’). A closer examination of these structures reveals further complexities: when the experiencer appears preverbally, the preposition *à* may be omitted altogether, suggesting that its distribution was neither stable nor exclusively tied to marking dative case. Indeed, in line with recent work questioning the sharp Old French distinction between direct and indirect objects, Figura argues that the distribution of *à* reflects a more fluid system in which dative marking had not yet fully crystallized. Her findings thus show that early Romance displayed greater variation in argument realization than modern standard languages, reinforcing the idea that present-day alternations are remnants of a once broader typological space.

Simonetta Vietri then investigates the syntactic behavior of Dative Experiencer (DE) verbs in Italian, traditionally exemplified by *piacere* (‘to please’) and characterized as unaccusative predicates with an inverted argument structure. While previous literature has focused on the quirky-subject properties of preverbal Experiencers or on their interpretation as topicalized elements, the present study undertakes a corpus-based analysis to determine the conditions regulating the preverbal vs. postverbal distribution of DEs. The author examines Dative Experiencer verbs in Italian, focusing on the syntactic patterns that configure the apparent stability of the Italian system. Her analysis of prepositional and clitic constructions with *a* shows that even within a seemingly fixed paradigm, subtle alternations depend on information structure and lexical semantics. The study further demonstrates that the class of DE verbs is more heterogeneous than generally assumed, comprising four distinct syntactic types. Alongside *piacere*, which alternates between dative and reflexive patterns, verbs such as *dispiacere* (‘to regret’) behave like change-of-state predicates, alternating between dative and non-reflexive subject constructions. *Interessare* (‘to interest’) displays both dative and accusative Experiencer alignments, as well as a pronominal variant with a subject Experiencer and prepositional Stimulus. Finally, unergative DE verbs – selecting *avere* (‘to have’) in compound tenses – such as *compiacere* (‘to please’) and *ripugnare* (‘to disgust’) exhibit their own alternation patterns, further demonstrating that the Italian DE system, far from uniform, encodes a rich set of argument-structure configurations shaped by lexical properties and discourse-driven constraints.

3.3 Constructions with Psych Nouns

Elga Cremades' chapter shifts the focus to the nominal domain for the third part, examining psych nominalizations in Catalan and showing how their internal structure relates to the well-known syntactic and morphological behavior of psych verbs. Building on Belletti and Rizzi's (1988) tripartite classification, the paper shows that when one turns from verbs to psych nominals – mostly deverbal nouns denoting psychological states or emotions – this tripartite distinction becomes partially neutralized. Nominals derived from Type I verbs pattern as subject-experiencer predicates, preserving an internal argument corresponding to the target of emotion. By contrast, nominals related to Type II and Type III verbs typically license only a single argument: the experiencer, which surfaces as an external argument. In other words, psych nominals are uniformly subject-experiencer predicates, regardless of the alignment found in their verbal bases. The chapter argues that this restructuring follows from broader properties of nominalization. Crucially, nominals lack the ability to introduce cause arguments – an absence that particularly affects nominals derived from Type II verbs. This restriction can be traced to the inherent characteristics of external arguments, as well as to the aspectual profile of nominalizations. By tracing how experiencers are encoded in psych nominals, the author shows how nominal structures can either preserve or neutralize argument-structure distinctions otherwise visible in the verbal domain.

The volume closes with Jordi Ginebra's exploration of light verb constructions with psychological predicates in Catalan, set against their Spanish – and, to a lesser extent, English – counterparts. This chapter offers the first comprehensive descriptive overview of Catalan psych constructions with light verbs, a domain of considerable structural complexity and high relevance for learners of Catalan as a second language. The study identifies twelve Catalan construction patterns combining a psychological noun with a light verb, grouped into two macro-types according to the syntactic function of the experiencer – subject-experiencer constructions and dative-experiencer constructions. For each construction, Ginebra examines a set of diagnostic parameters: the syntactic position of the experiencer, aspectual value, mass/count properties of the psychological noun, the realization of the non-experiencer argument, the existence of synthetic or attributive correlates (V + Adj/Part), cross-linguistic correspondences in Spanish and English, and historical attestation. The chapter presents the full inventory of these twelve structures, followed by a detailed analysis of the first construction type and a set of further remarks on patterns that emerge across the system. Beyond its descriptive and contrastive contributions, the chapter engages with a long-standing debate

concerning the status of light verb constructions within phraseology: whether they should be analyzed as grammatical combinations predictable from general principles, or as idiomatic collocations requiring lexical listing. Ginebra argues that the answer depends on how far the distribution of Catalan light verbs can be captured through grammatical or semantic generalizations – supporting a systematic account – or whether individual noun-verb pairings resist prediction, in which case they fall within the remit of phraseological study.

4 Toward a unified research agenda

Together, the chapters of this volume represent a comprehensive synthesis of current research on psych predicates in Romance languages. They demonstrate how empirical, theoretical, and sociolinguistic approaches can converge on a single phenomenon, each illuminating a distinct facet of its complexity.

Despite their diversity, the contributions share several unifying themes. First, they all treat argument realization as dynamic and context-sensitive rather than lexically fixed. Whether through diachronic change, register variation, or bilingual contact, the mapping of semantic roles to syntactic functions emerges as a site of flexibility within constraints. Second, the chapters collectively emphasize gradience and continuum. Rather than discrete classes, the data show tendencies along semantic dimensions such as agentivity, stativity, and affectedness. This supports the theoretical move toward scalar representations, such as Kailuweit's activity hierarchy or Marín & McNally's left-bounded states. Third, several contributions highlight voice categories – active, passive, reflexive, anticausative – as spaces to re-evaluate the “psych alternation” across languages, yielding a more nuanced typology of its function. Fourth, cross-linguistic comparison is used as a crucial tool for the analysis of grammatical phenomena – both within the Romance subfamily and at a larger typological scale. And fifth, the volume integrates sociolinguistic variation. The Spanish-Catalan case studies illustrate how grammatical choice can index speaker identity and stance toward linguistic norms. This approach exemplifies a broader movement toward embedding formal linguistics within real-world communicative ecologies.

In total, the findings and perspectives collected in this volume point toward a unified yet pluralistic research agenda for the study of psych predicates. Different directions appear particularly promising for future research.

On the one hand, empirical and cross-linguistic expansion and data harmonization: Future work should enlarge the comparative

database, integrating corpora from other Romance languages (e.g. Portuguese, Romanian) and systematically capturing agentivity, topicality, and polarity. Shared metadata standards would allow quantitative testing of hypotheses about the case alternation of the experiencer and the “psych alternation” across languages.

On the other hand, integration of sociolinguistic and glottopolitical considerations: Building on the pilot studies conducted in Mallorca and reported in this volume, future research should extend to other Catalan-speaking regions and to Latin America, investigating how institutional norms and language attitudes shape grammatical micro-variation. The concept of *glottopolitical reflexes* – grammatical manifestations of language ideology – may become a key analytical tool for the morphosyntactic variation of Romance psych predicates in such environments.

Under this point of view, the study of psych predicates remains an intriguing space for testing assumptions about linguistic variation and representation. The contributions assembled here reaffirm that resolving the “psych puzzle” requires not a single theory but a network of perspectives – syntactic, semantic, pragmatic, and sociolinguistic – which, albeit sometimes in conflict, eventually help each other on the path toward a deeper understanding of the psych domain.

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The Pronominal Construction

Diathesis Alternation and Case of Experiencer-Object with Psych-Verbs in Spanish

José María García-Miguel Gallego

Universidade de Vigo, España

Victoria Vázquez Rozas

Universidade de Santiago de Compostela, España

Abstract This study explores the factors that motivate the choice between alternating constructions with psychological predicates in Spanish. Using data from ADESSE and CORPES XXI, we have performed regression analyses and found that the Experiencer Person, Aspect, and Verb are the main significant factors for the use of the Experiencer-Object vs Experiencer-Subject patterns. However, we do not find a significant correlation between diathesis alternation (Subject vs Object Experiencer) and case alternation (Accusative vs Dative Object Experiencer). This leads to the conclusion that each construction type has different communicative functions.

Keywords Psychological verbs. Case marking. Middle voice. Diathesis. Corpus analysis.

Index 1 Introduction. – 2 Background. – 3 Data and Methodology. – 4 Results: Experiencer-Subject vs Experiencer-Object. – 5 Case Alternation with Experiencer Object Verbs: Accusative vs Dative. – 6 Case Alternation and Diathesis Alternation. – 7 Discussion. – 8 Conclusion.



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1 Introduction

In Spanish, as in other Romance languages, psychological verbs require two participants (Experiencer and Stimulus) and can be construed with 2 opposite syntactic orientations. Some verbs (Psych-I verbs such as *amar* 'love', *temer* 'fear', *sufrir* 'suffer', *añorar* 'miss' ...) encode the Experiencer as Subject and the Stimulus as (Direct) Object, like in (1). Other verbs (Psych-II verbs such as *gustar* 'like', *desagradar* 'dislike', *sorprender* 'surprise', *asustar* 'frighten' ...) code the Experiencer as (Direct or Indirect) Object and the Stimulus as Subject, like in (2)-(4)

- (1) *Yo no añoro la infancia* [ADESSE/CIN:043.20]
 1SG.NOM NEG miss ART childhood
 Exp=Subj Stim=Obj
 'I don't miss childhood'
- (2) *Me desagrada este Madrid ruidoso* [ADESSE/PAS:043.12]
 1SG.ACC/DAT dislike this Madrid noisy
 Exp=Obj Stim=Subj
 'I dislike this noisy Madrid'
- (3) *No la asustaba el contagio* [CORPES, Arg.]
 neg 3SG.ACC frighten.PST art contagion
 Exp=Obj Stim=Subj
 'She was not afraid of contagion'
- (4) *A Leila le asustaba casi todo* [CORPES, Arg.]
 to Leila 3SG.DAT frighten.PST almost everything
 Exp=Obj Exp Stim=Subj
 'Leila was scared of almost everything'

Within Psych-II verbs we can recognise two subclasses: Psych-IIa (= Belletti, Rizzi 1988's class II) alternate accusative/dative case in 3rd person clitics [examples (3)-(4) above] and allow for the *se* construction [= middle voice] with the Experiencer as Subject [example (5)]; whereas Psych-IIb (= Belletti, Rizzi's class III) have exclusively 3rd person dative but not accusative clitics (6), and they do not allow for diathesis alternation (7).

- (5) *Ella no se asustaba (de nada)*
 She NEG MIDDLE frighten.PST of anything
 Exp=Subj Pred_{MIDDLE} Stim=Oblique
 'She wasn't scared (of anything)'

(6)	<i>Le/*lo/*la</i>		<i>desagrada</i>	<i>este Madrid ruidoso</i>
	3SG.DAT/*ACC		dislike	this Madrid noisy
	Exp=Obj			Stim=Subj
	'(S)he dislikes this noisy Madrid'			

(7)	*	<i>Ella</i>	<i>no</i>	se	<i>desagrada</i>	<i>(de este Madrid ruidoso)</i>
		She	NEG	MIDDLE	dislike	(of this noisy Madrid)

The diathesis alternation exemplified in (3)-(5) is based on a regular semantic correspondence between the object of the active construction and the subject of the middle *se*-construction. Psych-IIa verbs assign the same semantic role, Experiencer, to the object of (3) and the subject of (5), whereas the Stimulus triggers subject agreement in (3) and either appears as an oblique argument (with a preposition) or is absent in the middle construction (5). The possibility of this alternation is related to transitivity, since it is permitted by Psych-IIa verbs, which also allow for the accusative case, but not by Psych-IIb verbs which encode the Experiencer as an indirect object obligatorily in the dative, not in the accusative, as shown in (6), and they do not allow for the middle construction, as illustrated in (7).

The aim of this study is to investigate the factors that influence the choice between Experiencer-Object and Experiencer-Subject constructions with psychological verbs. Building on previous studies, we focus on several linguistic and contextual features that, according to the literature, are involved in (i) the choice of the syntactic function for the Experiencer, either Subject (Exp=Subj) for Psych-I verbs or Object (Exp=Obj) for Psych-II verbs, (ii) the choice between active (Exp=Obj) and middle voice (Exp=Subj) of Psych-IIa verbs, and (iii) the choice between the accusative and the dative case for the Exp=Obj of Psych-IIa verbs. Finally, the study aims to establish (iv) the relationship between the choices mentioned in (ii) and (iii), i.e. whether there is a correlation between the use of the accusative vs dative in the active construction and the use of the middle *se*-construction.

2 Background

This study is rooted in the concept of construction as a conventional association of meaning and form (CxG), motivated by communicative goals. This approach posits that grammatical forms emerge from the discourse context to serve the expressive needs of speakers. Accordingly, our analysis of the syntactic behaviour of psychological verbs is based on the use of the constructions that appear in corpora, paying particular attention to the frequency and relative distribution

of the variable features that characterise them. The importance of the frequency of use derives from the assumption that the most frequent combinations of linguistic properties reflect the communicatively most efficient meanings (cf. Levshina 2023).

Communicative efficiency also underpins the grammatical status of clause constituents. The linking of grammatical functions and semantic roles is determined by the convergence of syntactic hierarchies, such as the Core > Oblique and Subject > Object > Oblique clines, and semantic hierarchies, such as animacy and empathy scales.

In Spanish, subject and direct and indirect objects are considered to be core syntactic roles. In addition to their tendency to be required by the verb as valency elements, the three functions are indexed within the verbal group, either by verbal agreement in person and number (subject) or by pronominal clitics, which vary for person, number, gender, and, for third person, case as well (direct and indirect objects) (cf. García-Miguel 2015). In contrast to these highly grammaticalized functions, oblique arguments are prepositionally flagged dependents that share this type of (more ‘lexical’) coding with non-valency elements (adjuncts).¹

The animacy hierarchy (human > animate > inanimate) has been related to the capacities of sentience, control and agency of the participants (Silverstein 1976; Dixon 1979), while topicality and empathy scales (1st > 2nd > 3rd person) reflect the degree of identification of the speaker with the referent.

In prototypical transitive constructions, syntactic and semantic hierarchies tend to converge such that the referents with the highest levels of animation and empathy occupy the most prominent syntactic position (subject). However, with psychological predicates, even if the Experiencers are the most animate and empathetic participants, they are not necessarily the most active. In fact, it is the Stimulus that is regarded as having an effect on the Experiencer. This mismatch between the semantic-referential properties of participants and their syntactic coding indicates the need to also consider the properties of events, as outlined below.

In the literature, the contrast underlying active / middle alternation has been related to two semantic dimensions of the event, causal structure and aspectual structure (Croft 1993; 2012).

1 Note that, crosslinguistically, datives may have properties (such as verbal indexing and/or adpositional flagging) suggesting to give them “a special status, closer in some respects to that of core terms *strictu sensu* than to that of ordinary obliques” (Creissels 2024, 30). Creissels proposes to designate them as “dative obliques” and to treat them as a particular variety of obliques. However, we defend, as least for Spanish, that the dative is an additional type of core syntactic role.

Regarding causal structure, even though both alternates deviate from the prototypical model of causation, cause-related differences were found between active and middle *se*-constructions, among which the spontaneity of the event and the Experiencer's responsibility and affectedness stand out.

The degree of spontaneity attributed to the event is a factor that has been highlighted in several studies as a basis for choosing between the two structures.² These studies point to the probability of the spontaneous occurrence of the described situation as a relevant factor: the greater the spontaneity, the less the need to express the causal or triggering element of the situation. Usage data supports considering the degree of spontaneity of an event as a relevant component in conceptualising middle *se*-constructions as opposed to active constructions. In active voice constructions, the syntactic encoding of the stimulus as a core participant (i.e. Subject) rules out a spontaneous interpretation of the process. In contrast, in the middle voice, “el estímulo pierde su estatus de participante central y pasa a elemento marginal” (the stimulus loses its status as a central participant and becomes a marginal element) (Melis 1999, 57), allowing for its omission. This gives rise to the conception of the event as a process that is autonomous or spontaneous to some extent (i.e. not the result of a direct cause-and-effect relationship). Thus, spontaneity favours the use of the middle *se*-construction, which does not require an argument that refers to what provokes the emotional process in the Experiencer (i.e. the Stimulus). Even when a cause or Stimulus coded as oblique is mentioned in the clause, the middle *se*-construction implies a defocusing of this participant, since “sitúa en la periferia del evento al elemento oblicuo” (it places the oblique element at the periphery of the event) (Melis 1999, 55).

The responsibility of the Experiencer in the occurrence of the event has been mentioned in the literature.³ Maldonado (1999, 52) states that the middle indicates an increasing involvement and responsibility of the Experiencer. Melis (1999, 52) also points out that the subject Experiencer “lleva asociados implícitos matices de responsable iniciador del evento” (is implicitly associated with being the responsible initiator of the event).

With respect to the affectedness of the Experiencer, Melis (1999) shows that the object Experiencer of the active pattern is conceived as more affected than the subject Experiencer of the middle voice. Usage data reveal a preference for first- and second-person Experiencers to be encoded as objects in the active alternate, in contrast to the third-person Experiencers, who are more often cast

² Cf. Haspelmath 1993; 2016; Melis 1999, 52; Heidinger 2015; García-Miguel 2023, 284.

³ See Maldonado 1999, 52; Melis 1999, 52; Croft 2012, 235; among others.

as subjects in the middle voice. This distribution is related to the ‘empathy hierarchy’ (Kuno, Kaburaki 1977; Kuno 1987), according to which the speaker perceives from a 1st person perspective how a given situation affects him/her and, to some extent, how it affects the interlocutor (2nd person); however, it is not so easy to determine how much a third person Experiencer is affected by a mental event.

Regarding aspect, Psych-IIa verbs are assigned a wide variety of interpretations according to the Vendler-Dowty classification.⁴ Active Subject-Object constructions have been analysed alternatively as stative or inchoative, depending on the dative or accusative case marking of the object Experiencer (cf. Ackerman, Moore 1999; Cifuentes 2015), however, the aspectual classification system based on formal tests has certain limitations, and in many cases yield dubious results, as has also been pointed out by Kailuweit (2015). Nevertheless, usage-based studies have found some significant correlations between perfect tenses and the accusative case, and between imperfect tenses and the dative case (Miglio et al. 2013; Vázquez Rozas, García-Miguel 2025). These data can be taken as evidence for the association of the accusative vs dative markings with, respectively, telic vs atelic events.

Differences in aspectual class have also been observed between active and middle voice clauses with Psych-IIa verbs. Marín, McNally (2011) identify an inchoative meaning in all middle *se*-constructions, with a further distinction between punctual verbs, such as *enfadarse*, and non-punctual verbs, such as *aburrirse*. Marín (2011), on the other hand, applies several aspectual combinatorial tests to active constructions, and concludes that they behave like stative expressions.

In the remainder of the paper, we first describe the data sources for the study – the ADESSE database and CORPES XXI – and the method used to extract the data sets for the statistical tests (section 3). Section 4 contains the statistical analysis concerning the choice between Experiencer=Subject vs Experiencer=Object, where the factors influencing the Experiencer’s syntactic encoding (subject vs. object) are examined; this analysis focuses on the contrast between Psych-I and Psych-II verbs, on the one hand, and on the diathesis alternation between active and middle *se*-constructions with Psych-II verbs, on the other. Next, section 5 deals with the accusative/dative alternation with Psych-IIa verbs. Section 6 examines the correlation between the frequency of accusative/dative case markings and the frequency of middle *se*-constructions. Section 7 discusses the results of the analysis, relating them to the specific communicative functions of

4 Cf. Di Tullio 2004; Vanhoe 2004; Marín 2011; Cifuentes 2015; Melis 2019.

alternative constructions allowed by psychological verbs. Finally, section 8 summarises the conclusions of the study.

3 Data and Methodology

For the present study, we have used two sources of data: ADESSE and CORPES.

ADESSE⁵ is a database with detailed lexical, semantic, and syntactic information about the argument structure of 159,000 clauses of a 1.45-million-word corpus (ARTHUS) of contemporary Spanish texts published between 1980 and 1990. In the ADESSE database, clauses are analysed for many syntactic and semantic properties, and the verbs ($\pm$ 4,000 lexical entries) are classified into a detailed conceptual typology of processes.

CORPES⁶ is a lemmatised and POS-tagged reference corpus of Spanish with a size of 395 million words (as of version 1.0), which consists of a balanced sample of Spanish texts of the twenty-first century.

From ADESSE we have selected all verbs and clauses classified as “*Sensación*”, i.e. Emotion/Psych-verbs. This amounts to a dataset of 5,845 clauses, and 265 different verbs. The whole dataset includes both Psych-I verbs (1,608 clauses, 56 verbs) and Psych-II verbs (4,237 clauses, 224 verbs), and detailed semantic and syntactic properties of the clause (e.g. Voice and TAM) and its arguments (Semantic Role, Syntactic Function, Case, Gender, Number, Animacy, etc.).

As for CORPES, we have used its search engine to extract the inventory of grammatical forms consisting of a Psych-IIa verb plus a personal pronoun (which corresponds to the Experiencer) immediately preceding or following the verb form (for example: *lo alegra, se alegró, alegrar-se, me he alegrado, alegra-te*) and the frequency of each combination. We have performed independent searches for 50 highly frequent Psych-IIa verbs that allow the accusative case for Experiencer-Object (as in *lo alegra* ‘it makes him happy’) and middle voice with the Experiencer-Subject (as in *se alegró* ‘he was happy’). (8) contains the list of the 50 selected verbs:

5 ADESSE. *Base de datos de verbos, alternancias de diátesis y esquemas sintáctico-semánticos del español*. Universidade de Vigo. <https://adesse.uvigo.es/>.

6 CORPES. *Corpus del español del siglo XXI*. v 1.0. Real Academia Española. <https://apps2.rae.es/CORPES/>.

- (8) *aburrir* ‘bore’, *agobiar* ‘overwhelm’, *alarmar* ‘alarm’, *alegrar* ‘gladden’, *animar* ‘animate’, *apaciguar* ‘appease’, *apasionar* ‘be passionate about’, *apacar* ‘calm down’, *asombrar* ‘amaze’, *asustar* ‘frighten’, *atormentar* ‘torment’, *aturdir* ‘stun’, *avergonzar* ‘embarrass’, *calmar* ‘calm’, *cansar* ‘tire out’, *complacer* ‘please’, *conmover* ‘move’, *consolar* ‘comfort’, *decepcionar* ‘disappoint’, *desconcertar* ‘bewilder’, *disgustar* ‘displease’, *divertir* ‘amuse’, *enfadar* ‘annoy’, *enojar* ‘annoy’, *enorgullecer* ‘make/be proud’, *entretener* ‘entertain’, *entristecer* ‘sadden’, *entusiasmar* ‘delight’, *escandalizar* ‘scandalize’, *estremecer* ‘shake/shudder’, *excitar* ‘excite’, *extrañar* ‘surprise’, *fastidiar* ‘annoy’, *fatigar* ‘tire’, *horrorizar* ‘horrify’, *incomodar* ‘disturb’, *indignar* ‘outrage’, *inquietar* ‘disquiet’, *irritar* ‘irritate’, *joder* ‘piss off’, *molestar* ‘bother’, *obsesionar* ‘obsess’, *ofender* ‘offend’, *preocupar* ‘worry’, *reanimar* ‘reanimate’, *relajar* ‘relax’, *satisfacer* ‘satisfy’, *sobresaltar* ‘startle’, *sorprender* ‘surprise’, *tranquilizar* ‘reassure’.

* In Spain, *extrañar* is used predominantly with the meaning of ‘surprise’, as a Psych-IIa verb, while in Latin America it is more frequently used with the accusative and means ‘to miss’ (Psych-I).

Each verb was searched for the subcorpora of European or American origin, which makes a total of 100 searches (50 × 2). Once the results were filtered and cleaned, we had a dataset of 12,034 records (verb forms + pronoun forms), corresponding to 169,338 total cases (clauses), from which 104,548 from the American subcorpus and 64,790 from Spain.

As CORPES does not provide tags with the search results, several home-made scripts were developed to assign a morphosyntactic tag to each case with the morphosyntactic properties of the verb forms (TAM, person, number) and the pronoun forms (person, number, case). This is followed by an automatic assignment of a syntactic function (Subj / Obj) to the Experiencer, based on the agreement or lack of agreement in person and number between the verbal and the pronominal form. For example, in *me alegra* [Pro1 V3] ‘(s)he/it makes me happy’, Experiencer *me* is Obj; whereas *me alegra* Pro1 V1 ‘I am happy’ is a middle voice construction with the Experiencer as Subject. If both pronoun and verb are 3rd person, reflexive *se* is a middle voice mark and the Experiencer is Subject, otherwise the pronoun (*le*, *la*, *lo*) is the object of active voice. As we are operating over an inventory of forms, and not over concordances of real examples, ambiguities could not be resolved. This specially affects syncretic 1st-3rd person forms, as in *me alegraba* [P1 V1/3] ‘I was happy’ or ‘it/(s)he used to make me happy’.

The final datasets contain the selected variables and levels listed in Table 1. The lack of semantic annotation in CORPES determines the selection of independent variables. Compared to ADESSE, in CORPES it is not possible to differentiate between animate and inanimate Stimuli. On the other hand, in ADESSE we cannot get

enough data on specific verbs, whereas in CORPES there are many data about all the 50 selected verbs.

Table 1 Factors and levels of ADESSE and CORPES datasets⁷

Factor	Levels	Dataset
(verb) Type	Psych-I vs. Psych-II	adesse
Verb	[50 selected Psych-IIa verbs]	corpes
Zone	Es [Spain] vs. Am [America]	adesse, corpes
TextGenre	Essay vs. Narrative vs. Press vs. Spoken vs. Theater	adesse
Aspect	Perf vs. Imperf ¹	adesse, corpes
Exp_fsynt	Subj vs. Obj	adesse, corpes
Exp_case	Acc vs Dat (vs NA)	adesse, corpes
Exp_person	1 vs. 2 vs. 3	adesse, corpes
Stim_person	1 vs. 2 vs. 3	adesse, corpes
Stim_anim	an [animate] vs. in [inanimate] vs. inc [clause]	adesse

¹ *Perf* = simple perfective past and all compound perfects. *Imperf* = all simple tenses, except perfective past indicative, including subjunctive, imperative, and non-finite forms.

From these datasets we have selected different subsets on which we have performed multivariate logistic regression analyses. In each step we have filtered the relevant data from the datasets and calculated (mixed-effects) logistic regression models that included all the potentially relevant predictors. We have mostly used the `glm()` function of the base R software, the `glmer()` function of the `lme4` package, and the `Anova()` function of the `car` package, to determine in each model which factors were statistically significant, their effect size and the relative importance of each predictor. Non-significant predictors were not discarded from the models and there was no model comparison or selection conducted (Tizón-Couto, Lorenz 2021).

Section 4 analyzes the factors that may influence the syntactic subject or object function of the Experiencer, section 5 looks into the accusative or dative case of the Experiencer, and section 6 considers a potential relation between case choice and syntactic function choice.

⁷ Abbreviations: EXP = Experiencer, STIM = Stimulus, FSYNT = Syntactic Function, ANIM = Animacy.

4 Results: Experiencer-Subject vs Experiencer-Object

The syntactic function of the Experiencer depends on the verb type and the voice. In the active unmarked voice of Psych-I verbs (such as *temer* ‘fear’ or *amar* ‘love’) the Experiencer is the Subject; whereas with Psych-II verbs (e.g. *asustar* ‘frighten’ or *alegrar* ‘gladden’) the Experiencer is the Object in the active voice clauses and the Subject in the middle voice clauses with *se*.

We want to explore which independent factors may influence the choice of the syntactic function of the Experiencer and whether those factors are the same when we choose between the two subclasses of psych verbs, and when we choose the voice of Psych-IIa verbs.

4.1 Verb Type: Experiencer Subject (Psych-I) vs Experiencer Object (Psych-II)

The choice between the Experiencer Subject construction (Psych-I verbs like *temer* ‘fear’) and the Experiencer Object construction (Psych-II verbs like *gustar* ‘like’ and *preocupar* ‘worry’) has been analysed by Vázquez-Rozas, Miglio (2016), who found that Experiencer person and number, Stimulus animacy, and Text Genre are significant for the selection of the construction.

Over a similar dataset – 4,359 uses of 218 psych verbs in the active voice in the ADESSE database, of which 1,339 come from 47 Psych-I verbs and 3,020 come from 176 Psych-II verbs –,⁸ we have now performed a mixed effects regression analysis. The dependent variable was the verb Type (Psych-I vs Psych-II), i.e. verbs that select Experiencer Subjects vs verbs that select Experiencer Objects, and the fixed effects were Stimulus Animacy, Experiencer Person and Text Genre (as suggested by Vázquez-Rozas, Miglio 2016) plus Zone (with two levels: Spain vs America) and Aspect (with two levels: Perfective and Imperfective). We have also explored the possible interaction between Experiencer Person and Stimulus Animacy, while accounting for random intercepts by Text (34 texts). Then, the formula for the `lme4::glmer()` function was ‘Type ~ TextGenre + Zone + Aspect + Exp_person*Stim_anim + (1|Text)’ and the results are summarized in Table 2.

⁸ Five verbs (*admirar* ‘admire’, *apetecer* ‘desire’, *desesperar* ‘despair’, *extrañar* ‘miss’ or ‘surprise’, and *gustar* ‘like’) are counted twice as they are found both in Exp-Subject and Exp-Object constructions.

Table 2 Coefficients of main effects for Type=Psych-I (Exp=Subj)

Predictor	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	0.538	0.211	2.553	0.011 *
TextGenre = Narrative	-0.321	0.179	-1.794	0.073 .
TextGenre=Press	0.470	0.273	1.720	0.085 .
TextGenre=Spoken	-1.829	0.232	-7.884	<0.001 ***
TextGenre=Theater	-0.312	0.200	-1.564	0.118
Zone=H	-0.069	0.147	-0.467	0.640
Aspect=perf	0.053	0.097	0.544	0.586
Exp_person=2	-0.430	0.223	-1.925	0.054 .
Exp_person=3	-0.539	0.156	-3.444	0.001 ***
Stim_anim=in	-1.109	0.150	-7.393	<0.001 ***
Stim_anim=inc	-1.280	0.161	-7.949	<0.001 ***
Exp_person=2 x Stim_anim=in	0.413	0.283	1.462	0.144
Exp_person=3 x Stim_anim=in	1.286	0.187	6.870	<0.001 ***
Exp_person=2 x Stim_anim=inc	-1.081	0.462	-2.340	0.019 *
Exp_person=3 x Stim_anim=inc	0.406	0.233	1.743	0.081 .

Reference levels: Type=Psych-II, TextGenre=Essay, Zone=E, Aspect=Imperf, Exp_person=1, Stim_anim=an.

The model converged successfully and showed a good fit (AIC = 4678.5). Random intercept variance for Text was estimated at 0.045 (SD = 0.21), indicating a moderate amount of between-text variation in baseline response probabilities.

To assess the relative contribution of each variable a type III ANOVA was performed using the Anova() function from the car package. The results indicated that Text Genre ($\chi^2(4) = 42.11$, $p < 0.001$), Experiencer Person ($\chi^2(2) = 20.34$, $p < 0.001$), and Stimulus Animacy ($\chi^2(2) = 16.45$, $p < 0.001$) were significant predictors of verb Type, while Zone ($\chi^2(1) = 0.21$, $p = 0.64$) and Aspect ($\chi^2(1) = 0.28$, $p = 0.59$) were not significant. All these results confirm the results of Vázquez-Rozas and Miglio (2016).

Predicted probabilities for Text Genre were highest for the Spoken genre ($\beta = -1.83$, $p < .001$, against the reference level: Essay) and lower for Press ($\beta = 0.47$, $p = .085$), with Narrative and Theater falling in between.

Of particular interest is the interaction between Stimulus animacy and Person of the Experiencer, which was statistically significant ($\chi^2(4) = 65.54$, $p < 0.001$), indicating that the effect of stimulus animacy on the probability of the Experiencer Subject Construction (Psych-I) varied by the Experiencer Person, as illustrated in Chart 1. In general, 1st person Experiencers have more probability of being encoded as the Subject of a Psych-I verb. However, 3rd-person

Experiencers had a higher probability of Psych-I for inanimate Stimuli, while the lower probability of clausal stimuli as the Object of Psych-I was particularly impactful for 2nd-person Experiencers. In general, animate Stimuli are more likely in Exp=Subj constructions (Psych-I verbs), where they are coded as Objects (*quiere a María* '(s)he loves Mary'), than inanimate Stimuli, and particularly propositional ones, which correlate significantly with Exp=Obj (Psych-II verbs), where these Stimuli are coded as Subjects (*le gusta bailar* '(s)he loves dancing', where *bailar* is the constituent triggering subject agreement).

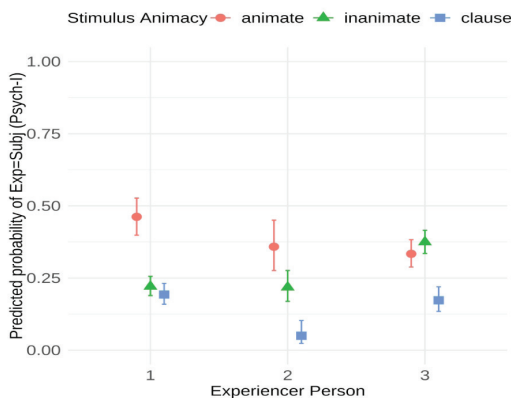


Chart 1 Interaction effect of Stimulus Animacy and Experiencer Person on the probability of using Exp=Subj verbs (Psych-I) (ADESSE data)

The results of the analysis partially confirm the findings of Vázquez-Rozas and Miglio (2016) regarding the influence of Text Genre, Experiencer Person, and Stimulus Animacy on the choice between Psych-I and Psych-II constructions. The interaction between Experiencer Person and Stimulus Animacy is an additional evidence of the complexity of this alternation, suggesting that the syntactic realization of psychological predicates is sensitive to both the characteristics of the Experiencer and the nature of the Stimulus. On the other hand, neither Aspect nor Geographical Zone are significant predictors of the choice between those two verb classes.

4.2 Diathesis Alternation: Experiencer Subject (Middle Voice) vs Experiencer Object (Active Voice) in ADESSE Data

In this section, we will analyze the voice alternation (Active vs Middle), that is associated with the choice of the syntactic function of the Experiencer (Subject in the middle voice, Object in the active voice), in a dataset of 3929 tokens in ADESSE corresponding to 265 Psych-II verbs, of which 2982 are in the Active Voice (Exp=Obj, as in *algo le/lo preocupa* ‘something worries him’) and 947 are in the Middle Voice (Exp=Subj as in *Él se preocupa (por algo)* ‘he is worried about something’). The dataset includes Psych-IIa verbs like *preocupar* that allow for voice alternation, Psych-IIb verbs like *gustar* ‘like’ that do not admit middle voice, and verbs like *arrepentirse* ‘repent’ and *sobreponerse* ‘overcome’ that in this corpus are documented only in middle voice.

Middle voice tends to include the Experiencer as the only explicit argument (*él se preocupa* ‘He is worried’). However, the Stimulus is expressed as an oblique argument in one third of the occurrences of the middle construction (*El se preocupa por algo* ‘he is worried about something’). Obviously, if there is not a Stimulus argument, the only option is to use the Exp=Subj middle construction, which does not require the expression of the Stimulus. Therefore, we have not included any factor related to the Stimulus features in the statistical models used to predict the choice of the middle voice constructions.

The dependent variable is the voice alternation (whether Experiencer occupies the subject slot or not) and, as in the preceding section, we will consider as potential predictors Text Genre, Geographical Zone, Aspect and Experiencer Person. A generalized linear mixed-effects model was fitted to predict Exp_subj using TextGenre, Zone, Aspect, Exp_person, and their interaction, with random intercepts for Verb and Text. The formula for the glmer() function is ‘Exp_subj ~ Exp_person*Aspect + TextGenre + Zone + (1 | Verb) + (1 | Text)’.

The model demonstrated good fit (AIC = 2462.6; BIC = 2544.0; log-likelihood = -1218.2). Random effects indicated substantial variability across verbs (SD = 2.74) but only a minimal variability across texts (SD = 0.32).

The results of the type III Wald chi-square tests revealed significant main effects of Aspect ($\chi^2(1) = 14.89$, $p < .001$) and Experiencer person ($\chi^2(2) = 66.36$, $p < .001$) on the response variable Exp_subj. Additionally, a significant interaction was found between Aspect and Experiencer person ($\chi^2(2) = 6.45$, $p = .040$), suggesting that the influence of Aspect varies depending on the level of Exp_person. In contrast, Text Genre ($\chi^2(4) = 7.55$, $p = .110$) and Zone ($\chi^2(1) = 0.13$, $p = .723$) did not exhibit statistically significant effects.

The coefficients of fixed effects for the base value Exp = Subj (middle voice) are summarized in Table 3.

Table 3 Coefficients of main effects for Exp=Subject (middle voice)

Predictor	Estimate	Std.Error	z-value	Pr(> z)
(Intercept)	-2.379	0.376	-6.331	< 0.001 ***
Aspect=Perf	0.951	0.247	3.859	< 0.001 ***
Exp_person=2	1.442	0.214	6.748	< 0.001 ***
Exp_person=3	1.358	0.181	7.516	< 0.001 ***
Aspect=perf x Exp_person=2	-1.429	0.573	-2.493	0.013 *
Aspect=perf x Exp_person=3	-0.119	0.297	-0.399	0.690
TextGenre=Narrative	-0.202	0.268	-0.755	0.450
TextGenre=Press	-0.524	0.435	-1.206	0.228
TextGenre=Spoken	-0.123	0.341	-0.360	0.719
TextGenre=Theater	0.290	0.303	0.957	0.339
Zone=H	-0.075	0.213	-0.355	0.723

The model revealed significant main effects of perfective Aspect ($\beta = 0.95$, $p < .001$), Exp_person = 2 ($\beta = 1.44$, $p < .001$), and Exp_person = 3 ($\beta = 1.36$, $p < .001$). The results show a higher predicted proportion of Middle construction in perfective Aspect and non-1st person Experiencers, as illustrated in Chart 2.

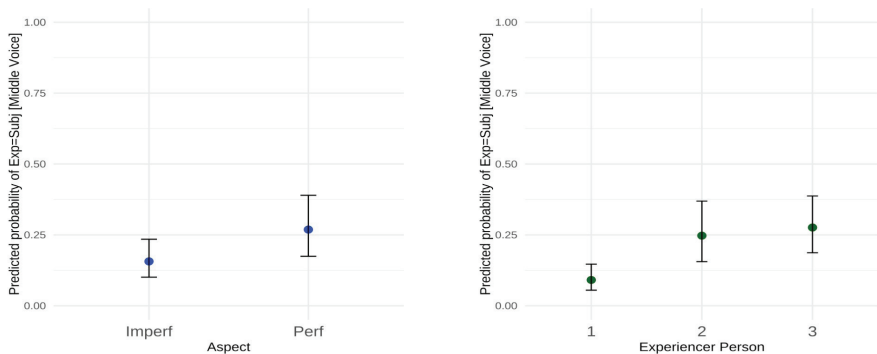


Chart 2 Main effects of Aspect and Person of Experiencer on the predicted probability of Exp=Subj middle construction (Psych-II verbs in ADESSE dataset)

A significant negative interaction was observed between perfective Aspect and 2nd person Experiencer ($\beta = -1.42$, $p = .013$), indicating that the effect of the perfective aspect was attenuated for second person. The interaction between Aspect and 3rd person Experiencers was not

significant. The positive effect of perfective aspect is significantly reduced for 2nd person Experiencers, as illustrated in Chart 3.

This apparently anomalous behaviour of 2nd person Experiencers led us to explore those examples, and we have found that in middle voice the 2nd person Experiencers appear very frequently (63% of their uses in middle voice) in the exhortative modality, either in the affirmative imperative form (*alégrate* ‘be happy’) or negative in present subjunctive form (*no te preocupes*, ‘don’t worry’). As we have coded in our data only the compound perfect tenses and the simple past perfective as “Perf”, all other forms have been coded as “Imperf”, including subjunctives and imperatives (a decision which we admit may be controversial). In any case, the quantitative analysis of the interaction between Aspect and Person has led us to observe an interesting pattern of usage. We will comment a bit more on that in the discussion section.

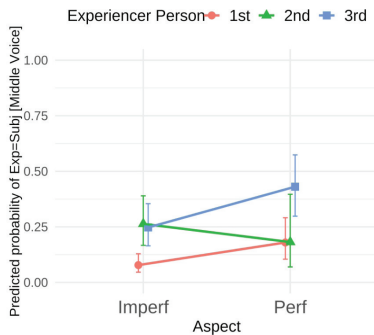


Chart 3 Interaction effect of Aspect and Experiencer Person on the probability of using the middle voice Exp=Subj construction (Psych-II verbs in ADESSÉ dataset)

Compared to the previous section about verb types (Psych-I vs Psych-II), the present analysis about diathesis alternation within Psych-II verbs (active vs middle) reveals notable shifts in the significance and behaviour of key predictors, even though both analyses are related to the choice of the Experiencer in Subject function. While Text Genre previously emerged as a significant factor for verb type, it turns out that there is no statistically meaningful effect on diathesis alternation. In contrast, Aspect, which was not significant before, now plays a crucial role: the middle voice is more likely to occur with the perfective aspect. The behaviour of Experiencer person remains consistent, with first person continuing to be less likely to appear in subject function as compared to third person experiencers. However, a new interaction between Aspect and Experiencer person has emerged: second person is now significantly less likely to occupy subject function in the perfective than in the imperfective aspect,

suggesting a more nuanced relationship between grammatical aspect and subject selection across different person categories.

The analysis also showed substantial variability across verbs, introduced in the model as a random effect. In the next section, CORPES data will allow us to incorporate the verb lexema as a fixed effect.

4.3 Diathesis alternation: Experiencer Subject (Middle Voice) vs Experiencer Object (Active Voice) in CORPES Data

For the analysis of this section, we have data from CORPES on the combination of Verb + Pronoun with 50 Psych-IIa verbs, from which we have been able to obtain several morphosyntactic characteristics derived from nominal and verbal morphology. We can also analyse, as in the models used with the ADESSE dataset, the variables Aspect, Experiencer person, and Zone. But now we cannot include variables related to Text Genre and Stimulus features. Information about text genre is not available in the CORPES dataset, and for the Stimulus the only data we could obtain is the verbal number and person when it functions as a subject (in the active voice), but nothing when it eventually appears as an oblique adjunct in middle voice. On the positive side, we have enough data on each verb to introduce it as one of the possible relevant factors. In fact, we will see that this is the main determining factor in the choice between Active (Exp=Obj) and Middle (Exp=Subj). From the remainder of the factors in these data, we obtain results that are very similar to those we had obtained in ADESSE with a larger number of verbs and a much smaller number of tokens. For the CORPES data, we have not introduced any random factors as the variable Verb will be included as a fixed effect and there is no Text variable in our dataset. The final generalized linear model calculates the formula 'Exp_fsyntax ~ Exp_person*Aspect + Zone*Verb'.

Overall, the model demonstrated a good fit, with a substantial reduction in deviance from the null model (Δ Deviance = 50,203; AIC = 160,278).

To assess the relative contribution of each predictor to the model, a Type III analysis of deviance was conducted. Among the main effects, Verb emerged as the most influential factor, accounting for the largest proportion of explained deviance ($LR \chi^2(49) = 21,459.0$, $p < .001$), followed by Experiencer Person ($LR \chi^2(2) = 11,837.5$, $p < .001$) and Aspect ($LR \chi^2(1) = 1,933.6$, $p < .001$). In contrast, Zone did not significantly contribute to the model ($LR \chi^2(1) = 0.6$, $p = .42$), although there is a significant interaction between Zone and Verb ($LR \chi^2(49) = 2,027.5$, $p < .001$). These results indicate that lexical and grammatical features related to the verb and the experiencer play a central role in predicting syntactic structure, whereas regional variation (Zone) has a negligible effect when controlling for other variables.

The coefficients of the main effects (excluding verb coefficients and their interaction with zone in order to simplify the table) are given in Table 4.

Table 4 Coefficients of main predictors of Exp = Subj [Middle Voice] (CORPES data) (verb coefficients not included in this table)

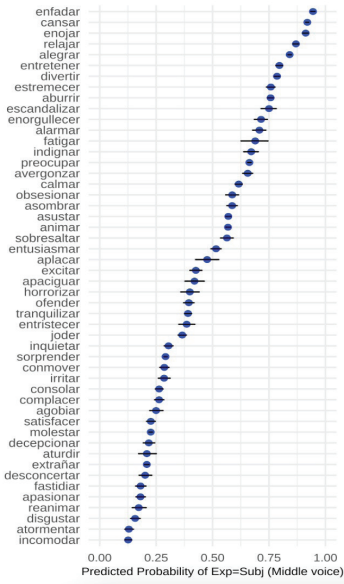
Predictor	Estimate	Std. Error	z value	Pr(> z)	
(Intercept)	-0.451	0.053	-8.599	<0.001	***
Exp_person = 2nd	2.134	0.028	75.754	<0.001	***
Exp_person = 3rd	1.982	0.021	96.509	<0.001	***
Aspect = Perf	1.173	0.027	43.521	<0.001	***
Zone = Es	-0.062	0.077	-0.806	0.420	
Exp_person = 2 nd x Aspect = Perf	-1.973	0.075	-26.472	<0.001	***
Exp_person = 3 rd x Aspect = Perf	-0.805	0.032	-25.465	<0.001	***

The results revealed significant main effects for Experiencer person and Aspect: the odds of middle voice increases with second and third person Experiencers compared to first person (2nd: $\beta = 2.13$, $p < .001$; 3rd: $\beta = 1.98$, $p < .001$), as well as with perfective Aspect compared to imperfective ($\beta = 1.17$, $p < .001$). Significant interactions were found between Experiencer person and aspect, indicating that the effect of perfective aspect was attenuated for non-first-person Experiencers, above all with 2nd person, as illustrated in Chart 2, which confirms the results of Chart 3 with the ADESSE dataset.



Chart 4 Predicted probabilities of Exp=Subj by Experiencer Person and Aspect (CORPES data)

a) by Verb



b) by Verb x Zone

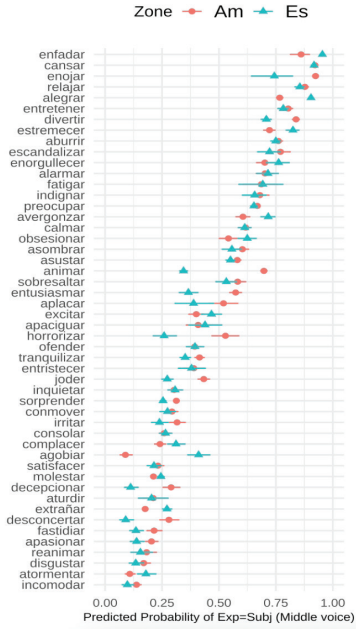


Chart 5 Predicted probabilities of Exp=Subj (& middle voice) (CORPES data)

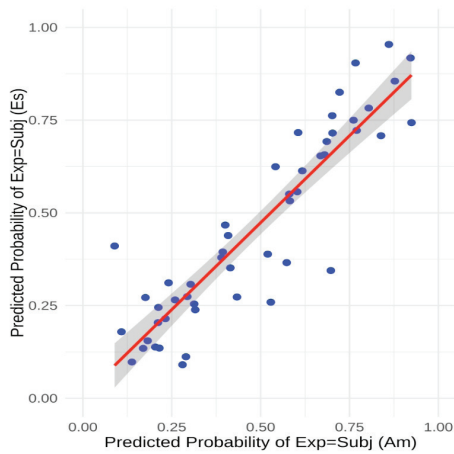


Chart 6 Predicted probabilities of Psych-IIa verbs been used in middle voice in Spain vs America.
Each dot represents a verb

The number of tokens provided by CORPES for each verb provides strong statistical support to the relevance of the differences between verbs. Additionally, although the main effect of Zone was not significant, several zone-by-verb interactions emerged, suggesting that the influence of some specific verbs varied across zones. The Chart 5 shows a ranking of verbs according to their predicted probability of being construed in middle voice, and the interaction of Verb and Zone maintaining the same ranking.

The verb rank in Chart 5 is likely related to the spontaneity of the event, with verbs at the top end (like *enfadarse* / *enojarse* ‘get angry’ and *cansarse* ‘get tired’) referring to events that occur more spontaneously as some internal process, whereas the verbs at the bottom (like *incomodar***lo** ‘disturb him’) indicate the involvement of a participant external to the Experiencer.⁹ Some (near-)synonyms, like *enfadar* and *enojar* ‘anger’, show a similar behaviour as regards their preference for the middle construction. However, several other near-synonyms behave differently: first, for example, *fatigar* ‘fatigue, tire’ is associated with the middle construction to a lesser degree than *cansar*, although both are situated near the top; second, verbs related to the meaning ‘bother’ (*joder*, *irritar*, *molestar*, *fastidiar*) also behave differently, although they are situated rather towards the bottom, and, finally, verbs whose meaning is ‘calm down’ or something similar (*relajar*, *calmar*, *apacar*, *apaciguar*, *tranquilizar*) are distributed along different points of the scale. So, it seems that there are always some lexical idiosyncracies.

Interestingly, there are not big differences between geographical zones, as there is a strong positive correlation between the predicted probabilities by verb in Spain and America (Pearson’s $r = 0.90$ $p < .001$, Spearman’s $\rho = 0.89$, $p < .001$). Among the outliers there are the nearly synonymous *enojar* and *enfadar* ‘(get) angry’: *enfadarse* has a greater probability of being used in middle voice in Spain, just as *enojarse* in America.

⁹ In some cases, nuances of meaning emerge, which we cannot explore here. For example, (i) *Me cansa hacerlo* ‘I tires me to do it’ contrasts with (ii) *Me canso de hacerlo* ‘I get tired of doing it’, both of which have an explicit external cause and a durative value in the present (and an inchoative-momentaneous value in the past). The active construction (i) is usually associated with physical fatigue, whereas the middle construction (ii), lacking an explicit cause, does not specify the type of fatigue.

4.4 The Syntactic Function of the Experiencer: Summary of Results

The choice of the syntactic function of the Experiencer (Subject or Object) is associated with the verb class (Psych-I vs. Psych-II) or with the grammatical voice with Psych-II verbs (Active vs. Middle *se*-construction). After analysing the effect of several independent variables on this choice across different data subsets, we summarize here the main results.

There are significant differences in use across Text Genres with respect to lexical choice: the Spoken subcorpus of ADESSE shows a higher probability of Psych-II verbs (vs Psych-I) than another genre. However, Text Genre is not a significant predictor of middle voice (vs active) within Psych-II verbs. On the other hand, we have not found significant differences between Zones (Spain vs. America) neither in the choice of verb types nor in the preference for any voice. External factors, such as geolect and register, appear to be of secondary importance in the choice of the syntactic constructions of psych verbs.

With respect to linguistic factors, we have analysed some features of the participants, and our results show that Experiencer Person is a significant predictor of the choice of constructions: 3rd person Experiencers are more associated with EXP=SUBJ constructions (either Psych-I, as in *temen* ‘they fear’, or middle voice Psych-II, as in *se asustan* ‘they got scared’); while 1st person Experiencers are more associated with EXP=OBJ constructions (Active voice Psych-II, as in *me asustan* ‘they scare me’). However, this general tendency must be nuanced as there are significant interactions of Experiencer Person and Stimulus Animacy on the choice of verb type, and interaction of Experiencer Person and Aspect on the voice alternation.

The data also show that the animacy of the stimulus seems to be a relevant predictor of the contrast between Psych-I and Psych-II verbs. However, the significance of this variable for the choice of Experiencer as Subject with the middle construction is not demonstrated since the statistical models for the class II alternants did not include such variable due to the sparseness of ADESSE data, and the absence of this kind of information in CORPES data.

Aspect is not significant for the choice between Psych-I and Psych-II; but it is significant within class II for the voice alternation: the middle EXP=SUBJ is more likely with the perfective aspect, and active EXP=OBJ with the imperfective. Frequency of perfective aspect is correlated with telic Aktionsarten (Becker, Malchukov 2022), so that we can infer that the middle voice tends to construe the event as an effective change of state. On the contrary, in the active voice both Psych-I and Psych-II tend to construe the event as stative, without significant aspectual differences between the two types of verbs, despite the differences in syntactic patterning.

Finally, the lexical verb is the main significant factor for the choice of the syntactic constructions. The syntactic function of each participant in a psychological process is at large lexically determined. This is obvious for the alternation between Psych-I and Psych-II constructions, where we have two (almost) disjoint classes. Within the Psych-II class, the Psych-IIa verbs allow voice alternation and, within those verbs that allow the voice alternation, we have found in CORPES data that there is a continuous cline from verbs that show a preference for the use of the middle voice EXP=SUBJ construction (like *enfadarse* / *enojarse* ‘get angry’ and *cansarse* ‘get tired’) to verbs that show a preference for the use of the active voice EXP=OBJ construction (like in *incomodarlo* ‘disturb him’). The possibility of middle voice is related to spontaneity, and the relative probability of using middle voice construction may be also related to transitivity. We will explore this possibility in the following sections, in which we try to relate the voice alternation with the case alternation in the object.

5 Case Alternation with Experiencer Object Verbs: Accusative vs Dative

The verbs that allow the middle voice construction also alternate in the active voice for the Experiencer as Object between the Accusative (*lo preocupa* ‘he/she/it worries him’) and the Dative (*le preocupa* ‘he/she/it worries him’) case. This alternation is limited to Psych-IIa verbs and can be seen only in 3rd person pronominal clitics, as 1st and 2nd person clitics (*me preocupa* ‘he/she/it worries me’, *te preocupa* ‘he/she/it worries you’) do not manifest this case distinction. Although the Experiencer-Object is most frequently 1st person, in the CORPES dataset we have got 38,072 valid cases of 3rd person Experiencer in which we can explore this alternation from which 19,779 of Accusative and 18,293 of Dative.

Taking the Case of Experiencer as dependent variable, in the statistical model we have introduced as independent variables the same factors as in the analysis of the voice alternation, with the exclusion of Experiencer person (not relevant because case alternation is limited to 3rd person) and the inclusion of Stimulus person, which is recoverable from the verb morphology. Verb person indexes the Subject argument (Stimulus) and is related to animacy: 1st and 2nd person forms always have human referents while 3rd person forms can refer to both animate and inanimate entities. As imperfect (*preocupaba*), conditional (*preocuparía*) and subjunctive present (*preocupe*) verb forms are ambiguous between 1st and 3rd person, and infinitive (*preocupar*) and gerund (*preocupando*) forms can correspond to any person, all these forms have been recoded as *Stim_anim* = “ambiguous”. Therefore, the generalized linear model was fitted to predict the likelihood of case selection based on the

predictors Zone, Verb, Stimulus Person, and Aspect (formula = ‘Exp_case ~ Zone * Verb + Stim_person + Aspect’).

The model fitted with an AIC = 38,825, suggesting a good balance between model complexity and explanatory power. A Type III analysis of deviance was conducted to assess the unique contribution of each predictor in the model. As illustrated in Chart 7, the results revealed a highly significant main effect of Verb ($\chi^2(49) = 6549.4$, $p < .001$), followed by Stimulus Person ($\chi^2(3) = 1491.5$, $p < .001$) and Zone ($\chi^2(1) = 68.5$, $p < .001$), and Aspect ($\chi^2(1) = 8.7$, $p = .003$). A significant Zone $\times$ Verb interaction ($\chi^2(49) = 609.6$, $p < .001$) suggests regional variation in the syntactic behaviour of specific verbs.

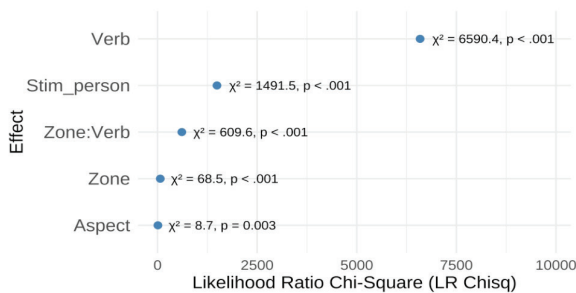


Chart 7 Accusative (lo / la) vs Dative (le). Relative importance of predictors. (CORPES data)

The effect of Aspect and Stimulus Person is illustrated in Chart 8. 1st and 2nd person Stimuli show a lower probability of Dative Experiencers (and, consequently, a higher probability of Accusative). In contrast, ambiguous and 3rd-person stimuli showed higher proportions of dative Experiencer. Imperfective Aspect shows a slightly higher probability of dative than Perfective.

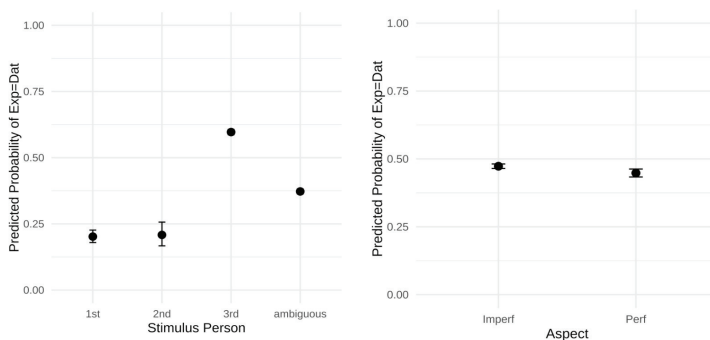


Chart 8 Predicted probabilities of Exp=Dative by Stimulus Person and Aspect (CORPES data)

Regarding the variable Zone, American texts clearly correlate with Accusative case while texts from Spain prefer Dative case. This is clearly a consequence of the prevalence of *leísmo* in Peninsular Spanish.

Finally, the verb lemma is the strongest predictor of the object case, which seems to be lexically determined, with a cline going from verbs like *preocupar* ‘worry’ and *disgustar* ‘upset’ with the highest proportion of Dative (*le preocupa* ‘(s)he/it worries him/her’) to verbs like *consolar* ‘comfort’, *tranquilizar* ‘reassure’ and *sobresaltar* ‘startle’ with the highest proportion of Accusative (*lo consuela* ‘(s)he/it comforts him’), as shown in Chart 9a. In Chart 9b we can see that most verbs are more likely with Dative in Spain than in American Spanish; but the ranking appears to correlate across both zones.

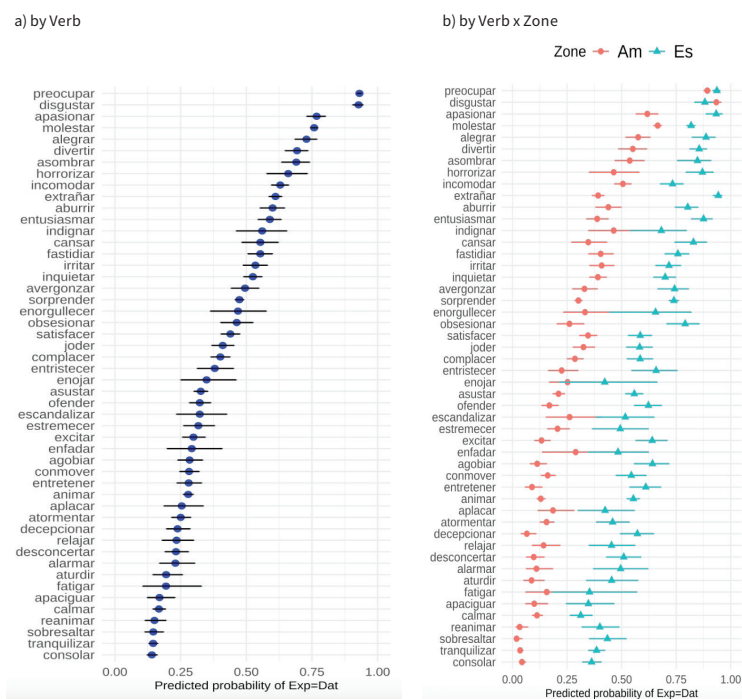


Chart 9 Predicted probabilities of Exp=DAT vs ACC (CORPES data)

The preference for Accusative or Dative case with psych verbs has been related to transitivity, and it can be seen as differences in relative ‘kinesis’, ‘agency’, and/or ‘object affectedness’ (Whitley 1995, 581). However, the lexical meanings do not show clear tendencies and there must be something idiosyncratic in lexical preferences. Some synonyms, like *enojar* and *enfadar* ‘annoy’, behave similarly and we

can find them in the middle of the scales, whereas other synonyms like *cansar* and *fatigar* ‘tire’ are clearly separated: *cansar* is situated towards the top, associated with a preference for the dative, and *fatigar* is situated almost at the bottom, associated with a preference for the accusative.

Apart from the general preference for the dative in Spain and for the accusative in America, there is a high correlation of verb ranking across both regions (Pearson’s $r = 0.808$, Spearman’s $\rho = 0.829$, $p < .001$), shown in Chart 10. In VázquezRozas, García-Miguel (2025, 429), we even documented a high correlation among Spanish-speaking countries in the ranking of verbs according to their preference for the dative or the accusative. There are, however, some outliers in this correlation that show greater differences in behaviour than expected. The most notable case is *extrañar*, which expresses different meanings: in Spain, it is predominantly used with the dative and conveys the meaning ‘to surprise’ (*le extrañó* ‘it surprised him/her’), whereas in Latin America, it is more commonly used with the accusative and means ‘to miss’ (*lo/la extrañó* ‘he/she missed it/him/her’).

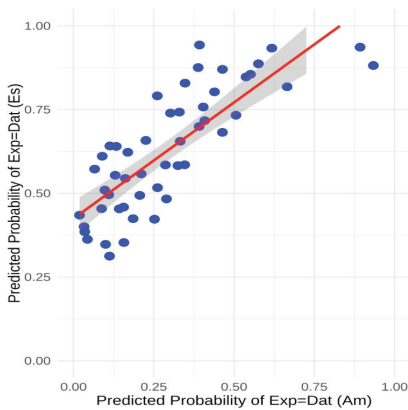


Chart 10 Correlation between Zones (Am vs Es) in the selection of case of Experiencer.
Each dot represents a verb (CORPES data)

6 Case Alternation and Diathesis Alternation

We have shown that psych verbs class IIb always take the dative case in the EXP=OBJ construction and consistently reject the EXP=Subj middle construction, whereas Psych-IIa verbs alternate accusative and dative case in their EXP=OBJ construction and alternate EXP=OBJ and EXP=Subj middle construction (diathesis alternation). This allows for the hypothesis that the frequency of use of accusative case for the object of Psych-IIa verbs correlates with the relative

frequency of their use of the EXP=Subj middle construction. Is there a relation between case alternation and voice alternation? If there is, which is the direction of the correlation?

Chart 11 is a scatterplot whose axes are the data of Chart 5a and Chart 9a, i.e., for each of the 50 verbs of CORPES data set, the predicted proportions of Exp=Subj (& Middle Voice) on the horizontal axis, and the predicted proportions of Exp=Dat (vs Exp=Acc) on the vertical axis.

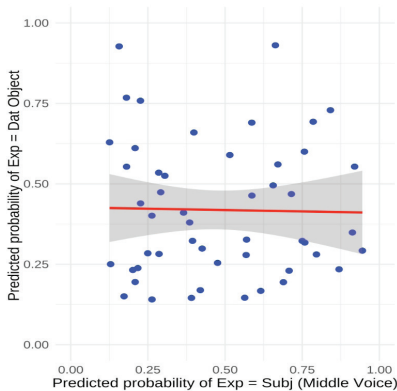


Chart 11 Proportions of Exp=Acc and Exp=Subj for each verb, as predicted by regression models. (Each dot represents a verb). [Pearson's correlation coefficient $r=0.005$, $p\text{-value}=0.975$, not significant]

The line in Chart 11 shows that there is no correlation, neither positive nor negative, between the preference for Accusative or Dative in the active voice and the higher or lower use of the Middle Voice. A correlation test confirms that there is absolutely no correlation between those two variables ($r=0.005$, $p\text{-value}=0.975$). The possibility of accusative case implies the possibility of middle voice constructions with Psych-II verbs. However, the probability of Accusative does not correlate neither positively nor negatively with the probability of middle voice.

Why do we dismiss the relationship between $\text{Exp}=\text{Obj}_{\text{ACC}}$ and $\text{Exp}=\text{Subj}$? It is due to the functional differences between the two constructions. We will elaborate a bit more on that in the next section.

7 Discussion

In the preceding sections we have analysed a few alternative constructions allowed by psychological verbs and explored the main contextual factors that may condition the choice between the one or the other. Unlike prototypical transitive verbs (action verbs such as

romper ‘break’ or *matar* ‘kill’), psychological verbs allow for reversal of participants, so that the Experiencer can have either Object or Subject function. This alternation may depend on the type of verb or be a result of a diathetic alternation with certain verbs.

As for the type of verb, we have seen in 4.1. that the alternation between Psych-I verbs, which encode the Experiencer as the subject, and Psych-II verbs, which in their basic schema encode the Experiencer as an object, may depend on discourse genre (Psych-II verbs are more likely in spoken discourse) and on the interaction of inherent properties of the participants: the person of the Experiencer and the animacy of the Stimulus; but that there are no significant differences between these two groups in either geographical zone or aspect. This suggests that both groups are fundamentally lexically specialized stative predicates.

The Object Experiencer constructions (Psych-II verbs) in Spanish show case variation in the third person clitics. With some verbs, such as *gustar* ‘like’, the clitic must necessarily be in the dative; but other verbs such as *preocupar* ‘worry’ vary with different proportions of dative and accusative. The differences in usage between accusative and dative with these verbs have been interpreted in relation to a greater affectedness of the object and higher agentivity of the subject in accusative constructions, as opposed to a more static relation and less agentivity of the subject in dative constructions (cf. Vázquez Rozas 2006). As we have seen in Section 5, our data reflect this in that 1st and 2nd person Stimuli (always animate, with higher agency potential) correlate with an Experiencer in Accusative, whereas 3rd person Stimuli (very often inanimate, with lower agency potential) correlate with an Experiencer in Dative. However, the effect of Aspect is less clear, although we have observed that there is some interaction with the person of the Stimulus.

The most relevant factor in the choice of case, however, is the verbal lexeme itself. The object case is lexically conditioned, in the sense that some verbs like *gustar* ‘like’ require dative, others like *preocupar* ‘worry’ or *disgustar* ‘displease’ are more likely in the dative but not impossible in the accusative, and others like *tranquilizar* ‘calm down’ and *consolar* ‘comfort’ prefer the accusative. We have shown how verbs are ranked according to their case preferences in Chart 9, which also indicates that lexical preferences are consistent across geolectal variation.

Our focus of interest is on the diathesis alternation that allows for the selection of the Experiencer as a subject when Psych-II verbs are constructed in the middle voice. And we have found, on the one hand, that the factors conditioning this choice are not the same as those conditioning the choice between Psych-I and Psych-II classes: in this case Text Genre and the interaction of Experiencer Person and Stimulus Animacy are significant, whereas in the diathetic alternation,

Aspect and the Person of the Experiencer are significant. That is, the key point is not simply what conditions must be in place to select the Experiencer as the subject, but that Psych-I verbs and middle voice Psych-II verbs constitute different constructions with different communicative functions. On the other hand, we have found with Psych-II verbs that, although there is a relationship between the possibility of accusative and that of middle voice, there is no relationship between the probability of using accusative and the probability of using middle voice with those verbs. Therefore, we need to pay attention to the peculiarities of middle-voice constructions with Psych-II verbs.

The main difference between the active <Stim=Subj - Exp=Obj> construction and the middle <Exp=Subj> alternative lies in the presence vs absence of the Stimulus as a core participant of the clause. Whereas in active Exp=Obj clauses the Stimulus is encoded as a subject, the privileged core argument, in middle Exp=Subj clauses the Stimulus is either not expressed at all or is downgraded to an oblique. This syntactic difference relates to the communicative function of each type of construction and to the statistically significant conditioning factors: person of the Experiencer, Aspect, and lexical meaning of the verb.

The person of the Experiencer (a participant that is inherently human) is related to empathy and topicality rather than to the animacy hierarchy, which is more related to agentivity. 1st person Experiencers, highest in the empathy hierarchy, are more likely as objects in the active construction, which give prominence to the Stimulus in subject function. Then, 1st person Experiencers are more likely in constructions with two core participants. The 1st person singular Experiencer perceives his/her inner feelings and emotions directly and is aware of the Stimulus that triggers them, which is not directly accessible to outsiders. His/her awareness of the entity or situation that brings about the emotion, i.e. the Stimulus, leads 1st person speakers to include it as a core participant in the event, and therefore to favour the two-argument active pattern <Stim=Subj - Exp=Obj> instead of the middle <Exp=Subj>, which only allows for a single core participant, the Experiencer.

In contrast, 3rd person Experiencers show a higher probability of being used in the middle Exp=Subj constructions, which do not require the Stimulus to be specified, although causal-related information can be expressed either as an oblique (9)-(10), as an adjunct clause (11), or as another type of constructions such as a consecutive (12).

- (9) *Se extrañó de aquella brusca aparición* [adesse/CAR:086.33]
MIDDLE surprise.PST of that sudden appearance
'She was surprised by that sudden appearance'
- (10) *Arancha se enfadó en alguna bola dudosa* [adesse/3VO:045]
Arancha MIDDLE got.angry in some ball dubious
'Arancha got angry at some dubious ball.'
- (11) *Ella se alegra al ver=le* [adesse/SON:205.01]
She MIDDLE get.happy to.the see=him
'She is happy to see him.'
- (12) *... un gesto tan maternal que el viejo se conmueve* [adesse/SON:105.31]
a gesture so maternal that the old MIDDLE move
'...a gesture so maternal that the old man is moved.'

The 'cause phrases' (so called by Babcock 1970, 41) highlighted in (9)-(12) refer to observable events that precede or accompany the emotions attributed to third-person Experiencers. This external point of view, which contextualises the reporting of emotions of others, is consistent with Brinton's (1980, 370-1) 'outer perspective' as opposed to an 'inner perspective', and with Wiebe's (1994) 'private-state action' as opposed to a 'private-state report'. Wiebe points out that, in third-person narrative, the perceptions and feelings of the characters can either be expressed through 'private-state reports' (*She was unhappy*), as is common in first-person narrative (*I am happy*), or inferred from 'private-state actions': "The sentence *She frowned* narrates a private-state action from which unhappiness or displeasure can be inferred, but does not directly report the character's private state" (Wiebe 2002, 264).

As examples (9)-(12) show, events causally related to the generation of the emotion expressed by the middle Exp=Subj clauses usually denote dynamic and telic situations. Conversely, the stimuli of the active constructions are propositional entities without spatio-temporal anchoring, as can be observed when comparing (13) and (14)

- (13) *Ella se alegra al ver=le*
she MIDDLE get.happy to.the see=him
'She is happy to see him' (i.e., she is happy when she sees him.)
- (14) *A ella la/le alegra ver=le*
to her O.3SG.ACC/DAT make.happy see=him
'She is happy to see him.' (i.e., the fact of seeing him makes her happy)

This difference in the conceptualisation of the Stimulus is also related to the aspectual interpretation of clauses with Psych-IIa predicates: the middle Exp=Subj construction is expected to be associated with the perfective aspect, which is also consistent with its 3rd person preference. As previously mentioned, the description of psychological states of others generally requires observing the person's reactions and visible physical changes. This implies a 'narrative' distance between the event and its linguistic description, which favours the use of the perfective aspect.

As for 2nd person Experiencers, it is common to find them in middle voice exhortative constructions with which the speaker expresses empathy and solidarity with the listener, wishing him/her a positive state of mind in affirmative sentences (*cálmate* / *ánimate* / *alégrate* / ..., 'calm down / cheer up / be happy / ...') and the avoiding of negative feelings in negative exhortative sentences (*no te preocupes* / *asustes* / *enfades* / ... 'do not worry / be scared / be angry / ...')

- (15) *¡ Cálmate, no te pasa nada !* [adesse/2IN:056.17]
calm.2SG.MIDDLE NEG 2SG happens nothing
'Calm down, nothing's wrong with you!'

- (16) *No te preocupes, que está todo controlado.* [adesse/MOR:037.37]
NEG 2SG.MIDDLE worry that is all controlled
'Don't worry, everything is under control.'

In examples such as those in (15)-(16) the focus is on the state of mind of the hearer-Experiencer, who remains the only central participant in the event, with the Stimulus or cause of that state of mind in the background, as inferable from the context or expressed in a separate sentence. In our data we have counted these imperatives as imperfective (and hence the interaction of person and aspect that can be observed in Chart 3 and Chart 4), but these are situations that can involve a potentially controlled change of state.

In addition to the aspect and person variables, the statistical analysis underlines the importance of the verb as a key factor in the choice of construction. The individual verbs appear as the most relevant factor as a predictor of the probability of using the middle voice and as a predictor of using the dative or accusative case in Experiencer object constructions. We have shown in charts 5 and 9 two clines showing the lexical preference for one or another alternating construction. However, it seems that the association verb - construction is idiosyncratic in nature, as near-synonymous pairs such as *cansar* and *fatigar* 'tire' exhibit different syntactic behaviour, and it is very difficult to find common semantic tendencies in the lexical meaning of verbs that share syntactic preferences.

Moreover, we have shown in Chart 13 that there is absolutely no correlation between the probability of being used with accusative case and the probability of being used in middle voice, and we take it as negative evidence against a direct relation between those constructions. This might imply a difference in construction meaning that could be related to lexical meaning: The accusative object construction is statistically associated with human Stimuli, which may voluntarily act on an Experiencer and effectively cause a change of his/her psychological state, as with *consolar* 'comfort', *tranquilizar* 'reassure', which are the highest ranked verbs in the preference for accusative. On the other hand, the middle construction does not imply an Agent that acts on a Patient, but it rather puts the focus on a change of state that may occur spontaneously and leaves in the background the potential causes of this change. The top ranked verbs in the preference for being used in middle voice (*enfadarse* / *enojarse* 'get angry', and *cansarse* 'get tired') are semantically coherent with a spontaneous change of state, whereas at the other end of the cline, *incomodar* 'disturb' and *atormentar* 'torment' imply an agent or a cause for the state of the Experiencer.

Finally, it should be noted that the middle Exp=Subj construction is seen as a transitivity reducing mechanism, since one of the two inherent participants, the Stimulus, is omitted or coded as non-core oblique argument. Therefore, active Exp=Obj clauses are more transitive than middle ones in terms of the number of core participants (parameter no. 1 of Hopper, Thompson 1980). On the other hand, middle clauses with Psych-II verbs are associated with the perfective aspect, which characterises them as more transitive than active clauses, which are correlated with the imperfective aspect. Moreover, the subject experiencer of the middle construction shows characteristics related to the agency (control, volition), for example being compatible with the imperative, as we have seen in examples (15)-(16).

The association of middle *se*-clauses with the perfective aspect and third person subjects makes them a syntactic device for foregrounding psychological events attributed to characters in narratives. Note that, according to Hopper, Thompson's (1980) transitivity hypothesis, the pragmatic function of highly transitive clauses in discourse is precisely that of foregrounding information, in contrast to the low transitive clauses, which tend to be associated with background information.

All these features contribute to the strange semantic transitivity of psychological verbs, which leads to the existence of non-canonical marking in many languages and to the paradox that constructions with one core participant seem more transitive than constructions with 2-core participants.

8 Conclusion

The aim of this study was to explore the factors that motivate the choice between Experiencer-Object and Experiencer-Subject constructions. The analysis also considered the choice between accusative and dative case for the Experiencer-object in active clauses, to determine whether case alternation and diathesis alternation are related.

First, we have found that Text Genre, Experiencer Person, and Stimulus Animacy are significant factors on the choice between Psych-I (Exp=Subj) and Psych-II (Exp=Obj) verbs. The interaction between Experiencer Person and Stimulus Animacy is indicative of the complexity of this alternation, suggesting that the syntactic realisation of psychological predicates is sensitive to both the properties of the Experiencer and the nature of the Stimulus. In any case, the greater likelihood of animate Stimuli and 1st person Experiencers to function as objects rather than subjects challenges the animacy and empathy hierarchies to some extent. On the other hand, neither Aspect nor Zone are significant predictors of the choice between those two verb classes. All this suggests that both groups are basically lexically specialised stative predicates.

Second, concerning the choice between active voice (Exp=Obj) and middle voice (Exp=Subj) with Psych-II verbs, neither Text Genre nor Zone has a statistically significant effect on diathesis alternation. However, Aspect, which was not significant for the contrast between Psych-I and Psych-II, turns out to play a crucial role: middle voice is more likely to occur with perfective aspect, which is consistent with the semantic association of middle voice with spontaneous changes of state. This is corroborated by the statistical preference for the middle voice of verbs such as *cansarse* 'get tired' and *enfadarse* 'get angry'. Lexical preferences remain stable across geographical zone (Spain vs America). The behaviour of Experiencer person remains consistent, with first person Experiencers continuing to be less likely to appear in subject function than second and third person experiencers. This behaviour is related to the communicative functions of active and middle voice constructions: 1st person Experiencers have a higher probability of being used in active voice constructions, as they reflect a perceived stative relation with the Stimulus, whereas 3rd person Experiencers are more likely to be found in middle voice, because the focus on an externally perceived change of state, and 2nd person Experiencers frequently appear in exhortative middle voice constructions, where the speaker shows his/her solidarity with the interlocutor.

Third, we have found highly significant effects of Verb, Zone, and Stimulus Person on the choice between the accusative and the dative case for the Exp=Obj of Psych-IIa verbs. The relevance of Aspect is less clear and may require further research. 1st and 2nd person Stimuli (always animate, with higher agency potential)

correlate with accusative Experiencers, whereas 3rd person Stimuli (mostly inanimate, with lower agency potential) correlate with dative Experiencers. However, the most relevant factor in the choice of case is the verbal lexeme, and the lexical preferences for dative or accusative correlate across geographical zones, despite the general preference for dative in the European variety as compared to American Spanish.

Finally, even though only psych verbs that can be combined with accusative case are grammatical in the middle voice Experiencer subject construction, we have found no correlation, neither positive nor negative, between the preference for Accusative or Dative in the active voice and the probability of a verb being used in the Middle Voice. This might imply a difference in the meaning of the construction which could be related to lexical meaning: the construction with accusative object in active voice is conceptually related to an Agent acting on a Patient and affecting it, whereas the Experiencer subject middle voice construction is more related to a change of state involving only one core participant.

The whole picture shows that the frequency tendencies turn out to be the result of the interplay of a number of different lexical, syntactical, and communicative factors, which cannot be reduced to a single principle.

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Spanish and Catalan Psych Verbs: A Pilot Study on the Acceptability of Active Voice and Pronominal Voice Constructions

Sarah M. Grätz

Heinrich-Heine-Universität Düsseldorf, Deutschland

Armin Sawicki

Heinrich-Heine-Universität Düsseldorf, Deutschland

Anna S. Stein

Heinrich-Heine-Universität Düsseldorf, Deutschland

Abstract This article examines Catalan and Spanish experiencer-object (EO) verbs in active and pronominal voice constructions with animate and inanimate stimuli. Acceptability judgements by native speakers in the Balearic Islands indicate a high degree of optionality concerning stimulus animacy in EO verb constructions in Spanish and Catalan. Catalan verbs that exclusively accept accusative case-marking yielded more varied ratings across participants, supporting claims of an interaction of agentivity and case-marking. No clear pattern for voice-animacy level preferences could be discerned from the data.

Keywords Psych verbs. Psych alternation. Experiencer object verbs. Animacy.

Index 1 Introduction. – 2 Background. – 3 Acceptability Study. – 4 Results. – 5 Discussion. – 6 Conclusion.



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1 Introduction

Expressing emotions is an inherent aspect of human communication, affecting relationships and social status. Psychological verbs, or psych verbs, are used to express emotions and mental states. They often interact with cultural and social factors, reflecting specific cultural norms, values, and attitudes towards emotions and mental states in everyday communication. For instance, the expression and regulation of emotions vary across different communities, leading to subtle differences in the usage and interpretation of psychological verbs.

Previous research has found that psychological verbs are often realised in varied syntactic patterns different from non-psychological verbs, particularly regarding their argument structure and preference for argument types (Belletti, Rizzi 1988). When the experiencer in a psych verb construction is morphologically or syntactically marked canonically as the subject of a phrase, the psych verb is being referred to as an ES (experiencer subject) verb. Similarly, when the experiencer is canonically marked as an object, the psych verb is an EO (experiencer object) verb. More research has focused on EO verbs since they exhibit the most interesting behaviour. This behaviour is primarily categorised by the verb's eventive reading (stative, dynamic, agentive) and its syntactic realisation (Rozwadowska et al. 2020), and the effect of animacy of the stimulus on the acceptance of the EO realisation (Verhoeven 2014). Psychological verbs are also closely related to voice alternations, as they are usually voice altering constructions (Marín, McNally 2011).

This paper focuses on EO verbs in Spanish and Catalan. For both languages, there is previous research examining the realisation of psychological verbs. However, research on Spanish¹ is more extensive than on Catalan.²

In Mallorca, Catalan is in constant contact with Spanish, and some recent changes regarding EO realisations in Catalan and their acceptance are hypothesised to originate in its contact with Spanish (Royo 2020). As shown above, there is less research on EO psych verbs for Catalan than for Spanish, making it more difficult to examine this phenomenon. Additionally, previous research on both Catalan and Spanish has been largely corpus-driven (e.g., Miglio et al. 2013), lacking insights from a more controlled environment that experimental data may be able to offer.

1 e.g. Ganesan 2019; Marín, McNally 2011; Miglio et al. 2013; Rott et al. 2020; 2023; Verhoeven 2017; Viñas-de Puig 2017.

2 e.g. Abrines, Royo 2021; Cabré Monné, Mateu Fontanals 1998; Pineda, Royo 2017; Royo 2017; 2020; 2021; Vega Vilanova 2022.

Royo (2020) conducted a corpus study of Catalan texts to analyse the distribution and usage patterns of verbs exhibiting the psych alternation. The results showed that certain verbs in Catalan prefer accusative or dative constructions depending on various factors, such as the animacy of the stimulus. Cabré Monné, Matue Fontanals (1998) indicate that the acceptance of the dative construction in Catalan is a recent and still ongoing development, and can be seen as an influence from Catalan's contact with Spanish. For both Catalan and Spanish, Ganeshan (2014) also showed that the agentivity of the stimulus influences case-marking. Although previous research on non-Romance languages has suggested a link between voice and animacy (Pijpops, Speelman 2015), this has not been researched for either Catalan or Spanish.

This study builds on the findings of (Royo 2020) using experimental data to examine the acceptability of voice-animacy variations of psychological verbs in Spanish and Catalan. In particular, we focus on the following research questions:

- Are EO verb constructions equally acceptable (or unacceptable) in Spanish and Catalan? How does the perception of these constructions differ between the two languages?
- Does stimulus animacy correlate with voice preference in Catalan utterances containing experiencer-object verbs?
- Do speaker ratings suggest that Catalan EO verbs alternating between accusative and dative are equally acceptable in certain voice-animacy level constructions as those that are only acceptable with accusative case-marking?

An experimental study design was chosen to create a controlled environment for observing the differences between Spanish and Catalan. This acceptability study serves as a small-scale pilot study to find patterns in contemporary Catalan and Spanish psych verb constructions. The remainder of this paper discusses relevant previous findings and the hypotheses (section 2), followed by the methodology behind the conducted acceptability study (section 3). The presentation of the results (section 4) and their discussion (section 5) will be followed by some concluding remarks in section 6.

2 Background

Linguistic research into the domain of psych verbs in Romance languages thus far has been rather thorough.³ We give a brief overview of what research on psych verbs in Spanish and Catalan has uncovered so far, specifically regarding animacy, agentivity, and psych alternations, as well as an account of the interaction between Catalan and Spanish in the Balearic Islands.

2.1 Language Contact and Language Change

The use of the Catalan language in the Balearic Islands is characterised by extensive contact with other languages. With the occupation of Mallorca and Ibiza and the conquest of Menorca under King Jaime I of Aragon in the thirteenth century, Catalan was established as the main language of the Balearic Islands. Contact with other languages in the Balearic Islands was limited to Latin and languages of the ethnolinguistic minorities on the islands, including Arabic, Hebrew, Occitan, and Aragonese (Blas-Arroyo 2007).

The first notable contact with the Spanish occurred in the fifteenth century when the first Spanish-speaking dynasty ruled the Kingdom of Aragon (Blas-Arroyo 2007; Vila-Pujol 2007). Since then, contact between speakers of Catalan and Spanish is characterised by periods of conflict in which regional languages were repressed in favor of Spanish, most notably after the War of Succession (1701-13) under the Bourbon monarchy, and the Spanish Civil War (1936-39), followed by the rule of Francisco Franco until 1975 (Blas-Arroyo 2007; Vila-Pujol 2007). Starting in the nineteenth century, Catalan had a literary resurgence in Catalonia, which, along with socioeconomic shifts in the region, contributed to the Catalan language becoming a key component of the identity of the Catalanian people (Pujolar 2011). After the end of the Francoist dictatorship in 1975, the regional governments of Catalonia and the Balearic Islands promoted the revitalisation of the Catalan language in public affairs and on all administrative levels (Miller, Miller 1996; Vila-Pujol 2007), as well as in the education system (Blas-Arroyo 2007; Huguet 2007). Simultaneously, a strong presence of Spanish remains due to the economic expansion and migration movements of Spanish speakers into Catalonia and the Balearic Islands in the second half of the twentieth century (Miller, Miller 1996; Blas-Arroyo 2007).

³ e.g. Cançado et al. 2024, Fábregas et al. 2012, Franco 1992, Ganeshan 2019, Herschensohn 1992.

In the present day, Catalan is predominantly spoken in three autonomous regions in Spain: Catalonia, the Balearic Islands and Valencia. Additionally, Catalan is the official language of Andorra and is spoken in parts of France and Italy (Plataforma per la Llengua 2018), displaying numerous dialectal varieties that are mostly mutually intelligible. Catalan is one of the four official languages spoken in Spain alongside Castilian, Basque and Galician.

The shared history and extensive contact between speakers of Spanish and Catalan sparked sociolinguistic research on the interaction of both languages. Huguet (2007) shows that the L1 of the speaker and the predominant language in the speaker's hometown are two significant factors that influence speaker attitudes in favour of either language in Catalonia. As for the Balearic Islands, Cremades et al. (2024) highlight the importance of the educational environment in enabling the habitual use two or more languages and find that the language choice in social interactions depends on several factors, including the L1 of the speakers, the educational environment, the specific communicative context, and the desire for integration. While the Catalan language is historically considered an important part of what constitutes the Catalanian identity in contrast to Spanish, the people of Mallorca often identify themselves as *mallorquín* regardless of their L1 language (Blas-Arroyo 2007).

Due to the extensive contact between the two languages, Catalonia and the Balearic Islands display region-wide bilingualism with few monolingual speakers of Spanish or Catalan in the present day (Blas-Arroyo 2007; Huguet 2007). Vega Vilanova (2022) poses that languages in regions with extended language contact are subject to change. Various changes have been observed in the social use of both Spanish and Catalan, being ascribed to the contact situation in Catalonia and the Balearic Islands. Code-switching practices and Catalan interferences commonly appear in contemporary Catalanian Spanish (Vila-Pujol 2007). Blas-Arroyo (2007) attributes lexical 'catalanisms' as well as phonetic changes in Balearic Spanish to the contact with the Catalan language.

Interactions between Spanish and Catalan are not limited to the lexical level or phonetic phenomena but are also observed in new semantic and syntactical developments. The Spanish of the Balearic Islands features semantic reorganisation with prepositions, verbal periphrases, and certain verbs like *ir* ('to go') and *venir* ('to come') that align with their Catalan cognates in usage rather than with Castilian Spanish (Blas-Arroyo 2007).

In syntactical research, Perpiñán (2018) finds that Catalan-Spanish bilingual speakers accept optionality regarding differential object marking (DOM) in both Catalan and Spanish and argues for convergence in both languages towards a variety that allows for features of the other language, induced by the unique language

contact situation in Catalonia. In particular, she found that Spanish-dominant bilingual speakers tend to show Catalan interference in the use of accusative clitics.

Royo (2020) attests an increasing acceptance of an alternation of accusative and dative case marking in Catalan psych verbs throughout the past century, which is reflected in different dialects of Catalan to varying degrees. In 2017, the Institute of Catalan Studies officially acknowledged the use of dative case marking in some Catalan psych verb constructions with traditional accusative case marking and included this alternation in the online version of the Catalan normative dictionary (DIEC 2007). While this development is often regarded as an adaptation of the same alternation in Spanish psychological verb constructions, it is also argued that the change itself is inherent to the Catalan language (Royo 2020). For example, Pineda (2020) argues that accusative marking in Catalan and Spanish is facilitated by a mechanism of differential indirect object marking (DIOM) and acknowledges that the decreased usage of DIOM in contemporary Spanish may affect the use of DIOM in Catalan as well due to the extensive contact of the two languages.

2.2 Psychological Verbs

Landau (2009, 137) proposes the following definition for psych verbs:

A psych verb is any verb that carries psychological entailments with respect to one of its arguments (the experiencer). A psychological entailment involves an individual being in a certain mental state.

Thus, psychological verbs express a mental state or process, such as ‘fear’, ‘love’ or ‘disappoint’ in English, usually accompanied by a distinct argument structure which is characterized by a stimulus which causes an emotional state in an experiencer argument. This is illustrated in (1) for Catalan and in (2) for Spanish, in which the stimulus (‘*música clàssica*’ and ‘*concierto*’ respectively) causes an emotional state of joy in the experiencer (‘*Jordi*’ and ‘*Sofia*’ respectively).

(1) Catalan (Fischer 2019, 111)

- a. *A en Jordi li agrada la música.*
to DEF Jordi 3SG.DAT please.3SG DEF music
‘Classical music pleases Jordi.’
- b. *La música clàssica li agrada a en Jordi.*
DEF music classical 3SG.DAT please.3SG to DEF Jordi

(2) Spanish (Rott et al. 2023, 152)

- a. *El concierto alegra a Sofia.*
 DEF concert make.happy.3SG to Sofia
 ‘The concert makes Sofia happy.’
- b. *Sofia se alegra (con/por el concierto).*
 Sofia REFL make.happy.3SG with/about DEF concert
 ‘Sofia gets happy (about the concert).’

While the experiencer argument is necessarily animate since it experiences emotions, the stimulus can have varying degrees of animacy (Verhoeven 2009). How this affects the realisation of psych verbs is further outlined in subsection 2.3.

Although most psych verb constructions contain this ensemble of arguments, their morphosyntactical realisation varies across languages. This variation has posed problems for theories of argument linking, which initially sparked interest in the argument structures of psych verbs (Belletti, Rizzi 1988; Dowty 1991). Belletti, Rizzi (1988) split psych verbs into three categories based on the syntactic role of the stimulus and the case-marking on the experiencer: nominative, accusative, and dative case-marking. Alternatively, psych verbs can be classified based on the verb’s argument structure, into ES verbs, which typically realise the experiencer with subject marking and the stimulus with object marking, and EO verbs, which have object marking on the experiencer and subject marking on the stimulus if specified (cf. Verhoeven 2014, 130). Aside from variation in argument structure, psych verbs also exhibit specific properties that distinguish them from other types of verbs, including non-canonical linearisation patterns and restrictions on passivisation (Verhoeven 2014).

2.3 Animacy

The role of animacy in the syntactic properties of psych verbs has prompted extensive research, especially in combination with factors such as agentivity and thematic role (cf. Ganeshan 2019; Rott et al. 2023; Verhoeven 2014) since the experiencer in a psych verb construction must, by definition, be sentient, as opposed to the stimulus, which may be either animate or inanimate (Verhoeven 2009). Verhoeven (2014, 130) claims that “[a] critical area for the study of the interaction between inherent properties (prominence in the animacy hierarchy) and relational properties (prominence in the thematic hierarchy) is the domain of experiencer object verbs” and details how *animacy-effects* impact EO verbs, specifically in combination with *thematic role hierarchies*.

According to Verhoeven (2014), *animacy effects* consist of what has been described in the literature as instances of an *animate-first* and *animate-high* influence. As demonstrated in several psycholinguistic studies, animacy impacts word order in language production (cf. Prat-Sala et al. 2000; Prat-Sala, Branigan 2000), which is considered to show an *animate-first* effect because an animate entity tends to be realised early in a clause. The *animate-high* is believed to be the reason why the more animate an entity, the more likely it is to be mapped to a higher syntactic function (i.e. as the subject of a clause) or realised earlier in a clause (Aissen 1999; Branigan 2000). These notions give rise to the previously mentioned *animacy hierarchy*, which is defined by the prioritisation of animate entities due to their elevated cognitive accessibility (Dahl 2008; Verhoeven 2014), leading to the following ranking:

(3) Animacy hierarchy:

1st and 2nd person pronoun > 3rd person pronoun > proper name/kin term >
human noun > animate noun > inanimate noun (Van Gelderen 2018, 2)

The key element of *thematic role hierarchies* is that the higher a thematic role, the higher the syntactic structure it is mapped to, which leads to the following realization of the thematic role hierarchy:

(4) Thematic role hierarchy:

Agent > Experiencer > non-agentive Stimulus (Verhoeven 2014, 134)

This hierarchy is assumed to influence the choice of subject, which in turn means that an ES construction is more likely if the experiencer competes with a stimulus on the low end of the thematic role hierarchy compared to when the experiencer competes with a stimulus on the high end of the hierarchy, i.e. an agentive and thus animate stimulus (Verhoeven 2014, 134).

Since animacy is believed to be an inherent element of human cognition, Verhoeven (2014) draws a connection between agency, thematic role and animacy, and relates to the impact of animacy on alternation patterns (Rott et al. 2023) in that agency and animacy are closely intertwined factors and refer to a definition of agentivity that entails “animate participants which exercise intention, volition and control over the event of the verb” (DiDesidero 1999). While most definitions of agentivity take volition to be inherent to it, Ganeshan (2019, 9) extends the definition by DiDesidero (1999) by linking agentivity to volitionality without requiring it. Instead, it also “includes inanimate arguments that can be actors but cannot act volitionally and animate arguments that can be actors that act non-volitionally” (Ganeshan 2019, 9).

Furthermore, Verhoeven (2014) argues that experiencers tend to be realised in a higher syntactic position than the stimulus (an observation shared by Rott et al. 2020), which may be reminiscent of an animacy-effect, but also in part due to frequently used experiencers that outrank stimuli in the animacy hierarchy. The importance of animacy has also been shown in studies regarding linearization processes (Landau 2004; Verhoeven 2014). Pijpops, Speelman (2015) argue that stimulus animacy in Dutch EO constructions predicts whether a transitive or pronominal⁴ construction is preferred: animate stimuli favor the transitive construction; inanimate stimuli prefer pronominal constructions.

2.4 Psych Alternation in Spanish and Catalan

While the experiencer argument has been discussed extensively concerning its role in the psych alternation (cf. Belletti, Rizzi 1988; Landau 2009; Pesetsky 1995), the stimulus argument has not. Psych alternations have been attested for in Spanish (Rott et al. 2020), where, in line with the classification by Nichols et al. (2004), Spanish is considered to be detransitivising. In general, detransitivising languages show semantic properties in the psych domain that do not behave like canonical transitives.⁵ In Spanish, instances of detransitivisation in the psych domain happen via the use of the reflexive pronominal clitic *se* and allow the derivation of intransitive ES forms from transitive EO forms (Rott et al. 2020).

According to Rott et al. (2023, 15), Spanish EO verbs display “a nearly fully grammaticalised alternation of dative and accusative” case-marking, which is visible in the third person clitic dative markers *le(s)* and accusative markers *lo(s)/la(s)* prefacing the verb (cf. (5) b).

(5) Spanish (Rott et al. 2023, 16)

- a. *El hombre se conmociona (con la noticia).*
DEF man REFL shock.3SG with DEF news
 ‘The man is/gets shocked (by the news).’
- b. *Al hombre conmociona la noticia.*
to.DEF man shock.3SG DEF news
 ‘The news shocks the man.’

⁴ Frequently called *reflexive*; we shall use the abbreviation REFL in line with the Leipzig Glossing Rules.

⁵ e.g. Belletti, Rizzi 1988; Dowty 1991; Verhoeven 2015.

The experiencer's clitic pronouns,⁶ being inherited from Latin case-marking, are visible in third-person constructions exclusively since dative and accusative pronouns for the other grammatical person configurations are homophonous in contemporary Spanish. Furthermore, Miglio et al. (2013) suggest that animacy makes the stimulus more agentive, which in turn demotes the experiencer to a more patient-like argument, and attributes significant influence on case-marking to the affectedness of the experiencer, volition and telicity, and recognises speaker and dialect-specific tendencies for alternation.

Catalan – a language in great cultural and geographical proximity to Spanish – has not been the subject of investigations into its psych verb domain as thoroughly as those conducted on other Romance languages.⁷

According to Royo (2017), Catalan psych verbs are traditionally used with an accusative case-marking; however, they display a certain syntactic and semantic flexibility, facilitated through the proto-agent-like characteristics of the experiencer, i.e. being animate, which in turn prompted further (descriptive) research into accusative/dative alternations. Royo (2020), for instance, investigates the accusative/dative alternation in Catalan EO verbs. Royo (2020) attributes certain Catalan EO verbs to type 2 in the classification by Belletti, Rizzi (1998). While they normally form utterances with an accusative experiencer, some of those verbs have recently been recognised by the Institute of Catalan Studies (IEC) to accept both accusative and dative case-marking. The predicates in question are *encantar* 'to delight', *estranyar* 'to bewilder', *molestar* 'to annoy', and *preocupar* 'to worry'. Examples (6) and (7), illustrate this behaviour, where (6a) and (7a) showcase accusative case-marking on the experiencer whereas (6b) and (7b) display dative case-marking:

(6) Catalan (Royo 2020, 372)

- a. *Els nens van molestar la Maria (o la van molestar).*
DEF kids AUX.3PL annoy.INF DEF Maria or DEF AUX.3PL annoy.INF
'The kids annoyed Maria (or they annoyed her).'
- b. *A Maria li molesten els nens.*
to Maria 3SG.DAT annoy.3PL DEF kids
(lit.) 'To Maria kids are annoying.'

⁶ 3rd person: *le(s)* = DAT; *lo(s)/la(s)* = accusative.

⁷ Publications on Catalan psych verbs include Abrines, Royo 2021; Cabré Monné, Mateu Fontanals 1998; Pineda, Royo 2017; Royo 2017, 2020; Vega Vilanova 2022.

(7) Catalan (Royo 2020, 372)

- a. *Les teves paraules la van sorprendre, preocupar, molestar molt.*
 DEF your words her.ACC AUX.3PL surprise.INF worry.INF
 annoy.INF a.lot
 ‘Your words surprised, worried, annoyed her a lot.’
- b. *Li sorpren, preocupa, molesta que joventud d’avui fumi tant.*
 3SG.DAT surprise.3SG worry.3SG annoy.3SG that youth of.today
 smoke.3SG so.much
 ‘To him/her that the youth of today smoke so much is surprising, worrying, annoying.’

As previously noted, Spanish is prone to accept argument alternation (i.e., accusative, dative and pronominal case-markings are appropriate in EO verb constructions): “psychological verbs that are used with dative constructions in Catalan, when they have traditionally been used with accusative constructions [...], have often been regarded as syntactic calques of the Spanish” (Royo 2020, 372-3). Furthermore, Royo (2020) argues that the syntactic-semantic configuration differs when the EO verbs in question are used with the accusative case compared to when they are used with the dative case. In particular, the option for different case-markings (accusative or dative) may cause some hesitation in speakers’ (written) language production (cf. Royo 2020, 375).

2.5 Hypotheses

We primarily base our hypotheses for the first and second research questions on Prat-Sala, Branigan (2000), Prat-Sala et al. (2000), and Verhoeven (2015) as well as the corpus investigation on the alternation of Dutch psych verbs conducted by Pijpops, Speelman (2015), by which animate stimuli tend to occur in active voice constructions, whereas inanimate stimuli are preferred in pronominal constructions. We therefore expect stimulus animacy to correlate with voice preferences accordingly in Spanish and Catalan.

Regarding our third research question on the difference between Catalan psych verbs that exclusively accept accusative case-marking versus those that accept both accusative and dative case, we expect them to behave similarly to what Ganeshan (2019) and Miglio et al. (2013) observed, i.e. that animacy correlates with agentivity, and agentivity, in turn, correlates with case-marking. They claim that in Spanish, agents with a higher degree of animacy appear with accusative case-marking and agents with a lower degree of

animacy appear with dative case-marking. Therefore, verbs that are exclusively found with accusative case-marking are expected to be less acceptable in utterances with inanimate stimuli due to the link between inanimate stimuli and the dative case. Since for both animacy levels a specific case-marking is available with those verbs that accept accusative and dative marking, both animate and inanimate stimuli should be acceptable in constructions with these verbs. Thus, similarly to the hesitations linked to the mental lexicon brought forward in Royo (2020), we assume a possibility for speaker hesitations when faced with verbs that only accept the accusative. Since Spanish and Catalan are in close contact (both culturally and geographically), it is reasonable to assume this correlation in Spanish is also found in Catalan.

3 Acceptability Study

Following the approach of Rott et al. (2020), eight Catalan psych verbs were selected to cover a range of different mental states based on the basic emotions as classified by Ekman et al. (1994), namely happiness, sadness, anger, fear, surprise and disgust. The choice of verbs is based on Royo's account (2020), by which four verbs were chosen that allow for a dative experiencer as well as an accusative experiencer in Catalan EO constructions, namely *encantar* ('to delight'), *molestar* ('to annoy'), *preocupar* ('to worry') and *estranyar* ('to surprise, to bewilder'). This set of four is complemented by *divertir* ('to amuse'), *entristir* ('to sadden'), *espantar* ('to frighten') and *sorprendre* ('to surprise'), which are only attested to occur in EO constructions with an accusative experiencer in Catalan.

Seven of the Spanish verbs selected are cognates of the Catalan verbs chosen, namely *encantar*, *molestar*, *preocupar*, *divertir*, *entristecer*, *espantar* and *sorprender*. While *extrañar* is a verb that can express surprise in Spanish, it is more commonly used to signify 'to miss (somebody or something)', which is less common with Catalan *estranyar*. Therefore, the eighth Spanish verb was replaced with the less frequently used verb *turbar* ('to disturb') to avoid interference of this semantic ambiguity. Note that Royo (2021) attested to the possible interpretation of the verb *encantar* to signify 'to bewitch', depending on the syntactic configuration of an utterance.

This study consists of two questionnaires, one in Catalan and one in Spanish, with the participants choosing one of the two language versions based on their personal preferences. In the questionnaire, the participants were instructed to rate 120 sentences in their chosen language version on a seven-point Likert scale, ranging from '1 (very bad)' to '7 (perfect)'. Both questionnaires contain sentences where each of the eight selected psych verbs is embedded into a sentence

in one of five different configurations of active or pronominal voice and the animacy of the non-experiencer stimulus. The configurations chosen are the active voice construction with an animate stimulus (henceforth abbreviated as AA), the active voice construction with an inanimate stimulus (AI), the pronominal voice construction with an animate stimulus in the prepositional phrase (PA), the pronominal voice construction with an inanimate stimulus in the prepositional phrase (PI), and the pronominal voice construction with no prepositional phrase (PN). The PN configuration is also tested since Spanish and Catalan allow for pronominal constructions with no stimulus (Prat-Sala, Branigan 2000; Rott et al. 2023). The experiencer and the non-experiencer stimuli are in the third person since the dative-accusative alternation has only been accounted for in the third person (Pineda, Royo 2017; Royo 2020). Although Catalan and Spanish also allow for the experiencer object to precede the verb in the EO construction (Pineda, Royo 2017; Rott et al. 2023), the standard word order subject-verb-object is chosen for all items in this study. An example item for each of these five configurations from the questionnaire is given in (8) for the Spanish verb *preocupar* and in (9) for the Catalan verb *divertir*.

(8) Test items for Spanish *preocupar*

- a. *La gata preocupa a su dueño.* (AA)
DEF cat worry.3SG to POSS owner
'The cat worries his/her owner.'
- b. *El partido preocupa al futbolista.* (AI)
DEF match worry.3SG to.DEF footballer
'The match worries the football player.'
- c. *La gente se preocupa por el asesino.* (PA)
DEF people REFL worry.3SG about DEF killer
'The people are worried about the killer.'
- d. *El estudiante se preocupa por el examen.* (PI)
DEF student REFL worry.3SG about DEF exam
'The student is worried about the exam.'
- e. *El banquero se preocupa.* (PN)
DEF banker REFL worry.3SG
'The banker is worried.'

(9) Test items for Catalan *divertir*

- a. *La filla diverteix la mare.* (AA)
DEF daughter amuse.3SG DEF mother
'The daughter amuses the mother.'

- b. *Les pel·lícules d'acció diverteixen a tothom.* (AI)
DEF movies of.action amuse.3PL to everyone
'The action movies amuse everyone.'
- c. *Els nens es diverteixen amb el pallasso.* (PA)
DEF boys REFL amuse.3PL with DEF clown
'The boys are amused by the clowns.'
- d. *L' oncle es diverteix amb la pel·lícula.* (PI)
DEF uncle REFL amuse.3SG with DEF movie
'The student is worried about the exam.'
- e. *L' amiga es diverteix.* (PN)
DEF friend.F REFL amuse.3SG
'The friend is amused.'

The critical items in this study make up 40 (each of the 8 verbs in 5 configurations) of the 120 sentences. The remaining 80 items are distractor sentences that do not contain psych verbs, ranging from standard transitive sentences with verbs from other lexical domains to ungrammatical sentences and semantically infelicitous sentences, to ensure that the whole range of the rating scale is sensibly used by the participants.

The study was conducted at the University of the Balearic Islands, Palma. A total of 25 participants rated the items in Catalan and 26 participants rated the items in Spanish. The participants' ages ranged from 19 to 43 years old, with a mean of 21.8 and a standard deviation of 4.1. Based on the time taken to complete the survey, ranging from 7 to 26 minutes, five participants were excluded from our analysis, for their survey completion time was more than 1.5 standard deviations off the mean for their respective language version. This resulted in 23 participants each for Catalan and Spanish.

4 Results

4.1 Acceptability Ratings in Spanish and Catalan

In both questionnaires, the most common answer given on the Likert scale is '7 (perfect)', with 340 of 896 judgments on Spanish items (37.9%) and 416 of 897 judgments on Catalan items (46.4%). Overall, 'rather acceptable' judgements of 5 or higher were more common in the Catalan questionnaire (74.9%) in comparison to the Spanish version (61.5%), and 'rather unacceptable' judgements of 3 or lower were less common in Catalan (19.4%) than in Spanish (29.4%). The absolute distribution of ratings in both languages is given in [tab. 1].

Table 1 The absolute distribution of ratings in the Spanish and Catalan versions of the study

Language	1	2	3	4	5	6	7	Total
Spanish	89	87	87	81	89	122	340	896
Catalan	51	57	66	51	117	139	416	897

25 of the 39 Spanish items were deemed rather acceptable with a mean rating above 5, six Spanish items were rated as rather unacceptable with a mean rating below 3, and eight items received a mean rating between 3 and 5 [tab. 2]. Among the 39 Catalan items, 26 were judged as rather acceptable, one item as rather unacceptable, and 12 items yielded a mean rating between 3 and 5 [tab. 3]. A brief comparison of the average ratings of the items in Spanish and Catalan indicates that the items with accusative EO verbs tend to yield similarly high ratings in both languages, whereas the picture is more diverse for cognate dative EO verbs in Spanish and Catalan.

Regarding the accusative EO verbs in Spanish, all four verbs (*divertir*, *entristecer*, *espantar* and *sorprender*) score a mean rating between 5.470 and 5.887 across all voice-animacy configurations, and all voice-animacy configurations score a mean rating between 5.290 and 6.120 across all accusative EO verbs. Only three out of 19 critical items in this group received a mean rating below 5, i.e., *divertir* AA (4.739), *espantar* AI (4.783), and *sorprender* PA (4.913).

Table 2 Mean ratings of the Spanish items

Verb Group (ESP)	AA	AI	PA	PI	PN	all config.
<i>divertir</i>	4.739	6.304	5.304	6.522	6.565	5.887
<i>entristecer</i>	5.261	5.565	5.739	5.652	6.304	5.704
<i>espantar</i>	5.870	4.783	5.435	6.043	5.217	5.470
<i>sorprender</i>	-	5.217	4.913	5.696	6.391	5.554
<i>encantar</i>	5.565	2.783	2.174	2.174	2.652	3.070
<i>molestar</i>	6.217	5.609	1.957	4.522	5.261	4.713
<i>preocupar</i>	5.304	5.522	6.174	6.696	5.870	5.913
<i>turbar</i>	3.043	3.609	2.455	3.348	3.348	3.167
Acc-only verbs	5.290	5.467	5.348	5.978	6.120	5.659
AccDat verbs	5.033	4.380	3.198	4.185	4.283	4.218
all verbs	5.143	4.924	4.279	5.082	5.201	4.921

Similarly, the four accusative EO verbs in Catalan (*divertir*, *entristir*, *espantar* and *sorprendre*) score a mean rating between 5.565 and 5.843 across all voice-animacy configurations, and all voice-animacy configurations are rated between 5.130 and 6.163 on average across all accusative EO verbs. Out of the 19 items in this group, 16 items

scored above 5 on average, and only three items scored lower than 5, i.e., *divertir* AA (4.913), *espantar* PA (4.435), and *sorprender* AI (4.870). Note that due to a technical error in the compilation of the questionnaires, no data on *sorprender* / *sorprender* in an active voice context with an animate stimulus (AA) was retrieved.

Table 3 Mean ratings of the Catalan items

Verb Group (CAT)	AA	AI	PA	PI	PN	all config.
<i>divertir</i>	4.913	6.478	5.609	6.217	6.000	5.843
<i>entristir</i>	5.087	5.130	6.435	6.652	5.696	5.800
<i>espantar</i>	5.391	5.913	4.435	6.130	6.478	5.670
<i>sorprender</i>	-	4.870	5.783	5.652	5.957	5.565
<i>encantar</i>	4.652	4.913	3.435	3.000	4.174	4.035
<i>molestar</i>	5.826	6.304	3.913	6.348	4.696	5.417
<i>preocupar</i>	5.739	6.783	6.870	6.913	6.739	6.609
<i>estranyar</i>	4.391	2.739	4.217	5.870	6.609	4.765
Acc-only verbs	5.130	5.598	5.565	6.163	6.033	5.728
AccDat verbs	5.152	5.185	4.739	5.533	5.554	5.207
all verbs	5.143	5.391	5.087	5.848	5.793	5.460

No item in either Catalan or Spanish was rated unanimously as unacceptable (receiving only ratings of 4 or lower) among all participants. There were four items in Catalan rated unanimously as acceptable, i.e. the *preocupar* items with AI, PA, PI & PN received no ratings below 5. Only two Spanish items were rated unanimously as acceptable (*divertir* PN & *preocupar* PI).

In both Spanish and Catalan, *preocupar* scored the highest average rating in the respective language group across all configurations, with no item scoring below 5 in either language.

The verb *molestar* was also deemed acceptable in the AA and AI configurations in Spanish and Catalan, with differences regarding the acceptability of the *molestar* items in pronominal voice. The PN configuration is accepted in Spanish (5.261) while it has mixed ratings in Catalan (4.696) and PI is accepted in Catalan (6.348) but received mixed responses in Spanish (4.522). In both languages, the PA configuration is the lowest scoring among the *molestar* items, and the Spanish *molestar* PA item scored the lowest of all 78 items in this study (Spanish: 1.957, Catalan: 3.913).

The verb *encantar* scored the lowest average of all tested verbs in both languages (in Spanish: 3.070; in Catalan: 4.035). Four configurations (AI, PA, PI and PN) are rated as unacceptable in Spanish with means below 3. Only the AA configuration was rated above 5 for Spanish *encantar*. In Catalan, all configurations of *encantar* scored an average between

3.000 and 4.913, indicating that this verb is potentially divisive in all configurations among the participants in the Catalan group.

The Spanish verb *turbar* scored consistently low (mean rating: 3.167), and all configurations received mean ratings between 2.455 and 3.609. In Catalan, *estranyar* accepts PI (5.870) and PN (6.609), and does not accept AI (2.739), while the configurations involving an animate stimulus, i.e., AA (4.391) and PA (4.217), received mixed ratings.

While the distribution of ratings indicates that the critical items were overall more likely to be accepted in Catalan (mean rating: 5.460) than in Spanish (mean rating: 4.921), it is not the case that all Catalan items were rated higher than their Spanish cognate counterparts as can be seen in [tab. 2] and [tab. 3].

Mann-Whitney *U* tests ($\alpha = 0.05$) on the mean ratings of all judgements on a verb show that there is no significant difference in the mean ratings for any of the Catalan Acc-only verbs *divertir* ($p = 0.995$), *espantar* ($p = 0.416$), *sorprendre* ($p = 0.663$) and *entristir* ($p = 0.367$) when compared to their Spanish cognates. In contrast, the AccDat verbs *encantar* ($p = 0.001$), *molestar* ($p = 0.0023$) and *preocupar* ($p = 0.002$) show significantly higher mean ratings in Catalan than in Spanish, and Catalan *estranyar* also scores a significantly higher mean than Spanish *turbar* ($p < 0.001$). This indicates that constructions with Acc-only EO verbs score similar to equal ratings in both Spanish and Catalan, while constructions with AccDat EO verbs are rated more likely as acceptable in Catalan than in Spanish.

As expected in Catalan, Acc-only verbs (mean: 5.728) scored significantly higher than AccDat verbs (mean: 5.207, $p = 0.001$). However, the same phenomenon is also seen in the Spanish ratings, in which the Acc-only verbs (mean: 5.619) scored significantly higher than the AccDat verbs (mean: 4.218, $p < 0.001$), which is contrary to our expectation that these two verb groups would generate similar ratings in Spanish.

Regarding the voice-animacy levels employed, there is no significant difference in the mean rating over all AA items (active voice, animate stimulus, $p = 0.885$), as opposed to all other combinations of voice and stimulus animacy tested for. They scored significantly higher in Catalan than in Spanish on average, respectively AI (active voice, inanimate stimulus, $p = 0.030$), PA (pronominal voice, animate stimulus, $p = 0.001$), PI (pronominal voice, inanimate stimulus, $p = 0.004$) and PN (pronominal voice, oblique stimulus, $p = 0.017$). The tested EO verb constructions in active voice with an animate stimulus yield similar ratings in both languages, and thus, we observe that constructions with EO verbs with an inanimate stimulus or in pronominal voice constructions are significantly more likely to be judged acceptable in Catalan than in Spanish on average.

4.2 Animacy

Regarding the hypotheses postulated for the second and third research questions, we expect overall high ratings for AA and PA, mostly low ratings for AI and PA. PN will be analyzed without any previous assumptions.

To further test for a potential influence of stimulus animacy on voice acceptability, the homogeneity of variances (Levene test) and significant differences of the general rating tendencies (Mann-Whitney *U* test) of the initially selected voice-animacy combinations shall be examined for significant differences in acceptability. For both the Levene and the Mann-Whitney *U* test the following voice-animacy pairs will be compared:

active-animate versus active-inanimate (AA&AI), pronominal-animate versus pronominal-inanimate (PA&PI), active-animate versus pronominal-animate (AA&PA), active-inanimate versus pronominal-inanimate (AI&PI), active-inanimate versus pronominal-animate (AI&PA), active-animate versus pronominal-inanimate (AA&PI), pronominal-animate versus pronominal-oblique (PA&PN) and pronominal-inanimate versus pronominal-oblique (PI&PN).

On the basis of our hypotheses and research questions, we expect the two statistical tests to yield the highest number of significant results when examining the first four listed instances, and significantly less (if any) when examining AI&PA and AA&PI. These expectations are based on the hypothesis which voice-animacy levels are expected to be preferred and which disliked. For instance, since AI and PA should both yield predominantly low ratings, AI&PA should not yield significant results due to similar ratings of both levels. The same applies to AA&PI, the only difference being that AA and PI should both yield mostly favourable ratings. Again, for comparisons including PN, we shall not hypothesise over the outcome. The tests were conducted for each verb individually, for the group of AccDat verbs, the group of Acc-only verbs, and for all verbs collectively. The second analysis step might reveal whether there is a systematic difference in rating distribution concerning the verbs that accept accusative and dative case-marking compared to those that only allow accusative case-marking, as well as the individual verbs. The results are visualised in the subsequent tables 4 through 9. An asterisk indicates a significant result. A period indicates a result close to the α level of 0.05, something we will refer to as ‘tendency case’. ‘n/s’ signifies all not significant results, and a hyphen indicates missing data points.

Among all verbs, homogeneity of variance was confirmed between AA&AI, AA&PA and PI&PN. AI&PI yielded a *p*-value close enough to the α level of $\alpha = 0.05$ to be considered to have a tendency toward

heterogeneity of variance, and PA&PI, AA&PI, AI&PA and PA&PN differed significantly [tab. 4].

Table 4 Significant variance differences between voice-animacy level ratings of all verbs ($p < 0.05$)

Verb (VAR)	AA&AI	PA&PI	AA&PA	AI&PI	AA&PI	AI&PA	PA&PN	PI&PN
<i>All verbs</i>	n/s	0.0003 *	n/s	0.053.	0.012 *	0.039 *	0.002 *	n/s

The means of all verbs differed significantly between PA&PI, AI&PI, AA&PI and PA&PN and showed a strong tendency to differ significantly between AA&AI and AI&PA. The Mann-Whitney *U* test did not yield significant results when testing AA&PA and PI&PN [tab. 5].

Table 5 Significant mean differences between voice-animacy level ratings of all verbs ($p < 0.05$)

Verb (MEAN)	AA&AI	PA&PI	AA&PA	AI&PI	AA&PI	AI&PA	PA&PN	PI&PN
<i>All verbs</i>	0.073.	4.426e-05 *	n/s	0.019 *	3.648e-05 *	0.051.	0.0007 *	n/s

When testing for homogeneity of variances among the Acc-only vs. the AccDat verbs, the AccDat verbs returned fundamentally less significant results [tab. 6]. While the Levene test yielded significant results when comparing PA&PI, AA&PA, AI&PI, AA&PI and PA&PN of the Acc-only verbs, it merely resulted in two tendency cases (PA&PI and PA&PN) for the AccDat verbs. No significant results can be reported for the remaining comparisons.

Testing for mean differences generated less significant results than testing for homogeneity of variance among Acc-only verbs, but more when testing the AccDat verbs [tab. 7]. Only AA&AI and AA&PI differed significantly among the Acc-only verbs. The remaining comparisons did not, however. The tendency cases when testing PA&PI and AA&PA are to be noted.

The means of the AccDat verbs differed significantly when testing PA&PI and PA&PN, exhibited a tendency in the pairs AA&PI and AI&PA. The remaining pairs did not differ significantly [tab. 7].

Table 6 Significant variance differences between voice-animacy level ratings of Acc-only vs. AccDat verbs ($p < 0.05$)

Verb (VAR)	AA&AI	PA&PI	AA&PA	AI&PI	AA&PI	AI&PA	PA&PN	PI&PN
Acc-only	n/s	0.004 *	9.357e-05 *	0.011 *	0.00003 *	n/s	0.042 *	n/s
AccDat	n/s	0.088.	n/s	n/s	n/s	n/s	0.055.	n/s

Table 7 Significant mean differences between voice-animacy level ratings of Acc-only vs. AccDat verbs ($p < 0.05$)

Verb (MEAN)	AA&AI	PA&PI	AA&PA	AI&PI	AA&PI	AI&PA	PA&PN	PI&PN
Acc-only	0.016 *	0.054.	0.067.	n/s	0.0001 *	n/s	n/s	n/s
AccDat	n/s	0.002 *	n/s	n/s	0.066.	0.072.	0.001 *	n/s

A similar overview of the results for the Levene test [tab. 8] and the Mann-Whitney U test [tab. 9] for the individual verbs shall now be provided.

In testing the individual verbs, comparing AA&AI yielded the most instances of significant results, closely followed by AA&PA, AA&PI, and AI&PA. PA&PI and PA&PN both yielded two significant results, and PI&PN resulted in the fewest significant results [tab. 8].

Taking a closer look at the significant differences in variances when testing the individual Acc-only verbs vs. the individual AccDat verbs, the following is noticeable:

Among the Acc-only verbs, AA&AI and AA&PI yielded the highest number of significant results. PI&PN only exhibited one tendency case and no significant results. The other comparisons each show one significant result. Additionally to one significant result, AI&PA generated two tendency cases. Overall, nine out of twenty-four instances (37%) in which the test was carried out yielded a significant outcome.

The AccDat verbs yielded a somewhat consistent number of significant differences in variance among all voice-animacy level comparisons, with the exception of AI&PI, which did not yield any significant results. Ten out of thirty-two comparisons (31.25%) turned out significant. Overall, *entristir* and *molestar* had the highest number of results that indicate heterogeneity of variance, closely followed by *preocupar*, *estranyar* and *espantar*. Additionally, *entristir*, *estranyar* and *espantar* all yielded one tendency case. Lastly, *divertir* exhibits two significant results plus a tendency case whereas *encantar* did not yield any significant results or tendency cases.

Referring back to the distinction between Acc-only and AccDat verbs, I can report that all Acc-only verbs had one tendency case, *entristir* had the most significant results, closely followed by *espantar*, and *divertir* returned the fewest. Among the AccDat verbs, *molestar*

presented four significant and four non-significant results. *Preocupar* and *estranyar* both produced three significant results, the latter an additional two tendency cases. The tendency of Acc-only verbs to yield more significant variance differences than the AccDat verbs [tab. 6] is reflected in the results of the individual verbs.

Table 8 Significant variance differences between voice-animacy level ratings per verb ($p < 0.05$); the top three are Acc-only verbs, the bottom four AccDat verbs

Verb (VAR)	AA&AI	PA&PI	AA&PA	AI&PI	AA&PI	AI&PA	PA&PN	PI&PN
<i>divertir</i>	6.125e-05 *	n/s	n/s	n/s	0.004 *	0.070.	n/s	n/s
<i>espantar</i>	n/s	0.016 *	0.038 *	n/s	n/s	0.0867.	0.0001 *	n/s
<i>entristir</i>	0.011 *	n/s	n/s	0.005 *	0.0006 *	0.020 *	n/s	0.050.
<i>encantar</i>	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
<i>molestar</i>	n/s	0.005 *	0.045 *	n/s	n/s	0.002 *	n/s	0.006 *
<i>preocupar</i>	0.0004 *	n/s	6.254e-05 *	n/s	2.91e-05 *	n/s	n/s	n/s
<i>estranyar</i>	0.019 *	n/s	n/s	n/s	0.053.	0.049 *	4.057e-06 *	0.063.

AA&PI and AI&PA had the most instances of significant differences in voice-animacy in pairwise comparisons of means, while AA&AI, AA&PA, AI&PI, PA&PI and PI&PN resulted in three significant and four not significant results, minus AA&PA and AA&PI, which each had one additional tendency case. PA&PN returned the fewest significant results.

When comparing the significant differences in means between the individual Acc-only and individual AccDat verbs, the following is striking:

Almost all voice-animacy level comparisons but AA&PI and AI&PA yielded the same number of significant results, namely one, among the Acc-only verbs. AA&PI turned out significant for all Acc-only verbs and AI&PA for all except *divertir*.

The number of significant differences peaked at the same pairings for the AccDat verbs. AA&AI, PA&PI, AA&PA, AI&PI and PI&PN all turned out to differ significantly in two of the four verbs, PA&PN in one of the verbs. Two tendency cases can be reported.

Eleven out of twenty-four (45.83%) Acc-only comparisons and seventeen out of thirty-two (53.13%) AccDat comparisons turned out significant. The tendency of AccDat verbs to yield equally as many significant mean differences than the Acc-only verbs [tab. 7], is more strongly pronounced, since the individual AccDat verbs resulted in more significant outcomes than the individual Acc-only verbs. *Estranyar* and *entristir* had the highest number of significant results, closely followed by *encantar*, *espantar* and *molestar*, of which *encantar* and *espantar* claim the tendency cases. *Divertir* and *preocupar* had

the smallest number of significant instances, *divertir* fewer than *preocupar*.

Similar to the variance results of the Acc-only verbs, *entristir* yielded a high number of significant results, closely followed by *espantar*, and *divertir*.

Among the AccDat verbs, *estranyar* had the highest number of significant results, *encantar*

and *molestar* each two less than *estranyar*. *Preocupar* yielded the fewest significant results.

Table 9 Significant mean differences between voice-animacy levels per verb ($p < 0.05$); the top three are Acc-only verbs, the bottom four AccDat verbs

Verb (MEAN)	AA&AI	PA&PI	AA&PA	AI&PI	AA&PI	AI&PA	PA&PN	PI&PN
<i>divertir</i>	0.003 *	n/s	n/s	n/s	0.02 *	n/s	n/s	n/s
<i>espantar</i>	n/s	0.004 *	n/s	n/s	0.042 *	0.013 *	0.0004 *	n/s
<i>entristir</i>	n/s	n/s	0.015 *	0.001 *	0.002 *	0.002 *	n/s	0.049 *
<i>encantar</i>	n/s	n/s	0.057.	0.003 *	0.014 *	0.015 *	n/s	0.047 *
<i>molestar</i>	n/s	5.394e-05 *	0.001 *	n/s	0.090.	6.034e-05 *	n/s	0.004 *
<i>preocupar</i>	0.007 *	n/s	0.002 *	n/s	0.0009 *	n/s	n/s	n/s
<i>estranyar</i>	0.017 *	0.003 *	n/s	3.938e-06 *	0.027 *	0.015 *	9.379e-06 *	n/s

5 Discussion

5.1 On Comparisons

Based on previous research by Pijpops, Speelman (2015) regarding correlations between stimulus animacy and voice preference in Dutch EO verbs and the findings of Miglio et al. (2013) and Ganeshan (2019) on correlations between stimulus animacy and case marking of the experiencer in EO constructions in Spanish, it was expected that many items generated acceptable ratings, which we could replicate in this acceptability study (cf. subsection 4.1). In particular, high acceptance was expected for the AA and PI configurations of the tested verbs in both Spanish and Catalan, and also for the AI configuration to some extent. The PN configuration also generated acceptable ratings for most of the tested verbs, which is in line with the accounts of Rott et al. (2023) on Spanish and Prat-Sala, Branigan (2000) on Catalan. The PA items, which were expected to be less acceptable than the other configurations, scored low with all dative EO verbs in this study, except *preocupar*, and the accusative EO verbs also scored high in the PA configuration. The high acceptance rate in this acceptability study may not be attributed solely to the applied methodology but rather the type of knowledge that participants engage with when responding to

a task, and tasks based on comprehension, and acceptability studies in particular, are more likely to indicate acceptance than production-based tasks (Perpiñán 2018).

On the accounts of Perpiñán (2018) and Vega Vilanova (2022), we expected that the widespread Catalan-Spanish bilingualism in the Balearic Islands (Blas-Arroyo 2007; Cremades et al. 2024) may affect the acceptability ratings on the tested configurations of voice construction and stimulus animacy in favour of convergence towards the other language. However, we cannot determine whether this behaviour is characteristic of the varieties of Spanish and Catalan spoken in Mallorca based solely on this experiment due to the limited sample size drawn from a predominantly young (and educated) demographic from different cities and villages, which may also feature regional differences.

Interlingual comparisons between non-cognates cannot be directly attributed to properties of EO verbs the same way as for cognates, due to the potential differences in saliency arising from the usage of the lexeme in their respective language.

5.2 On Animacy

The analysis comparing the variances and means of the voice-animacy levels resulted in more significant results for the Acc-only verbs than the AccDat verbs, which is in line with our initial hypotheses.⁸ However, this trend is not reflected in the analyses of the individual verbs. Furthermore, we expected the comparison of AA&PI and AI&PA to yield the least significant results due to the respective levels being either both preferable (AA and PI) or both detestable (AI and PA) (e.g. Pijpops, Speelman 2015). This hypothesis could not be supported via the collected data. In most lines of testing, either AA&PI or AI&PA or both frequently yielded significant results of variances and/or means. Regarding variance differences, among all verbs, AA&PI yielded the highest number of significant results, and the same goes for Acc-only verbs exclusively. AA&PI and AI&PA yielded some significant results among AccDat verbs but neither the least, nor the most (number-wise). Furthermore, it appears as though the comparisons of PA&PI resulted in (expected) significant results in a considerable number of lines of testing, while the comparison of AA&AI resulted in very few significant results, again, not in line with the initial hypothesis.

⁸ Based on the accounts of Ganeshan 2014; Miglio et al. 2013; Pijpops, Speelman 2015; Prat-Sala, Branigan 2000; Prat-Sala et al. 2000 and Verhoeven 2014; 2015.

Secondly, now referring to the mean differences, AA&PI and AI&PA yielded the highest number of significant results among all verbs, a trend reflected in the analysis of both Acc-only verbs and AccDat verbs. There is no uniform pattern regarding the remaining voice-animacy levels, which should all have yielded mostly significant results. The comparison of PN with PA and PI did not provide insightful results that suggest an alternative to the assumed animacy preferences.

Several factors may have influenced the ratings, such as the missing data on AA constructions including the verb *sorprendre*, as well as the possibility to interpret *encantar* as ‘to bewitch’ instead of ‘to delight’ (Royo 2021). Generally, this deviation in semantic meaning could have influenced speaker ratings depending on the items presented. However, *encantar* is one of the verbs whose descriptive analysis was most in line with our hypotheses and yielded no significant differences in variance, independent of which voice-animacy levels were compared.

6 Conclusion

In the presented study, speakers of Catalan and Spanish show a high degree of optionality with the acceptance of different configurations of voice and animacy in EO psych verb constructions. In light of the extended contact between the two languages and widespread bilingualism in the Balearic Islands, the fact that the acceptance is not reflected uniformly for all tested verbs indicates a dynamic and ongoing development in both languages, which motivates further research on psych verbs in Spanish and Catalan in the Balearic Islands, and by extension other regions that are subject to the influence of language contact.

We were further interested in whether eight Catalan EO verbs, four of which are traditionally only accepted with accusative case-marking and four of which are also accepted with dative case-marking, are subject to certain preferences regarding voice-animacy combinations. While it is striking that testing Acc-only verbs, in line with the second hypothesis, indeed yielded considerably more significant results than AccDat verbs, the remaining lines of testing did not allow for definite conclusions regarding either of the hypotheses on the verbs and their affiliations with the voice-animacy levels in question. We suggest revising the critical items and filler items used in this study to rule out semantic discrepancies of verbs like *encantar* and *estranyar*.

Abbreviations

3 = third person
ACC = accusative
AUX = auxiliary
CL = clitic
DAT = dative
DEF = definite
F = feminine
INF = infinitive
M = masculine
PL = plural
REFL = reflexive
SG = singular

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Sketch-Based Elicitation on the Morphosyntactic Properties of Object-Experiencer Psych Verbs in Catalan and Spanish

Addison J. Blanchard-Rooney

CNRS UMR 5565 Dynamique du Langage, Université Lumière Lyon 2, France

Abstract In this investigation of the psych alternation of object-experiencer psych verbs in Catalan and Spanish on Mallorca, novel elicitation methodology was employed, using visual stimuli to analyze seven morphosyntactic properties. Speakers' behavior between languages and lexemes is compared quantitatively. Here: voice, non-experiencer type and tense are verb-dependent; voice is language-dependent; non-experiencer type, person of the experiencer and tense correlate with voice. These results provide insights into how speakers construct psych verb sentences and highlight the benefits of elicitation methods to supplement theory and corpus data.

Keywords Psych alternation. Object-experiencer verbs. Voice. Catalan. Spanish. Elicitation.

Index 1 Introduction. – 2 Background. – 3 Methods. – 4 Results: Inferential Statistics. – 5 Results: Descriptive Statistics. – 6 Discussion. – 7 Conclusion.

1 Introduction

This paper reports on an elicitation study on the morphosyntactic properties of the psych alternation in Catalan and Spanish object-experiencer psych verb constructions. The psych alternation investigated involves the use of a reflexive clitic to detransitivize an object-experiencer construction as shown in (1a) into a subject-experiencer construction as shown in (1b). This alternation – exemplified here with Catalan sentences – encompasses the optional choice between two grammatical voice constructions, i.e., active or pronominal, respectively, as will be further outlined in this paper.

- (1) a. *A -l noi l' alegra el regal.*
 to DEF boy 3SG.OBJ gladden.3SG DEF gift
 ‘The boy is gladdened by the gift.’
 b. *El noi s' alegra d -el regal.*
 DEF boy REFL gladden.3SG of DEF gift
 ‘The boy is gladdened by the gift.’

The aim of the present study was to gather data surrounding seven predetermined morphosyntactic parameters of such psych verb constructions. Firstly, to determine parameters which demonstrate covariation with the realization of grammatical voice in the psych alternation. Secondly, to determine parallels and discrepancies in speakers’ habits regarding such constructions in general, contrasted across two Romance languages which are spoken in the same region. To obtain a new perspective on this phenomenon, novel elicitation methodology was employed. The study was conducted within the framework of an interdisciplinary research project exploring morphosyntactic and sociolinguistic parameters of psych predicates in Catalan and Spanish varieties spoken on the island of Mallorca (Wiskandt et al. 2023a).

The paper is structured as follows: Section 2 introduces the concepts of psych verbs and object-experiencers as well as the phenomenon of the psych alternation in Romance. Furthermore, current methodological gaps in the literature are highlighted and the specific research questions of this study are posed. The methods of this study are presented in Section 3 followed by inferential statistical results in Section 4. These findings are supplemented with descriptive statistical considerations in Section 5. Both results sections are considered in Section 6, which encompasses a discussion of implications for the research questions and future research outlook. Summarizing remarks are located in Section 7.

2 Background

2.1 Psych Verbs and Object-Experiencers

Over the past decades and beginning as early as 1988 with work by Belletti and Rizzi, the domain of psych verbs has been a common topic of investigation regarding the crossroads of syntax and semantics. Also named *experiencer verbs* or *mental verbs* (cf. Croft 1993; Franco 1992; Rott et al. 2020), the term *psych verbs* – as used in the present paper – encompasses verbs which carry a psychological entailment, i.e., an experiencer of a mental state (Landau 2010, 136f.). Rott et al. (2023, 2) specify this definition to surround verbs for which one argument elicits¹ and one experiences a mental state, where the mental state itself reflects the emotional content of the predicate.

Psych verbs are reported to demonstrate discrepancies from a given language's canonical transitive verbs (Verhoeven 2008); their argument structures pose exceptions to a language's standard structure of agent subjects and patient objects, demonstrating syntactic uniqueness from other predicates (Temme, Verhoeven 2016). These marked coding strategies – while reflected differently depending on the language – are a common feature in languages when it comes to psych verbs (Becker, Guzmán Naranjo 2020). Take the sentences in (2), for example: The experiencer, i.e., *the child*, may be realized in either the subject or the object position. This poses an anomaly to standard English argument linking, in which most transitive verbs cannot freely express a given argument in either syntactic position. This is shown in (3), which demonstrates how the equivalent of (2b) cannot be lexically expressed, i.e., with a single verb and without the use of passive voice, for a non-psych verb (cf. Rott et al. 2023).

- (2) a. **The child** fears the monsters.
b. The monsters frighten **the child**.
- (3) a. **The man** kicks his bicycle.
b. The bicycle *v.get.kicked.by **the man**.

¹ This argument, sometimes referred to as the *stimulus* in the literature, will henceforth be described in this paper by the term NON-EXP, i.e., the non-experiencer argument, so as to remain neutral regarding its semantic role.

The term *object-experiencer verbs* refers to such psych verbs in which the experiencer argument fills the syntactic object position, as further exemplified in (4).

- (4) a. *Flying really scares **her**.*
 b. *Your tardiness is starting to annoy **our boss**.*
 c. *It pleases **me** to hear that you are well.*

2.2 The Psych Alternation in Romance

Psych verb constructions in Romance languages, as briefly described in the introduction, encompass object-experiencer verbs which can undergo alternation in grammatical voice. A further example of this is presented in the Spanish sentences in (5) with the experiencer *Miguel*.

- (5) a. *La sorpresa alegra a Miguel.*
 DEF surprise gladden.3SG to Miguel_[OBJ]
 ‘The surprise gladdens Miguel.’
 b. *Miguel se alegra de la sorpresa.*
 Miguel_[SUBJ] REFL gladden.3SG of DEF surprise
 ‘Miguel is gladdened by the surprise.’

Here, a detransitivized subject-experiencer construction in (5b) is derived from a transitive object-experiencer verb in (5a) by means of pronominal voice marked by a reflexive clitic. The result is *psych alternation*: In the presence of an object-experiencer psych verb, the subject position can be alternatively filled by either the NON-EXP argument or the experiencer, the latter by means of derivation (Rott et al. 2020). This flexibility poses an exception to theories on argument linking, highlighting speakers’ unique behavior within the specific domain of psych verbs (Croft 1993; Kutscher 2009).

Notable is that this comes without an accompanying lexical change in predicate causality; whereas the English examples in (2) showcase such causality alternation (cf. Nichols et al. 2004), Rott et al. (2023) underline that the psych alternation is to be treated as a separate phenomenon, postulating that while the psych alternation shares patterns with causality alternation, it is not to be classified as a subtype of causality alternation. This study therefore specifically investigates the realization and properties of the psych alternation – not causality alternation – of object-experiencer psych verbs in two Romance languages, Catalan and Spanish.

2.3 Methodological Gaps and Research Questions

The phenomenon of psych alternation has been granted abundant attention from a theoretical standpoint. While this includes studies on possibilities to describe and categorize psych verbs in both Catalan (e.g., cf. Monné, Fontanals 1998; Royo 2018; Vilanova 2022) and Spanish,² two main issues prevail. Firstly, the focus of these studies does not always lie in a comprehensive description of psych verb constructions as a whole or in the factors influencing the psych alternation; Franco (1992) and Miglio et al. (2013) mainly focus, for example, on case alternation in psych verb constructions and Vilanova (2022) on double clitics. These investigations are compelling but do not shed light on all aspects of this phenomenon. Secondly, theory alone is insufficient to provide a holistic understanding of the psych alternation and the factors which condition it. To this end, Kutscher (2009, 43) reflects of psych verb research that “die Vorhersagen der jeweiligen Theorie die tatsächliche Datenlage nicht adäquat abbildet [the predictions from the respective theory do not adequately depict the actual data]”. As such, empirical reports complementing theory are required to explore not only what is possible in such constructions, but also how speakers actually utilize them. This enables closer connections between theoretical findings and speaker reality to be drawn.

Despite this, however, little empirical work has been conducted on the psych alternation to date. Of those which do exist, they are mainly rooted in corpus analyses, although these also consist of linguistic investigations of psych concepts in a broader sense e.g., Becker and Guzmán Naranjo (2020). They used TED-Talk subtitle corpora for seven European languages to document patterns of psych constructions including psych nouns and psych adjectives. The only systematic elicitation method proposed in the literature comes from Rott and Verhoeven (2019), which – while typologically applicable and advantageous – aims to explore diverging parameters than those in the study at hand. Given the current state of the literature, previously employed methods are unable to provide reliable empirically-funded data relevant for the description of object-experiencer psych verbs and their alternation.

There are further gaps in the literature which this study contributes to bridging. Previously, no study comparing and contrasting two languages featuring psych alternation which are spoken in the same location had been conducted to gain insights on how similar or distinct patterns can be in the specific case of regional bilingualism.

² e.g., cf. Acedo-Matellán, Mateu 2015; Franco 1992; Marín, McNally 2011; Miglio et al. 2013.

The linguistic environment of Mallorca, where Catalan and Spanish are both spoken, was therefore selected for investigation. In general, a systematic examination of all of the parameters discussed in this paper has not been undertaken empirically. Becker and Guzmán Naranjo (2020) represent an exception, however they did not investigate the psych alternation but rather linguistic representations of psych concepts in a broader sense, nor did they gather data on Catalan. Therefore, this study is the first one to report on the Catalan psych alternation and explore the selected parameters in object-experiencer psych verb constructions in general by using empirical methodology. Furthermore, a quantitative perspective rooted in inferential statistics was previously missing, which can serve to support or provide counterevidence to theoretically-based claims in a holistic cross-methodological pursuit of understanding this phenomenon.

Resulting from all of the reasons illustrated in this section, the study at hand was developed and conducted to elicit data on the morphosyntactic properties of object-experiencer psych verb constructions and the psych alternation in Catalan and Spanish, stemming from both targeted and explorative perspectives. In doing so, the following queries are investigated:

1. Within each investigated language, how do the selected object-experiencer psych verbs behave similarly and discrepantly regarding annotated morphosyntactic parameters, and are these patterns similar or discrepant across languages?
2. Where do Catalan and Spanish, when compared, show similar vs. discrepant trends regarding the morphosyntactic parameters in general, i.e., across object-experiencer psych verbs?
3. Within each investigated language and across both, which – if any – of the morphosyntactic parameters demonstrate a relationship with the realization of grammatical voice in the psych alternation?

In the following, the operationalization of these research questions is presented.

3 Methods

In order to gain further insights on the psych alternation and the parameters which influence it, novel methodology in this field was developed for this study in the form of visual elicitation. The elicitation phase took place across five days in May of 2023 at the Universitat de les Illes Balears (UIB). The following subsections provide insights

into the participants, stimuli, empirical procedure and annotation methodology of the study.

3.1 Participants

A total of $N = 79$ took part in this study, all of whom were recruited on the UIB campus. Their ages at the time of the study ranged from 20 to 48 ($\bar{x} = 23.34$, $\sigma = 4.08$). The majority originally came from Mallorca ($n = 66$; 84%), the remaining hailing from other Balearic Islands ($n = 5$; 6%), Catalunya ($n = 5$; 6%), non-Catalonian mainland Spain ($n = 2$; 3%) and France ($n = 1$; 1%). Regarding the primary place of residence at the time of the study, the following reports were provided: $n = 76$ (96%) lived on Mallorca, $n = 2$ (3%) in Catalunya and $n = 1$ (1%) on another Balearic Island.

All participants had either completed or were in the process of completing a higher educational degree. Most participants listed their main occupation to be student ($n = 61$; 77%). Further participants stated to be student teachers ($n = 8$; 10%). The other main occupations were academic teaching staff ($n = 3$; 4%), as well as $n = 1$ (1%) each of the following: administrator, cook, musician, receptionist, linguistic assistant. No occupation was listed by $n = 2$ (3%) of participants. No data was collected on participant sex.

Table 1 Target object-experiencer psych verbs

Stimulus No.	Language		Translation
	Catalan	Spanish	
1	<i>molestar(-se)</i>	<i>molestar(se)</i>	'to annoy'
2	<i>enfadar(-se)</i>	<i>enfadar(se)</i>	'to anger'
3	<i>entristir(-se)</i>	<i>entristecer(se)</i>	'to sadden'
4	<i>alegrar(-se)</i>	<i>alegrar(se)</i>	'to gladden'

3.2 Stimuli

Visual stimuli were employed in this study. They consisted of four sketches presented on a single sheet of paper. Each sketch individually aligned with a selected object-experiencer psych verb. An example of the sketches is found in Figure 1. The sketches remain as comparable as possible, i.e., the position of the experiencer remains constant. These matching representations were designed to not unintentionally prime participant responses. The verbs as presented in both the

Catalan and Spanish versions³ of the stimuli are listed in Table 1. The verbs ('to annoy', 'to anger', 'to sadden' and 'to gladden'), referred to as *target verbs* in this paper, were chosen due to their fulfilment of selected criteria; they provide coverage for various basic emotions (e.g., cf. Ekman 1999) and demonstrate the previously described voice alternation as seen in data reported by Royo (2018) for Catalan and Marín and McNally (2011) for Spanish. Furthermore, the verb pairs represent cognates cross-linguistically.



Figure 1 Stimulus example.

Note. Stimulus drawings created and provided by Pia Kailuweit, April 2023 (Wiskandt et al. 2023a)

3.3 Procedure

Participants could freely select the Catalan or Spanish version of the study, provided they speak the selected language at a native level. They were only informed to provide a written descriptive sentence under each sketch, ensuring to incorporate the verb in the caption for each of the four sketches accordingly. These instructions were intentionally kept minimal, so as to generate as natural and authentically individual of speech data as possible. This aim was successful as highlighted in (6); both descriptions were composed for the same stimulus (*alegrar(-se)*), but offer vastly discrepant levels of

3 For the sake of clarity and uniformity, unless Spanish data is specifically being cited, the Catalan forms of the employed verbs will henceforth be used in this paper when generally referencing the target verb of both languages.

detail.⁴ As demonstrated in Figure 1, each of the four stimuli were labelled with the corresponding target verb, including the reflexive clitic marker used in pronominal constructions, supplemented in parentheses to underline the optional nature of including it in descriptions. This also parallels standards in some dictionaries.

- (6) a. *Me n'alegro molt!*
1.SG.REFL pro gladden.1SG much
'I'm very glad!' (CA)
- b. *En Damià s'ha alegrat molt quan el seu amic Joan li ha portat un regal d-el seu viatge a les Illes Canaries.*
DET Damià REFL have.3SG gladden.PTCP much when DEF
POSS.M.SG friend Joan 3SG.OBJ have.3SG bring.PTCP INDF gift
from DEF POSS.M.SG trip to DEF.PL Islands Canaries.
'Damià was very happy when his friend Joan brought him a present from his trip to the Canary Islands.' (CA)

3.4 Annotation

The generated data was labelled for the language of elicitation and the target verb of the description. It then underwent spreadsheet-based annotation in accordance with seven predetermined parameters: Grammatical voice (henceforth: voice), morphosyntactic realization of the non-experiencer argument, grammatical person of the experiencer argument, order of experiencer and target verb, part of speech of target, tense of target verb and prepositions used. For the purpose of legibility, these have been abbreviated as P1 - P7, respectively, and will henceforth be referred to as such. An overview of these parameters and their abbreviations is found in Table 2.

While some of these parameters have been closely investigated in the literature, others have not been paid targeted empirical attention and were therefore included in annotation in exploratory nature. In this section, each of the seven parameters and their respective annotation coding will be outlined in further detail, so as to clarify the content of data comparisons drawn in this study. An overview of the annotation labels presented in this section is illustrated in Table 3.

⁴ Examples from the elicited data will be glossed in accordance with the Leipzig Glossing Rules (cf. Comrie et al. 2008). An overview of the abbreviations used in this paper is located after Section 7. Examples are labelled with CA for Catalan and ES for Spanish. Examples are exact digitalizations of primary data and therefore subject to spelling and punctuation errors as found in participant descriptions.

P1: Voice In line with research investigating the psych alternation, the first area of interest surrounded voice. Descriptions were annotated as a (active) or p (pronominal), the latter surrounding constructions which employ a reflexive clitic to create a detransitivized sentence as discussed in Section 2.2. Examples of active voice from the data can be seen in (7a) for Spanish and (7b) for Catalan. Pronominal voice is showcased in (7c) for Spanish and (7d) for Catalan. All sentences in (7) come from the same stimulus, underlining the possible variation elicited with this method.

Table 2 Overview of abbreviations for annotated parameters

No.	Parameter
P1	Voice
P2	Morphosyntactic realization of the non-experiencer argument
P3	Grammatical person of the experiencer argument
P4	Order of experiencer and target verb
P5	Part of speech of target
P6	Tense of target verb
P7	Prepositions used

- (7) a. *Me alegra mucho que hayas pensado en mi.*
1SG.OBJ gladden.3SG much that have.SBJV.2SG think.PTCP on 1SG.OBJ
'I'm very happy that you thought of me.' (ES)
- b. *A -l noi l'alegra el regal rebut.*
to DEF boy 3SG.OBJ gladden.3SG DEF gift receive.PTCP
'The gift he received gladdened the boy.' (CA)
- c. *Su amigo se ha alegrado a -l recibir su regalo.*
POSS.3SG friend REFL have.3SG gladden.PTCP to DET receive POSS.3SG
gift
'His friend was happy to receive his gift.' (ES)
- d. *S'alegra perquè li fa un regal.*
REFL gladden.3SG because 3SG.OBJ make.3SG INDF gift
'He is happy because he gives her a present.' (CA)

P2: non-exp In addition to voice, the realization of the NON-EXP was of interest. The realization of NON-EXPS was initially classified into four groups: The first of these is n for nominal constructions, including NPs, names and pronouns, as exemplified in (8a) through (8c), respectively.

- (8) a. *El accidente con el jarrón me entristeció mucho.*
DEF accident with DEF vase 1SG.OBJ sadden.3SG.PST much
'The accident with the vase saddened me a lot.' (ES)
- b. *Juan se molestó con Marc.*
Juan REFL annoy.3SG.PST with Marc
'Juan was annoyed with Marc.' (ES)
- c. *Tenia la música molt alta i va molestar -se amb ell.*
have.3SG.PST DEF music very loud and go.3SG annoy REFL with
he
'He had the music very loud and she got annoyed with him.' (CA)

Table 3 Overview of annotation labels

Parameter	Label	Description
P1	a	active voice
	p	pronominal voice
P2	n	nominal
	c	clausal
	c_b	'because'
	c_w	'when'
	c_t	'that'
	c_vp	VP
	c_o	other
	y	'and'
	n/a	no NON-EXP argument
P3	f	1 st person
	s	2 nd person
	t	3 rd person
	n/a	no experiencer argument
P4	e	experiencer comes first
	v	target verb comes first
	n/a	no experiencer argument
P5	ver	verbal realization
	adj	adjectival realization
P6	sp	simple present
	pp	present progressive
	pfp	present perfect
	pt	preterite past
	fut	future
	psub	simple present subjunctive
	spi	subjunctive present imperfective
	ipp	imperfective periphrastic past
	inf	infinitive

P7	e.g., con, por, etc.	wherever used, preposition was noted
	no	no preposition used
	yes	preposition used before NON-EXP argument

The label *c* was used for clausal constructions. To enable finer-grained coding, *c* constructions were – in an additional layer – further divided into: *c_b* for cases of clauses linked with a ‘because’ conjunction (cf. (9a)); *c_w* for cases of clauses linked with a ‘when’ conjunction (cf. (9b)); *c_t* for cases of clauses linked with a ‘that’ conjunction (cf. (9c)); *c_vp* for cases of directly adjacent VPs (cf. (9d)); and *c_o* for cases of clauses linked with any other type of conjunction (cf. (9e)).

- (9) a. *S' enfada perquè ha trencat el gerro.*
REFL anger.3SG because have.3SG break.PTCP DEF vase
‘He is angry because the vase broke.’ (CA)
- b. *Quan li faig un regal, Maria sempre s' alegra.*
when 3SG.OBJ make.1SG INDF gift Maria always REFL gladden.3SG
‘When I give her a present, Maria is always happy.’ (CA)
- c. *Me entristece mucho que hayas rato mi jarrón favorito.*
1SG.OBJ sadden.3SG much that have.2SG.SBJV break.PTCP POSS.1SG
vase favorite
‘It saddens me a lot that you broke my favorite vase.’ (ES)
- d. *Se alegró de dar -le el regalo.*
REFL gladden.3SG.PST of give 3SG.DAT DEF gift
‘He was glad to give her the gift.’ (ES)
- e. *M' entristirà si romps el gerro de mon pare.*
1SG.OBJ sadden.3SG.FUT if break.2SG DEF vase of POSS.1SG.M father
‘It will make me sad if you break my father’s vase.’ (CA)

For some items, such as in (10), additional clauses providing supplemental explanations extending beyond a nominal NON-EXP were not coded as *c* but rather as *n*; here *Toni* serves as the NON-EXP whereas the clause beginning with *perquè* is additional material as opposed to a clausal NON-EXP.

- (10) *Na Maria va enfadar -se molt amb en Toni, perquè va rompre un tassó.*
DET Maria go.3SG anger -REFL much with DET Toni because go.3SG
break INDF bowl
‘Maria got very angry with Toni, because he broke a bowl.’ (CA)

The third category of NON-EXP annotation was y. The label y, as shown in (11), was used for cases in which the word ‘and’ connected the clause including the experiencer with the clause including the NON-EXP.

- (11) S’ ha romput la jerra i s’ han enfadat.
REFL have.3SG break.PTCP DEF vase and REFL have.3PL anger.PTCP
‘The vase broke and they got angry.’ (CA)

These cases were not annotated as a category of c, because whereas the forms of c semantically indicate the relationship between the experiencer and the NON-EXP is causal, with the word ‘and’ this relationship is only to be understood as causal through pragmatics and therefore represents a different phenomenon; consider the sentences in (12): (12d) is the only of the four, in which it is plausible that the annoyance of the experiencer and the volume of the cat are independent of one another. It is also the only sentence in which the addition of another non-experiencer argument would not be pragmatically marked (compare the sentences in (13)). Finally, the label n/a indicated that no NON-EXP was incorporated in the given description.

- (12) a. I am annoyed **because** my cat is loud.
 b. I am annoyed **when** my cat is loud.
 c. I am annoyed **that** my cat is loud.
 d. I am annoyed **and** my cat is loud.
- (13) a. I am annoyed ?*[by my sister] **because** my cat is loud.
 b. I am annoyed [by my sister] **and** my cat is loud.

P3: Person of experiencer To gather data on the realization of the experiencer argument, grammatical person was labelled: f, s and t were coded for first, second and third person arguments, respectively. The letters were chosen instead of their numerical counterparts, as they were to later be analyzed statistically as categorical variables. The t arguments here include 3sg pronouns, names and NPs. Where no experiencer argument was provided, the description was labelled with n/a. It is noteworthy that a participant’s choice of person was grounded in individual preference only; no variations of the study to elicit various person constructions were employed.

P4: Order of experiencer and target verb The fourth annotated parameter surrounded the order of the experiencer and target verb. Descriptions in which the experiencer was realized first are labelled with e and those in which the target verb came first with v. In some cases, no experiencer was provided and the descriptions were

therefore coded with n/a. Examples are illustrated in (14a) through (14c), respectively.

- (14) a. *Me molesta que no me escuches.*
1SG.OBJ annoy.3SG that neg 1SG.OBJ listen.2SG.SBJV
'It annoys me that you don't listen to me.' (ES)
- b. *El chico molesta a la mujer.*
DEF boy annoy.3SG to DEF woman
'The boy annoys the woman.' (ES)
- c. *La música està massa alta i molesta.*
DEF music be.3SG too loud and annoy.3SG
'The music is too loud and it's annoying.' (CA)

P5: POS of target This parameter serves to differentiate cases in which the target was realized as a verb (labelled as *ver*, shown in (15a)) and cases in which the target was realized as an adjective instead (labelled as *adj*, shown in (15b)). Inclusion of both types mirrors the methodology by Becker and Guzmán Naranjo (2020).

- (15) a. *M' entristeix que hagi romput la ceràmica.*
1SG.OBJ sadden.3SG that have.2SG break.PTCP DEF ceramic
'It saddens me that you broke the ceramic.' (CA)
- b. *Estic trist perquè m' has trencat la gerra.*
be.1SG sad because 1SG.OBJ have.2SG break.PTCP DEF vase
'I'm sad because you broke my vase.' (CA)

P6: Tense Each description was additionally coded for the tense of the target verb. For cases in which the target was realized adjectivally, as described above, the temporal form of the verb 'to be' in the phrase with the *adj* target was annotated.

P7: Prepositions Finally, wherever prepositions were used in descriptions, forming a PP with the *NON-EXP*, they were noted. In addition to coding for the general presence of a preposition (yes vs. no), the preposition found was used as the label in an additional annotation layer. For prepositional contractions of a preposition and determiner, the stand-alone form of the preposition was used for the label (e.g., where *del* was written, the label used was *de*). In tests for inferential statistics, the binary coding for this parameter was used, but the specific prepositions are considered descriptively.

4 Results: Inferential Statistics

4.1 Data and Analytical Methods

The $N = 79$ participants were given the option to freely select the Catalan or Spanish version of the study. This led to discrepant amounts of data for both languages: $n = 64$ chose Catalan and $n = 15$ chose Spanish. Each participant provided descriptions for all four stimuli, generating $N = 316$ items ($n = 79$ per target verb). During data filtration $n = 8$ sentences were removed. In $n = 7$ of these cases, the description lacked the corresponding target verb and in $n = 1$, the correct verb was used, but not with the targeted meaning (here, *molestar-se* was not used as the object-experiencer psych verb ‘to annoy’ but rather as ‘to bother [to do sth.]’). The final amount of items per target verb per language are outlined in Table 4. The total and relative data value distributions per parameter per target verb per language can be found in Tables 9 through 16 in the appendix.

Table 4 Items per target verb per language after data filtration

Target verb	Language	
	Catalan	Spanish
‘to annoy’	63	15
‘to anger’	64	15
‘to sadden’	63	14
‘to gladden’	60	14

The results from an inferential statistical perspective are presented below, structured as follows: First, within each language separately, the four target verbs will be compared regarding P1 - P7. Then, cross-linguistic comparisons will be made across target verbs regarding P1 - P7. This is followed by analyses of covariation between P1 and P2 - P7. All statistical analyses presented in this section were conducted using the open-access statistics program R.Version 4.3.1 (R Core Team 2021), the package ggbarstats (Patil 2021) and the user interface software RStudio (RStudio Team 2020). Figures of statistic results were generated with the package ggplot2 (Wickham 2016).

To test for significant differences in the data between selected variables, Pearson’s chi-squared (X^2) tests of independence were conducted. Where the X^2 criteria of five observations per cell was not fulfilled, a Fisher’s exact test was conducted. In all cases, the p values within a tested group were adjusted using the Holm-Bonferroni method to counteract the α -problem of multiple comparisons and therefore reduce the chance of false significance (for more, cf. Holm

1979). The threshold for statistical significance lies at $p < .05$. All descriptive visualization and interpretation of results is withheld until Sections 5 and 6.

4.2 Cross-Target Verb Comparisons

This analysis provides insights to the question *within each language, how do the target verbs behave similarly and discrepantly regarding the seven annotated parameters?* In this section, results are presented for significance tests regarding the covariation of the variables target verb and each of the seven parameters individually. Significance here indicates that the relationship between the target verb (i.e., which of the four was used in the given description) and the tested parameter is not independent and an effect is present. Results for Catalan are presented below, followed by those for Spanish in Section 4.2.2.

4.2.1 Catalan

Table 5 depicts the results for the Catalan data.⁵ Two parameters indicate a highly significant relationship with the target verb: P1 and P2 ($p < .001$ each). Note that this effect does not remain when the fine-grained coding of clausal arguments in P2 is combined to a singular c label ($p = .09$). P6 is shown to also be significant ($p = .01$). As aforementioned, P7 in inferential testing is done corresponding with the binary coding due to target verb-individual lexical constraints which challenge comparability. Neither this nor any other remaining parameter reveal statistically significant covariation with the target verb in Catalan sketch descriptions.

4.2.2 Spanish

The results for Spanish data are outlined in Table 6. Here no annotated parameter is shown to have a statistically significant relationship with the target verb.

⁵ In this and all following tables where p values are listed, the p values shown are those corrected for multiple comparisons. Bold indicates statistical significance.

4.3 Cross-Linguistic Comparisons

This analysis provides insights to the question *where do Catalan and Spanish show similar vs. discrepant trends regarding the seven annotated parameters in general, i.e., across target verbs?* In this section, results are presented for significance tests regarding the covariation of the variables language and each of the seven parameters individually. Significance here indicates that the languages display discrepant patterns regarding the tested parameter regardless of the target verb.

The results of these analyses are visualized in Table 7. It is shown that two parameters of object-experiencer psych verb constructions – when compared across all four target verbs – are language-dependent: P1 significantly ($p = .04$) and P6 ($p < .001$) highly significantly. No other parameter yielded significant results when tested cross-linguistically.

Table 5 χ^2 test results between target verb and P1 - P7: Catalan

Parameter	χ^2	d.f.	Φ_c	p
P1: Voice	27.68	3	0.30	<.001
P2: NON-EXP	59.46	21	0.28	<.001
P2: NON-EXP_combined-c	18.75	9	0.11	.09
P3: Person of experiencer	4.78	9	0.08	.87
P4: Order of e and v	8.35	6	0.13	.23
P5: POS of target	10.77	3	.021	.07
P6: Tense	45.75	21	0.25	.01
P7: Prepositions_binary	10.27	3	0.20	.07

Table 6 χ^2 test results between target verb and P1 - P7: Spanish

Parameter	χ^2	d.f.	Φ_c	p
P1: Voice	5.28	3	0.30	.76
P2: NON-EXP	25.80	21	0.39	.76
P2: NON-EXP_combined-c	13.03	9	0.27	.76
P3: Person of experiencer	0.97	3	0.13	.99
P4: Order of e and v	8.98	3	0.39	.29
P5: POS of target	2.31	3	0.20	.99
P6: Tense	17.20	9	0.31	.32
P7: Prepositions_binary	6.19	3	0.33	.69

4.4 Morphosyntactic Covariance with Voice

This analysis provides insights to the question *within each language and across both, which – if any – of the annotated parameters P2 - P7*

demonstrate covariation with voice across target verbs? To more closely explore the domain of the psych alternation, in this section, results are presented for significance tests regarding the covariation of the variables P1 and each of the six remaining parameters individually. Significance here indicates that the relationship between the value of P1 (i.e., whether active or pronominal voice was used in the given description) and the tested parameter is not independent and an effect is present. Results are shown in Table 8.

Table 7 χ^2 test results in cross-linguistic comparisons of P1 - P7

Parameter	χ^2	d.f.	Φ_c	p
P1: Voice	7.72	1	0.17	.04
P2: NON-EXP	17.87	7	0.24	.07
P2: NON-EXP_combined-c	3.57	3	0.11	.73
P3: Person of experiencer	9.39	3	0.18	.16
P4: Order of e and v	3.38	2	0.11	.69
P5: POS of target	2.33	1	0.10	.36
P6: Tense	60.12	8	0.44	<.001
P7: Prepositions_binary	0.14	1	0.03	.73

In Catalan descriptions, all parameters are shown to be highly significantly non-independent from the value of P1 ($p < .001$) with one exception: When comparing the value of P1 to P2 where all clausal types of NON-EXPS are combined, the significance does not remain ($p = .65$). In Spanish descriptions, two parameters share a highly significant relationship ($p < .001$) with P1: P3 and P6. Two further parameters demonstrate significance when compared to P1: the binary coding for P7 ($p = .01$) and P2 ($p = .02$). The remaining three parameters do not stand in a significant relationship with P1. Finally, when analyzing all descriptions regardless of the language, all parameters are shown to be highly significantly non-independent from the value of P1 ($p < .001$) with one exception: When comparing the value of P1 to P2 where all clausal types of NON-EXPS are combined, the value of p is reduced from high significance, but remains in the level of significance ($p = .03$).

Table 8 χ^2 test results of P2 - P7 in relation to P1

Parameter	Language											
	Catalan				Spanish				Across languages			
	χ^2	d.f.	Φ_c	p	χ^2	d.f.	Φ_c	p	χ^2	d.f.	Φ_c	p
P2: NON-EXP	93.92	7	0.61	<.001	16.38	7	0.53	.02	104.98	7	0.58	<.001
P2: NON-EXP_combined-c	7.24	3	0.17	.65	3.89	3	0.26	.54	8.66	3	0.17	.03
P3: Person of experiencer	96.60	3	0.62	<.001	26.04	1	0.71	<.001	129.54	3	0.65	<.001
P4: Order of e and v	18.04	2	0.27	<.001	0.38	1	0.14	.54	18.21	2	0.24	<.001
P5: POS of target	26.52	1	0.34	<.001	3.06	1	0.27	.16	32.16	1	0.33	<.001
P6: Tense	104.19	7	0.65	<.001	36.25	3	0.79	<.001	137.89	8	0.67	<.001
P7: Prepositions_binary	13.00	1	0.24	<.001	9.70	1	0.45	.01	21.44	1	0.27	<.001

5 Results: Descriptive Statistics

In this section, the trends reported above are described in regards to value distributions. This is beneficial in interpreting the statistics above to explain, for example, the directionality of significant findings and identify patterns which are non-significant statistically albeit noteworthy.

5.1 Voice Alternation (P1)

As indicated in Table 5 above, in Catalan, voice is highly significantly related to the target verb, meaning the use of active vs. pronominal voice depends on the psych verb in the given description. This relationship becomes clearer when viewing the total frequencies in the value distribution as portrayed in Figure 2: Whereas the target verbs *alegrar-se*, *enfadar-se* and *entristir-se* exhibit a clear preference for pronominal voice, the opposite is the case for *molestar-se*, which favors active voice.

Although this target verb-dependent significance was not mirrored in the Spanish data [tab. 6], a descriptive analysis of the value distribution delivers interesting observations. Figure 3 illustrates a parallel between Catalan and Spanish, in that descriptions of *molestar-se* feature a predominant use of active voice in Spanish as well. The similarities cease here, however; unlike Catalan speakers, Spanish speakers also preferred active voice for *alegrarse*, both voices were used equally for *entristecerse*, and the preference for *enfadarse* is more minimal compared to in Catalan.

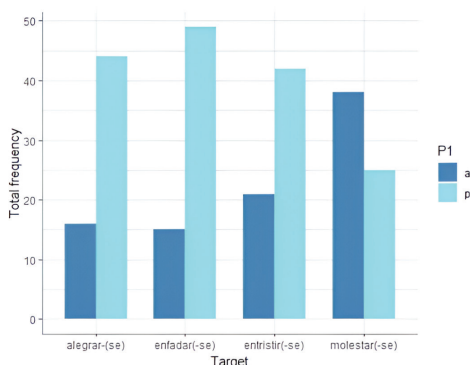


Figure 2 Total frequencies of P1 per target verb: Catalan

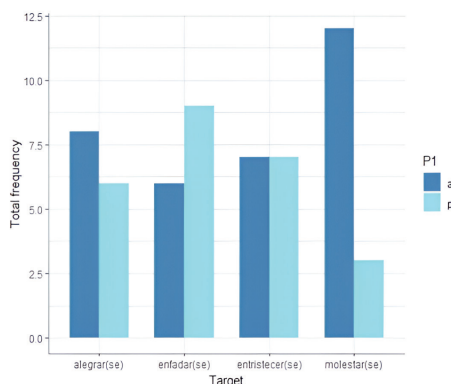


Figure 3 Total frequencies of P1 per target verb: Spanish

These reflections generate two findings. Firstly, the use of voice appears to be a language-specific phenomenon in the present data, in which Catalan speakers demonstrate a pronominal voice preference whereas Spanish speakers are less clearly partial towards one voice. This clarifies the finding reported in Table 7 that the languages behave significantly discrepantly regarding P1. Secondly, it appears as though the verb *molestar-se* is treated specially in both languages in that active voice is greatly preferred. This specific effect found for the verb ‘to annoy’ is mirrored by Wiskandt et al. (2023b); they report a similar effect in Portuguese and Catalan corpus data. They argue this is due to a higher likelihood of an agentive interpretation compared to most other object-experiencer psych verbs.

5.2 Morphosyntactic Realization of the NON-EXP (P2)

A highly significant relationship was observed between the target verb and the realization of the NON-EXP in Catalan descriptions [tab. 5]. No significance is found in this test with Spanish data, however [tab. 6]. Nonetheless, a descriptive analysis of both datasets deliver further insights. As highlighted in Table 7, there is no significant difference in the data when comparing languages across all target verbs. Therefore, the similarities in the data will be more closely investigated. Figures 14 and 15 show the distribution of P2 values for Catalan and Spanish, respectively. In both languages, the verb *entristir-se* exhibits a uniquely strong disinclination for nominal NON-EXP. Although not statistically significant [tabs 5-6], this trend becomes clearer when comparing the target verbs where all subtypes of c are cumulated; Figures 6 and 7 showcase the unique lack of nominal NON-EXPS for *entristir-se* in Catalan and Spanish descriptions, respectively. This is especially notable in Catalan data, where the remaining three target verbs exhibit behavior similar to one another in this regard. A possible explanation for this is that events are responsible for initiating some emotions, not directly the person who caused the event (cf. e.g., Kailuweit 2005). In this case, it would be the vase breaking which triggers sadness, as opposed to a person causing the vase to break. A cognitive scientific perspective on the matter in the future is required to further explore this possibility.

Because clausal NON-EXPS are the preferred type in each target verb in both languages, a closer look at the distribution of c types is of interest. Cross-linguistically similar trends can be found as both languages demonstrate a clear preference for 'because' clauses in *enfadar-se*. While this 'because' majority can also be found in *entristir-se* descriptions, Catalan exhibits a larger gap between this and the second-most utilized type of c. Furthermore, it is notable that there is less c subtype variation in *molestar-se* descriptions compared to the other target verbs in both languages.

When P2 is tested with P1, the covariation in Catalan and across languages is highly significant and in Spanish significant, as reported in Table 8. When looking at the data of both languages, found in Figure 8, the cause of this significance between voices becomes clear; regarding clausal NON-EXPS, active voice prefers 'that' clauses, whereas pronominal voice greatly prefers 'because' clauses. Further noteworthy is the greater representation of 'when' clauses in pronominal voice compared to active voice.

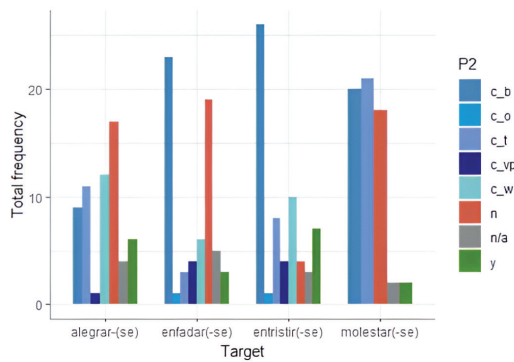


Figure 4 Total frequencies of P2 per target verb: Catalan

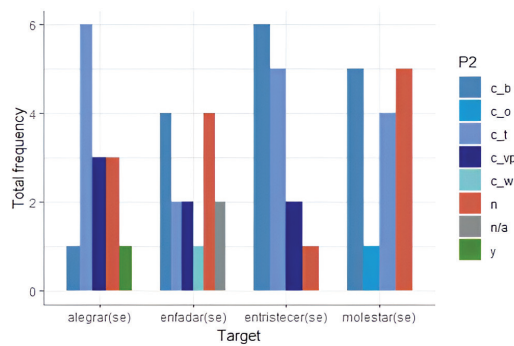


Figure 5 Total frequencies of P2 per target verb: Spanish

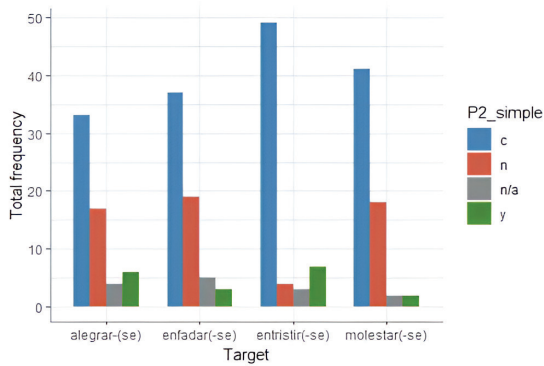


Figure 6 Total frequencies of simplified P2 per target verb: Catalan

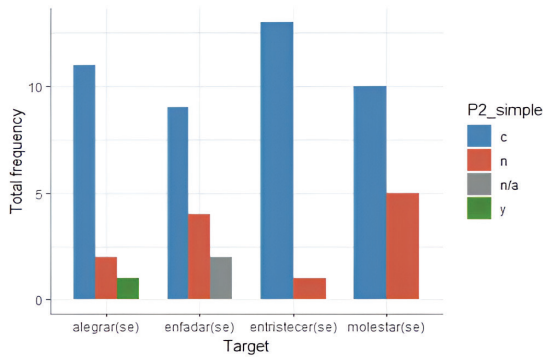


Figure 7 Total frequencies of simplified P2 per target verb: Spanish

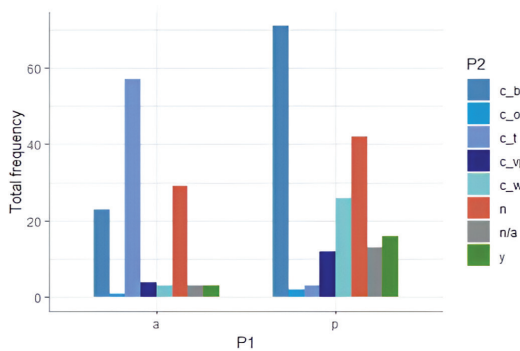


Figure 8 Total frequencies of P2 per P1: Across languages

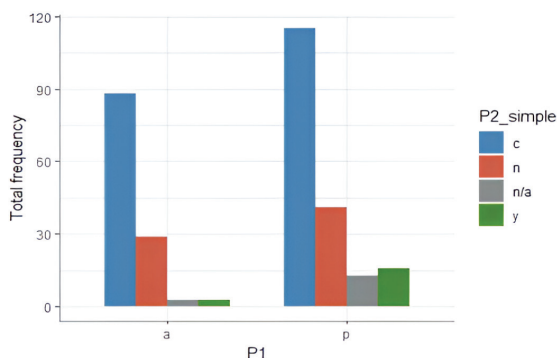


Figure 9 Total frequencies of simplified P2 per P1: Across languages

Where the subtypes of c are visually cumulated, however, the lack of significance shown in Table 8 for P2_combined-c is elucidated. Figure 9 indicates that when the subtypes of c are not considered, but rather grouped against nominal, ‘and’ clause as well as missing NON-EXPS, that the voices demonstrate highly comparable distributions.

This contrast between P2 and P2_combined-c here and in analyses above is critical. They highlight the sensibleness for future research on psych verb constructions to investigate both clausal NON-EXPS as a cumulative category, while additionally considering category-internal differences; both units of analysis deliver unique insights which would be overlooked when addressing only one.

When comparing these findings to those in previous studies, there are parallels and deviations. Becker and Guzmán Naranjo (2020, 514) report that in all European languages they investigated, there is more variance across concepts than across languages, which behave mainly similarly. This mirrors the findings here, although only where c is subdivided. The authors further report clausal arguments to account for a minor portion of NON-EXPS (Becker, Guzmán Naranjo 2020, 519). Wiskandt et al. (2023b) also report c arguments to be less common in their corpus data on Portuguese, Catalan (where they also investigated *molestar-se* and *entristir-se*) and Romanian than in the present study. This is a stark contrast to the data here, where c is responsible for the majority of NON-EXPS in both languages and all target verbs. This can likely be explained due to the methodological differences between the studies, highlighting the advantage of employing elicitation methods for new insights; in spontaneous elicited speech data, clausal NON-EXPS seem to occur with increased frequency compared to corpus reports.

5.3 Grammatical Person of the Experiencer Argument (P3)

When examining the experiencer argument regarding the parameter of grammatical person, no significant differences between the target verbs were determined in either Catalan or Spanish (cf. Table 5 and Table 6, respectively). This lack of significance is paralleled in Table 7, highlighting that the languages do not differ in this regard.

Regarding the relationship between P1 and P3, however, highly significant effects were identified in Catalan, Spanish and cross-linguistically, as illustrated in Table 8. Comparing Figure 10 and Figure 11, the results are striking as in both languages, the same preferences become clear: When speakers use first person experiencers, they greatly prefer active voice (true in 100% of Spanish descriptions), whereas they prefer pronominal voice when referring to third person experiencers.

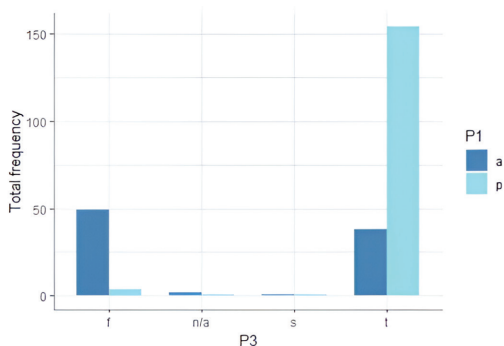


Figure 10 Distribution of P1 per P3: Catalan

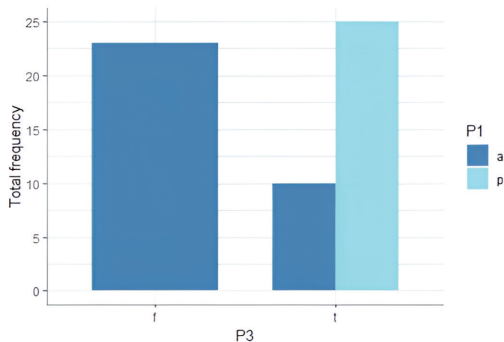


Figure 11 Distribution of P1 per P3: Spanish

5.4 Order of Experiencer and Target Verb (P4)

In both observed languages, no significant discrepancies were found between the order of the experiencer / target verb and which target verb was used in a given description [tabs 5-6], nor do the languages behave differently across target verbs [tab. 7]. Highly significant covariation was determined for P4 as a covariate of P1 in Catalan and across languages, but no significance was determined in this regard for Spanish, outlined in Table 8.

From a descriptive standpoint, some noteworthy patterns are discovered. Figures 12 and 13 visualize the distribution of voice in experiencer-first vs. verb-first descriptions in Catalan and Spanish, respectively. At first glance it is clear that verb-first constructions are not conducive to pronominal voice due to syntactic constraints. Nonetheless, these graphs deliver interesting considerations. Firstly, within experiencer-first constructions, the given language's general voice preference in this data is mirrored, i.e., Catalan prefers pronominal voice and Spanish is more impartial, slightly preferring active voice. Further, experiencer-first descriptions predominate over verb-first descriptions in both languages. This trend is of special interest; although both e and v structures are grammatically possible in both languages, there is a clear trend towards experiencer-first constructions. This is in line with reports by Temme and Verhoeven (2016), who state that cross-linguistically, experiencers are often fronted in psych verb constructions. They report this phenomenon to be particularly observable for accusative experiencers, as found in the data at hand. All in all, while P4 significance in these analyses is unsurprising due to syntactic constraints, the distribution of experiencer-first vs. verb-first descriptions is compelling.

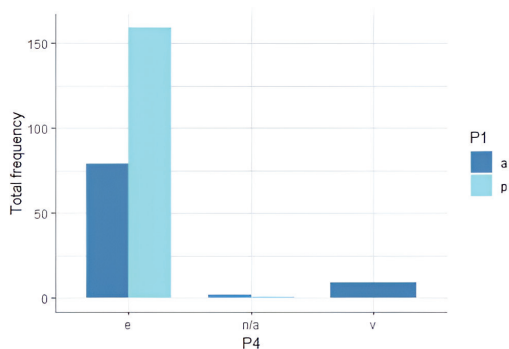


Figure 12 Distribution of P1 per P4: Catalan

5.5 Part of Speech of Target (P5)

To investigate whether Catalan and Spanish speakers demonstrate similar or discrepant preferences towards using psych verbs vs. psych adjectives, the part of speech of the target was also examined. Here, as depicted in Tables 5, 6 and 7, there is no observable effect between P5 and the target verb or the language. The parameter does, however, indicate highly significant covariation with the realization of voice in Catalan and across languages, but not in Spanish individually [tab. 8]. This significance or lack thereof is, however, likely to be traced back to the language's general voice preferences; in verbal constructions, Catalan generally prefers pronominal voice, whereas Spanish speakers employed a more fair distribution. Including this parameter for analysis was chosen for exploratory reasons, though it has been determined that analyzing this parameter does not foster new insights on psych verb constructions in this study.

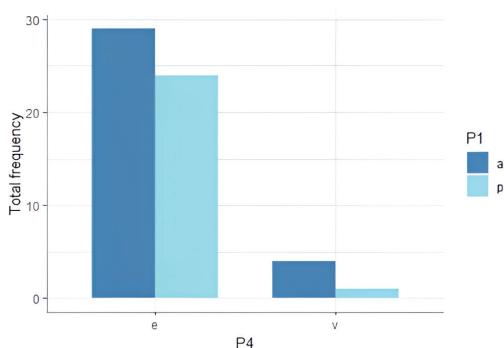


Figure 13 Distribution of P1 per P4: Spanish

5.6 Tense of Target (P6)

As shown in Table 5, the tense of target verbs and the target verb used in a given description share a significant relationship in the Catalan data. This effect is not mirrored statistically in Spanish data [tab. 6], however a descriptive analysis of the value distribution paints a similar picture to the Catalan distribution; in Figures 14 and 15 for Catalan and Spanish, respectively, *molestar-se* is shown to be treated differently from the other target verbs. Here, in both languages and especially in Catalan, a substantial use of simple present is showcased. The tense is used more for *molestar-se* than for any other target verb, and within *molestar-se* descriptions, the difference between simple present and other tenses is substantially greater than

the differences between the most and second-most common tenses for any other target verb, again in both languages. Similar to how the verb gains discrepant treatment regarding voice, *molestar-se* descriptions are an exception as only here can a clear tense preference be identified. This is particularly interesting in light of the methodology used; even where some participants interpreted the stimuli as a continuous story, a shift in tense from simple present in *molestar(-se)* – the first of the four items – descriptions to other tenses for the remaining descriptions was located. This was not expected due to its markedness when combined with the remaining stimuli and underlines the uniqueness of how speakers treated *molestar(-se)*.

Furthermore, P6 is shown in Table 7 to be highly significantly discrepant when comparing languages across target verbs, however this will not be considered further as the languages exhibit individual tense inventories, prohibiting comparative claims. In general, however, within each language across target verbs, a myriad of tenses were incorporated in sketch descriptions. This leads to the impression that – apart from the uniqueness found in *molestar-se* – the data shows no indication that tense is an anomaly in the domain of psych verb constructions compared to verb use in general in each language when it comes to which tenses can be and are employed in natural speech.

Target verb tense additionally has a highly significant relationship with the realization of voice within both languages and across both [tab. 8]. A common feature of both Catalan and Spanish is a highly substantial preference for simple present tense in active voice constructions [figs 16-17]. Another similarity is that perfect present tense is favored for pronominal voice in both languages, albeit with a less prominent preference than simple present for active voice. These differences in the data across both languages are striking, especially as constructions in both voices in each tense are grammatically possible, yet such clear preferences exist regardless.

A possible explanation for this finding is that the underlying motivation at play is aspect-based. Pronominal voice can be viewed as an inchoative change-of state marking voice (cf. Marín, McNally 2011). In the case of object-experiencer psych verbs, this implies that the use of pronominal voice denotes a shift from the experiencer argument not experiencing an emotion to experiencing it. Therefore, when participants describe a static scene, they may opt to employ pronominal voice to highlight this inchoativity and the perfective aspect that the change of state has not ended, i.e., the experiencer is still experiencing the given emotion. This tendency is not relevant for active voice, which could explain speakers' preference of the least marked tense, i.e., simple present, when using it.

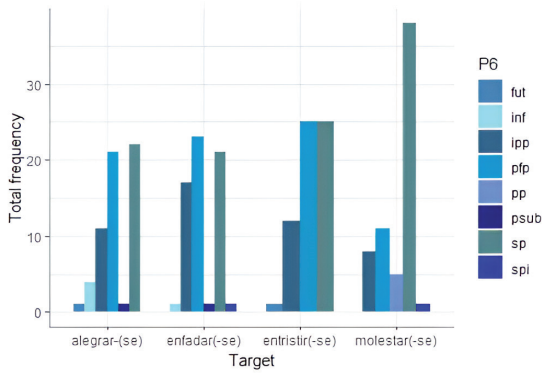


Figure 14 Distribution of P6 per target verb: Catalan

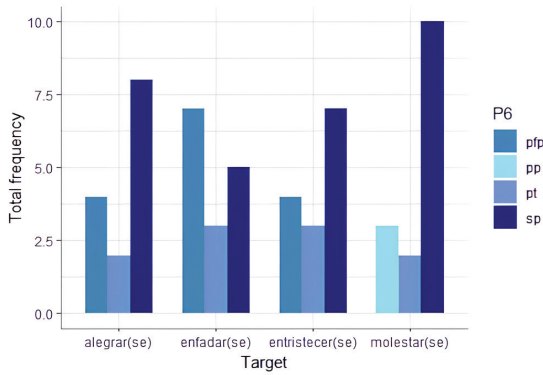


Figure 15 Distribution of P6 per target verb: Spanish

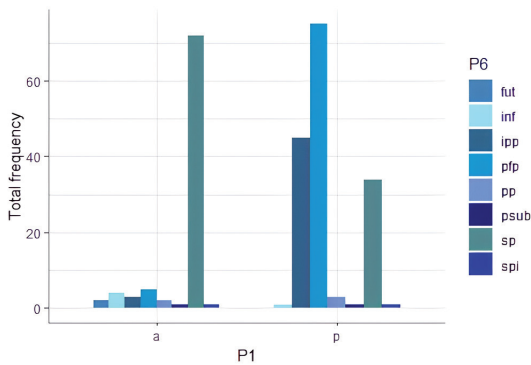


Figure 16 Distribution of P6 per P1: Catalan

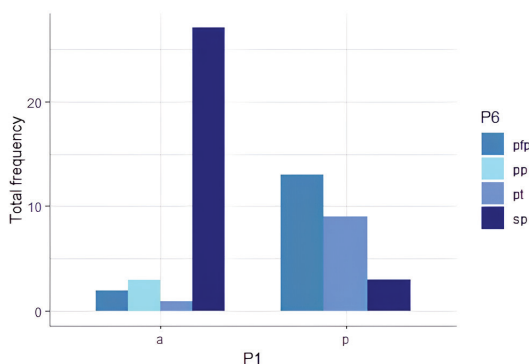


Figure 17 Distribution of P6 per P1: Spanish

5.7 Prepositions (P7)

Finally, the presence vs. absence of a preposition before the NON-EXP did not yield significant results when tested between target verbs in Catalan or Spanish [tabs 5-6], nor when tested between languages across target verbs [tab. 7]. Table 8 indicates high significance when testing covariance of binary P7 and P1 for Catalan and cross-linguistically and significance for Spanish. This is, however, not surprising as the variables are nearly collinear; further data exploration reveals syntactic constraints as the origin of this significance. For example, the presence of a pre-NON-EXP preposition in active voice descriptions is only possible where the target is realized adjectivally as opposed to verbally, as seen in (16), where the preposition *per* precedes a VP-NON-EXP and the target verb *enfadar-se* is realized as an adjective.

- (16) *Estic molt enfadada per haver -me romput el gerro.*
 be.1SG very angry for have.INF 1SG.OBJ break.PTCP DEF vase
 ‘I’m very angry about my vase breaking.’ (CA)

A descriptive analysis of the non-binary distribution of P7 values, i.e., which specific prepositions were used where, does not provide further insights due to lexical constraints of the individual target verbs, e.g., the combination of *entristir-se* and ‘with’ or *alegrar-se* and ‘of’. As a whole, it therefore appears that neither the presence nor value of pre-NON-EXP prepositions are worthy of further investigation within the data of the current study.

6 Discussion

6.1 Implications for Research Questions

Summarizing the findings reported above, each of the three research questions proposed in 2.3 will now be addressed individually:

1. Within each investigated language, how do the selected object-experiencer psych verbs behave similarly and discrepantly regarding annotated morphosyntactic parameters, and are these patterns similar or discrepant across languages?

Two parameters were identified for which there are target verb-dependent trends which appear parallel in both languages. These were P2 (morphosyntactic realization of the NON-EXP) and P6 (tense). For one parameter – P1 (voice) – target verb-dependent trends were identified in both languages, however the language-internal trends are partially discrepant. For all remaining parameters (P3, P4, P5, P7), no target verb-dependent trends were identified in either language.

As such, in the data at hand, the speakers treated verbs differently from one another regarding the NON-EXPS, tense, and voice, indicating that object-experiencer psych verb constructions vary in some morphosyntactic parameters depending on the verb at hand. In most cases, the languages exhibit similar trends when it comes to language-internal target verb distributions, showcasing that the target verb-dependent trends identified are not random, but rather systematic across both languages. This highlights that speakers in both languages do not treat all object-experiencer psych verbs equally.

2. Where do Catalan and Spanish, when compared, show similar vs. discrepant trends regarding the morphosyntactic parameters in general, i.e., across object-experiencer psych verbs?

Only two parameters were treated discrepantly depending on the language: P1 (voice) and P6 (tense). As aforementioned, the dissimilarities in tense are due to contrasting inventories and are therefore not of further interest, leaving voice to be the only parameter which is language-dependent. The take-aways from this research question are twofold: First, it is evident that investigating the morphosyntactic parameters of psych verb constructions is senseful when analyzing target verb-dependent trends within or across languages, but not when comparing languages across all target verbs. Second, it underlines that voice preferences in the Romance psych alternation are language-specific as opposed to

general, fueling questions about the motivators within each language for the trends to be different.

3. Within each investigated language and across both, which – if any – of the morphosyntactic parameters demonstrate a relationship with the realization of voice in the psych alternation?

While the parameters other than voice did not deliver significant results when comparing languages, they do when tested in covariation with voice. All parameters demonstrate a relationship with voice. While this was not surprising due to syntactic or lexical constraints for P4 (order of experiencer and target verb), P5 (part of speech of the target) or P7 (prepositions), there are compelling results for the remaining three parameters. In P2 (morphosyntactic realization of the NON-EXP), the preferred subtypes of clausal arguments differ depending on voice. When combined and compared with nominal arguments, however, there is no covariation. In P3 (grammatical person of the experiencer), first person is preferred in active voice constructions, whereas third person is preferred in pronominal voice constructions. In P6 (tense), simple present is preferred in active voice constructions, whereas perfect present is preferred in pronominal voice constructions.

If – as reflected above – trends in voice preference in the psych alternation are language-specific, the results of this paper indicate that the parameters of NON-EXP realization, grammatical person of the experiencer and tense ought to be examined in order to identify the properties which condition the realization of the psych alternation within a language.

Finally, the results of this study lead to three additional considerations from the research questions at hand. Firstly, it appears that the target verb *molestar-se* is granted special treatment in both languages in several parameters; this leads to questions on if ‘to annoy’ has a sort of unique status within the domain of psych verb constructions. Secondly, it is clear that *entristir-se* is different from the other target verbs regarding the NON-EXPS; this leads to questions on how different emotions are triggered by events vs. by the causers of said events. Thirdly, the analyses highlight that it is senseful to consider the clausal NON-EXPS both as a whole and separated into subtypes. These considerations pose implications for future research, as considered in the following.

6.2 Research Outlook

Both the results as well as some limitations of this study pose an array of implications for future research. Firstly, it is evident that employing elicitation methodology in investigations of the psych alternation and psych verb constructions generates novel insights and could be employed broadly in this field. As such, the methods used in this study can be further developed. It is possible that some of the effects documented here are subject to stimuli effects, hence future studies could adapt the stimuli. For one, the order of items could be changed to test if the partial special treatment of *molestar-se* seen is a result of its being first in the set. Similarly, different sketches could be used to verify that the target verb-specific results are rooted in the verbs themselves and not in the drawings they were paired with. New sketches could furthermore be developed to explore additional target verbs. Further uses of this methodology could consider removing the reflexive clitic in parentheses in the stimulus labels, as its presence could foster a biased increase in the use of pronominal voice. Additionally, the static stimuli employed in this study could be replaced or supplemented by dynamic stimuli in the form of videos. This could lead to new insights, such as regarding the interplay of voice and tense / aspect. Not all possible properties were explored in this study and future investigations could construct stimuli to elicitate data on other morphosyntactic properties, such as animacy of the NON-EXP, conforming with other work, e.g., by Rott and Verhoeven (2019) and effects reported by Verhoeven (2017) and Pijpops and Speelman (2017) for Germanic languages. Wiskandt et al. (2023b) argue animacy plays an important role in psych verb constructions in a cross-Romance perspective. Finally, entirely other forms of visual stimuli could be employed, such as storyboards, and spoken as opposed to written data could provide novel insights.

In part, future research can also counteract limitations of this study. Considerably the largest limitation at play is the limited amount of Spanish data in comparison to Catalan data. Research with larger samples in both languages, but especially Spanish, may shed clearer light on trends reported here. These methods could also be employed in other Romance languages. Future samples should additionally be constructed in a more sociodemographically representative manner; due to the project's parameters, the participants of this study exhibit mainly homogeneous make-up regarding age and educational background. This impedes investigations of the sociodemographic factors possibly involved in the psych alternation and psych verb constructions, which may also be a factor. Furthermore, no metadata was collected on the mono- or bilingual Catalan / Spanish L1 status of the participants. Collecting this in future research would facilitate

investigating potential effects of L1 on the realization of psych verb constructions.

There are further open questions from the results and supplemental considerations for future research. One of these stems from emotional psychological theory; in addition to previous reflections regarding eventual vs. personal causality of emotion triggering, emotional intensity itself could be considered. This could, for example, surround sketches in which the facial expressions of the experiencers are scaled from slightly to extremely emotional, distributed to different participant groups. This could also explore the seemingly unique status of *molestar-se*. Another consideration is that although covariation is tested, causality could not be, therefore directionality of effects in covariation with voice is speculative. More large-scale and crosslinguistic studies are required to determine if, for example, tense / aspect motivates voice or vice versa. Along similar lines, investigating the effects found in this paper for languages exhibiting other alignments systems would test the universality of such effects. Finally, at this time, an additional perspective which cannot be analyzed is that of language contact. Diachronic and longitudinal investigations may elucidate the effect the region's bilingualism has on voice alteration over time.

7 Conclusion

This study used elicitation methodology to investigate the psych alternation as well as psych verb constructions in general in Catalan and Spanish varieties spoken on Mallorca. In doing so, it was found that voice, the realization of the NON-EXP and tense are verb-dependent. The phenomenon of psych alternation appears to be a language-dependent one in the elicited data, where each language clearly demonstrates its own preference for voice. Covariation between voice and the realization of the NON-EXP, the grammatical person of the experiencer argument and tense was also discovered. It is clear that the employment of elicitation methodology in this domain can generate novel insights and a more holistic understanding of the phenomenon; the results postulated in this paper contribute to findings on voice alternation in Romance and - in a broader sense - the interface of language and emotion.

Glossing Abbreviations

1 = first person
2 = second person
3 = third person
DAT = dative
DEF = definite
DET = determiner
F = feminine
FUT = future
INDF = indefinite
INF = infinitive
M = masculine
NEG = negative
OBJ = object
PL = plural
POSS = possessive
PRO = pronoun
PST = past
PTCP = participle
REFL = reflexive
SBJ = subject
SBJV = subjunctive
SG = singular

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Appendix

Table 9 Total and relative frequencies of annotation values: alegrar(-se) (Catalan)

Parameter	Label	Total frequency	Relative frequency
P1	a	16	27%
	p	44	73%
P2	n	17	28%
	c	33	55%
	c_b	9	27% of c; 15% of total
	c_w	12	36% of c; 20% of total
	c_t	11	33% of c; 18% of total
	c_vp	1	3% of c; 2% of total
	c_o	0	0%
	y	6	10%
P3	n/a	4	7%
	f	11	18%
	s	0	0%
	t	48	80%
P4	n/a	1	2%
	e	54	90%
	v	5	8%
P5	n/a	1	2%
	ver	60	100%
P6	adj	0	0%
	sp	22	37%
	pp	0	0%
	pfp	21	35%
	fut	1	2%
	psub	1	2%
	spi	0	0%
	ipp	11	18%
	inf	4	7%
P7	no	48	80%
	yes	12	20%
	per	5	42% of yes; 8% of total
	de	5	42% of yes; 8% of total
	amb	2	17% of yes; 3% of total

Table 10 Total and relative frequencies of annotation values: enfadar(-se) (Catalan)

Parameter	Label	Total frequency	Relative frequency	
P1	a	15	23%	
	p	49	77%	
P2	n	19	30%	
	c	37	58%	
	c_b	23	62% of c; 36% of total	
	c_w	6	16% of c; 9% of total	
	c_t	3	8% of c; 5% of total	
	c_vp	4	11% of c; 6% of total	
	c_o	1	3% of c; 2% of total	
	y	3	5%	
n/a	5	8%		
P3	f	11	17%	
	s	1	2%	
	t	51	80%	
	n/a	1	2%	
	e	62	97%	
P4	v	1	2%	
	n/a	1	2%	
P5	ver	54	84%	
	adj	10	16%	
	sp	21	33%	
	pp	0	0%	
	pfp	23	36%	
P6	fut	0	0%	
	psub	1	2%	
	spi	1	2%	
	ipp	17	27%	
	inf	1	2%	
P7	no	per	44	69%
	yes	a	20	31%
		amb	4	20% of yes; 6% of total
			2	10% of yes; 3% of total
			14	70% of yes; 22% of total

Table 11 Total and relative frequencies of annotation values: *entristir*(-se) (Catalan)

Parameter	Label	Total frequency	Relative frequency
P1	a	21	33%
	p	42	67%
P2	n	4	6%
	c	49	78%
	c_b	26	53% of c; 41% of total
	c_w	10	20% of c; 16% of total
	c_t	8	16% of c; 13% of total
	c_vp	4	8% of c; 6% of total
	c_o	1	2% of c; 2% of total
	y	7	11%
P3	n/a	3	5%
	f	15	24%
	s	0	0%
	t	48	76%
P4	n/a	0	0%
	e	63	100%
	v	0	0%
P5	n/a	0	0%
	ver	53	84%
P6	adj	10	16%
	sp	25	40%
	pp	0	0%
	pfp	25	40%
	fut	1	2%
	psub	0	0%
	spi	0	0%
	ipp	12	19%
	inf	0	0%
P7	no	57	90%
	yes	6	10%
	per	2	33% of yes; 3% of total
	a	2	33% of yes; 3% of total
	amb	2	33% of yes; 3% of total

Table 12 Total and relative frequencies of annotation values: molestar(-se) (Catalan)

Parameter	Label	Total frequency	Relative frequency
P1	a	38	60%
	p	25	40%
	n	18	29%
	c	41	65%
	c_b	20	49% of c; 32% of total
P2	c_w	0	0%
	c_t	21	51% of c; 33% of total
	c_vp	0	0%
	c_o	0	0%
	y	2	3%
	n/a	2	3%
	f	16	25%
P3	s	1	2%
	t	45	71%
	n/a	1	2%
P4	e	59	94%
	v	3	5%
	n/a	1	2%
P5	ver	53	84%
	adj	10	16%
P6	sp	38	60%
	pp	5	8%
	pfp	11	17%
	fut	0	0%
	psub	0	0%
	spi	1	2%
	ipp	8	13%
	inf	0	0%
	no	53	84%
P7	yes	10	16%
	per	1	10% of yes; 2% of total
	amb	9	90% of yes; 14% of total

Table 13 Total and relative frequencies of annotation values: alegrar(se) (Spanish)

Parameter	Label	Total frequency	Relative frequency
P1	a	8	57%
	p	6	43%
P2	n	3	21%
	c	10	71%
	c_b	1	10% of c; 7% of total
	c_w	0	0%
	c_t	6	60% of c; 43% of total
	c_vp	3	30% of c; 21% of total
	c_o	0	0%
	y	1	7%
	n/a	0	0%
	f	7	50%
P3	s	0	0%
	t	7	50%
	n/a	0	0%
P4	e	14	100%
	v	0	0%
	n/a	0	0%
P5	ver	12	86%
	adj	2	14%
P6	sp	8	57%
	pp	0	0%
	pfp	4	29%
	pt	2	14%
	no	8	57%
P7	yes	6	43%
	a	2	33% of yes; 14% of total
	de	2	33% of yes; 14% of total
	por	2	33% of yes; 14% of total

Table 14 Total and relative frequencies of annotation values: enfadar(se) (Spanish)

Parameter	Label	Total frequency	Relative frequency
P1	a	6	40%
	p	9	60%
P2	n	4	27%
	c	9	60%
	c_b	4	44% of c; 27% of total
	c_w	1	11% of c; 7% of total
	c_t	2	22% of c; 13% of total
	c_vp	2	22% of c; 13% of total
	c_o	0	0%
	y	0	0%
	n/a	2	13%
	f	6	40%
P3	s	0	0%
	t	9	60%
	n/a	0	0%
P4	e	15	100%
	v	0	0%
	n/a	0	0%
P5	ver	13	87%
	adj	2	13%
P6	sp	5	33%
	pp	0	0%
	pfp	7	47%
	pt	3	20%
	no	11	57%
P7	yes	4	43%
	con	3	75% of yes; 20% of total
	por	1	25% of yes; 7 of total

Table 15 Total and relative frequencies of annotation values: *entristecer(se)* (Spanish)

Parameter	Label	Total frequency	Relative frequency
P1	a	7	50%
	p	7	50%
P2	n	1	27%
	c	13	60%
	c_b	6	46% of c; 43% of total
	c_w	0	0%
	c_t	5	38% of c; 36% of total
	c_vp	2	15% of c; 14% of total
	c_o	0	0%
	y	0	0%
	n/a	0	0%
	f	5	36%
P3	s	0	0%
	t	9	64%
	n/a	0	0%
P4	e	13	93%
	v	1	7%
	n/a	0	0%
P5	ver	11	79%
	adj	3	21%
P6	sp	7	50%
	pp	0	0%
	pfp	4	29%
	pt	3	21%
P7	no	12	86%
	yes	21	14%
	a		50% of yes; 7% of total
	por	1	50% of yes; 7% of total

Table 16 Total and relative frequencies of annotation values: molestar(se) (Spanish)

Parameter	Label	Total frequency	Relative frequency
P1	a	12	80%
	p	3	20%
P2	n	5	33%
	c	10	67%
	c_b	5	50% of c; 33% of total
	c_w	0	0%
	c_t	4	40% of c; 27% of total
	c_vp	0	0%
	c_o	1	10% of c; 7% of total
	y	0	0%
	n/a	0	0%
	f	5	33%
P3	s	0	0%
	t	10	67%
	n/a	0	0%
P4	e	11	73%
	v	4	27%
	n/a	0	0%
P5	ver	10	67%
	adj	5	33%
P6	sp	10	67%
	pp	3	20%
	pfp	0	0%
	pt	2	13%
P7	no	14	93%
	yes	1	7%
	con	1	100% of yes; 7% of total

From Impersonal to Pronominal Psychological Verbs

A Comparative Study of Latin and Catalan

Jaume Mateu

Universitat Autònoma de Barcelona, España

Carles Royo

Universitat Rovira i Virgili, España

Abstract Latin impersonal psychological verbs, whose experiencer in the accusative case is hierarchically prominent over the stimulus in the genitive case, involve stative causative constructions. A null *A(mbient)-Causer* pronoun is posited to act as their external argument. In the transition from Latin to Romance languages such as Catalan the reflexive pronoun was grammaticalized as a middle marker, which attracted verbs to the personal construction. We show that Lat. non-agentive impersonal psychological verbs correspond to Cat. anticausatives, whereas more agentive ones correspond to autocausatives.

Keywords Anticausatives. Autocausatives. Catalan. Impersonal psychological verbs. Latin.

Index 1 Latin Impersonal Psychological Verbs. – 2 Latin Impersonal Psych Verbs Are Causative Stative Predicates. – 3 Diachronic Evolution of Latin. – 4 Comparison with Sentences from Modern Catalan. – 5 Argument Structure of Sentences with Catalan Verbs. – 6 Conclusions.

1 Latin Impersonal Psychological Verbs

Latin impersonal psychological verbs like the ones exemplified in (1)¹ are interesting for linguistic theory since they appear to pose non-trivial problems for the so-called Burzio's Generalization (namely, a verb which does not assign an external theta-role to its subject does not assign structural accusative Case to an object and conversely) and for Chomsky's Extended Projection Principle (EPP), whereby all clauses must contain an NP/DP in the subject position.² The existence of this impersonal class shows that the range of descriptive patterns of psychological verbs goes beyond the typical tripartite classification (namely, experiencer subject verbs like *timere* 'fear', experiencer direct object verbs like *perturbare* 'embarrass' and experiencer indirect object verbs like *placere* 'appeal'), which can be traced back to Belletti and Rizzi's (1988) seminal work. See Giusti and Iovino (2019) for a recent descriptive comparison of Latin psychological verbs with the Italian ones.

- (1) *me tamen meorum factorum... numquam... paenitebit*
me.ACC however my.GEN.PL fact.GEN.PL never regret.FUT.3SG
'However, I will never regret my deeds' (Cic. *Catil.* 4, 20)
- (2) *neque te mei miseret...*
nor you.ACC.SG me.GEN.SG feel_pity.PRES.3SG
'You don't have pity for me' (Cic. *Tusc.* 1, 106)
- (3) *ut me non solum pigeat stultitiae*
CONJ me.ACC not only irk.PRES.SBJV.3SG stupidity.GEN.SG
meae, sed etiam pudeat
my.GEN.SG but also shame.PRES.SBJV.3SG
'so that I am not only upset but also am ashamed of my silliness' (Cic. *Dom.* 29)

¹ Following Pinkster (2015, 132), we include the deponent verb *veretur* 'it has respect' into the list of impersonal psychological verbs (see (5)). Several derivatives from these verbs such as *subpaenitet* 'it regrets slightly', *commiseritur* 'it feels compassion for', *dispudet* 'it makes greatly ashamed', *subpudet* 'it makes slightly ashamed', *taedescit* 'it grows tiresome', *pertaedet* 'it wearies', i.a., can also be added to this list. E.g. see Matasović 2013, 93 fn. 1 and Barðdal et al. 2020, 30, i.a.

² See Baños (2003), Mangialavori (2013, 21-31), Matasović (2013), Tur-Altarriba (2013), Cavallo (2014, 106-46), Fedriani (2013; 2014a; 2014b, 119-89), among others, for a description of the linguistic properties of these impersonal psychological verbs. Cuzzolin and Napoli (2009, 76), Lühr (2011, 327) and Matasović (2013, 101-3) point out that this type of construction, which is found in Latin and Celtic, is rare in other Indo-European languages.

- (4) *me civitatis morum piget*
me.ACC city.GEN.SG habit.GEN.PL feel_grieved.PRES.3SG
taedetque
feel_annoyed.PRES.3SG-and
'I am sick and tired of the manners of the city' (Sall. *Iug.* 4, 9)
- (5) *Si tui veretur te progenitoris, ...*
if you.GEN.SG have_respect.PRES.PASS.3SG you.ACC.SG ancestor.GEN.SG
'If you have respect for your ancestor,...' (Acc. *trag.* 76)

These psychological verbs can also appear in personal constructions when the subject is a neuter pronoun: e.g. *quod* in (6a) and *haec* in (6b). In these examples the subject is marked in the nominative case and is interpreted as the stimulus. However, as pointed out by Pinkster (2015, 133), "instances of 'personal' forms with an explicit cause constituent as subject are rare and mostly Late".

- (6) a. *Nimio id quod pudet facilius*
much this.NOM.N.SG REL.NOM.N.SG shame.PRES.3SG easily.COMP
fertur quam id quod
bear.PRES.PASS.3SG than this.NOM.N.SG REL.NOM.N.SG
piget
irk.PRES.3SG
'That which causes shame is much more easily endured than that which causes displeasure' (Plaut. *Pseud.* 281)
- b. *Non te haec pudet?*
not you.ACC.SG this.NOM.N.PL shame.PRES.3PL
'Don't these things shame you?' (Ter. *Ad.* 754)

Furthermore, these verbs can also appear in constructions where the subject is an infinitival or finite clause: see (7a) and (7b), respectively. Fedriani (2013, 213-14) notes that, "if the stimulus is conveyed by an infinitive clause, its subject is usually co-referent with the experiencer and this results in a situation of conceptual identity between the experiencer and the causer of the experience which he repents".³

³ As pointed out by an anonymous reviewer, one may wonder why a gerund in the genitive case could not instead be used in (7a): e.g. *Me paenitet vivendi*_{GEN}. As far as we know, this pattern is not attested nor is commented on in Latin grammars at all. Incidentally, the very same question was, in fact, raised by the first author of this paper in 2019 in the Stack Exchange network devoted to the Latin language: <https://latin.stackexchange.com/questions/12655/gerundial-arguments-selected-by-verbs-taking-genitive-e-g-memento-moriendi>.

- (7) a. *me, mi Pomponi, valde paenitet vivere*
me.ACC my.VOC Pomponius.VOC much regret.PRES.3SG live.INF
'my dear Pomponius, I am very sorry to be alive' (Cic. Att. III, 4)
- b. *tam diu... te quantum proficias*
as_long_as you.ACC.SG so_much_as advance.PRES.SBJV.2SG
non paenitebit.
not regret.FUT.3SG
'as long as you are not dissatisfied with the progress you are making'
(Cic. Off. I, 2)

The experiencer accusative in these impersonal psychological verbs has been said to be non-structural (e.g. see Migliori 2016, 77) but can be argued to be *structural*. As shown by Mateu and Royo (2024, 423), this proposal can be exemplified in (8), where the case of the experiencer is changed from accusative to dative in the context of the gerundival form *paenitendum (esse)*. To put it more concisely, the experiencer expressed in the accusative case in the simplified example in (9a) changes to dative in the gerundival construction in (9b), i.e. in the so-called 'passive periphrastic' in traditional Latin grammars. This change can be taken as evidence for the structural nature of the accusative argument of these impersonal psychological verbs. Were it non-structural, one would expect that the accusative case could be preserved, contrary to fact: in contrast to (9b), the sequence ***nos***_{ACC} *paenitendum est consilii nostri* is ungrammatical.

- (8) *Consilii nostri, ne si*
resolution.GEN.N.SG our.GEN.N.SG NEG if
quidem qui id secuti
indeed REL.NOM.M.PL this.ACC.N.SG follow.PERF.PASS.PTCP.NOM.M.PL
non eos sunt non paeniteret,
not this.ACC.M.PL be.PRES.3PL not regret.IPFV.SBJV.3SG
nobis paenitendum putarem.
us.DAT regret.GERNDV.ACC.N.SG think.IPFV.SBJV.1SG
'As for our line of conduct, we ought not in my opinion to regret it even if those who took a different line were not regretting that' (Cic. Fam. 9.5.2)
[Transl. by Pinkster (2015, 297, ex. (g))]
- (9) a. *Nos paenitet consilii nostri.*
us.ACC regret.PRES.3SG resolution.GEN.N.SG our.GEN.N.SG
'We regret our resolution'
- b. *Nobis paenitendum est consilii nostri.*
us.DAT regret.GERV.NOM.N.SG is resolution.GEN.N.SG our.GEN.N.SG
'We must regret our resolution'

It is also worth pointing out that examples like (10) and (11), which are drawn from Baños (2003, 63-4), can be taken as evidence for the “quirky subject” nature of the experiencer with these impersonal psychological verbs. In (10) the impersonal verb *paenitet* is juxtaposed with other personal verbal forms (*erravi, feci, confugio*, etc.), whereas in (11) this impersonal verb appears in an infinitival construction that is juxtaposed with other infinitives. As is well-known, the subject of the latter can be expressed in the accusative case (e.g. *sapientem*_{ACC} ‘the wise man’ in (11); cf. the so-called ‘Accusativus cum Infinitivo’ construction in traditional Latin grammars). As shown below, our analysis will be claimed to capture this syntactic fact by positing that in these atypical cases of coordination/juxtaposition the experiencer argument, which occupies the specifier position of an inner verbal predication, turns out to be coindexed with a null pronoun in the upper subject position.

- (10) *erravi, temere feci, paenitet, ad clementiam*
 err.PR.F.1SG recklessly act.PR.F.1SG regret.PRES.3SG to clemency.ACC.SG
tuam confugio, delicti ueniam peto, [...]
 your.ACC.SG take_refuge.PRES.1SG fault.GEN.SG mercy.ACC.SG ask.PRES.1SG
 ‘I was wrong, I acted recklessly, I regret it, I take refuge in your clemency, I ask for mercy with my fault’ (Cic. *Lig.* 30)

- (11) *Sapientem nihil opinari, nullius rei paenitere,*
 sage.ACC.SG nothing opine.PASS.INF any.GEN.SG thing.GEN.SG regret.INF
nulla in re falli, sententiam mutare
 any.ABL.SG in thing.ABL.SG mistake.PASS.INF view.ACC.SG change.INF
numquam.
 never
 ‘that the wise man has no opinion, regrets nothing, makes no mistakes, and never changes his mind’ (Cic. *Mur.* 61)

As for the genitive constituent that typically, but not always (e.g. it is absent in (10)), appears with these impersonal verbs, it can be said to be, at least conceptually speaking, required by the psychological predicate: it expresses the stimulus associated to the emotion. However, in the next section we, following Cavallo (2014, 142), claim that, syntactically speaking, it is a low adjunct in typical examples like (1)-(5). In less typical examples like (12) the conceptual stimulus of the emotion can also be syntactically expressed through an upper (in this case, conditional) adjunct.

- (12) *ceteros* *pudeat* *si* *qui* *se*
the_other.ACC.PL feel_shame.PRES.SBJV.3SG if REL.NOM.PL REFL.ACC
ita *litteris* *abdiderunt* *ut* *nihil* *possint*
so letter.ABL.PL hide.PRF.3PL that nothing.ACC be_able.PRES.SBJV.3PL
ex *eis* *neque ad communem* *adferre* *fructum*,
from this.ABL.PL nor to common.ACC.SG to-bring.INF profit.ACC.SG
neque in aspectum *lucemque* *proferre*
nor into sight.ACC.SG light.ACC.SG-and forth-bring.INF
‘Let others be ashamed if some have buried themselves in books without being
able to produce anything out of them for the common advantage or anything
which may bear the eyes of men and the light’ (Cic. *Arch.* 6,12)

2 Latin Impersonal Psych Verbs Are Causative Stative Predicates

In this section, we briefly review Matasović’s (2013) proposal that the Latin impersonal verbs described in Section 1 express causative stative predicates. As we will see, his proposal provides an interesting explanation of why the experiencer is marked in the accusative case with these verbs. Finally, we will provide a syntactic account of their argument structure.

Matasović (2013, 106-8) claims that the argument structure pattern of Latin impersonal psychological verbs is a *blend* of the argument structure of causative verbs, on the one hand, and of the argument structure of stative verbs, on the other. According to him, this merge was motivated by the following morphological fact, i.e. the P(roto)I(ndo)E(uropean) causative and stative suffixes merged as Latin *-ē-*, which is the 2nd conjugation suffix involved in all these impersonal verbs.

Latin verbs with case-frames like *paenitet* belong to the second conjugation, which includes the PIE causatives (e.g. PIE **mon-eye-ti* ‘admonishes’ > Lat. *monet*) and statives (PIE **tak-eh₁-ti* ‘is silent’ > Lat. *tacet*). This is the consequence of the regular sound changes (**eh₁* > *ē*, **eye* > *ē*) by which the stative and causative suffixes merged as Latin *-ē-*. We argue that the irregular case-frames of the Latin bivalent statives are innovations based on the analogy with the case-frames of causative verbs, which had the Causee argument in the accusative case. (Matasović 2013, 93)

However, we would like to point out that Matasović’s (2013, 106-8) paraphrase of Latin impersonal psych verbs (i.e. “Source (Gen) causes the sensation X on experiencer (Acc)”) is based on his wrong premise that the Stimulus has structural preeminence over the experiencer.

Rather, as noted by Devine and Stephens (2013, 123), “the stimulus is still lower in the event structure than the experiencer [...] That is why a reflexive can be bound by the object argument”: see the examples in (13).

- (13) a. senectutis eum suae paeniteret
old_age.GEN.SG this.ACC.SG POSS.GEN.SG regret.IPFV.SBJV.3SG
‘He would not regret his old age’ (Cic. *Cato* 19)
- b. quos libidinis infamiaequae suae neque
REL.ACC.PL desire.GEN.SG infamy.GEN.SG.-and POSS.GEN.SG nor
pudeat neque taedeat
shame.PRES.SBJV.3SG nor upset.PRES.SBJV.3SG
‘Who are neither ashamed nor upset by their own licentious behavior and bad reputation’ (Cic. *Verr.* 1, 1, 35)

The proposal that the Latin impersonal psychological verbs are causative leads us to claim that there is a null Causer in their subject position. In particular, following Pesetsky’s (1995, 112) definition of so-called *A(mbient)-Causer* (i.e. “A-Causer is simply a Causer of a predicate that limits the argument to ambient pronouns -as a matter of s-selection”),⁴ we claim that his analysis of the Russian impersonal verb in (14a) can also hold for the Latin one in (14b).

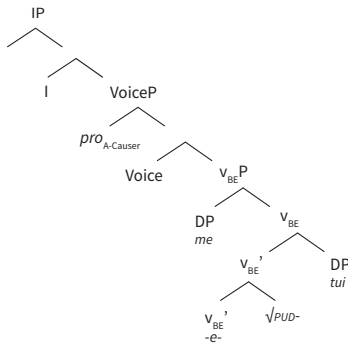
- (14) a. Menja tošnit. (Russian)
me.ACC nauseate.3SG
‘I am nauseated’ (ex., gloss and transl. from Pesetsky 1995, 311 fn. 119)
- b. Pudet me tui.
shame.3SG me.ACC you.GEN.SG
Lit.: ‘It causes me to be ashamed of you’

⁴ Pesetsky (1995, 111-13) put forward an interesting meaning connection and structural parallelism between the subject of impersonal meteorological verbs like *It rains* and that of impersonal psychological predicates like *It’s boring in there*. This linguist expounds his following insightful proposal in a section that is properly entitled as “Emotional Weather”: “Emotions like surprise, annoyance, and amusement are indeed like the weather in a number of respects. They are ‘global’ (ambient), affecting one’s perceptions as well as actions. They are transitory. They are somewhat unpredictable in their onset, intensity, and duration. Most important for our purposes, the proximate cause of both weather and emotions can be viewed as a force of nature [...]. One possibility might be a requirement that the lexical item used to express natural forces in meteorological and psychic weather sentences must somehow be *minimally expressive*. An appropriate notion of minimal expressivity might explain why the form used for meteorological natural forces is (in languages that use the strategies seen in English, French, and Italian) generally identical to that used for expletives: third person, neuter if available (otherwise masculine), null *pro* if available (otherwise an unstressed pronoun)” (Pesetsky 1995, 111-12).

Accordingly, the combination of these two assumptions – namely, (i) Devine and Stephens’s (2013, 123) claim that the stimulus (i.e. Matasović’s ‘Source’) is hierarchically lower than the experiencer and (ii) Pesetsky’s (1995) proposal that “A(mbient)-Causer” is involved in certain impersonal constructions – leads us to argue that Matasović’s (2013) proposal, namely, “Source (Gen) causes the sensation X on experiencer (Acc)”, must be replaced by the following one: ‘A(mbient)-Causer *pro* causes the experiencer (Acc) to have the sensation X (root) from Y (Gen)’.

Our syntactic analysis of (14b), which is associated to the meaning ‘A-Causer *pro* causes the experiencer (*me*_{ACC}) to have the sensation X (*√pud-*) from Y (*tui*_{GEN})’, is depicted in (15). The true external argument in (15) is minimally expressed (see fn. 4) by a null Causer and is introduced by the Voice head (Kratzer 1996; Alexiadou et al. 2015, i.a.) Furthermore, following Cuervo (2003; 2014a) and Royo (2017), i.a., we assume that verbs are formed in the syntax by combining a lexical root with a verbal head *v*, which can present three flavors (e.g. see Folli, Harley 2005). Depending on the combination of the root with the verbal flavor, three basic eventive types can be obtained: activity (*v*_{DO}), change (*v*_{GO}) or state (*v*_{BE}). As shown in (15), the last type is the one involved in the syntactic representation of Latin impersonal verbs like *pudet* in (14b). Finally, it is worth pointing out that the constituent in the genitive case *tui* (lit. ‘of you’) is represented in (15) as a low adjunct to the inner verbal structure (see Cavallo 2014, 142 for a related proposal and Mateu, Royo 2024, 424-5, 432 for relevant discussion). It could also in principle be claimed to be syntactically expressed as the complement of the psych root *√pud-*. However, see Acedo-Matellán, Mateu 2014 and Alexiadou 2014a, i.a., for the claim that roots do not take arguments/complements in the syntax. Alternatively, as pointed out by an anonymous reviewer, it could also be an adjunct to the root, developing the content of the feeling of shame.

(15)



Following Cuervo (2003; 2014a), we claim that in stative predicates the root $\sqrt{pud-}$ is generated in the complement position of v_{BE} , to which it is incorporated (or conflated in Hale and Keyser's 2002 terms; see also Mateu 2017). In line with mainstream Distributed Morphology approaches, we assume that the root $\sqrt{pud-}$ is acategorial but see Bouchard 1992, 33 fn. 10 for the insightful proposal (attributed by him to Roger Higgins, p.c.) that psychological verbs are denominal in IE. Interestingly, the "denominal" nature of the root can be said to receive some support from the following derivations put forward by Matasović (2013, 98-9):⁵

Lat. *miseret* 'feel sorry for' is derived from *miser* 'poor, unfortunate' [...]. Lat. *paenitet* 'cause to regret' is derived from *paene* 'almost, practically'. It appears to contain a root **payn-*, the original meaning of which should have been 'lack' [...]. Lat. *piget* 'affect with revulsion, irk' is from the same root as *piger* 'torpid, inactive' [...]. Lat. *pudet* 'be ashamed of' is derived from the same stem as *pudor* 'shame, decency' [...]. Lat. *taedet* 'be tired of' is probably connected to *taeter* 'foul, horrible'.

3 Diachronic Evolution of Latin

Over time, Latin impersonal psychological verbs evolved to form personal sentences with an experiencer subject in the nominative case. This evolution was gradual and constant: it was first noted in the classical age and had been completed by the third century AD, when all the following structures coexisted: the impersonal active (16a), the personal active (16b), the personal deponent (16c) and the reflexive (17) (see Baños 2003, 59-60, for the examples in (16)).⁶

- (16) a. *iuravit dominus nec paenitebit eum*
swear.PRF.3SG lord.NOM.SG and_not regret.FUT.3SG he.ACC
'The Lord has sworn it and will not change His mind' (Itala, *Psalm*. 109.4)

⁵ Here "denominal" should be understood in the traditional sense put forward by Latin grammarians, i.e. there are two kinds of *nomina* 'nouns': *nomen substantivum* (lit. 'substantive noun') and *nomen adjectivum* (lit. 'adjectival noun'). Unsurprisingly, declension is then expected to apply to both types of *nomina*: substantives and adjectives. See Mateu 2002; Kayne 2008; Fábregas 2020, i.a., for a reappraisal of this traditional definition of adjectives.

⁶ Authors such as Woodcock (1959, 167) and Cavallo (2014) point out that in the evolution of most of these verbs from Latin the impersonal deponent construction is also possible. However, there is no record of the use of the impersonal deponent with *paenitetur* (see Woodcock 1959, 167; Baños 2003, 60).

- b. *si* *paenitebit* *deus*
if regret.FUT.3SG god.NOM.SG
'If God will change His mind' (Itala, *Ion.* 3.9)
- c. *iurauit* *deus* *et* *non* *paenitetur*
swear.PRF.3SG god.NOM.SG and not regret.PRES.IND.PASS.3SG
'God has sworn it and does not change His mind' (Itala, *Psalm.* 109.4,
cod. 136 Cas.)
- (17) *ubi* *dominus* *paenituit* *se*
when lord.NOM.SG regret.PRF.3SG REFL.ACC.3SG
'When the Lord changed His mind' (Vulg., *I Reg.* 15.11)

In Late Latin, the coexisting impersonal active forms remained marked structures for semantic reasons since they encoded the lack of volition in the experiencer (see Cavallo 2014, 125). As well as the personal active form, it is significant that in Late Latin there was a tendency for the deponent morphology of Latin impersonal psychological verbs to become more widespread (see Matasović 2013, 95; Cavallo 2014, 131).

The semantics of the experiencer in the personal deponent construction, in the nominative case, has some quite significant features. On the one hand, the experiencer is affected by verbal predication (see Baños 2003, 60) insofar as it is an internal subject in the argument structure (see Cavallo 2014; Pinzin 2018). On the other, it resembles an agent since it entails a certain degree of agentivity, intentionality, rational involvement and control over the action of the verb (see Tur Altarriba 2013; Fedriani 2014a; 2014b; Cavallo 2014; Baños 2019), although the extent of this involvement will depend on the verb (see Fedriani 2014a; 2014b). Pinzin (2018, 365) claims that the nominative argument of Latin deponent verbs always merges in an internal position and has two thematic roles, which for sentences that encode a controlled change of state are a holder (the subject of a state) and a doer.

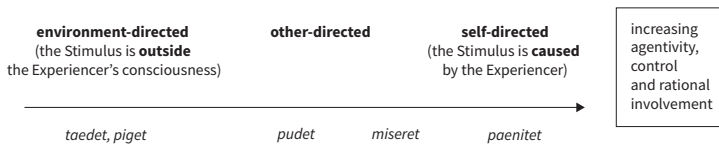
The impersonal active construction of the verb *miseret* exists since Old Latin alongside the personal construction (see Baños 2003, 52 fn. 1; Fedriani 2014b, 154-65; Cavallo 2014, 130-3). According to Tur Altarriba (2013, 250), this phenomenon suggests that the personal constructions that coexist with *miseret* may be one of the factors that catalysed the development of the personal construction in the other four impersonal verbs in this group.

However, other factors may explain this evolution in Late Latin. Fedriani (2014b, 208) mentions two of them. The first factor has to do not only with the progressive personalisation and transitivity of the construction but with the highlighting of the semantic features of the experiencer. According to Fedriani (2014a; 2014b, 198-208), the

semantic properties of these predicates have affected this evolution: the more agentivity, control and rational involvement the sentence's experiencer has, the faster it is; the less agentivity, control and rational involvement the sentence's experiencer has, the slower it is. The verb *paenitet* evolved to the personal form more quickly than the other four verbs, and this personal form was used more frequently as from the second century AD, particularly in the moral texts of Christianity (see Pinkster 2015, 133-4).

For Fedriani, *paenitet* is the verb that has an experiencer with the most agentive features with a *self-directed feeling*, followed by *miseret*, with an *other-directed feeling*. These two verbs share a rational reinterpretation of a past personal experience. In contrast, the verbs that have least control are *piget* and *taedet*, which have an *environment-directed feeling* (i.e. caused by the environment). Meanwhile, the verb *pudet* is halfway between the two extremes, the result of a combination of a *self-directed feeling* (becoming aware of oneself after rationalising an event) and an *environment-directed feeling* caused by an external judgement (imagining oneself to be observed by a potential witness) (18).

(18) Semantic characterization of the *pudet*-type verbs (Fedriani 2014b, 208, fig. 9)



The second factor mentioned by Fedriani is related to another significant phenomenon that has been discussed: in Late Latin, there was a tendency to extend the deponent or middle morphology of these five verbs (see Matasović 2013, 95; Cavallo 2014, 131). And Latin subsequently grammaticalised the reflexive pronoun as a mark of the middle construction (16). This pattern was gradually adopted by a considerable number of new verbs in the Romance languages (in Italian, *affliggersi* 'to grieve', *rammaricarsi* 'to regret', *vergognarsi* 'to feel shame') or by other Romance verbs with an existing lexeme that moved syntactically towards a pronominal intransitive construction with a nominative experiencer (such as *pentirsi* 'to regret', from *paenitet*) (see Fedriani 2014b, 242).

4 Comparison with Sentences from Modern Catalan

Like other studies that have analysed the contrast between sentences containing certain psychological verbs in Latin and the syntax in a modern-day Romance language,⁷ below we compare sentences with these five verbs in Latin with the same verbs in modern Catalan.

Our initial proposal is that, in the move towards the personal construction, the causative semantics of the null pronoun situates this causation in the experiencer, which has some control over the predication expressed by the verb. The experiencer is the active internal cause of the psychological experience (see Royo 2017) and is also affected by it. Both elements in the sentence become coindexed, which facilitates the disappearance of the pronoun since it is identified with the experiencer, which can take nominative case when accessing the specifier of IP. The sentence in Catalan can initially take the following meaning:

- (19) *'Alguna cosa en mi fa {penedir-me / compadir-me / avergonyir-me / afligir-me disgustar-me / shame.INF-REFL.1SG distress.INF-REFL.1SG upset.INF-REFL.1SG fastiguejar-me o avorrir-me} {del / amb el} que sigui.'*
 disgust.INF-REFL.1SG or bore.INF-REFL.1SG of_D with D whatever
 'Something in me makes me {regret / take pity / ashamed / distressed or upset / disgusted or bored} {of / with} whatever'

Of the five verbs, only *paenitet* maintains the lexical root in the corresponding Catalan verb (*penedir-se* 'to regret'). For this reason, we do not make a diachronic study – from the Middle Ages to the present – of the items in Catalan that have inherited the semantics of the corresponding etymons in Latin but compare the syntactic structure of the sentences in Latin, just as we have done in this paper, with the syntactic structure of the sentences with the verbs in modern Catalan that have taken the meaning of each of the Latin verbs.

A common feature of the corresponding verbs in Catalan is that they are all pronominal: *penedir-se* 'to regret' or 'to repent' for *paenitet*, *compadir-se* 'to take pity' or 'to be sorry' for *misereretur*, *afligir-se* or *disgustar-se* 'to get distressed' or 'to get upset' for *piget*, *fastiguejar-se* or *avorrir-se* 'to get disgusted' or 'to get bored' for *taedet*, and *avergonyir-se* 'to be ashamed' or 'to get embarrassed' for *pudet*. What is more, some of these verbs govern an oblique

⁷ See, for example, Batllori 2012; Batllori et al. 2019 and Acedo-Matellán 2013.

complement: *penedir-se de* 'to regret' or 'to repent of', *compadir-se de* 'to take pity on' or 'to be sorry about' and, in some contexts, *avergonyir-se de* 'to be ashamed of' or 'to get embarrassed about'.

There is an interesting correlation between the semantic characterisation of impersonal psychological verbs in Latin (18) (see Fedriani 2013; 2014a; 2014b) and the syntactic behaviour of the corresponding pronominal verbs in Catalan. On the one hand, in Catalan the most agentive verbs (*penedir-se* and *compadir-se*) encode a semantics in which the experiencer both initiates a process (agent) and is affected by it (patient). It has, therefore, two thematic roles: agent and patient (see Royo 2018). Several authors refer to this type of construction as *autocausatives* (see Parry 1998; Pinkster 2015; Pinzin 2018).⁸ On the other, the verbs that are not agentive (*afligir-se/disgustar-se* and *fastiguejar-se/avorrir-se*) are part of *anticausative* sentences (also known as *ergatives*), in which the experiencer is a patient.

We refer to Royo's (2018) evidence for the differentiated characterization of autocausative and anticausative sentences.⁹ Both constructions share a bi-eventive unaccusative structure: they encode an internal subject argument with a patient thematic role, as is shown by both construction's ability to form resultative sentences (20). However, they differ from one another because the subject of an autocausative also presents agentive characteristics, as can be seen from the ability of an autocausative (but not an anticausative) to admit, for example, an imperative sentence (21) or the deontic interpretation of the modal periphrasis in a sequential order of two modals in Catalan such as *haver de + poder* (22). Authors such as Ramchand (2008) and Mateu (2015) argue for the existence of agentive unaccusative sentences, although they do not specifically refer to autocausative constructions. Contrary to Chomsky's (1981) Theta Criterion, Ramchand (2008, 78-9) characterizes the subject of unaccusative agentive sentences as having more than one thematic role.

⁸ Armstrong (2016) uses the term *unergative* to refer to some Spanish pronominal verbs labelled by Masullo (1992) as *antipassives*, even though he is aware that this group of verbs is quite heterogeneous: *aprovecharse (de)* 'to take advantage (of)', *compadecerse (de)* 'to take pity (on)', *deshacerse (de)* 'to get rid (of)', *despedirse (de)* 'to say goodbye (to)', *desquitarse (de)* 'to get even (with)', etc. The psychological verb *compadecerse (de)* shows the heterogeneity of the group because it permits a resulting state construction (*estar* or *quedar compadecido* 'to be pitied'), unlike other predicates mentioned in the list. We regard this to be one of the differences between autocausative sentences, as they are defined here, and antipassives. The former have a bi-eventive structure (see Section §5) and accept a resultative construction; the latter have a mono-eventive structure and do not.

⁹ According to the alternants that they can form, autocausative sentences are labelled in Royo (2018) as SubjExp(pr-prep)_A and SubjExp(pr-prep)_B, and anticausatives are labelled as Subj(i)Exp(pr) and Subj(i)Exp(pr-ci). It should be noted that the argument structure we show for these sentences does not entirely coincide with the one presented in Royo (2018).

- (20) a. L' *Enric* {n' *està* o n' *ha*
D *Enric* PRON_(OF_THAT) *is* or PRON_(OF_THAT) *has*
quedat *penedit* / n' *està* o n' *ha*
turn_out.PTCP regret.PTCP.M.SG PRON_(OF_SB) *is* or PRON_(OF_SB) *has*
quedat *compadit*.
turn_out.PTCP take_pity.PTCP.M.SG
Lit.: 'Enric {has become regretful about sth / has taken pity on sb}'
- b. L' *Enric està* o *ha quedat* {*afligit*
D *Enric is* or *has* turn_out.PTCP distress.PTCP.M.SG
o *disgustat* / *fatiguejat* o *avorrit*.
or upset.PTCP.M.SG disgust.PTCP.M.SG or bore.PTCP.M.SG
'Enric is or has got {distressed or upset / disgusted or bored}'
- (21) a. *Penedeix -te 'n!* / *Compadeix -te 'n!*
regret.IMP.2SG REFL.2SG PRON_(OF_THAT) pity.IMP.2SG REFL.2SG PRON_(OF_SB)
'Regret it! / Take pity on sb!'
- b. **Afligeix -te!* / **Fastigueja 't!*
distress.IMP.2SG REFL.2SG disgust.IMP.2SG REFL.2SG
Lit.: *'Get distressed! / Get disgusted!'
- (22) a. L' *Enric ha de poder* {*penedir -se 'n!*
D *Enric has of be_able.INF regret.INF REFL.3SG PRON_(OF_THAT)*
compadir -se 'n.
pity.INF REFL.3SG PRON_(OF_SB)
'Enric must be able to {regret it / take pity on sb}'
- b. **L' Enric ha de poder* {*afligir -se/ fatiguejar -se*.
D *Enric has of be_able.INF distress.INF REFL.3SG disgust.INF REFL.3SG*
Lit.: *'Enric must be able to get {distressed / disgusted}'

Pudet translates as *avergonyir-se*, which is part of an anticausative construction in the agentive interpretation and an anticausative construction in the non-agentive interpretation. In the terminology used by Pinzin (2018), in anticausative sentences there is a *controlled change of state* and in the anticausatives there is an *uncontrolled change of state*.

4.1 The Verbs *penedir-se* ‘to regret’ and *compadir-se* ‘to take pity’

Of the five Latin verbs, the only lexical predicate that is used in Catalan in the corresponding verb form is that of *penedir-se* ‘to regret’ (from *paenitet*). In line with the higher degree of agentivity, control and rational involvement of the original Latin etymon, the sentences with *penedir-se* (*de*) ‘to regret’ in Catalan encode the semantics of anticausative sentences.

The syntactic structure of the Catalan verb *penedir-se* (*de*) ‘to regret’ expresses reflexivity with the pronoun and introduces the stimulus with a preposition in an unaccusative sentence (23a). The clitic absorbs the accusative case and prevents the stimulus argument from receiving it, which can only be an oblique complement: see Rigau (1994, 33) for Catalan and Pinzin (2018, 357-8) for Italian. On occasion, the absolute construction (23b) can be used.¹⁰

- (23) *penedir-se de* [anticausative construction (a) / absolute use (b)]
- a. *La Maria es penedeix d’ haver-ho fet.*
 D Maria REFL.3SG regret.PRES.3SG of have.INF-it do.PTCP
 (o se ’n penedeix)
 or REFL.3SG PRON_(OF_THAT) regret.PRES.3SG
 ‘Maria regrets having done it’ (or ‘regrets it’)
- b. *~La Maria es penedeix.*
 D Maria REFL.3SG regret.PRES.3SG
 Lit.: ~‘Maria regrets’

If we bear in mind the features of the verbal lexical predicate *compadir-se* (*de*) ‘to take pity (on sb) or to be sorry (about sth)’ which in Catalan has taken on the meaning of the second Latin predicate with a higher degree of agentivity (*miseret*), the sentences with this verb are expected to share the behaviour described for *penedir-se* (*de*): indeed, *compadir-se* (*de*) also forms pronominal sentences with anticausative features and a stimulus introduced by a preposition, which contain an experiencer with two thematic roles, at once an agent and a patient (24a). However, each psychological verb can have different idiosyncratic traits, which show the specificity of each verb and the semantic and syntactic flexibility of psychological verbs (see Royo 2017): unlike *penedir-se* (*de*), *compadir-se* (*de*) has

¹⁰ In some contexts in Catalan, sentences can be formed with the verb *penedir-se* with no prepositional phrase. Rather than a different anticausative alternant, we regard this construction as an absolute use of the verb. Example: *Quan l’altre s’ha penedit* ‘lit.: When the other regretted’ (Torralba 2012, 139, title).

a non-pronominal transitive alternant with an experiencer subject: SubjExp or a Belletti and Rizzi type I verb (1988) (24b).

- (24) *compadir-se de* [autocausative construction (a) / SubjExp construction (b)]
- a. *La Maria es compadeix de la Bet. (o D Maria REFL.3SG pity.PRES.3SG of D Bet or se 'n compadeix)*
REFL.3SG PRON_(OF_HER) pity.PRES.3SG
'Maria takes pity on Bet' (or 'takes pity on her')
- b. *La Maria compadeix la Bet. D Maria pity.PRES.3SG D Bet*
'Maria pities Bet'

4.2 The Verbs *afligir-se/disgustar-se* and *fastiguejar-se/avorrir-se*

At the other extreme, with a lower degree of agentivity, there are the Latin verbs *piget* and *taedet*. Although we could use more verbs as examples, the verbal lexical items in Catalan that have the meaning of these Latin predicates are *afligir-se* or *disgustar-se* for *piget*, and *fastiguejar-se* or *avorrir-se* for *taedet*. They also form unaccusative pronominal sentences, but they are all different from *penedir-se (de)* and *compadir-se (de)* in the sense that they do not form autocausative sentences but anticausative sentences, with a patient experiencer that has no agentive features (25a)-(26a): they do not require the presence of a PP (although they may have an optional one, generally introduced by the preposition *amb* 'with') and they are often intransitive alternants of the causative alternation. These four predicates in Catalan are verbs that have a causative transitive non-pronominal alternant (causative alternation) with an accusative experiencer: AcExp or a type II Belletti and Rizzi verb (1988) (25b)-(26b).

- (25) *afligir-se / disgustar-se* [causative alternation: anticausative construction (a) / causative or AcExp construction (b)]
- a. *La Maria s' afligeix. / La Maria es D Maria REFL.3SG distress.PRES.3SG D Maria REFL.3SG disgusta. (amb el que has dit)*
upset.PRES.3SG with D what have.2SG say.PTCP
'Maria is distressed / Maria is upset (with what you said)'
- b. *La Bet afligeix la Maria. / La Bet disgusta D Bet distress.PRES.3SG D Maria D Bet upset.PRES.3SG la Maria.*
D Maria
'Bet distresses Maria. / Bet upsets Maria'

- (26) *fatiguejar-se* / *avorrir-se* [causative alternation: anticausative construction (a) / causative or AcExp construction (b)]
- a. *La Maria es fatigüeja. / La Maria s'avorreix. (amb aquesta classe)*
 D Maria REFL.3SG disgust.PRES.3SG D Maria REFL.3SG bore.PRES.3SG with this class
 'Maria gets disgusted / Maria gets bored (with this class)'
- b. *La Bet fatigüeja la Maria. / La Bet avorreix la Maria.**
 D Bet disgust.PRES.3SG D Maria D Bet bore.PRES.3SG D Maria
 'Bet disgusts Maria / Bet bores Maria'

* In this sentence, in which the verb *avorrir* means 'to cause tedium', the experiencer is *la Maria* (direct object in the accusative case). The verb *avorrir* can also be used in SubjExp sentences such as *La Maria avorreix la Bet*, which has an experiencer subject in the nominative (*la Maria*) but a different meaning: 'to have or take a dislike to/of'.

4.3 The Verb *avergonyir-se*

Still to be analysed is the verbal lexical item in Catalan that has the meaning of *pudet*, the verb *avergonyir-se*. It should be pointed out that, in just the same way that Fedriani (2014a; 2014b) shows that in Latin *pudet* is mid-way between the extreme of most agentivity (*paenitet* and *miseret*), and the extreme of least agentivity (*piget* and *taedet*), so *avergonyir-se* plays a similar role in Catalan. It is a predicate that can take part in both an autocausative structure, with an experiencer that is a patient and an agent at the same time (27), and an anticausative structure, with a patient experiencer (28a), which represent the two extremes of most and least agentivity, respectively.¹¹

- (27) *avergonyir-se de* [autocausative construction]
- La Maria s' avergonyeix de la Bet. (o se n' avergonyeix)*
 D Maria REFL.3SG shame.PRES.3SG of D Bet or REFL.3SG
 PRON_(OF, HER) shame.PRES.3SG
 'Maria is ashamed of Bet' (or 'is ashamed of her')

¹¹ This contrast is probably also present in complex predicates containing a light verb and a psychological noun (admittedly a highly uncommon contrast), where there is a patient and agent experiencer (a) and a patient experiencer (b):

- a. *Me 'n dono vergonya, de ser amic teu.*
 PRON.DAT.1SG PRON_(OF, THAT) give.PRES.1SG shame of be.INF friend your
 Lit.: 'I give to me shame to be your friend'
- b. *Em fa vergonya ser amic teu*
 PRON.DAT.1SG make.PRES.3SG shame be.INF friend your
 'It makes me ashamed to be your friend'

- (28) *avergonyir-se* [causative alternation: anticausative construction (a) / causative or AcExp construction (b)]
- a. *La Maria s' avergonyeix (amb el que li*
D Maria REFL.3SG shame.PRES.3SG with D what PRON.DAT.3SG
acabes de dir).
finish.PRES.2SG of say.INF
'Maria is ashamed (because of what you have just said)'
- b. *La Bet avergonyeix la Maria.*
D Bet embarrass.PRES.3SG D Maria
'Bet embarrasses Maria'

Other Catalan verbs have the double pronominal use in autocausative and anticausative sentences (for example, *alegrar-se* 'to be happy'). In some contexts, the agentive component of *avergonyir-se* (*de*) 'to be ashamed (of)' and *alegrar-se* (*de*) 'to be happy (with)' becomes more transparent (see the example in (29a)); and in others the emotional spontaneous reaction with no agentivity involved in *avergonyir-se* and *alegrar-se* is clearly shown (see (29b)). The two alternants in (29) are an example of emotional/volitional alternation (see Royo 2017; 2018).

- (29) a. *Ja ho he fet, i no sé si*
already it have.1SG do.PTCP and not know.PRES.3SG if
alegrar-me 'n o avergonyir-me 'n.
be_happy.INF-REFL.1SG PRON_(OF_THAT) or shame.INF-REFL.1SG PRON_(OF_THAT)
'I've already done it and I don't know whether to be happy or ashamed'
- b. *Després de dir-li-ho sense embuts, la Maria {es*
after of tell.INF-PRON.DAT.3SG-it without care D Maria REFL.3SG
va avergonyir i es va enrojolar/ es
PST.3SG shame.INF and REFL.3SG PST.3SG blush.INF REFL.3SG
va alegrar i em va abraçar}.
PST.3SG feel_happy.INF and PRON.1SG PST.3SG hug.INF
'After telling him to his face, Maria {felt ashamed and turned red / felt happy and hugged me}'

Following the semantic characterisation of Fedriani's experiencer for the five Latin verbs, below we show the behaviour of the corresponding verbs in Catalan when they form anticausative and autocausative sentences (30)-(31) in order from the most agentive to the least (*penedir-se* > *compadir-se* > *avergonyir-se* > *afligir-se* / *disgustar-se* > *fatiguejar-se* / *avorrir-se*). The sentences in (30c) and (31c) take part in the emotional/volitional alternation.

- (30) Anticausatives: non-agentive, uncontrolled change of state
- a. ^{??}*Després de fer-ho, es va penedir.*
Lit.: ^{??}'After doing it, he regretted'
 - b. ^{??}*Després de veure el que li ha passat, es va compadir.*
^{??}'After seeing what had happened to him, he took pity'
 - c. *Després de dir-li-ho, es va avergonyir i es va enrojolar.*
'After telling him, she felt ashamed and turned red'
 - d. *Després de dir-li-ho, es va {afligir / disgustar} i va perdre l'alegria.*
'After telling him, she got {distressed / upset} and lost her good humour'
 - e. *Escoltant la conversa dels tertulians es va {fastiguejar / avorrir} i no hi pensa tornar.*
'Listening to the conversation of the talk-show guests, she got {disgusted / bored} and she has no intention of returning'
- (31) Autocausatives: agentive, controlled change of state
- a. *Ja ho he fet, i no sé si alegrar-me'n o penedir-me'n.*
'I've already done it and I don't know whether to be happy about it/that or to regret it/that'
 - b. *He vist el que li ha passat, i no sé si alegrar-me'n o compadir-me'n.*
'I saw what happened to him, and I don't know whether to be happy or sorry about it/that'
 - c. *Ja ho he fet, i no sé si alegrar-me'n o avergonyir-me'n.*
'I've already done it and I don't know whether to be happy or ashamed about it/that'
 - d. ^{??}*M'ha passat això, i no sé si alegrar-me'n o {afligir-me'n / disgustar-me'n}.*
^{??}'This happened to me and I don't know whether to be happy or {distressed / upset} about it/that'
 - e. ^{*}*M'ha passat això, i no sé si alegrar-me'n o {fastiguejar-me'n / avorrir-me'n}.*
^{*}'This happened to me and I don't know whether to be happy or {disgusted / bored} about it/that'

5 Argument Structure of Sentences with Catalan Verbs

We start from the combination of the Voice head concepts developed by Kratzer (1996) and Embick (1997) using different approaches. These concepts allow us to differentiate the argument structure of causative sentences, with an external argument, from their pronominal intransitive alternations. On the one hand, Kratzer (1996) characterises the Voice head as the introducer of the external argument into the sentence. On the other, Embick (1997) analyses Voice as a common morphological component in sentences with no external argument.

Schäfer (2008) proposes that Voice can both expand into a full VoiceP to introduce an external argument with semantic content (thematic role) in its specifier, and be an expletive VoiceP without a specifier that can contain an argument with semantic content. On the basis of these proposals, various authors have gone further into Voice head applied to various argument alternations (see Alexiadou et al. 2015; Harley 2017; Wood, Marantz 2017, among others). We first focus on the presence of Voice in the two components of the causative alternation – a causative transitive alternant with a full VoiceP and another anticausative intransitive with an expletive VoiceP – and then move on to analyse autocausative sentences.

Currently, the Voice head of transitive (and also unergative) sentences is usually characterized as the licenser of the sentence external argument in its specifier, as head of a full VoiceP with the feature [+D], and this would be the Voice_{+D} head of the transitive alternant of the causative alternation. In contrast, anticausative sentences have a head of an expletive (or non-active) VoiceP, without a specifier, with the feature [-D]. In languages that, like Catalan, use the clitic *es* or similar in anticausative sentences, several authors introduce it in the expletive VoiceP specifier (see Schäfer 2008; Alexiadou 2014b, among others). Unlike some previous studies, we consider the clitic *es* to be a legitimate morphological component of the head of the expletive VoiceP (Voice_{-D}),¹² not of the specifier, which will merge with the verbal element when it passes through Voice before merging with the head IP. This is also different from Cuervo's theoretical framework (2003), which does not use expletive Voice heads and places the clitic *es* of the anticausatives as a verbal morpheme in the head of a v_{GO}P.¹³ Therefore, for anticausative sentences we use a Voice_{-D}, which is non-thematic or without semantic characterisation, and which indicates the absence of external argument.

For Cuervo (2003), sentences with a v_{GO}P – prototypical of unaccusative sentences – do not have an external argument because they do not project a VoiceP; on the other hand, the sentences with a v_{DO}P do project a VoiceP that introduces an external argument (see Kratzer 1996). In our approach, however, it is the *flavor* of the vP that determines what type of VoiceP is projected on the sentence: a v_{GO}P projects an expletive voice or Voice_{-D}, and a v_{DO}P projects a full voice or Voice_{+D}.¹⁴ A v_{GO}P conceptualises an uncontrolled dynamic

12 When it occurs in autocausative sentences, we consider the clitic *es* to be a legitimate morphological component of the head of a full VoiceP (Voice_{+D}).

13 See also the proposals made by Folli and Harley (2005) and Vivanco (2016, 327-31) for placing the corresponding clitic in Italian and Spanish, respectively, in a phrase head other than Voice.

14 We use Cuervo's model (2003) for the flavors of vP, making the adaptations necessary to explain when a full VoiceP is projected and when an expletive VoiceP.

event with a patient subject (in a bi-eventive structure) and a v_{DO} P a controlled dynamic event with an agent subject (see Cuervo 2003; 2014b; 2015; Pinzin 2018, 55).

As far as anticausative sentences are concerned, we claim they present an argument with two thematic roles, at once an agent and a patient, and that they do not comply with Chomsky's (1981) Theta Criterion. Since it is necessary for a Voice head to have an argument that has the semantic content of an agent, we argue that anticausative sentences have a Voice_{+D} head, which enables the internal argument to merge into its specifier to saturate the thematic role of the agent, without losing the role of patient (see Royo 2017; 2018). Therefore, the experiencer argument of the anticausatives is generated as the subject of an internal predication (patient) and it moves to the specifier of the IP to comply with EPP. On the other hand, the experiencer argument of the anticausatives involves an additional intermediate step: starting from the position as subject of an internal predication (patient), it moves first to the specifier of Voice_{+D} (agent) and then finally to the specifier of IP to comply with EPP. It should be borne in mind that the thematic role of the patient of the internal subject – which allows the resultative construction: see the examples in (20) – is determined by the bi-eventive structure of both constructions – v_{DO} P + v_{BE} P (autocausatives) and v_{GO} P + v_{BE} P (anticausatives). This subject is in the specifier position of a v_{BE} P (stative) which has above it another non-stative vP (v_{DO} P or v_{GO} P) (see Cuervo 2003).

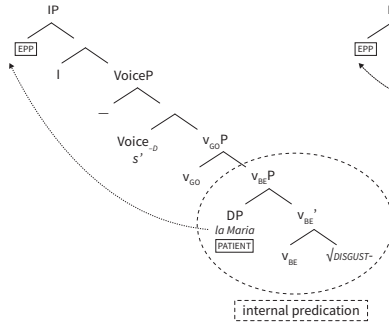
On the other hand, the stimulus of the psychological experience adopts the position of an adjunct, following the reasoning in §1 *in fine* and (15) for the argument in the genitive case of sentences with Latin impersonal psychological verbs. One topic that still requires a considerable amount of research is the relation between the obligatory presence of this PP and the agentive features of the experiencer in anticausative sentences, as can be seen in the contrasting pairs of examples in (29), (32) and (33); somehow, the PP enforces a causative structure that is intransitive.

Below we show the structural difference between the anticausative sentences of these verbs and the autocausatives. Example (32) shows the contrast between a verb that forms anticausative sentences (*disgustar-se* 'to get upset') and another that forms autocausative sentences (*penedir-se* 'to regret'). And example (33) shows that a

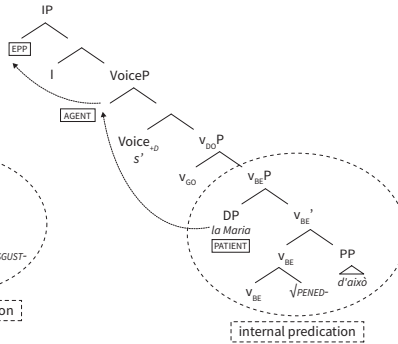
verb such as *avergonyir-se* ‘to be ashamed’ can take part in both types of sentences.¹⁵

(32) anticausatives (a) vs. autocausatives (b) with different verbs (*disgustar-se* and *penedir-se*)

a. *La Maria s’ha disgustat.*
D Maria REFL.3SG have.3SG upset PTCP
‘Maria got upset’

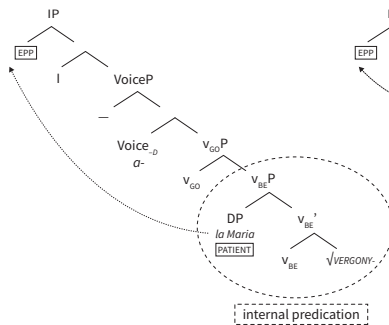


b. *La Maria s’ha penedit d’això (or se n’ha penedit).*
D Maria REFL. 3SG have.3SG regret.PTCP of that
‘Maria regretted that’

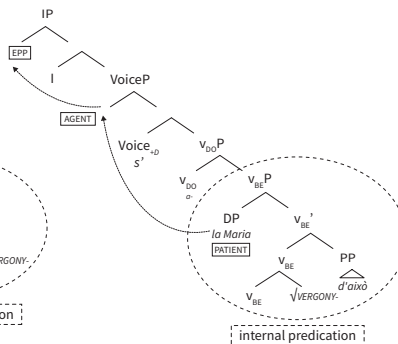


(33) anticausatives (a) vs. autocausatives (b) with the same verb (*avergonyir-se*)

a. *La Maria s’ha avergonyit.*
D Maria REFL.3SG have.3SG shame.PTCP
‘Maria felt ashamed’



b. *La Maria s’ha avergonyit d’això (or se n’ha avergonyit).*
D Maria REFL.3SG have.3SG shame.PTCP of that
‘Maria felt ashamed of that’



¹⁵ Like Cuervo’s approach (2003, §3.3.2) to prefixed deadjectival verbs, we place the prefix *a-* of the verb *avergonyir-se* as a verb marker, associated with the dynamic *v*. Therefore, on this point, we follow Cuervo’s proposal which differs from the prepositional characterisation of prefixes argued by other authors.

6 Conclusions

1. The experiencer argument in the accusative case is the subject of an inner stative predication (specifier of $v_{BE}P$), which is then syntactically prominent with respect to the Stimulus in the genitive case. Conceptually speaking, this genitive constituent is a participant of a psychological emotion, but, syntactically speaking, is a modifier of the stative vP (low adjunct).

2. Latin impersonal psych verbs express a stative causation. An A(mbient)-Causer *pro* appears in the specifier position of VoiceP, whose head in turn selects the stative vP . Despite appearances, Burzio's Generalization is not violated: (i) there is a thematic external argument represented by this null *pro* and (ii) the experiencer argument has a structural accusative case.

3. In the transition from Latin to Romance languages the grammaticalization of the reflexive pronoun as a marker of middle-related functions attracted new verbs to the personal construction (e.g. Cat. *avergonyir-se* 'to feel shame'). This structural pattern was also extended to existing lexemes like Cat. *penedir-se* 'to regret' (< *paenitet*). The diachronic productivity of intransitive pronominal verbs resulted in the loss of the $ACC_{EXP} - GEN_{STIM}$ non-centered pattern.

4. There is a correlation between the semantic characterization of impersonal psych verbs in Latin and the syntactic behavior of their corresponding pronominal verbs in Catalan: non-agentive *taedet* 'it tires' and *piget* 'it irks' correspond to anticausatives like *fatiguejar-se/avorrir-se* and *afligir-se/disgustar-se*, respectively, whereas more agentive *miseret* 'it moves to pity' and *paenitet* 'it regrets' correspond to autocausatives like *compadir-se* and *penedir-se*, respectively. *Pudet* 'it makes ashamed' corresponds to *avergonyir-se*, which, on its non-agentive reading, is anticausative and, on its agentive reading, is autocausative.

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An RRG Approach to Pronominal Constructions of Object-Experiencer Verbs – Anticausatives or Antipassives?

Rolf Kailuweit

Heinrich-Heine-Universität Düsseldorf, Deutschland

Abstract In a large number of studies, pronominal constructions of object-experiencer verbs in Romance languages are classified as anticausatives. However, this analysis is not convincing: the experiencer argument is more likely to be the most active argument than the most passive argument. According to the common criteria for determining antipassives, there is a strong argument for considering pronominal constructions of OE-verbs in Romance languages as instances of antipassives. As an alternative, we propose deriving these constructions by a lexical rule because the presumed antipassive construction in Romance languages is only productive in the semantic domain of episodic psych-verbs.

Keywords Object-Experiencer verbs. Anticausatives. Antipassives. Romance Languages. Role-and-Reference Grammar.

Index 1 Introduction. – 2 Pronominal Constructions in Standard RRG. – 3 The Antipassive Hypothesis. – 4 Further Evidence for the Antipassive Hypothesis. – 5 More on Causation. – 6 Verbs of Interest. – 7 Towards a LS-Description of Episodic OE-Verbs. – 8 Experiencer-Centred Episodic Verbs of Emotion. – 9 Antipassives – A Typological Approach. – 10 Conclusion.



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1 Introduction

Psych-verbs, or more precisely verbs of emotion such as English ‘fear’, ‘frighten’, ‘like’, ‘appeal to’, ‘worry’ etc., have been a central topic of linguistic discussion since Belletti and Rizzi’s (1988) seminal work. While some predicates link the experiencer argument to the subject function (subject-experiencer verbs = SE-verbs), others code it as the object (object-experiencer verbs = OE-verbs). Additionally, many Standard European Languages exhibit an OE/SE-alternation (see Rozwadowska, Bondaruk 2019; Bondaruk, Rozwadowska 2024 for an overview). As illustrated in (1) with French examples from the Frantext corpus, a morphologically simpler basic OE-construction alters with a morphologically more complex SE-construction which is marked by a pronoun derived from the Latin reflexive pronoun *sē*.

- (1) a. *Cela irritait papa* (Frantext)
 This irritate-IPFV.3SG dad
 ‘That irritated dad.’
 b. *Son père s’irritait*
 Poss father REFL upset-IPFV.3SG
 ‘His/her father was irritated.’

Pronominal constructions of OE-verbs are not easy to classify. Clearly, these constructions are not, or at least are not prototypically, reflexive,¹ as in the French example in (2), in which the most active argument – actor in Role and Reference Grammar (RRG) (Van Valin, LaPolla 1997; Van Valin 2005; Kailuweit 2023) – and the most passive argument – undergoer in RRG – of the corresponding transitive construction denote the same person or object:

- (2) a. *Paul_i rase Pierre_j*
 Paul shave-PRS.3SG Peter
 ‘Paul shaves Peter.’
 b. *Paul_i se_i rase*
 Paul_i REFL_i shave-PRS.3SG
 ‘Paul shaves himself.’

Some works explicitly refrain from classifying the pronominal constructions as illustrated in (1b) (e.g. Sonnenhauser 2010; Pijpops,

¹ As far as I can see, only Härtl (2001a) holds a different opinion. He sees the experiencer in these constructions as the intrinsic originator of his or her feeling and therefore considers the construction to be reflexive in a broader sense.

Speelman 2017). In others, the construction is labelled anticausative (Acedo-Matellán, Mateu 2015; Hirsch 2018 among others), inchoative,² medium (Kutscher 2009; Bedkowska-Kopczyk 2014), reflexive (Härtl 2001), passive (Gross 1971; 1975; 2000), or antipassive.³ These are partly terminological differences (anticausative ~ inchoative), but partly also fundamentally different analyses as far as the degree of activity of the subject experiencer of the construction is concerned. If the construction is described as reflexive or antipassive, the experiencer is considered the actor. Conversely, if the construction is viewed as anticausative/inchoative or passive the experiencer is categorised as the undergoer. These contrasting semantic analyses highlight the need for further research in this area.

The aim of this paper is to examine whether the pronominal constructions of transitive OE-verbs are more similar to antipassive constructions or to passive constructions in the broader sense (including anticausative constructions). There is a widespread consensus in the literature that an anticausative construction describes an event that affects its subject, typically expressing a change of state, but without indicating or specifying the external cause or agent of the event. In anticausatives, the subject is a passive argument which is often labelled patient or theme. It denotes the entity undergoing the change, while the cause remains unexpressed and cannot be referenced directly (Haspelmath 1993; Schäfer 2008). Conversely, there is less consensus regarding antipassives (Polinsky 2017; Heaton 2020). Some approaches, including standard RRG, restrict these constructions to ergative languages. Therefore, some scholars may be surprised to learn that pronominal constructions of psychological verbs in accusative languages could be considered antipassives. For now, we will leave open the question of whether it makes sense, from a typological point of view, to term some constructions of accusative languages as antipassives.

Our argument is based on the following working definition of an antipassive construction: An antipassive construction is a derived, detransitivised clause in which the most passive argument is demoted – either made oblique or omitted – and the most active argument becomes the syntactic subject. Therefore, our main question is whether the subject of pronominal psych-verb constructions is more akin to an actor or an undergoer. In this context, we will discuss the aktionsart type of pronominal constructions and the semantics of the corresponding transitive constructions. We shall only consider the extent to which the assumption of antipassive constructions

2 Marín, McNally 2011; Cançado 2012; 2015; Cifuentes Honrubia 2015; Ganeshan 2015; 2019; Cançado et al. 2018; Melis 2019; Fábregas, Marín 2020 among others.

3 Cresti 1990; Masullo 1992; Herslund 1997; Kailuweit 2005.

in accusative languages can be justified at the end of the paper. To conclude our contribution, we will demonstrate how both the pronominal construction and the corresponding OE-construction can be modelled in RRG, and how the two are related.

The argument is based on extensive datasets from Romance languages derived from corpus-based and corpus-driven studies conducted by my collaborators and me over a number of years. Based on these findings, we hypothesise that it is possible, in principle, to establish general rules that describe the syntactic and semantic behaviour of OE-verbs in Romance languages. In this respect, our approach is compatible with the generativist work of Belletti and Rizzi (1988), although we do not claim that our description captures universal linguistic competence. Rather, we consider rules and generalisations to be descriptively useful, particularly for identifying parallels and differences between languages and between individual verbs within a language.

Studies with a theoretical orientation, particularly in the context of generative grammar, still generally lack an objective database. Statements about what is grammatical in a particular language are often based on the intuitive assumptions of authors who are usually native speakers of that language. Data on other languages is often uncritically adopted from existing literature. When these data contradict the authors' own findings, ad hoc claims are often made that the differences lie at the level of individual languages. For example, Rozwadowska and Bondaruk (2019, 79) oppose the analysis of Polish to that put forward by Alexiadou and Iordăchioaia (2014) for Greek and Romanian. In my view, these claims are difficult to reconcile with the generative approach. Generative grammar claims to describe a universal linguistic competence. Notable differences in core syntactic questions between individual languages should be attributable to parameters and not exist idiosyncratically alongside one another.

Since there is no objective, empirical basis for the reliability of the data, it seems that generativists have concluded a kind of non-aggression pact. Each study develops its own structural tree based on its own data. The danger here is that one's first-language competence becomes clouded by a desire to confirm one's theoretical assumptions with the data. Anyone who has practised syntax theory based on intuition and critically reflected on the process, including the author of this paper, will have noticed how easily theoretical assumptions can influence judgements of grammaticality.

Therefore, in our work, we would like to counter this approach with a corrective. As linguists specialised in Romance Languages, we describe a large number of these languages in parallel and comparatively. This is not based on first-language competence, but on the competent interpretation of corpus data. This study builds

upon preliminary corpus-based work on French and Italian (Kailuweit 2005), Spanish (Kailuweit 2015; 2018; Wiskandt 2020), as well as preliminary corpus-driven work on Brazilian Portuguese, Catalan, and Romanian (Wiskandt et al. 2023).⁴

The paper is structured as follows. Section 1 provides an introduction to the description of pronominal constructions in RRG. Section 2 presents three studies that argue for the antipassive nature of the pronominal construction of OE-verbs in Romance languages. Section 3 provides further evidence for this hypothesis. Section 4 focuses on causation. Section 5 considers verbs of interest as a special case, illustrating the relationship between pronominal and causative constructions of OE-verbs. Section 5 generalises the results of Section 4. Section 6 distinguishes two classes based on the frequency of pronominal constructions. Finally, Section 7 discusses the Antipassive Hypothesis from a typological perspective. The results are summarised in Section 8.

2 Pronominal Constructions in Standard RRG

In a standard RRG framework (Van Valin, LaPolla 1997; Van Valin 2005), González Vergara (2009) described a Spanish construction corresponding to the French example in (1b) as an instance of an “intrinsic”, non-reflexive *se*-construction (3a).

- (3) a. *Pedro se enojó.* (González Vergara 2009, 364)
 Pedro REFL upset-PST.3SG
 ‘Pedro got angry.’
 b. *Pedro se levantó.*
 Pedro REFL rise-PST.3SG
 ‘Pedro got up.’
 c. *La puerta se cerró.*
 The door REFL close-PST.3SG
 ‘The door closed.’

⁴ In this study we were, for example, unable to confirm the data basis that led to central assumptions in Alexiadou, Iordăchioaia (2014) for Romanian or in Cançado et al. (2024) for Brazilian Portuguese (published online in 2023). In Alexiadou and Iordăchioaia’s (2014) argument, a Romanian pronominal construction that realises the non-experiencer argument with the preposition *de la* plays a central role. However, in our studies, we found no evidence of this construction; instead, we found numerous other prepositions that were used to realise the non-experiencer argument. Cançado et al. (2024) claim that pronominal constructions exclusively realise the non-experiencer argument with the preposition *com* in Brazilian Portuguese. However, we also found numerous other prepositions.

According to González Vergara (2009), all the constructions in (3) were traditionally included in the so-called ‘middle’ construction. The author distinguishes ‘psychological’ (3a) and ‘physical’ (3b and 3c) intrinsic-*se* sentences with an animate or inanimate subject, i.e. an animate or inanimate privileged syntactic argument (PSA) in RRG terms (LaPolla 2023). Hence, González Vergara’s approach to structures such as (3a) is in line with the anticausative or inchoative interpretation of the OE/SE-alternation illustrated in (1) for French.

In order to derive these constructions and other *se*-constructions that are not real reflexives (such as the French construction in (2b)) González Vergara (2009) proposed a lexical rule (4).

- (4) [**do**’ (x, Ø)] CAUSE [(BECOME/INGR) **pred**’ (y)] ↔ [**do**’ (Ø, Ø)] CAUSE [(BECOME/INGR) **pred**’ (y)]

This rule operates on the semantic representation – called Logical Structure (LS) in RRG (Van Valin, LaPolla 1997; Van Valin 2005; 2023) – of the transitive basic construction in a way that the semantic argument that originally would have been expressed as PSA (subject) of the transitive construction is no longer available for macrorole assignment. Note that macrorole assignment is crucial for linking the semantic representation, i.e. the LS, to the syntactic representation. Only a macrorole argument can become the PSA at the syntactic level. Transitive predicates assign two macroroles, **actor** to the leftmost (most active) argument in the LS and **undergoer** to the rightmost (most passive) argument. Intransitive predicates, i.e. those lacking a direct core argument, assign only one macrorole. Intransitive activities assign an actor, whereas intransitive predicates of all other aktionsart classes assign an undergoer. In transitive constructions, the actor argument becomes the PSA of the active voice. In macrorole-intransitive constructions, the sole macrorole argument becomes the PSA (Van Valin, LaPolla 1997; Van Valin 2005; Kailuweit 2023).

In (4), the LS on the left side of ↔ is a causative construction with a causing activity [**do**’ (x, Ø)] and a caused achievement or accomplishment⁵ [(BECOME/INGR) **pred**’ (y)]. The x-argument of the causing activity is erased on the right side of ↔. Hence, there is only one argument left for macrorole assignment, the y-argument of [(BECOME/INGR) **pred**’ (y)]. The construction is intransitive. According to standard RRG analysis, the macrorole argument of an

⁵ Traditionally, RRG has operated with the four basis Vendler/Dowty aktionsart classes: activities, states, achievements and accomplishments. However, more recent versions of the theory introduce two additional classes: semelfactives and (atelic) processes (Van Valin 2023).

intransitive activity (i.e. *jump*) is an actor, the macrorole argument of intransitive states, achievements or accomplishments (i.e. *exist*, *explode* or *melt*) is an undergoer. Since the remaining argument – the y-argument in [**do'** (Ø, Ø)] CAUSE [(BECOME/INGR) **pred'** (y)] – is an argument of an achievement or accomplishment and not of an activity, this argument receives the undergoer macrorole and is realised as PSA.

González Vergara (2009) did not give a detailed analysis of the psych-verb example in (3a), but illustrated his claim for Spanish *ensuciar* (stain), that allows for causative alternation as *cerrar* (close) does in (3c). Hence, the rule applied to the transitive causative LS of *ensuciar* (stain) in (5a) would yield the anticausative/inchoative or “physically intrinsic” construction in (5b).

- (5) a. *Pedro ensució la camisa*
 Pedro shave-PRS.3SG the shirt
 ‘Pedro stained the shirt.’
 [**do'** (Pedro, Ø)] CAUSE [BECOME **dirty'** (camisa)]
- b. *La camisa se ensució.*
 the shirt REFL stain-PST.3SG
 ‘The shirt got dirty.’
 [**do'** (Ø, Ø)] CAUSE [BECOME **dirty'** (camisa)]

However, several problems arise when we try to apply this description to OE-verbs such as Spanish *enojar* (anger). The standard RRG description of causative verbs of anger, i.e. episodic⁶ OE-verbs, is illustrated in (6) (Van Valin, LaPolla 1997, 402):

- (6) *The photo in the newspaper upsets James.*
 [**be-in'**(newspaper, photo)] CAUSE [**feel'**(James, [**upset-about'**(**be-in'**
 (newspaper, photo)))]

A description for a corresponding construction of Spanish *enojar* (anger) would be (7):

⁶ Episodic OE-verbs are those that refer emotions such as anger, sadness, happiness, fear or disgust (Johnson-Laird, Oatley 1989, 85), showing quick onset, brief duration and unbidden occurrence. They correspond to typical facial expressions and physical reactions. They can be found in the behaviour of primates, too.

- (7) *Estos comportamientos enojaron a sus papás.* (CREA)
 These behaviours anger-PST.3PL DOM their parents.
 [**be'** (Ø, behaviours)] CAUSE [**feel'**(parents, [**angry-about'**(**be'** (Ø, behaviours)))]⁷
 'These behaviours angered their parents.'

When we apply the lexical rule in (4) to the LS provided for episodic OE-verbs like *enojar* (anger) in Standard RRG, the result is (8):

- (8) [**be'** (Ø, Ø)] CAUSE [**feel'**(parents, [**angry-about'**(**be'**(Ø, Ø)))]

There are two main problems with this analysis. The most obvious problem is that the PSA-argument of the basic construction does not necessarily remain unexpressed in the *se*-construction. As for Spanish, Masullo (1992, 187) highlights the fact that passive *se*-constructions including anticausatives never express the second argument while this is always possible with *se*-constructions of transitive OE-verbs. In Wiskandt et al. (2023), we investigated the presence of the non-experiencer argument in a larger corpus of psych pronominal constructions of four verbs denoting anger, fear, happiness and sadness in Catalan, Brazilian Portuguese and Romanian. As illustrated in Figure 1 all verbs allow the expression of the non-experiencer argument in pronominal constructions. For *preocupar* (worry) in Catalan and Brazilian Portuguese the appearance of the second argument is even the unmarked case.⁸

⁷ The LS fragment [**be'** (Ø, behaviours)] codes an unspecified property of *comportamientos* (behaviours) that provokes parental anger.

⁸ Note that the statistic in Fig. 1 includes some cases of passive constructions with a second argument introduced by a preposition.

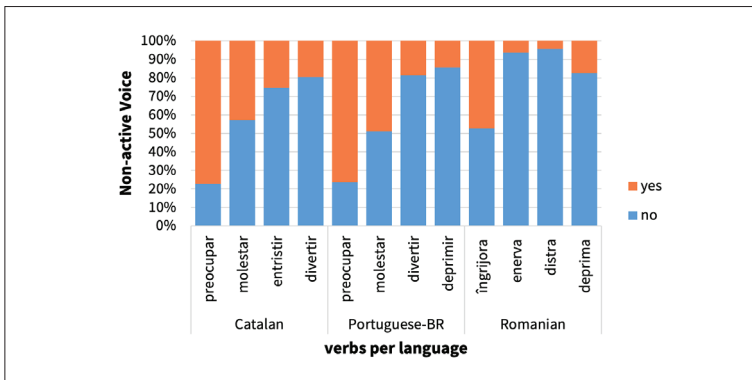


Figure 1 Distribution of non-experiencer PPs in non-active voices per verb. (Wiskandt et al. 2023)

Wiskandt (2020)⁹ proves that Spanish *enfadarse* (get angry) appears regularly without a PP-complement. The same seems to hold for *enojarse* (get angry). However, for Spanish verbs of anger the PSA of the basic construction can be easily expressed via the prepositions *con* or *por* (see (9) and (10)).

- (9) *Michael se enojó con los niños*
Michael REFL anger-PST.3SG with the children
‘Michael got angry with the children’
- (10) *Ninguno de los chicos se enojó por la derrota*
None of the boys REFL anger-PST.3SG about the defeat
‘None of the boys were angry about the defeat’

Note that each prepositions introduce a different participant, which, according to Pesetsky (1995), can be distinguished from the causer of the emotion: the target¹⁰ and the subject matter of emotion.¹¹

⁹ Wiskandt (2020) analyses 15 verbs, 200 tokens per verb, from CORPES XXI of Real Academia Española.

¹⁰ Pesetsky (1995) refers to Kenny (1963, 71) who introduced the term target for the non-experiencer argument citing Wittgenstein (1958, 137): “We should distinguish between the object of fear and the cause of fear. Thus a face which inspires fear or delight (the object of fear or delight), is not on that account its cause, but—one might say—its target” (aphorism 476 of his *Philosophical Investigations*).

¹¹ For this reason, the non-experiencer argument should not be labeled a stimulus, since the term *stimulus* has a causative connotation.

Kailuweit (2005) named these two participants the correlate¹² and the point of reference.¹³ As we shall see, the non-experiencer argument can take on a second semantic role (causer), but does not have to.

While *por* introduces the state of affairs the emotion corresponds to, the correlate in Kailuweit's terms (2005), *con* introduces the person the emotional behaviour is directed at, the point of reference. This becomes even more evident if we change the preposition (compare (9) with (11):

- (11) *Michael se enojó por los niños* (CREA)
 Michael REFL anger-PST.3SG about the children
 'Michael got angry about the children'

In (9) Michael and the children are necessarily co-present in the event, but the children did not necessarily behave in an annoying way. They may have served as a lightning rod for Michael's anger triggered by something else. On the contrary, in (11) Michael and the children are not necessarily co-present in the event, but a property or action of the children is what Michael is annoyed about.

This leads to the second problem. It is not obvious that the experiencer of the basic construction, when appearing as the subject of the pronominal construction, is still influenced by an unspoken causal event. This makes a clear difference in comparison to the subject of an anticausative construction, e.g. the shirt in the 'physically intrinsic' *se*-construction in (5b). In fact, several authors have claimed that the experiencer of *se*-constructions derived from OE-verbs is not a passive, causally affected argument, but rather an active argument, like the absolutive argument in antipassive constructions in ergative languages (Polinsky 2017).

12 As discussed in detail by Kailuweit (2005), the non-experiencer argument is not a spatio-temporal object, but rather a concept that possesses certain properties. According to Ruwet (1994), two entities are necessarily involved in an emotional scene: the intentional subject (the experiencer) and a state of affairs to which the subject's intentionality refers as its correlate.

13 In Pesetsky (1995), the distinction between the two roles remained rather obscure. As Kailuweit (2005) points out, they can be more easily distinguished when compared with *fearing somebody or something* (target/correlate) versus *fearing for somebody* (subject matter/point of reference). If we are afraid for someone, that person is not dangerous in themselves; rather, they are the subject of our concern. If we observe this person in danger, we can identify the corelate of the fear. Therefore, this argument is a point of reference.

3 The Antipassive Hypothesis

Cresti (1990) for Italian, Masullo (1992) for Spanish and Herslund (1997) for French assume that pronominal constructions of psych-verbs are not anticausatives or passives in a broader sense, but antipassives. Their approaches are informed by different frameworks. While Cresti (1990) works within the Relational Grammar (RG) framework and Masullo (1992) within the generative Principle & Parameter (P&P) approach, basing their analyses on the unaccusativity hypothesis, Herslund (1997) takes a typological functionalist approach. However, what they have in common is that they all consider the experiencer to be the more active argument of the derived construction.

Cresti (1990) argues that the experiencer of Italian *preoccupare* (worry) or *interessare* (interest) is an initial 1 (subject) and demotes to 2 (direct object) in the second stratum. While it is realized as a final 2 (direct object) in the transitive construction it is promoted again to a final 1 (subject) in the pronominal construction.

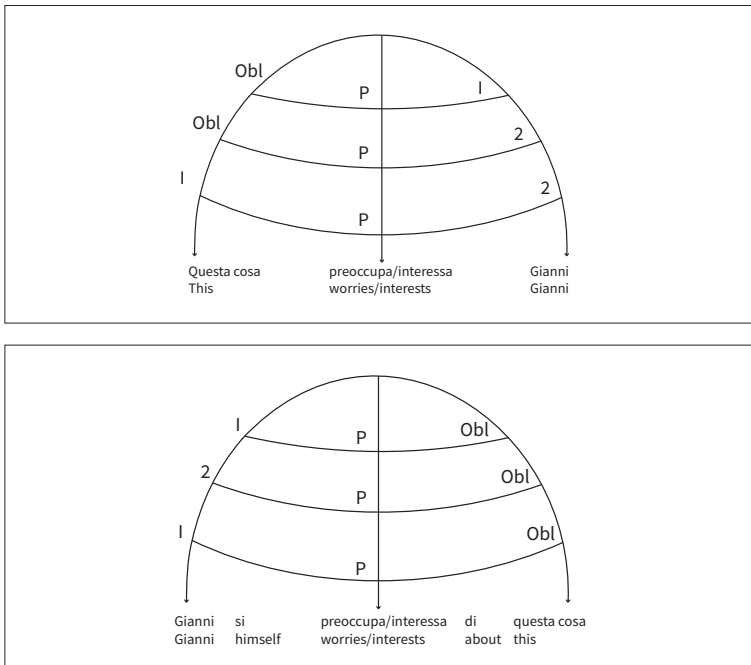


Figure 2 Demotion and Promotion of the experiencer in RG. (Cresti 1990, 62)

Masullo (1992) bases his argumentation on Belletti and Rizzi's (1988) unaccusative hypothesis. Following Belletti and Rizzi (1988), the

experiencer of verbs like *sorprender* (surprise) is the higher (more active) argument in the theta grid, but not an external argument at deep structure. In the transitive construction, the experiencer receives inherent (not structural) accusative case, while the second argument moves to the subject position, just as the argument of Italian unaccusative verbs selecting *essere* (be) in compound tenses, e.g. Italian *arrivare* (arrive). Masullo (1992, 185) assumes an optional morphological frame that allows these verbs to realize the experiencer, the more active argument, in the subject position.

DS:	<i>e sorprendere</i> <i>se</i> _i <i>Juan las noticias</i> _i
Incorporation:	<i>e sorprenderse</i> <i>t</i> _i <i>Juan las noticias</i> _i
NP-Movement:	<i>Juan</i> _i <i>sorprenderse</i> <i>t</i> _i <i>t</i> _i <i>las noticias</i> _i
Cliticization:	<i>Juan</i> _i <i>se</i> _i <i>sorprende</i> <i>t</i> _i <i>t</i> _i <i>las noticias</i> _i
Case-Marking:	<i>Juan</i> _i <i>se</i> _i <i>sorprende</i> <i>t</i> _i <i>t</i> _i <i>de las noticias</i> _i

Figure 3 Derivation of pronominal psych-verb constructions (Masullo 1992, 185)

Herslund (1997) differs from these more technical approaches assuming a semantic promotion of the experiencer. Hence, he considers the experiencer the more passive argument ('patient') of the basic construction that is promoted semantically and syntactically: "what happens is really a kind of promotion of the Patient: the demotion of the Patient-**role** is performed by the promotion of the Patient-**phrase** to the Agent-role and thereby to the subject relation" (Herslund 1997, 84).

Herslund (1997) does not justify explicitly why he considered the experiencer the semantically promoted agent of the pronominal construction. Masullo (1992) does not provide any direct evidence for considering the experiencer the most active argument. However, he bases his analysis indirectly on the distributional arguments of Belletti and Rizzi (1988), who tried to prove that the experiencer of the verbs in question is not the structural direct object of a transitive construction and that the subject of these verbs is derived. Cresti (1990) justifies her analysis explicitly with some pieces of Belletti and Rizzi's (1988) evidence.

In a first step, Cresti (1990, 63f) proves that the experiencer of OE-verbs is not an initial 2 (direct object). The initial 2 (direct object) of transitive subject experiencer verbs (SE-verbs) such as e.g. *temere* (fear) is able to occur in a participial absolute (12a). However, this construction is ungrammatical with the experiencer of OE-verbs (12b):

- (12) a. *Temute la ripercussioni di questo atto, decidemmo*
 fear.PTCP the repercussions of this act decide-PST.1PL
 convocare un'assemblea.

- call assembly
 ‘Fearing the repercussions of this act, we decided to call an assembly’
 b. *Preoccupata la mamma, Gianni tentava di riassicurarla.*
 worry.PTCP the mother Gianni try-PST.3SG to reassure-her
 ‘Having worried the mother, Gianni tried to reassure her’

In a second step, she argues that the experiencer of OE-verbs of the *preoccupare* (worry) class was a 1 at a former stratum because it is able to bind an anaphor in the subject position as illustrated in (13):

- (13) a. *Questi pettegolezzi su di se_i preoccupano Gianni_i*
 These gossips about himself worry-PST.3SG Gianni
ogni altra cosa.
 more than every other thing
 b. **Questi pettegolezzi su di se_i descrivano Gianni*
 These gossips about himself describe-PST.3SG Gianni
più di ogni biografia ufficiale.
 more than every biography official

However, the binding facts are not incompatible with the anticausative analysis put forward in the RRG framework. They are explicitly addressed in Van Valin and LaPolla (1997, 402) who proved that they are compatible with their analysis of episodic OE-verbs as causative states, because the anaphor occurs twice in the LS, not only on the left but also on the right side of the experiencer, as you can see in (14b):

- (14) a. *The photo of himself in the newspaper upsets James.*
 b. [**be-in'**(newspaper, **be'** (photo, [**of'**(himself.)]))] CAUSE [**feel'**(James,
 [**upset-about'**(**be-in'**(newspaper, **be'** (photo, [**of'**(himself.)]))))]]

According to Masullo (1992) and Herslund (1997) antipassive constructions in Romance languages are not restricted to OE-verbs. Herslund (1997, 84) refers to Foley and Van Valin (1985) to distinguish ‘foregrounding’ from ‘backgrounding’ antipassives. Note that current RRG would call the ‘foregrounding’ antipassives “PSA modulation” antipassives and the ‘backgrounding’ antipassives “argument modulation” antipassives (Van Valin 2005).

While the pronominal constructions of OE-verbs are candidates for ‘foregrounding’ (PSA-modulation) antipassives, there are also constructions that are candidates for ‘backgrounding’ (argument-modulation) antipassives. French *exprimer* (express) or Spanish *confesar* (confess) demote the undergoer of the corresponding transitive sentence. The undergoer can be deleted or appears as oblique in (15b) and (16b).

(15)	a.	<i>Jean</i>	<i>exprime</i>	<i>ses opinions</i>	<i>clairement.</i>
		Jean	express-PRS.3SG	his opinions	clearly
		'Jean expresses his opinions clearly'			
	b.	<i>Jean</i>	<i>s'exprime</i>	<i>clairement</i>	<i>(sur ce sujet).</i>
		Jean	REFL express-PRS.3SG	clearly	on this subject
		'Jean expresses himself clearly (on this subject)'			
(16)	a.	<i>Juan</i>	<i>confiesa</i>	<i>sus pecados</i>	
		Juan	confess-PRS.3SG	his sins	
		'Juan confesses his sins'			
	b.	<i>Juan</i>	<i>se confiesa</i>	<i>(de sus pecados)</i>	
		Juan	REFL confess-PRS.3SG	of his sins	

However, this construction is not productive at all. The examples could be considered idiosyncratic lexical alternations. The linking of the arguments is unproblematic since the predicates at issue are activities. Therefore, the remaining macrorole argument is the actor that is realized as PSA in the transitive as well as in the intransitive construction. Masullo (1992) points out that this type of potential anticausative differs substantially in its syntactic and semantic properties from the pronominal constructions of OE-verbs. Hence, they do not provide evidence for the antipassive analysis of the latter.

In this section, we saw that the antipassive hypothesis put forward by Cresti (1990) for Italian and Masullo (1992) for Spanish pronominal psych-verb constructions is consistent with the seminal work of Belletti and Rizzi (1988). According to these authors, the experiencer is the most active argument in both the OE-construction and the corresponding pronominal construction. Conversely, in his analysis of French pronominal psych-verb constructions, Herslund (1997) claims that the experiencer is semantically promoted. It should be noted that the binding facts in Belletti and Rizzi (1988) are not incompatible with an anticausative analysis either (Van Valin, LaPolla 1997). Therefore, further evidence is required to demonstrate that experiencer of pronominal psych-verb constructions is an actor and not an undergoer.

4 Further Evidence for the Antipassive Hypothesis

To approve the hypothesis that pronominal constructions of OE-verbs are more similar to antipassives than to anticausatives, independent evidence is needed that the promoted EXPERIENCER is the most active argument, i.e. an actor in RRG terms. Clearly, the degree of activity of the PSA (subject) argument differs significantly between pronominal constructions of OE-verbs (17b) and corresponding (non-pronominal)

passive constructions as in (17a) (Kailuweit 2005, 218). The two constructions are not synonymous. While (17a) describes a process in which Pierre (precisely an action or property of him) causes Paul's emotion, (17b) denotes Paul's emotional behaviour that is directed against Pierre. In (17b) Pierre is not necessarily the cause of Paul's irritation:

- (17) a. *Paul est irrité par Pierre*
 Paul be-PRS.3SG irritate-PTCP by Peter
 'Paul is irritated by Peter'
 [**do'** (Pedro, Ø)] CAUSE [BECOME **dirty'** (camisa)]
- b. *Paul s' irrite contre Pierre*
 Paul REFL upset-PRS.3SG against Peter
 'Paul gets angry with Peter'

However, prototypical anticausatives are also not synonymous with corresponding passive constructions. In anticausative (or 'physically intrinsic') *se*-constructions, a semantic promotion also takes place without the passive argument of the transitive construction – i.e. the undergoer in RRG terms – being converted into an actor (Kailuweit 2011). We will illustrate this fact with some examples taken from the CREA corpus of the Real Academia Española.

- (18) a. *Él prefirió empobrecerse poco a poco y continuar*
 he prefer-PST.3S impoverish-PRON little by little and continue
operando la cafetería
 operating the coffee shop
 'He preferred getting poorer and poorer keeping the coffee shop open to becoming rich by selling it.'
- b. *La crisis empobreció al dueño de la cafetería.*
 The crisis impoverish-PST.3SG DOM+DET owner of the coffee shop
 'The crisis impoverished the coffee shop owner'
- c. *El dueño de la cafetería fue empobrecido por la crisis.*
 Owner of the coffee shop be-PST.3SG impoverish-PTCP by the crisis
 'The coffee shop owner was impoverished by the crisis'

In (18a), the coffee shop owner, who corresponds to the object of the transitive construction in (18b), consciously accepts his impoverishment; however, he does not willingly cause it and thus remains causally affected. In the passive construction of (18c), however, there is no conscious acceptance of impoverishment. Therefore, the coffee shop owner in (18a) seems to be semantically slightly upgraded compared to those in (18b) and (18c), but he is still an undergoer and not an actor.

An argument in favour of the actor analysis of the experiencer in the pronominal psych-verb constructions may be derived from aktionsart. Anticausative constructions remove the agent-causer and the focus on the change of state or result. The remaining only argument is an undergoer. Intransitive predicates that assign an undergoer does not have an activity predicate in their semantic representation (Van Valin 2005, 63). Antipassive constructions most naturally align with activities (Tatevosov 2011; Denniss 2017). If it could be demonstrated that the pronominal constructions of OE-verbs satisfy the activity tests, the experiencer argument would be considered an actor in RRG terms. This would lend weight to the antipassive hypothesis.

OE-verbs of Belletti and Rizzi's *preoccupare* (worry) class has been attributed to all of the four Vendler-Dowty (Vendler 1967; Dowty 1979) aktionsart classes (see Kailuweit 2015 for an overview).¹⁴ However, there are very few studies addressing the aktionsart of the corresponding pronominal constructions. Marín and McNally (2011) suggest that they are generally associated with achievements because of their inchoative nature. However, although this claim is made for anticausatives such as *darken* or *sink* (Dowty 1979), the studies cited by Marín and McNally do not refer to pronominal psych-verb constructions.¹⁵ While Marín and McNally (2011) distinguish between an achievement subclass (*enfadarse* 'get angry') and a stative subclass with a left boundary (*aburrirse* 'get/be bored'), Marín and McNally (2019) describe these constructions indiscriminately as (left) bounded states. In fact, if we define achievements as punctual change-of-state verbs as in standard RRG (Van Valin, LaPolla 1997; Van Valin 2005; 2023), then it is easy to show that pronominal psych-verbs fall outside this class because they are not punctual.¹⁶

Härtl (2001a, 2001b) claimed that OE-verbs and their pronominal constructions represent durative, non-telic activities. While this analysis may seem unusual, particularly in relation to non-agentive OE-verbs (Kailuweit 2005; 2015), it is worth considering in the

14 Marín and McNally (2011; 2019) also list studies that classify these verbs as accomplishments, achievements or states. However, they do not mention the works of Härtl (2001a; 2001b) who argues that these verbs are activities.

15 With the exception of Smith (1991, 293), who includes the French verb *se facher* *de* (to become angry) among the achievements. However, in her brief description of French achievement predicates, Smith does not provide an argument directly justifying the inclusion of pronominal psych-verb constructions.

16 Verbs like *enfadarse* (get/be angry) or *sorprenderse* (get/be surprised) are extended in time. They can be combined with *for X time* phrases or with *more and more*: i. *Los asistentes se sorprendieron durante los quince segundos que ella permaneció semidesnuda* (The attendees were surprised for the fifteen seconds that she remained half-naked); ii. *lo que hace que Liam se enfade más y más* (which makes Liam get angrier and angrier). (<https://www.corpusdelespanol.org/now/>).

context of pronominal constructions. It is a well-known fact that some OE-verbs allow constructions with an agent who is supposed to intentionally evoke an emotion in the experiencer, while others do not.¹⁷ However, it is never certain that one can cause another person's emotions. Whether or not a person is easily annoyed or delighted depends on their disposition. On the other hand, an individual can control or allow their emotions to a certain extent. Thus, imperative constructions are acceptable: 'Don't worry, be happy!'.¹⁸

Pronominal constructions of Spanish OE-verbs meet all activity tests listed in Van Valin (2005, 35). As illustrated with examples from the Corpus de Español, Spanish *enojarse* (get/be angry) allow the progressive (see 19a) and occur with adverbs of intensity such as *strongly* (see 19b) and pace adverbs such as *quickly* (see 19c).

- (19) a. *Mi madre no me contestó apretaba los labios*
My mother not me answer-PST.3SG purse-IPFV.3SG the lips
y comprendí que se estaba enojando.
and understood-PST.1SG that REFL be-IPFV.3SG upset-PROG
'My mother did not answer me. She pursed her lips and I understood that she was getting angry.'
- b. *Amy se enoja fuertemente con Sheldon quien*
Amy REFL upset-PRS.3SG strongly with Sheldon who
no entiende la situación
not understand-PRS.3SG the situation
'Amy gets very angry with Sheldon who doesn't understand the situation.'
- c. *En Monterrey la gente tiene mal carácter.*
In Monterrey the people have-PRS.3SG bad character
Se enojan rápidamente.
REFL upset-PRS.3PL quickly
'In Monterrey people have bad tempers. They get angry quickly.'

However, on closer semantic analysis, it must be acknowledged that adverbs of pace with pronominal psych-verb constructions, such as in (19c), do not refer to the emotion itself, but rather to the time lapse before the emotion begins, using the metonymic strategy. If people get angry 'quickly', they do not need to be exposed to a potentially annoying event for a long time before showing anger.

¹⁷ Ruwet 1972; Arad 1998; Pykkänen 2000; Kailuweit 2005; Landau 2009; Marín 2011.

¹⁸ Several hundred occurrences of *¡no te enfades!* (don't get angry) and *¡alégrate!* (be happy) can be found in <https://www.corpusdelespanol.org/now/>.

According to Ekman (1994), episodic emotions, which are triggered by a particular situation and only last a short time, are associated with specific facial expressions. Additionally, there are other physiological effects and behaviours that cause an observer to attribute a particular emotion to a person. OE-verbs refer to the emergence of emotions, whereas the corresponding pronominal constructions focus on emotional behaviour. Therefore, these constructions could be considered atypical activities, with an actor as their sole macrorole. This lends weight to the antipassive hypothesis, given that the sole argument of anticausatives is an undergoer.

In this section, we have demonstrated that pronominal constructions of psych-verbs can, at best, be classified as atypical activities within the Vendler/Dowty aktionsart classes. If this is correct, they cannot be considered anticausatives, since anticausatives are never activities. As antipassives most naturally align with activities, our findings could support an antipassive analysis.

5 More on Causation

Nonetheless, the PSA of a pronominal OE-verb construction still could be an undergoer if we consider the construction a kind of passive of a caused activity. The analysis would be analogous to (20):

- (20) a. *A robber has been put to flight by a pensioner.*
b. [**be-in'**(newspaper, **be'** (photo, [**of'**(himself)]))] CAUSE [**feel'**(James, [**upset-about'**(**be-in'**(newspaper, **be'** (photo, [**of'**(himself)])))]]

According to the Linking algorithm from syntax to semantics given in Van Valin (2005, 149), the construction would be a passive in a language that allows a voice opposition. In (20a), the subject will be linked to the undergoer macrorole (the rightmost argument of the LS in (20b)), even if the caused event (the event on the right side of CAUSE) is an activity. The argument appearing in the periphery, introduced by the preposition marking passive agents (e.g. *by* in English), will be linked to the leftmost argument of (20b): the argument of the causing event on the left side of CAUSE.

However, for semantic reasons this analysis does not seem to be appropriate for pronominal constructions of OE-verbs. It neither reflects the semantic promotion of the experiencer nor the fact, that in many cases the oblique argument cannot be considered a passive agent-causer. Even if the preposition *por* (by) is not excluded by some Spanish pronominal constructions, these constructions regularly

appear with different prepositions to those that mark the passive agent.¹⁹

Indeed, the causative analysis of OE-verbs proposed by Grimshaw (1990) and Pesetsky (1995) has been undergone modifications in recent years (see Temme 2018 for an overview). If we assume a causal structure for these verbs, the question arises as to why these verbs exhibit ‘psych-properties’ such as the impossibility of participial absolutes in (12b). Following Landau (2009), Alexiadou and Iordăchioaia (2014) distinguish between causative ‘eventive’ and non-causative ‘stative’ constructions of OE-verbs. Only the latter show psych-properties. Alexiadou and Iordăchioaia (2014) propose that the pronominal constructions derived from the eventive constructions are anticausative. However, they analyse some OE-verbs as being stative exclusively. Consequently, Romanian pronominal constructions of OE-verbs that lack an eventive reading cannot be considered anticausatives. In addition, the authors claim that Romanian anticausative psych-verb constructions realise the non-experiencer argument, if present, with the causative preposition *de la* (from). However, our corpus study of four Romanian verbs (Wiskandt et al. 2023) revealed no instances of *de la* in conjunction with a pronominal construction. According to Alexiadou and Iordăchioaia (2014), the subject experiencer construction of the English verb *worry* (*about*) is not causative neither, since, in their analysis, *worry* does not allow an eventive reading. Alexiadou and Iordăchioaia (2014) do not categorise pronominal constructions derived from ‘stative’ OE-verbs as belonging to a specific syntactic class. These constructions appear to be lexical idiosyncrasies.

In our view, this analysis also has several issues. The distinction between causative and non-causative OE-verbs in Alexiadou and Iordăchioaia (2014) is based on Grimshaw’s (1990) analysis of OE-verbs as causative accomplishments. However, this is not convincing for the vast majority of OE-verbs, as they sound very strange in the ‘in X time’ test: *??x annoyed/delighted y in 10 minutes*. The imperfective paradox, which Dowty (1979) identified as a central criterion for the class of accomplishments, does not apply to OE-verbs either, at least not when no intentional behaviour triggers the emotion. If something was annoying x, then this circumstance annoyed x. The possibility that OE-verbs are causative states, i.e. the standard RRG analysis

19 Wiskandt et al. (2023) demonstrated that a wide range of prepositions can introduce the non-experiencer argument. Of the four verbs tested, in Catalan we found *a, amb, en, davant, de, per* (to, with, in, in front of, of/from, for) in Brazilian Portuguese *com, com relação a, de, devido a, diante de, em, por, por causa de* (with, in relation to, of/from, due to, before, in, by/for, because of). Finally, in the Romanian corpus appeared *cu, de, din, din cauza, la, pe, pentru, prin* (with, of, from, because of, at, on, for, through).

of the OE-verb construction, is not considered by Alexiadou and Iordăchioaia (2014).

The facts are highly complex, and further empirical research is needed to clarify the relationship between aktionsart, causativity, and psychological properties (Temme 2018). Some evidence comes from verbs of interest. Although their syntactic behaviour appears exceptional among OE-verbs, they can still provide insight into the general structural properties of this class.

6 Verbs of Interest

In this section, we will focus on verbs of interest in order to develop a description of the relationship between the causative (eventive), the non-causative (stative), and the pronominal construction of OE-verbs. Consider the different constructions in (21) documented in the Frantext corpus:

- (21) a. *Il m'intéressait à ce qui l'intéressait* (Frantext)
 He me-interest-IPFV.3SG in what 3SG.ACC- interest-IPFV.3SG
 'He got me interested in what he was interested in'
- b. *Je m'intéressais à ce qui l'intéressait*
 I REFL-interest-IPFV.3SG in what 3SG.ACC- interest-IPFV.3SG
 'I was interested in what s/he was interested in'

The construction in (21a) demonstrates the three-place causative use of the French verb *intéresser* (interest). The same verb appears again in the embedded argument as a non-causative two-place predicate. (21b) illustrates a pronominal construction derived from the two-place construction, rather than the three-place causative construction.

French *intéresser* (interest) is evidence for the claim that not all transitive OE-verbs are causative. The three-place construction is the causativisation of the two-place construction; for example, *The sergeant marched the soldiers to the barracks* is a causativisation of the non-causative active accomplishment *The soldiers marched to the barracks* (Van Valin, LaPolla 1997, 101). The pronominal construction in (21b) refers to emotional behaviour (showing interest) and demonstrates semantic and syntactic elevation of the experiencer-argument.

These three different constructions of verbs of interest are also attested in Spanish, Catalan (Royo 2017, 2019), German and English although some speakers consider the three-place construction to be unusual and slightly marked.

Figure 4 presents a lexical rule that relates the three constructions.

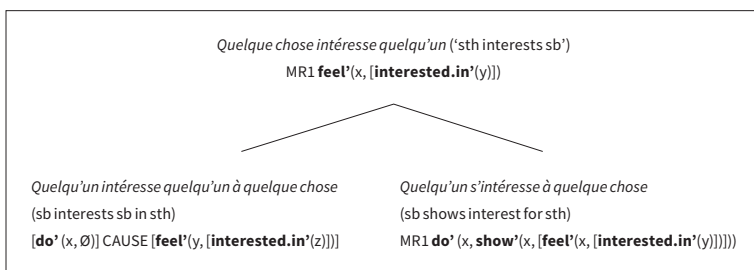


Figure 4 Non-causative, causative and pronominal construction of French intéresser (interest)

Note that the linking of the two-place construction cannot be explained, when we assume, in line with standard RRG, that the argument of the predicate embedded under **feel'** is not accessible for macrorole assignment. However, if we assume that the *y*-argument is a potential macrorole candidate, the linking follows straightforwardly from macrorole intransitivity (MR1). The construction is macrorole-intransitive. Therefore, we assign the undergoer-macrorole to the *y*-argument which becomes the PSA of the construction. The experiencer is not the direct core argument of a transitive construction. This is confirmed by the fact that two-place verbs of interest refute passivation. In Spanish, the experiencer of *interesar* (interest) shows a strong tendency towards dative coding (Vázquez Rozas, García-Miguel 2025). Consequently, its linking parallels with *gustar* (like) in (22).²⁰

(22) Spanish: *gustar* = MR1 **like'**(*x*,*y*)

However, if we consider the embedded non-experiencer argument accessible for macrorole assignment, the linking of the three-place construction of *intéresser* (interest) becomes problematic. The experiencer is not the rightmost accessible argument for undergoer choice. Therefore, the undergoer assignment is marked. Perhaps for this reason, the construction is rare and is only used with a few verbs. Even with verbs of interest, some speakers are reluctant to accept the construction as fully grammatical.

²⁰ Cresti (1990) counts Italian *interessare* (interest) into both the *preoccupare*-class and the *piacere*-dative-class of OE-verbs. See also Vietri (this volume).

7 Towards a LS-Description of Episodic OE-verbs

The findings from the last section will now form the basis for proposing a general LS for OE-verb constructions that captures both structural alternations and constraints. It is important to remember, that verbs of interest are clearly exceptions. While there are a few genuine causative three-place OE-verbs such as the Spanish verb *incitar* (incite), most OE-verbs exhibit what Pesetsky (1995) termed the “target/subject matter-restriction” (T/SM-restriction): the causer must be referentially identical to the non-experiencer argument (23).

(23) [...y / *z...] CAUSE [**feel**'(x, [**pred**'(...y...))]]

A lexical rule relating causative and non-causative constructions²¹ of episodic OE-Verbs is given in (24):

(24) [...y / *z...] CAUSE [**feel**'(x, [**pred**'(...y...))]] <=> 1MR [**feel**'(x, [**pred**'(...y...))]]

The representation in (24) is able to describe the fact that these verbs exhibit so-called psych properties in certain contexts, while behaving like causative agent-patient verbs in others (Bouchard 1995). Note that there is no linking problem with the LS for the causative construction. The non-experiencer argument (y) appears twice, first on the left side of the CAUSE operator and second on the right. Since the linking algorithm starts with actor assignment by reading the LS from left to right, the actor-macrorole is assigned to the leftmost argument, i.e. the non-experiencer argument on the left of CAUSE. When assigning the undergoer, the first option, the non-experiencer argument (y), is unavailable because it has already been selected for the actor. Therefore, the experiencer (x) receives the undergoer-macrorole. The actor is linked to the PSA function and the undergoer appears as a direct core argument.

Figure 5 shows that the basic non-causative construction of episodic OE-verbs allows for two derived constructions: the causative and the pronominal constructions. Therefore, the pronominal constructions are not directly related to the causative constructions and cannot be considered anticausative.

²¹ In (24), the causative construction corresponds to the “eventive” and the non-causative construction to the “stative” reading in Alexiadou and Iordăchioaia (2014). However, it is not clear if causativity of OE-verbs is a corollary of eventivity (see Temme 2018 for a critical overview).

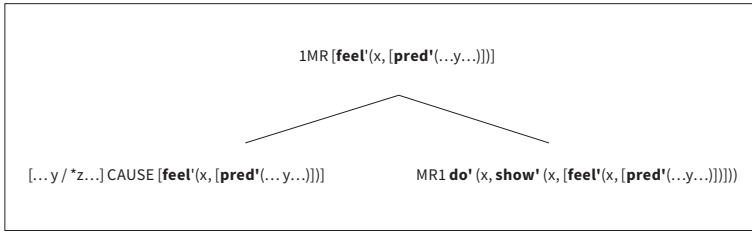


Figure 5 Non-causative, causative and pronominal constructions of OE-verbs

8 Experiencer-Centred Episodic Verbs of Emotion

It is a matter of fact that, at least in Romance languages, for many OE-verbs the pronominal construction is the more frequent construction. Let us consider the results of the corpus study in Wiskandt et al. (2023).

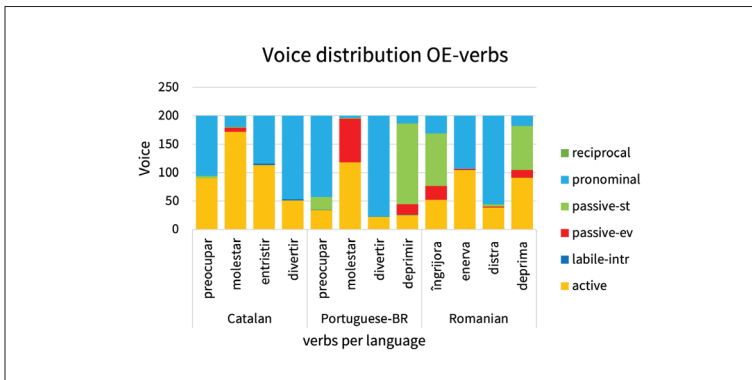


Figure 6 Voice distribution of four OE-verbs in Catalan, Brazilian Portuguese and Romanian (Wiskandt et al. 2023)

Of the four verbs analysed, those for distraction (Catalan and Brazilian Portuguese *divertir* and Romanian *distra*) appear significantly more often in pronominal constructions than in active constructions with a non-experiencer subject. The same is true of Brazilian Portuguese *preocupar* (worry), while Catalan *preocupar* (worry) is distributed roughly equally between pronominal and active constructions.

The tendencies observed in the Catalan data, which we found in a corpus including Catalan literature and press from the late nineteenth

century onwards,²² were confirmed by an elicitation test conducted in May 2023 with 63 participants at the University of Palma. The participants had to use any construction of a given psychological verb to describe a picture. The ratio of active to pronominal use for *molestar* (bother) was 51:49, and for *entristir* (sadden) it was 22:78. The other two verbs analysed in Wiskandt et al. (2023) were not tested. When we compare the experimental data with the corpus analysis, we see that the pronominal construction is more frequent for both verbs. However, *molestar* is more frequently used in the active construction than *entristir* in both datasets.

Based on these results, we claim that there is continuum between an experiencer-centred conceptualization and a correlate-centred conceptualization with each verb showing a more or less pronounced affinity to one of the two poles. The experiencer-centred view focusses on the fact that the experiencer exhibits a certain emotional behaviour in relation to a correlate that may remain unexpressed. The correlate-centred view highlights the fact that, given²³ a certain correlate, an experiencer (has come to and) remains in a certain emotional state.²⁴ The examples in (25), taken from the Corpus textual informatitzat de la llengua catalana (CTILC), illustrate a correlate-centred conceptualisation (25a) and an experiencer-centred conceptualisation (25b):

- (25) a. *Els sons aguts la molestaven* [CORRELATE-centred]
 The sounds high-pitched 3SG.FEM.ACC bother-IPFV.3PL
 ‘high-pitched sounds bothered her.’
- b. *Ens divertíem amb tota mena de jocs* [EXPERIENCER-centred]
 REFL.1PL distract-IPFV.1PL with all kind of games
 ‘we had fun with all kinds of games.’

The position that a predicate occupies on the scale between the two poles seems to vary according to the type of text. However, we argue that certain predicates (e.g. verbs expressing disturbance, such as the Catalan verb *molestar* in (25a)) are situated closer to the correlate-centred pole than other predicates (e.g. verbs expressing distraction,

²² Corpus textual informatitzat de la llengua catalana (<https://ctilc.iec.cat/scripts/>).

²³ The correlate may be given in the co-text or in the context.

²⁴ We essentially follow Marín and McNally’s (2011) approach, which states that OE-verbs denote a state marked inchoatively by a “left boundary”. Similar considerations can be found in the work of Kailuweit (2005) and Kailuweit (2015). In the present paper, however, we do not attempt to formalise the left boundary in the LS because it is irrelevant for linking purposes. Therefore, our formalisation is essentially compatible with the LS of the Standard RRG for episodic OE-verbs.

such as the Catalan verb *divertir* in (25b)) across languages and text types. We cannot rule out the possibility of diachronic change towards the experiencer-centred perspective, but this would require further empirical research to confirm.

The corpus study conducted by Wiskandt et al. (2023) also suggests a negative correlation between the occurrence of an animate non-experiencer argument and the frequency of the pronominal construction [fig. 7]. This is in line with the Spanish data that can be extracted from the ADESSE Corpus.²⁵ Overall, the ADESSE data shows a certain correlation between the animation of the non-experiencer argument and the active constructions. If the argument is animated, there is a greater probability of an active construction, whereas if it is inanimate, there is a greater probability of a pronominal construction.²⁶

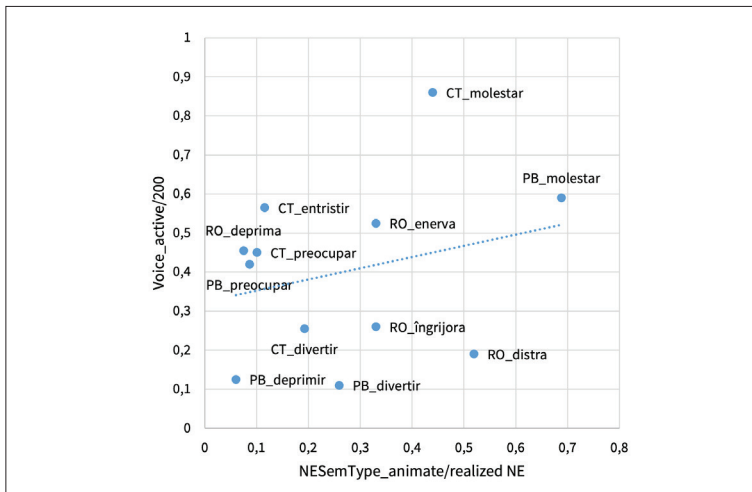


Figure 7 Correlation between active voice and animacy of the non-experiencer argument (Wiskandt et al. 2023).

We interpret animacy of the non-experiencer argument as an indicator of a causative reading of the active construction due to its animacy. Animacy is a necessary condition for deliberate and controlled action that affects another participant. In this sense, agentivity is a sufficient criterion for causativity (Kailuweit 2005, 182), which is difficult to prove in languages without a causative verb morphology.

²⁵ ADESSE Corpus (<http://adesse.uvigo.es/>).

²⁶ Personal communication José García-Miguel (23/02/2024).

This leads us to claim that we should distinguish correlate-centred and experiencer-centred episodic OE-verbs.²⁷

Lexical rule for CORRELATE-centred episodic OE-verbs	
1MR feel' (x, [pred' (... y...)])	(Basic construction)
=> [... y / *z...] CAUSE [feel' (x, [pred' (... y...)])] ???	(Causativisation)
MR1 do' (x, show' (x, feel' (x, [pred' (... y...)]))	(Pronominal construction)
Lexical rule for EXPERIENCER-centred episodic OE-verbs	
MR1 do' (x, show' (x, feel' (x, [pred' (... y...)]))	(Basic construction)
=> 1MR feel' (x, [pred' (... y...)])	(Stative construction)
=> [... y / *z...] CAUSE [feel' (x, [pred' (... y...)])]	(Causativisation)
A few verbs (i.e. verbs of interest) allow causativisation with z	

Figure 8 Correlate-centred and experiencer-centred episodic OE-verbs

In this section, we have demonstrated that a causative structure can be derived with the non-experiencer argument in the subject position for correlate-centred OE-verbs. The subject argument receives two semantic roles: correlate and causer. As adding a causer is optional for basically non-causative structures, the pronominal construction of OE-verbs cannot be considered an anticausative. The extent to which causativisation is also available for experiencer-centred episodic OE-verbs remains an open question for further research.

9 Antipassives – A Typological Approach

One central question remains. Should the pronominal construction be considered an antipassive construction in an accusative language? According to standard RRG, antipassive constructions are restricted to ergative languages (Watters 2023, 313). Herslund acknowledges the risk of his antipassive approach, which is that

²⁷ Note that the proposal of experiencer-centred episodic OE-verbs parallels to a certain extent with the idea of an ‘autocausative’ class in Mateu and Royo (this volume). However, some of their examples, such as Catalan *avergonyir-se* (to be ashamed), *pendir-se* (to repent) and *compadir-se* (to pity) appear to exhibit highly idiosyncratic syntactic behaviour. When comparing languages, it is questionable whether there is a standardised class of ‘autocausatives’ here. Nevertheless, the concept of an ‘autocausative’ structure is consistent with our analysis, as it demonstrates that so-called autocausative pronominal constructions of OE-verbs are clearly not anticausative.

The straitjacket of Latin grammar is replaced by an unprincipled promiscuity of all kinds of categories from the grammars of exotic languages. (Herslund 1997, 76).

However, he claimed that this danger could be mitigated:

First, by the requirement of the existence of a functional category, i.e. the already mentioned common functional content of different grammatical structures. Secondly, by the awareness that the grammaticalisation of structural patterns occurs in different degrees in different languages [...] I think there is a good chance of making sense out of the idea of cross-linguistic functional categories. Such categories could for instance be the ways in which different languages proceed to get rid of Agent- and Patient-arguments under certain pragmatic or textual circumstances. These procedures are, however great the structural differences from language to language, good candidates for the status of cross-linguistic functional categories. (Herslund 1997, 76).

In a broad typological survey of 448 languages, Heaton (2017) demonstrated that antipassive constructions exhibit significant heterogeneity across languages. These constructions vary significantly in their morphosyntactic, semantic, and pragmatic properties. The author notes that, based on her criteria, these constructions occur in both accusative and ergative languages. According to Heaton's classification, 43% of ergative languages have antipassives, compared to 18% of nominative-accusative languages (Heaton 2017, 153). Heaton (2020, 148f) lists eleven features of antipassive. Of the 448 languages in the sample (Heaton 2017), more than 100 different sets of features were found to describe various constructions as potential antipassives. Only 64 of these sets were not unique in the data. However, most of these appeared just a few times (Heaton 2020, 137f).

Heaton (2020) does not explicitly explain which features she considers to be sufficient or necessary. Nevertheless, she emphasises that "antipassives with oblique patients and primarily syntactic functions are rare" (Heaton 2020, 140). Consequently, only a very small number of ergative languages have constructions that have been considered prototypical cases of antipassives, following Dixon (1979). Conversely, dozens of languages have constructions that exhibit at least some of the eleven features identified by Heaton.

The following provides a brief schematic overview of Heaton's features, applying them to the reconstruction of two pronominal OE-verbs in Spanish, one correlate-centred verb, *enfadar(se)* (upset), and one experiencer-centred verb, *interesar(se)* (interest).

Table 1 Six out of eleven features for antipassive (Heaton 2020, 148f) applicable to Spanish *se*-constructions of OE-verbs

Feature	Description	<i>enfadarse</i> (get/be angry) / <i>interesarse</i> (get/be interested)
[oblique]	The patient appears in an oblique phrase.	+ (<i>enfadarse con/por; interesarse por/en</i>)
[mark]	Present antipassive marker that detransitivises the predicate, preserves the agent, and demonstrably indicates voice.	+ (<i>enfadarSE, interesarSE</i>)
[asymm]	The antipassive construction corresponds to an unmarked or less-marked bivalent transitive construction. It may also apply to ditransitives, intransitives, etc., as long as it acts primarily on bivalent structures.	+ (<i>María enfada / interesa a Pedro</i> => <i>Pedro se enfada / interesa por María</i>)
[intrans]	The resulting predicate is intransitive.	+ (<i>Pedro se enfada / se interesa por María</i>)
[ValDec]	The construction is valency decreasing, the patient argument must always be omissible	(+) (<i>Pedro se enfada / ??se interesa</i>)
[semantics]	Antipassive-like semantics / functions: nonindividuation, genericness, nonspecificity, or indefiniteness of the patient; the expression of partitive relationships; habitual or canonical action; incompletive aspect; promotion of the agent; and/or demotion or deletion of the patient from the discourse.	(+) Promotion of the experiencer to actor; demotion or deletion of the undergoer.

Table 2 Five out of eleven features for antipassive non applicable to Spanish se-constructions of OE-verbs

Feature	Description	<i>enfadarse</i> (get/be angry) / <i>interesarse</i> (get/be interested)
[dedicated]	The antipassive marker is dedicated to the antipassive construction and does not have other uses beyond signaling the antipassive. (In many languages the antipassive marker has evolved from a middle marker or reflexive/reciprocal marker and still has that function as well, in which case the marker is not dedicated to the antipassive)	– (se has also the function of a middle marker and reflexive/reciprocal marker <i>inter alia</i>)
[–lexical]	The antipassive is nonlexical.	– restricted to a small number of semantic verb classes: OE-verbs, verbs of communication such as <i>confesar-se de</i> (confess)
[productive]	The operation applies to (almost) all transitive verbs. Coupled with [–lexical], the presence of [–lexical] but not [productive] indicates that the construction is nonlexical, but not entirely productive.	(–) Productive only with OE-verbs.
[–patient]	The operation creates a predicate where there is no implication of any specific patient.	– The undergoer of the basis construction always remains expressible as an oblique.
[syntax]	The construction is used to circumvent various types of restrictions on nonabsolute Arguments. It participates in syntactic ergativity.	– Spanish is not an ergative language.

As Tables 1 and 2 show, six of the eleven antipassive features apply to the pronominal constructions of OE-verbs in Spanish. Please note that the features [oblique] and [–patient] are mutually exclusive and that the feature [syntax] only applies to ergative languages. Therefore, the maximum number of features for a construction in an accusative language such as Spanish would be nine. Since six of the nine possible features take on a positive value, it would be quite justified to describe the construction as antipassive, in line with the approach taken by Cresti (1990), Masullo (1992) and Herslund (1997).

However, the main problem with assuming a PSA-modulation antipassive construction in Romance languages or German is that this construction is restricted to a clear-cut semantic class: episodic OE-verbs. This suggests that the pronominal construction of these verbs is derived from a lexical rule rather than a basic voice operation. In this respect, we consider the [productive] feature to be a prerequisite for the adoption of a grammatical antipassive. Our approach thus aligns with standard RRG's description of voice operations (Van Valin 2023, 125-30; Watters 2023, 310-4).

10 Conclusion

Contrary to widespread opinion, which also forms the basis of the standard RRG analysis, pronominal constructions of OE-verbs in Romance languages cannot be considered anticausatives, as we have seen in this paper. A more compelling argument is to classify them as antipassives, as Cresti (1990) did for Italian, Masullo (1992) did for Spanish, and Herslund (1997) did for French. Pronominal constructions of episodic OE-verbs as they occur in Romance languages differ substantially from anticausatives and other 'passive-like' pronominal constructions. Firstly, they always permit the non-experiencer argument to be expressed as an oblique. In many cases, from a semantic point of view, this argument is clearly not the 'cause' of the emotion. Secondly, while the subject of anticausative constructions (PSA in RRG) is an undergoer, the experiencer of pronominal constructions of OE-verbs is an actor. Pronominal constructions are, at best, classified as activities rather than states because they fulfil several of the criteria for activities. Semantically, they can be considered non-prototypical activities focusing on the emotional behaviour of the experiencer. Unlike the corresponding active OE-constructions in the standard RRG analysis, they are not causative states. Furthermore, they cannot be classified as caused activities. Since the antipassive construction takes an actor as the PSA and demotes the undergoer syntactically, it generally aligns with activities. Therefore, there are some good arguments in favour of the antipassive analysis of pronominal constructions of OE-verbs in Romance languages.

We began our own RRG analysis of these constructions with verbs of interest. These verbs provide evidence that the pronominal construction does not derive from a causative construction. The pronominal construction is related to a macrorole-intransitive stative construction, in which the non-experiencer argument acts as the undergoer and PSA. A third argument is introduced as the actor in a causativised three-place construction, while the experiencer becomes the actor in the pronominal construction. This changes

the semantics from a state to an (non prototypical) activity, and the undergoer is demoted syntactically.

In a second step, we generalised these structures and demonstrated that verbs of interest are rare exceptions to Pesetsky's (1995) T/SM-restriction. Taking this restriction into account enables us to explain that both the causative and pronominal constructions of episodic OE-verbs are derived from a non-causative base. Generally, the T/SM-restriction excludes the introduction of an external causer. Instead, the non-experiencer argument is given the additional semantic role of a causer.

However, due to its frequency, the pronominal construction can be considered as the basic construction for many episodic OE-verbs. We have described these verbs as experiencer-centred, in contrast to the correlate-centred verbs, where the pronominal construction is derived. Experiencer-centred verbs seem to allow causativisation less easily. Further research is needed in this area.

Finally, we addressed the question of whether the pronominal construction should be considered an instance of antipassive in an RRG framework. According to Heaton's (2017; 2020) list, the construction shows several features that are characteristic of antipassive. However, standard RRG only allows for antipassive constructions in ergative languages. Since the construction is confined to a specific semantic domain (OE-verbs), we chose to derive it using a lexical rule rather than considering it to be a basic voice operation.

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The Nature of Psych Detransitivization in Romance and Germanic

A Typological Approach

Niklas Wiskandt

Heinrich-Heine-Universität Düsseldorf, Deutschland

Abstract Romance and Germanic languages exhibit the psych alternation, deriving intransitive subject-experiencer predicates from transitive object-experiencer verbs, using markers of reflexive origin. The appropriate syntactic classification of Romance and Germanic detransitivized psych verbs, e.g. as anticausatives or antipassives, is under debate. This paper proposes a typologically oriented approach to the question, based on patterns of voice syncretism: The study shows that the common denominator of psych detransitivization markers is an anticausative function, and discusses how this approach may complement theoretical reasoning and language-specific hypothesis building.

Keywords Psych verbs. Psych alternation. Grammatical voice. Voice syncretism. Detransitivization. Anticausative. Romance and Germanic languages. Typology.

Index 1 Introduction. – 2 The Debate on the Nature of the Psych Alternation in Romance and Germanic. – 3 Towards a New Typological Method. – 4 Data. – 5 Results. – 6 Discussion. – 7 Conclusion.

1 Introduction

Romance (roma1334)¹ and Germanic (germ1287) languages are known to exhibit instances of the psych alternation. Research on psych verbs has been vibrant particularly for Romance languages since the study of Belletti and Rizzi (1988), and the psych alternation has recently become one of the core topics in this research domain. As a consequence of the fact that Romance and Germanic languages are, in terms of Nichols et al. (2004), detransitivizing languages, their psych alternations derive syntactically intransitive subject-experiencer (SE) predicates from transitive object-experiencer (OE) verbs, forming reduced psych alternation pairs (cf. Rott et al. 2020; 2024) in which the subject-experiencer construction is marked in relation to the object-experiencer construction. The voice marker employed in Romance psych alternation pairs is a reflexive pronominal clitic (e.g. Portuguese *se* in (1)). In Germanic languages, the respective marker is a reflexive pronoun (e.g. German *sich* in (2)) or a suffix (e.g. Danish -s).

- (1) Brazilian Portuguese (braz1246; Romance < IE; cf. Cançado et al. 2024, 127)²
- a. *A insistência do filho aborreceu a mãe.*
 DEF insistence of:DEF son annoy.PST.3SG DEF mother
 ‘The son’s insistence annoyed the mother.’
- b. *A mãe se aborreceu com a insistência do filho.*
 DEF mother REFL annoy.PST.3SG with DEF insistence of:DEF son
 ‘The mother got annoyed by the son’s insistence.’
- (2) German (stan1295; West Germanic < IE; cf. Wiskandt 2021, 246)
- a. *Das Missgeschick ärgert Paul.*
 DEF mishap irritate.3SG Paul
 ‘The mishap irritates Paul.’
- b. *Paul ärgert sich (über das Missgeschick).*
 Paul irritate.3SG REFL about DEF mishap
 ‘Paul is/gets irritated about the mishap.’

While the phenotype of the phenomenon is well-established, its functionality is still under discussion. There is no consensus on

¹ Languages and other languoids mentioned in this paper are unambiguously identified by Glottocodes (see Hammarström et al. 2024).

² Glossing of linguistic examples in this paper follows the Leipzig Glossing Rules. Glosses of examples extracted from the literature were adapted in order to enforce the Glossing Rules and to harmonize the use of labels and terminology.

semantic features of the detransitivized constructions, and existing accounts lack explanations for lexical restrictions operating on them. Against the background of these open questions, there are vigorous debates about the appropriate syntactic classification of Romance and Germanic detransitivized psych verbs: Are they anticausatives? Reflexives? Or even antipassives?

Within the huge problem field around psych detransitivization and its properties, this paper deals with a subset of all possible subquestions: I investigate what kinds of markers are used for psych detransitivization, what functions those markers have, and what information typological patterns provide us for the study of Romance and Germanic languages. The main goals of the paper are to establish a new method for determining the nature of psych detransitivization, to validate the method on an initial cross-family sample, and to build hypotheses for subsequent research on psych detransitivization based on the method. Several other possible subquestions are beyond the scope of this paper. I do not address the semantics of the alternation counterparts (although this paper gives rise to hypotheses for subsequent empirical studies on semantic features), and how the phenomenon should be theoretically modeled (although the findings of this paper might still inform theoretical modeling).

After this introduction, the theoretical background of the research question is laid out in Section 2. Section 3 proposes a new functional-typological approach to the question. Data from the language sample presented in Section 4 reveal interesting patterns that are analyzed in Section 5. The implications of my results for the analysis of Romance and Germanic languages and for the typology of the psych alternation are discussed in Section 6. Section 7 summarizes my key findings and provides an outlook on subsequent research.

2 The Debate on the Nature of the Psych Alternation in Romance and Germanic

As a first step, I introduce the research background of the debate about the psych alternation, i.e. the transitivity alternation of psych verbs, in Romance and Germanic, and its theoretical classification.

The term ‘psych verb/predicate’ as well as the closely related term ‘experiencer verb/predicate’ are used ambiguously in the literature: They are used either for all verbs and predicates that have an ‘experiencer’ in the wider sense, i.e. an argument referring to an individual experiencing any type of mental or cognitive state or process, as one of their arguments; or they are used in a more specific way, referring to the subset of verbs and predicates in which the experiencer’s referent is an individual experiencing an emotion

(a subtype sometimes referred to as ‘emoter’). This paper discusses the latter, more specific category: A psych verb, psych predicate, experiencer verb or experiencer predicate as understood in this paper has an experiencer argument which refers to a sentient being that feels an emotion denoted by the predicate of which the experiencer is an argument. The second argument of those verbs and predicates has been labeled a stimulus (e.g. Verhoeven 2010), theme (e.g. Belletti, Rizzi 1988), causer (e.g. Pesetsky 1995), or correlate (e.g. Kailuweit 2005) in previous literature. This paper does not make any *a priori* assumptions on the specific role of that argument, and thus uses the descriptive, neutral term ‘non-experiencer argument’. A more detailed discussion of this terminology and of the general properties and peculiarities of psych verbs and psych predicates goes beyond the scope of this chapter; I refer the reader to the introductory chapter and the other contributions in this volume. From now on, I concentrate specifically on the psych alternation in Romance and Germanic.

There are numerous different approaches to classifying the type of detransitivization that happens in the psych alternation (cf. Rott et al. 2020; 2024) in detransitivizing languages (cf. Nichols et al. 2004) such as Romance and Germanic languages. However, many previous approaches are not really satisfying. Some approaches only draw on data from one language; others seem to have no empirical basis. Some works use a specific label for the type of detransitivization, but do not explain why they chose it or what they mean by it; and others provide a classification, but no falsifiable claims on the nature of the alternation. As an obfuscating factor, the pronominal element that detransitivizes Romance or German psych verbs has a lot of other functions, e.g. reflexive, reciprocal, anticausative voice functions, but occasionally also aspectual functions. There is not even consensus on whether or not the phenomenon in question belongs in the domain of grammatical voice. This paper postulates that it does, assuming a definition of grammatical voice in the line of Zúñiga and Kittilä (2019):

Grammatical voice is defined [...] as a grammatical category whose values correspond to particular diatheses marked on the form of predicates. Diathesis refers to the number of semantic arguments involved in a state of affairs, to how they are involved in it, and to how they are assigned to [grammatical roles] of varying salience and flexibility. Voice refers to the way a specific diathesis is formally marked on functional or lexical verbs in the predicate complex. (Zúñiga, Kittilä 2019, 4)

The literature on the psych alternation, particularly in Romance and Germanic, features a diverse range of classifications of the phenomenon, and particularly of the detransitivized constructions in the alternation. Although a large proportion of the literature (see

also the literature review in Kailuweit, this volume) classifies them as anticausatives (e.g. Acedo-Matellán, Mateu 2015; Hirsch 2018; Wiskandt 2021; Vietri 2023; 2024) or inchoatives (e.g. Marín, McNally 2011; Cançado, Godoy 2012; Cifuentes Honrubia 2015; Ganeshan 2019; Melis 2019; Fábregas, Marín 2020), they have also been labeled as reflexives (e.g. Härtl 2001), middles (e.g. Kutscher 2009; Będkowska-Kopczyk 2014), passives (e.g. Gross 2000), antipassives (e.g. Cresti 1990; Masullo 1992; Herslund 1997; Kailuweit 2005), and inverse constructions (e.g. Cançado et al. 2024). These classifications have been made from different perspectives, e.g. theoretical syntactic perspectives (e.g. Cresti 1990; Hirsch 2018) or aspectual-semantic perspectives (e.g. Marín, McNally 2011; Melis 2019). Some recent studies abstain from all theoretically loaded classifications (e.g. Sonnenhauser 2010; Pijpops, Speelman 2017; Verhoeven 2017). Others make a subdistinction within the psych alternation: Alexiadou and Iordăchioaia (2014) identify cases of a “psych causative alternation” among OE verbs in Greek and Romanian, i.e. they classify some alternation pairs of OE verbs and detransitivized constructions as equivalent to causative alternations, which would entail that the latter are anticausatives. They limit this analysis to a subset of OE verbs, based on the preposition that marks the oblique argument phrase in the detransitivized construction. Other cases of the psych alternation that are excluded by their definition remain unclassified. Some approaches touch on the question of how to classify the phenomenon, but only make negative statements. For example, Rozwadowska and Bondaruk (2019) argue that the respective phenomenon in Polish is not a type of anticausativization. Within this volume, several other contributions also address the psych alternation and its classification specifically for Romance languages. García-Miguel and Vázquez Rozas (this volume) classify the constructions as middle, Kailuweit (this volume) argues for analyzing them as antipassives; Mateu and Royo (this volume) make a sub-distinction within the phenomenon, sorting them into the categories of anticausatives and autocausatives, with agentivity as the deciding parameter; and Blanchard-Rooney (this volume); Grätz et al. (this volume) opt for the neutral classification as pronominal voice.

3 **Towards a New Typological Method**

The debate on the nature on the psych alternation is diverse, and as listed in Section 2, there are several different perspectives. So far, no compromise has been presented, and no classification has been successfully argued to capture all Romance and Germanic languages. In order to escape the deadlocked classification debate, this paper

presents a new approach to the problem, taking a typological perspective.

In this spirit, I conceive of the psych alternation as a cross-linguistic phenomenon that has different phenotypes across languages. My use of the term “psych alternation” follows Rott et al. (2020; 2024). Directionality of the psych alternation, that is, whether the psych alternation forms augmented, reduced, or undirected pairs (Rott et al. 2024), is correlated with the transitivity/detransitivizing typological parameter described by Nichols et al. (2004): Transitivity languages tend to form augmented pairs, i.e., to derive transitive OE predicates from intransitive SE verbs. Detransitivizing languages tend to form reduced pairs, i.e., to derive intransitive SE predicates from transitive OE verbs. Some languages have equipollent derivations in the psych domain and form undirected psych alternation pairs. Many languages use more than one of these strategies, but in most of them, one strategy still dominates. A few languages exhibit a balanced mix of strategies. This paper mainly deals with Nichols et al. (2004)’s detransitivizing languages type, or more precisely, with languages that are at least partially detransitivizing, and analyzes reduced psych alternation pairs in the sense of Rott et al. (2024). Although sharing the common trait of forming reduced psych alternation pairs, these languages still differ largely with respect to the markers they employ for marking those reduced pairs. This mirrors the large variety of different markers that languages use for detransitivization in general.

This paper proposes a novel approach to classifying detransitivization in the psych domain in Romance and Germanic languages. The aim of this approach is to investigate the nature of the type of detransitivization that occurs in reduced psych alternation pairs from a functional-typological perspective and to provide a classification that is grounded in cross-linguistic functional patterns rather than language-specific assumptions. Previous typological studies on the psych alternation, most prominently in the line of Rott and Verhoeven (2019) and Rott et al. (2020; 2024), have provided useful insights, but focused on other aspects. What is still missing in typological considerations is a detailed look at what types of markers are used in reduced psych alternation pairs in the languages of the world, and what other functions they fulfill. The comparison to other functions can allow for conclusions about what exactly these markers do in the psych domain.

Inspired by recent research on voice syncretism (cf. Bahrt 2021), the nature of psych detransitivization is assessed by investigating the functional syncretisms of the markers used in it. All known markers that detransitivize experiencer verbs and thereby form reduced alternation pairs also mark other voice constructions, but there is large cross-linguistic variation with respect to how many and which functions are part of that syncretism. My conception of the term “voice syncretism” follows Bahrt (2021), and in this work,

I include only Bahrt's Type 1a, unconditioned full resemblance, i.e. "the voice marking in two [or more] voices bears full resemblance under all conditions" (2021, 59-62), and Type 1b, conditioned full resemblance, i.e. "the voice marking in two [or more] voices bears full resemblance under only some conditions" (63-6). It also needs to be clarified that whenever a statement like "Marker X marks anticausatives in language A." or "Marker Y shows a syncretism with the passive in language B." is made, the voice labels refer to at least some typical, undoubted cases of the respective voice constructions. For determining voice functions, I assume the definitions of voices as designed for the voice syncretism study in Bahrt (2021, 19-46).

The subsequent chapters present a pilot study for the new approach based on an elementary sample. The results can demonstrate a path towards classifying the nature of psych detransitivization in Romance and Germanic languages which is grounded in functional morphosyntactic typology.

4 Data

In this section, I present data on the phenomenon in question. After laying out the situation in Romance and Germanic languages, I assess a sample of ten languages beyond those families. The sample includes five additional Indo-European (indo1319) languages, among them representatives of the Slavic (slav1255), Greek (gree1276), and Armenic (arme1241) genera, as well as five languages outside of Indo-European from four different families. The allocation of languages to genera and families follows WALS (Dryer, Haspelmath 2013) and Glottolog (Hammarström et al. 2024); the names of all languoids (i.e. families, genetic subgroups, languages, and varieties) are consistent with Glottolog. For each sampled language, I provide an example of the respective psych alternation marker and a statement on the other voice functions of that marker.

4.1 Romance Languages

Consistent with the perspective of this paper, I begin the compilation of the data sample with Romance languages (roma1334). Given that there is rich existing literature on the phenomenon and the marker in Romance, as I summarized in Section 2, and that the focus of this study is to consider data from outside of the Romance genus, the description is kept brief. Romance languages are consistent in their use of markers for the psych alternation. Their detransitivizing markers used to form reduced psych alternation pairs are reflexive pronominal clitics. In the following examples, I present exemplary

reduced psych alternation pairs from six large Romance languages, i.e. Portuguese (3),³ Spanish (4), Catalan (5), French (6), Italian (7), and Romanian (8).

- (3) Brazilian Portuguese (braz1246; Romance < IE; cf. Cançado et al. 2024, 127)
- a. *A insistência do filho aborreceu a mãe.*
 DEF insistence of:DEF son annoy.PST.3SG DEF mother
 ‘The son’s insistence annoyed the mother.’
- b. *A mãe se aborreceu com a insistência do filho.*
 DEF mother REFL annoy.PST.3SG with DEF insistence of:DEF son
 ‘The mother got annoyed by the son’s insistence.’
- (4) Spanish (stan1288; Romance < IE; cf. Fábregas, Marín 2020, 223)
- a. *A Juan le preocupan las cosas.*
 OBJ Juan 3SG.DAT worry.3SG DEF thing.PL
 ‘Juan gets worried about things.’
- b. *Juan se preocupa por las cosas.*
 Juan REFL worry.3SG for DEF thing.PL
 ‘Juan gets worried about things.’
- (5) Catalan (stan1289; Romance < IE; cf. Royo 2018, 117)
- a. *La música emociona l’Enric.*
 DEF music excite.3SG DEF-Enric
 ‘The music excites Enric.’
- b. *Enric s’emociona amb la música.*
 Enric REFL-excite.3SG with DEF music
 ‘Enric gets excited about music.’
- (6) French (stan1290; Romance < IE; cf. Kailuweit 2005, 4)
- a. *Marie irrite Pierre.*
 Marie irritate.3SG Pierre
 ‘Marie irritates Pierre.’
- b. *Pierre s’irrite contre Marie.*
 Pierre REFL-irritate.3SG against Marie
 ‘Peter becomes irritated with Marie.’

³ Example (3), repeated from (1), stems from the Brazilian variety of Portuguese. The alternation pair would work in other varieties of Portuguese (port1283) just as well; in European Portuguese the reflexive pronominal marker would appear as an enclitic (*aborreceu-se*) instead of a proclitic (*se aborreceu*).

- (7) Italian (ital1282; Romance < IE; cf. Vietri 2024, 12)
- a. *Maria ha spaventato Luca.*
 Maria have.3SG frighten.PTCP Luca
 ‘Maria frightened Luca.’
- b. *Luca si è spaventato (di Maria).*
 Luca REFL be.3SG frighten.PTCP of Maria
 ‘Luca was frightened (by Maria).’
- (8) Romanian (roma1327; Romance < IE; cf. Alexiadou, Iordăchioaia 2014, 63)
- a. *Stirile au enervat -o pe Maria.*
 news.DEF have.3PL annoy.PTCP -3SG.F.ACC ACC Maria
 ‘The news annoyed Maria.’
- b. *Maria s-a enervat de la stiri.*
 Maria REFL-have.3SG annoy.PTCP of at news
 ‘Maria got annoyed with the news.’

Romance languages are not only consistent in the form of the marker, but also in its voice syncretism pattern. The markers employed in the psych alternations of all Romance languages have the same set of other voice functions, i.e. reflexive, reciprocal, anticausative and restricted passive functions. Some authors (Masullo 1992; Herslund 1997; Bogard 1999; Janic 2012; 2016) have also proposed an antipassive function of the marker.⁴ Within my approach, I do not assume that the antipassive is included in the voice syncretism. The Romance REFL-marked constructions classified as antipassives in those works, while certainly sharing properties with antipassives, cannot be confirmed as such under the definitions proposed by Bahrt (2021) that I adopt in this paper. The respective voice definitions (Bahrt 2021, 25-7) require that in the antipassive voice construction the non-agent argument either cannot be expressed (in case of an absolute antipassive voice), or is less likely to be expressed (in case of a non-absolute antipassive voice). This entails that the omission of that argument is at least possible. The constructions in the works referenced above, however, fall into one of two categories: Either the non-agent argument can, while expressed in a denucleativized way (i.e. in a PP, not as direct object), not be entirely omitted; or the construction can alternatively be analyzed as a reflexive construction. Neither of the two categories qualify as antipassives as understood in this work. A more detailed assessment of the definition of antipassive voice functions goes beyond the scope of this paper.

⁴ I am grateful to an anonymous reviewer for the suggestion to address this issue and for two additional literature recommendations.

4.2 Germanic Languages

Germanic languages (germ1287) show more diversity with respect to psych alternation markers and their voice syncretism patterns than we saw in Romance languages. There are markers with close similarity to Romance reflexive pronominal clitics, but also markers that are – at least synchronically – very different in morphological form and function.

German (stan1295; West Germanic < IE) uses a reflexive element for psych detransitivization. Contrary to Romance languages, it is not a pronominal clitic, but a free reflexive pronoun. The psych alternation in German has been analyzed e.g. by Hirsch (2018); Wiskandt (2021), and is also included in the sample of Rott et al. (2024). Examples (9), repeated from (2), show a reduced psych alternation pair in German. (9b) features the 3rd person reflexive pronoun *sich* in its use as a psych alternation marker. The marker is also used for reflexive, reciprocal and anticausative voice functions.

(9) German (stan1295; West Germanic < IE; cf. Wiskandt 2021, 246)

- a. *Das Missgeschick ärgert Paul.*
 DEF mishap irritate.3SG Paul
 ‘The mishap irritates Paul.’
- b. *Paul ärgert sich (über das Missgeschick).*
 Paul irritate.3SG REFL about DEF mishap
 ‘Paul is/gets irritated about the mishap.’

The form and behavior of the psych alternation marker in Dutch (dutc1256; West Germanic < IE) is similar to that of its fellow West Germanic language, German. Pijpops and Speelman (2017) analyze the influence of agentivity on the psych alternation in Dutch and provide the following pair of examples (10). The reflexive pronoun *zich* marks the psych alternation in (10b).

(10) Dutch (dutc1256; West Germanic < IE; cf. Pijpops, Speelman 2017, 210-1)

- a. *Elizabeth ergert John*
 Elizabeth annoy.3SG John
 ‘Elizabeth annoys John.’
- b. *John ergert zich aan Elizabeth*
 John annoy.3SG REFL to Elizabeth
 ‘Elizabeth annoys John.’

The voice syncretism pattern is slightly different from that in German described above. The marker has reflexive and limited anticausative functions (cf. examples in Donaldson 2017, 257-62). Lekakou (2005,

171-4) argues against an anticausative function of the marker on theoretical-syntactic grounds. But from a functional and semantic perspective, some of the given examples that have inchoative semantics qualify as anticausatives over the broad definition of the voice function assumed in this paper. Broekhuis (2022, 9-10) also discusses similar uses with inchoative semantics. An anticausative function of the Dutch reflexive pronoun is clearly not as productive as in its German and Romance counterparts. The majority of causative alternation pairs in Dutch are labile, i.e. there is no morphological marking of the anticausative. But given the inchoative detransitivizing uses of the marker shown in the literature referenced above, it is justified to assume a limited syncretism with the anticausative. Also, there is no other morphological anticausative marker that competes with the reflexive pronoun; while most anticausatives remain unmarked due to the dominant labile causative alternation, the limited number of marked anticausatives always employ the reflexive pronoun. Unlike its counterpart in German, the Dutch reflexive pronoun does not have a reciprocal function (Donaldson 2017, 264). Interestingly, Lekakou (2005, 174-5) also treats the reflexive pronoun as an alternation marker on psych verbs.

Turning to the other branch of the Germanic genus, we observe a significantly different situation in North Germanic, i.e. Scandinavian languages: Danish (dani1285), Norwegian (norw1258), Swedish (swed1254), Faroese (faro1244), and Icelandic (icel1247). These languages are discussed collectively here for the sake of conciseness. Scandinavian languages feature a suffix as the marker in reduced psych alternation pairs: *-s* in Mainland Scandinavian (i.e. Danish, Norwegian and Swedish), and *-st* in Insular Scandinavian (i.e. Icelandic and Faroese). These markers historically originated from reflexive pronominal clitics; synchronically, they exhibit the morphological behavior of suffixes. In present-day Scandinavian languages, they are best classified as middle voice suffixes, as has been argued by Wiskandt (2019). In all five languages, the suffix has several other voice functions, although the exact voice syncretism patterns differ (cf. Wiskandt 2019, 36): The marker can mark anticausatives, reciprocals (all Scandinavian languages), reflexives (Icelandic and Faroese), passives (Danish, Norwegian and Swedish), and antipassives (Swedish). An application of the respective suffix in a psych alternation pair in Icelandic is displayed in (11), with a transitive use (11a) of the verb *gleðja* ('make happy') in (11a) and the corresponding reduced alternant, detransitivized by the suffix *-st*, in (11b). (12) shows two examples of the use of the middle voice suffix *-s* as a psych alternation marker in Norwegian.

- (11) Icelandic (icel1247; North Germanic < IE; cf. Rott et al. 2024, supplementary material, ID 1-2)
- a. *Kom-a hóp-s-ins gleð-ur kon-u-na.*
arrival-NOM group-GEN-DEF cheer.up-3SG woman-ACC-DEF
'The arrival of the group makes the woman happy.'
- b. *Kon-a-n gleð-st við kom-u hóp-s-ins.*
woman-NOM-DEF cheer.up-3SG-MID at arrival-ACC group-GEN-DEF
'The woman becomes joyful due to the arrival of the group.'
- (12) Norwegian (norw1258; North Germanic < IE; cf. Åfarli 2002, 132)
- a. *Jeg irritere-s av at han kan ha sagt det.*
1SG annoy-MID by that 3SG.M can have say.PTCP that
'I am annoyed that he might have said that.'
- b. *Jeg bekymre-s av at han kan ha sagt det.*
1SG worry-MID by that 3SG.M can have say.PTCP that
'I worry that he might have said that.'

The situation in Mainland Scandinavian is even more complex: There is competition between two psych detransitivization strategies. Besides the middle voice suffix, these languages can also use a reflexive pronoun, much like German and Dutch, which otherwise marks reflexives, reciprocals, and occasionally anticausatives. This is exemplified in (13) by two pairs of detransitivized psych verbs in Swedish, which can each be marked either by the reflexive pronoun *sig* or by the middle voice suffix *-s*. Since the Mainland Scandinavian pronoun option does not show any voice syncretism pattern that is not already present in Scandinavian through the middle voice suffix, it will not be listed separately in the results overview in the following Section 5, but it shall be mentioned here for the sake of a comprehensive description.

- (13) Swedish (swed1254; North Germanic < IE; cf. Holmes, Hinchliffe 1994, 304-5)
- a. *glädja sig — glädja-s*
delight REFL delight-MID
'rejoice / be happy'
- b. *förarga sig — förarga-s*
annoy REFL annoy-MID
'get/be annoyed'

4.3 Slavic Languages

After presenting the psych alternation markers and their voice syncretism patterns in the language genera in the focus of this paper,

our first object of comparison is provided by Slavic languages (slav1255). Although closely related to Romance and Germanic, they feature new voice syncretism patterns in their psych alternation markers.

The psych alternation marker in Polish (poli1260) is the reflexive pronominal clitic *się*. Its use on psych verbs has been described by Rozwadowska and Bondaruk (2019). Other functions of the marker comprise the reflexive, reciprocal, and anticausative. A classic example of the psych alternation in Polish is found in (14).

- (14) Polish (poli1260; Slavic < IE; cf. Rozwadowska, Bondaruk 2019, 86)
- a. *Głupie gadanie zdenerwowało Marka.*
idle talk.NOM annoy.PST.PFV Marek.ACC
'Idle talk started to annoy/annoyed Mark.'
 - b. *Marek zdenerwował się (głupim gadaniem).*
Marek.NOM annoy.PST.PFV REFL idle.INS talk.INS
'Mark got annoyed (with idle talk).'

Slovenian (slov1268) marks psych detransitivization by means of the lightened reflexive pronoun *se*, which has been classified as a middle voice marker (Będkowska-Kopczyk 2014). It is used in both imperfective (15a) and perfective (15b) aspect. In addition to marking the psych alternation, the marker also has reflexive, reciprocal, anticausative, and limited passive voice functions (cf. Herrity 2016, 215-17).

- (15) Slovenian (slov1268; Slavic < IE; cf. Będkowska-Kopczyk 2014, 204)
- a. *Janez se boji.*
Janez MID scare.3SG
'Janez is scared.'
 - b. *Janez se je prestrašil.*
Janez MID PFV frighten.PST.3SG
'Janez got scared/frightened.'

The corresponding marker in Russian (russ1263) is the suffix *-sja*. Sonnenhauser (2010) provides a detailed study on Russian emotion verbs with this suffix (or, in her terminology, "reflexive postfix"), focusing on event structure properties. (16) presents an example pair for the psych alternation in Russian, with the object-experiencer base construction in (16a) and the subject-experiencer construction detransitivized by *-sja* in (16b). Sonnenhauser (2010, 335) also highlights that *-sja* constructions with emotion verbs differ from other uses of the marker in that the second argument, i.e. the non-experiencer argument, can be overtly realized, like in example (16c). This is a regular property of detransitivized constructions in the psych alternation (cf. Rott et al. 2020, 402).

- (16) Russian (russ1263; Slavic < IE; cf. Sonnenhauser 2010, 335)
- a. *Razgovor menja zlit.*
conversation 1SG.ACC anger.PST
'The conversation made me angry.'
 - b. *Ja uzhe togda zlit-sja.*
1SG.NOM already then anger.PST-REFL
'I was already angry at that time.'
 - c. *Sergej zlit-sja na tovarishha za ego*
Sergej anger.PST-REFL on companion.ACC at 3SG.M.GEN
neumestnye tajny.
inappropriate.PL secret.PL
'Sergei was angry at his companion for his inappropriate secrets.'

Enger and Nessel (1999) describe a range of other voice-related functions for the suffix *-sja*: Their “grooming”, “converse reflexive” and “auto-causative” categories qualify as reflexive functions in the terminology of this paper, although it should be noted that for prototypical reflexives another marker is available. Enger and Nessel’s “natural reciprocals” are a clear case of a reciprocal function, “spontaneous events” marked by *-sja* constitute an anticausative function. A passive voice function is visible in the “quasi-passives” and “reflexive passives” categories, and the “object demotion” and “absolute” categories show an antipassive function. The relations between all these functions are modeled in a Cognitive Grammar network (Enger and Nessel 1999, 38). Interestingly, they also include a category labeled “mental events” and provide an example (Enger and Nessel 1999, 35-6) which, in terms of this paper, shows psych detransitivization. Bahrt (2021, 140-1), using the same set of voice categories as this paper, describes a “passive-antipassive-reflexive-reciprocal-anticausative syncretism” for Russian *-sja*, which is the most complex voice syncretism pattern identified in his language sample. Indeed, Russian is also the only language included in this paper that features this maximal voice syncretism.

4.4 Greek

The psych alternation in Greek, or more precisely, Modern Greek (model248; Greek < IE) was described alongside Romanian by Alexiadou and Iordăchioaia (2014). Greek has morphological voice marking that specifies the voice of each inflected verb, including the active voice (cf. Holton 2012, 275). These suffixes also mark both counterparts in the psych alternation: The transitive object-experiencer verb is marked for active voice (17a), while the detransitivized construction is marked for non-active voice (17b).

Non-active voice (occasionally also called passive) marking is also used for passive, anticausative, reflexive, and reciprocal functions (cf. Holton 2012, 280-4).

- (17) Modern Greek (mode1248; Greek < IE; cf. Alexiadou, Iordăchioaia 2014, 63)
- a. *Ta nea enohl-is-an ti Maria.*
DEF.N.PL news annoy-AOR.ACT-3PL DEF.F.SG.ACC Maria
 'The news annoyed Maria.'
- b. *I Maria enohl-ithik-e me ta nea.*
DEF.F.SG.NOM Maria annoy-AOR.NACT-3SG with DEF.N.PL news
 'Maria got annoyed with the news.'

4.5 Armenian

In Eastern Armenian (nucl1235; Armenic < IE) transitivization and detransitivization are both attested in the psych alternation. Armenian is predominantly transitivizing. The language features productive causativization by means of an analytic marking strategy and by the causative suffix *-c'n-* (Dum-Tragut 2009, 317). The causative suffix is used in augmented psych alternation pairs, e.g. the derivation of *vaxe-c'n-el* 'to frighten, to scare' from *vaxenal* 'to fear, to be afraid' (Dum-Tragut 2009, 320). But reduced psych alternation pairs also exist, and they are marked by the suffix *-v-*. According to Dum-Tragut (2009, 334), this is a "multifunctional suffix", which marks passives, reflexives, reciprocals and anticausatives.

Examples for the use of the detransitivizing suffix with psych verbs are shown in (18). The function of the suffix is labelled as reflexive by the author (Dum-Tragut 2009, 354), but there is no actual reflexive meaning; the semantics of the examples seem to be consistent with what we would expect in the psych alternation. Dum-Tragut also states that these constructions "mark psychological and emotional states, but use two valences with an obligatory object"; this means that although the non-experiencer argument is downgraded in the constructions marked by the detransitivizing suffix, it is still obligatorily expressed. The oblique marking that is expected for a non-experiencer argument in a detransitivized construction appears in the form of instrumental case.

- (18) Eastern Armenian (nucl1235; Armenic < IE; cf. Dum-Tragut 2009, 354)
- a. *100 m vazk'ataracut'yun-um 11.8 vrk ardyunk'-ov Marine*
 100 m sprint-LOC 11.8 second.NOM result-INS Marine.NOM
łazaryan-ě bavarar-v-ec' bronze medal-ov.
 łazaryan.NOM-DEF satisfy-DETR-AOR.3SG bronze medal-INS
 'For a result of 11.8 seconds in the 100 m sprint, Marine łazaryan was satisfied (content) with a bronze medal.'
- b. *T. Petrosyan-ov šarunak-um en hetak'rk'r-v-el*
 T. Petrosyan-INS continue-PTCP.PRS be.3PL interest-DETR-INF
bazmat'iv hetazotoł-ner gitnakan-ner šaxmat-i
 numerous researcher-PL.NOM scientist-PL.NOM chess-DAT
masnaget-ner ew šaxmataser-ner.
 specialist-PL.NOM CONJ chess.amateur-PL.NOM
 'Numerous researchers, scholars, chess professionals and chess amateurs continue to be interested in T. Petrosyan.'

4.6 Uralic Languages

As a first step outside of the Indo-European family, I present data from two Uralic languages (ural1272), Hungarian and Finnish.

In Hungarian (hung1274; Hungaric < Uralic), there is a large variation with respect to psych alternation strategies. Rott et al. (2024, 164) describe that undirected strategies are found in the majority of Hungarian psych alternation pairs. But psych detransitivization is also attested with a significant number of reduced alternation pairs, and there is also a smaller number of augmented pairs. The suffix *-ódik* that marks the reduced alternants is labeled as inchoative by Rott et al. (2024, 184). Jurth (2017) provides a comprehensive analysis of alternating experiencer verbs in Hungarian. The study describes and exemplifies undirected (in their terms, "common stem"), augmented ("marked transitive") and reduced ("marked intransitive") alternation pairs (Jurth 2017, 137). The above-mentioned suffix *-ódik*, including its allomorph *-ődik*, is specified as the marker for reduced psych alternation pairs by Jurth (2017) as well. Rounds (2001, 229-30) describes the marker as a verb-forming derivational suffix that "makes intransitive verbs", and provides examples that all show, in the terminology of this paper, an anticausative function. The examples in (19) constitute a reduced psych alternation pair. (19a) can be detransitivized by the suffix described above to form (19b).

- (19) Hungarian (hung1274; Hungaric < Uralic; cf. Rott et al. 2024, supplementary material, ID 1235-1236)

a.	A	<i>mese</i>	<i>meghat-já</i>	<i>a</i>	<i>férfi-t.</i>
	DEF	fairy.tale:NOM	touch.emotionally-3SG	DEF	man-ACC
	'The fairy tale touches the man.'				
b.	A	<i>férfi</i>	<i>meghat-ódik</i>	<i>a</i>	<i>mesé-től.</i>
	DEF	man:NOM	touch.emotionally-INCH:3SG	DEF	fairy.tale-ABL
	'The man is touched by the fairy tale.'				

In Finnish (finn1318; Finnic < Uralic), all three strategies are found in the psych alternation, like in Hungarian, but with a different distribution. Rott et al. (2024, 164) document significant proportions of augmented, reduced, and undirected pairs in their data, with augmented pairs making up the largest share and undirected pairs making up the smallest share. Murmann (2019) presents a detailed study on detransitivized Finnish emotion verbs, but does not analyze the voice alternation dimension of the verbs. The marker used in Finnish reduced psych alternation pairs, the suffix *-u/-y*, has been traditionally labeled as a reflexive derivational suffix (cf. Karlsson 2015, 280; Murmann 2019, 64). But Murmann (2019, 64-5) recognizes that the verbs formed by the suffix are primarily anticausatives. Based on the anticausative function of the marker and the change-of-state semantics of the resulting derived verbs, he calls the latter “inchoative emotion verbs”. Subsequently, Rott et al. (2024, 183) also label the suffix as an inchoative marker. At a closer look, the examples in Karlsson (2015, 280), although subsumed under the classification as reflexive, show mainly an anticausative function with inchoative semantics. Only one example pair (‘create a network’ → ‘engage in a network’) shows a reflexive function. This might be an indication for the marginality of the reflexive function of the marker, but since there is no negative evidence against it, I follow Karlsson and assume that the marker indeed has a reflexive voice function in addition to the apparent anticausative function. Examples for Finnish psych detransitivization are provided in (20): The transitive sentence in (20a) and the detransitivized sentence in (20b) form a reduced psych alternation pair. But as example (20c) shows, the reduced alternant can be augmented again, by attaching the causative suffix *-tta* (see Karlsson 2015, 280 for some examples of the general use of the suffix).

- (20) Finnish (finn1318; Finnic < Uralic; cf. Rott et al. 2024, supplementary material, ID 795-796)

a.	<i>Ystävä-n</i>	<i>näkeminen</i>	<i>inno-sta-a</i>	<i>nais-ta.</i>
	friend-GEN	seeing:NOM	enthusiasm-FACT-3SG	woman-PTV
	'The woman is excited about seeing her friend.'			

- b. *Nainen inno-st-u-u* (*ystävä-n näkemise-stä*).
 woman:NOM enthusiasm-FACT-INCH-3SG friend-GEN seeing-ELA
 ‘The woman gets excited (by seeing her friend).’
Nais-ta inno-st-u-tta-a *ystävä-n näkeminen*.
 woman-PTV enthusiasm-FACT-INCH-CAUS-3SG friend-GEN seeing:NOM
 ‘Seeing the friend excites the woman.’

4.7 Kannada

Kannada (nucl1305; Dravidian) can generally be sorted into Nichols et al. (2004)’s transitivity language type. Transitivity of verbs is productively achieved by means of the suffix *-isu* (Sridhar 1990, 217). There is no equally productive detransitivizing marker, and no detransitivizing markers occurring on psych verbs have been described in the literature. It is plausible to assume that the distribution of psych alternation pairs is similar to what Rott et al. (2024, 164) showed for the closely related language Tamil (tami1289; Dravidian): a clear domination of augmented pairs. However, in elicitation data, it is observed that the marker *-koL-* / *-koND-* can be used on psych verbs and forms reduced psych alternation pairs. This marker is usually classified by Kannada grammar descriptions as a reflexive marker (Sridhar 1990; Zydenbos 2020), and has also been called a reflexive “aspect marker” (Schiffman 1983, 86). Its functions include both direct and indirect reflexives, but it also appears to mark, at least occasionally, spontaneous or inchoative events (Sridhar 1990, 119), or fulfil a more general detransitivizing function (124), and cover anticausative functions. Two examples from elicitation data (21) show how the aforementioned marker added to a transitive, object-experiencer verb stem produces a detransitized predicate with the experiencer as the subject.

- (21) Kannada (nucl1305; Dravidian; provided by Akhilesh Kakolu Ramarao)
- a. *Avanu ad-annu nodi bhaya-gond-anu*
 3SG.M.REM 3SG.N.REM-ACC see horrify-REFL.PST-3SG.M
 ‘He was horrified to see it.’
- b. *Avanu ad-annu nodi kushi-gond-anu*
 3SG.M.REM 3SG.N.REM-ACC see delight-REFL.PST-3SG.M
 ‘He was happy to see it.’

4.8 Tswana

Tswana (tswa1253; Bantu < Atlantic-Congo) exhibits both detransitivization and transitivization in a very productive way, and this is reflected in the domain of experiencer verbs. In contrast to most other languages in which the psych alternation has been described so far, and which either augmented or reduced alternation pairs are significantly more frequent than the other type, both strategies seem to be roughly equally productive. Reduced psych alternation pairs employ the suffix *-eg-*, an anticausative marker (cf. Creissels 2002). The suffix has traditionally been labeled as “neuter” (Cole 1955; Krüger 2006); it covers anticausative and inchoative functions, e.g. as described by Cole (1955, 196): “The neuter form of the verb signifies that the subject thereof enters into or is in some state or condition, without indicating the agent of the action, i.e. the thing which brings about that state”. However, it has been shown to be distinct from passive, antipassive, reflexive, and reciprocal markers (Creissels 2002), and is thus best characterized as a dedicated anticausative suffix. Augmented psych alternation pairs are marked by one of the causative suffixes *-ts-* and *-is-*.

In (22a) we see a transitive, active voice, use of an object-experiencer verb. (22b) shows an example with the same verb stem, but with an anticausative suffix added to it, forming a reduced psych alternation pair.

- (22) Tswana (tswa1253; Bantu < Atlantic-Congo; provided by Denis Creissels)
- a. *Motse o o-kgatlh-a baeti.*
SG.village(3) CL3.DEM SI:CL3-interest-FV PL.visitor(2)
‘This village interests visitors.’
- b. *Ke-ne ka-kgatlh-eg-a go-bon-a jaaka difofane*
SI:1SG-AUX SI:1SG-interest-ANTC-FV INF-see-FV how PL.plane(10)
di-dir-w-a
SI:CL10-make-PASS-FV
‘I was interested to see how planes are made.’

An active voice use of a subject-experiencer verb is shown in (23a). The same verb stem with a causative suffix in (23b) results in a transitivized, object-experiencer construction, forming an augmented psych alternation pair.

- (23) Tswana (tswa1253; Bantu < Atlantic-Congo; provided by Denis Creissels)
- a. *Banna ba-ne ba-galef-a thata.*
man.PL(2) SI:CL2-AUX SI:CL2-become.angry-FV very
‘The men got very angry.’

- b. *Tiragalo* *e* *e-ne* *ya-galef-is-a* *Maburu.*
incident(9) CL9.DEM SI:CL9-AUX SI:CL9-become.angry-CAUS-FV PL.Boer(6)
'This incident made the boers angry.'

Most psych verb roots form either a reduced alternation pair or an augmented alternation pair. However, some experiencer verbs can bear causative and anticausative marking within the same form, which is comparatively rare. The only other languages in the sample of this paper that feature similar combinations of voice markers are Finnish (described in Subsection 4.6 above) and Mongolian (described in the following Subsection 4.9).

4.9 Mongolian

The last language in the sample of this study is Halh Mongolian (halh1238; Mongolic). The marker used for detransitivization of psych verbs in Halh Mongolian is the suffix *-yda/-gde-*. Mongolian features a special type of psych detransitivization and is distinct from all other languages discussed in this paper: Psych detransitivization is attested only on the base of verbs that have been transitivized before. Transitivity and subsequent detransitivization of psych verbs is also attested in Tswana (as mentioned in Subsection 4.8), but Tswana also forms reduced psych alternation pairs out of object-experiencer base verbs. Halh Mongolian does not seem to have that option; psych detransitivization is apparently only possible by combining voice markers. This is illustrated by the example set in (24): A subject-experiencer base verb (24a) is transitivized by a causative suffix (24b). This constitutes an augmented psych alternation pair. The transitive, object-experiencer construction in turn forms a reduced psych alternation pair with the subject-experiencer construction marked by the above-described suffix in (24c).

(24) Halh Mongolian (halh1238; Mongolic; cf. Ujiyediin 1998, 250-1)

- a. *keüked* *čoči-ba*
children be.scared-PST
'The children were scared.'
- b. *noqai* *keüked-i* *čoči-ya-ba*
dog children-ACC be.scared-CAUS-PST
'A dog scared the children.'
- c. *keüked* *noqai-du* *čoči-ya-yda-ba*
children dog-DAT be.scared-CAUS-PASS-PST
'Some children were scared by a dog.'

The marker *-yda/-gde-* is primarily classified as a passive suffix (Ujiyediin 1998, 216). But as Ujiyediin (1998, 222-3) describes, the suffix is also used in detransitivized constructions where an agent is defocused or absent, and an event or change of state occurs spontaneously. In the terminology used in this paper, these constructions qualify as anticausatives. Thus I assume a voice syncretism including the passive and anticausative functions.

It has to be mentioned that, based on the available data in the literature, the classification of psych detransitivization in Mongolian remains uncertain. It is possible that the constructions described above do not actually form reduced psych alternation pairs in the narrow sense, but just regular passivization, which might be restricted to or enforce an agentive reading. More and better targeted data would be necessary to definitely determine this, which would be desirable, but goes beyond the scope of this paper. For now and until encountering counter-evidence, we can assume that it is an instance of the psych alternation and include it in the sample.

5 Results

The data presented for Romance, Germanic, and ten further sampled languages in Section 4 encompassed several different types of psych alternation markers which, in turn, exhibit several different types of voice syncretism. In this section, I summarize the findings from the sample to uncover cross-linguistic results. First, I summarize which types of markers were found in the sample; after that, I collate the voice syncretism patterns.

Rott et al. (2024, 169) list reflexive, inchoative, middle and passive markers, as well as participle markers and light verbs, as morphological means in reduced psych alternation pairs. In the present study, I identified markers previously sorted into the first four of those types, i.e., reflexive (Romance languages, German, Dutch, Polish, Russian, Kannada), inchoative (Hungarian, Finnish), middle (Scandinavian languages, Slovenian), and passive (Mongolian), as well as an anticausative marker (Tswana), a non-active voice marker (Greek), and a general detransitivizer (Armenian). From a morphological perspective, the markers can be identified as pronouns (German, Dutch, Slovenian), pronominal clitics (Romance languages, Polish), and affixes (Scandinavian languages, Russian, Greek, Armenian, Hungarian, Finnish, Kannada, Tswana, Mongolian). Regarding the origin of the markers, it can be said that a majority of them, particularly in Indo-European, originated from reflexive markers, even though a subset of those is synchronically best classified otherwise, e.g. as middle voice markers. Markers of inchoative semantics are also good candidates for sources of markers

in reduced psych alternation pairs. However, the focus of this paper is not on the morphosyntactic types of markers or their diachrony,⁵ but on the voice syncretism patterns that can be identified in psych alternation markers and the implications they have for the theoretical classification of the phenomenon.

Based on previous research summarized in Section 2, possible hypotheses were that psych alternation markers behave like, and thus syncretize with, reflexives, anticausatives, or antipassives. For at least a subset of these possible hypotheses, the sample delivers clear results. Table 1 gives us an overview of the results of the cross-linguistic study on voice syncretism in detransitivizing psych alternation markers, i.e., markers used in reduced psych alternation pairs. For each language analyzed in Section 4, the table specifies which voices are syncretic with psych detransitivization, that is, in which voice constructions the respective psych alternation marker also appears.

Table 1 Overview of voice syncretisms of markers used in reduced psych alternation pairs

Language	Genus < Family	PASS	ANTIP	ANTC	REFL	RECP
Portuguese, Spanish, Catalan, French, Italian, Romanian	Romance < IE	(✓)	✗	✓	✓	✓
German	Germanic < IE	✗	✗	✓	✓	✓
Dutch		✗	✗	(✓)	✓	✗
Icelandic, Faroese		✗	✗	✓	✓	✓
Danish, Norwegian		✓	✗	✓	✗	✓
Swedish		✓	✓	✓	✗	✓
Polish	Slavic < IE	✗	✗	✓	✓	(✓)
Slovenian		(✓)	✗	✓	✓	✓
Russian		✓	✓	✓	✓	✓
Greek	Greek < IE	✓	✗	✓	✓	✓
Armenian	Armenic < IE	✓	✗	✓	✓	✓
Hungarian	Hungaric < Uralic	✗	✗	✓	✗	✓
Finnish	Finnic < Uralic	✗	✗	✓	✓	✗
Kannada	Dravidian	✗	✗	✓	✓	✗
Tswana	Bantu < Atl.-Congo	✗	✗	✓	✗	✗
Mongolian	Mongolic	✓	✗	✓	✗	✗

⁵ For a background on possible paths of diachronic development, I refer the reader to the works of Inglese on the development of anticausative markers (2022a) and middle voice systems (2023).

The main results for the sample can be summarized as follows.

1. All markers used for psych detransitivization also mark anticausatives.
2. Most markers have a variety of functions. Only two markers have only one other voice function. Four markers have two other voice functions. All other markers have voice syncretism with three or more functions beyond the psych alternation.
3. Only one language, Russian, has a marker that fully covers all voice functions analyzed in this study.
4. If psych detransitivization is syncretic with only one other voice function, it is the anticausative.
5. Syncretism with the reflexive function is the second most common. This is causally related to the fact that a significant proportion of the psych alternation markers in the sample have, as mentioned above, developed diachronically from reflexive markers.
6. Syncretism with the reciprocal function is found in all Indo-European languages of the sample except Dutch, and is absent in all non-Indo-European languages of the sample.
7. Syncretism with the passive is also widespread, but also mainly in Indo-European and only once outside it.
8. Syncretism with the antipassive is apparently rare. It occurs only in two languages of the sample, Russian and Swedish.

6 Discussion

After presenting and summarizing the voice syncretism patterns found in the language sample, I now proceed to discuss their implications for research on the nature of the psych alternation and its instances in Romance and Germanic languages.

6.1 Typological Considerations

There are two possible mechanisms for the choice of psych detransitivization marker that would account for the patterns of voice syncretism found in the sample, a simple one (A) and a more complex one (B):

- Mechanism A If there is a marker for the anticausative, it is used for psych detransitivization.
- Mechanism B If a generalized middle voice marker is available, that marker is employed for psych detransitivization; if no generalized middle voice marker is available, then the marker used for anticausativization is employed instead.

Confronted with these two possible mechanisms, several considerations can be made with respect to which mechanism should be assumed under which circumstances. I propose the following line of reasoning: Adhering to a scientific principle of parsimony in the line of Ockham's razor, we should choose the explanation that relies on the smallest set of elements. In this case, the principle would favor Mechanism A. The assumption of the simpler Mechanism A is indeed valid for the language sample of this paper, and it remains valid as long as in any further language that is at least partially detransitivizing in the psych domain, a respective marker also has an anticausative function. However, Mechanism A would be falsified by a language that features psych detransitivization, but no marker used in it also has any anticausative function. If, by one or more of such cases, Mechanism A was falsified but the respective markers, although not having anticausative functions, still featured a voice syncretism of two or more valency-reducing functions, the assumption of Mechanism B would be justified. Assuming a more complex mechanism than Mechanism B would only be required if there were languages with a dedicated psych detransitivization marker, or languages with psych detransitivization where the respective marker only has one other voice function which is not an anticausative function, i.e., it only has a passive, antipassive, reflexive, or reciprocal function. Given the current state of research on both psych predicates and grammatical voice, this seems very unlikely, but since there is no negative evidence against it – and hardly ever will be, due to the under-documentation of numerous languages –, the option should be considered. For a substantiation of Mechanism B, a contextualization in the middle voice debate would be necessary (see, e.g., Inglese 2022c for the typology of middle voice systems; Inglese 2023 for the diachronic development of middle voice systems; and Inglese 2022b about the interaction of middle voice systems and valency-reducing constructions; see, e.g., Kemmer 1993; 1994; Kaufmann 2004; 2007 for comprehensive studies of the middle voice domain). Given that, as stated above, Mechanism B is not necessary to explain the results of the present sample, the contextualization in the middle voice debate goes beyond the scope of this paper but might be in order in a subsequent study.

Even without a more detailed background in the middle voice debate, it can be said that finding complex voice syncretism, i.e. syncretism with more than one other voice function, was certainly to be expected. This is mainly due to the generally wide distribution of voice syncretism in the languages of the world as described by Bahrt (2021), and is further influenced by the over-representation of Indo-European languages that frequently have polyfunctional markers for detransitivizing functions in particular. As mentioned above, only one language, Russian, has the maximal syncretism all

voice functions analyzed in this study, which is also an expected result given the findings of Bahrt (2021, 138-41).

As an additional interesting observation, data from several languages of the sample showed that two voice markers can be combined in constructions of the psych alternation, creating alternation triplets rather than pairs for some verbs in those languages, e.g. -CAUS-ANTC- in Tswana, -INCH-CAUS- as well as -CAUS-INCH- in Finnish, and -CAUS-PASS- in Mongolian. These cases point towards an intriguing new path for subsequent research, because the combinatorics of voice markers in the psych alternation and the conditions that restrict possible combinations can provide further insights into the nature of those markers and the types of voice relations that they mark.

6.2 Implications for Describing Romance and Germanic Languages

These typological considerations have significant implications for analyses of Romance and Germanic languages. If there are no markers for reduced psych alternation pairs that cannot also mark anticausatives (which, based on the sample analyzed in this paper, is possible), this could substantiate the claim that psych detransitivization is a subtype of anticausativization. As laid out in Section 2, this claim has been made in the literature. If one were to make such a claim, it should be noted that psych detransitivization is certainly not a prototypical case of anticausativization. However, such non-prototypicality is rather the norm than the exception in the domain of grammatical voice; voice function labels like “anticausative”, “passive” or “antipassive” are defined minimally to enable comparison and thereby capture a wide range of possible subtypes. In terms of anticausatives, many other constructions that encompass anticausative markers are not prototypical anticausatives either. Thus, nonprototypicality should not be regarded as a criterion for exclusion. Meanwhile, assumptions of other classifications, e.g. as passive or antipassive, are clearly not supported by the results of this study. That said, it must be considered that some of those deviating perspectives might come to a different conclusion not because they make different observations on the phenomenon’s behavior but rather because they operate in a different theoretical framework. This seems to be the case, for example, in Kailuweit (this volume), where a classification as antipassive is argued for based on an analysis in the framework of Role and Reference Grammar (RRG).

The typological patterns can also give rise to hypotheses for empirical studies on Romance and Germanic languages. If psych detransitivization is by default syncretic with anticausativization,

or especially if it is even a subtype of anticausativization, it can be assumed that it is grammatically similar to anticausativization beyond the re-semblance of the marker. The detransitivized constructions in reduced psych alternation pairs should behave like anticausatives in language data. For example, they might show similar grammatical behavior with respect to oblique argument realizations or other participant adjuncts, similar lexical restrictions, or similar effects of agentivity (cf. e.g. Fritz-Huechante et al. 2020) or causalness (cf. e.g. Heidinger 2015; Vietri 2023). These aspects can be tested in different types of studies: Regarding the behavior of oblique arguments and adjuncts, or lexical restrictions, corpus studies seem promising; effects of agentivity and causalness can be ideally tested in experiments, but it has already been shown (Vietri 2023) that corpus data can give insights here, too.

6.3 Methodological Considerations

As part of a thorough discussion on the results of this study, some methodological aspects must be considered in more detail. First and foremost, they concern the sampling. The sample analyzed in this paper is significantly unbalanced in two ways. First, only a few languages in the sample have antipassive markers, which naturally limits the possibility of finding syncretism with the antipassive. However, this is at least partly an artifact of the delimitation of the object of research: The languages of the sample are, due to the nature of the research question, predominantly detransitivizing, and detransitivizing languages rarely have antipassives. Second, the sample is geographically unbalanced. Only few of the languages are from outside the Eurasia macro-area. However, this imbalance is also favored by the research question. The imbalance towards Europe fits the general distribution of detransitivizing psych alternation strategies. Rott et al. (2024, 169) observe that “[r]educed pairs most commonly occur in the European macro-area”.

An expansion of the sample is desirable, e.g., using the Genus-Macroarea sampling method (cf. Miestamo et al. 2016), and possibly also specifically targeting underrepresented types, notably languages with antipassive markers, languages with largely distinct markers for several detransitivizing voice functions, and non-Indo-European languages with middle voice markers. Some candidates for an extended sample – though not nearly enough particularly to better cover the underrepresented types – could be adopted from the sample of Rott et al. (2024), e.g. Serbian-Croatian-Bosnian (sout1528; Slavic < IE), Tamil (tami1289; Dravidian), and Cabécar (cabe1245; Chibchan). However, Serbian-Croatian-Bosnian and Tamil would not add much to the diversity of the sample, since the closely related languages

Slovenian and Kannada are already included at the present point. Some changes or additions to the sample would certainly change the resulting patterns, although I do not expect significant deviation from the main tendencies laid out in Section 5. For instance, if the sample included more languages that have an antipassive, we would find more cases of syncretism of psych alternation markers with the antipassive. But it is hardly imaginable that these would, even in a hypothetical totally balanced sample, outnumber the cases of syncretism with anticausative or reflexive functions. Also, based on the initial sample, it would be expected that whenever there is indeed syncretism with the antipassive, the syncretism would always also include at least one other voice function, and in many cases probably more.

Beyond these aspects related to the conditions of the sample, a subsequent study could pay more attention to the types of data used for the identification of voice syncretism patterns. Ideally, the data used for the identification should be of the same type in all languages, which is a difficult task if the sample contains – as it has to – low- resource languages. In addition, the definitions of the voice relations used to determine the syncretism patterns could be refined and tailored more precisely to the needs of the approach proposed in this study. For this paper, I adopted the set of voice relations and their definitions as established by Bahrt (2021), but changes are definitely possible, e.g. the addition of further, or finer-grained, voice relations (e.g. direct and indirect reflexives, or absolute and non-absolute passives and antipassives).

As a final aspect of discussion, it must be conceded that the study presented in this paper is, at the end of the day, preliminary, given the limited sample as discussed above. However, the results are still satisfactory, since the goal of the paper was to add a new perspective to the long-stuck debate on the theoretical problem in question. This paper documents one specific step, namely the presentation, development, and justification of a new typological research approach, the illustration and validation of the pertaining method, and the discussion of the insights that this approach can generate. On this foundation, next steps can be built, e.g. a broad, quantitatively valid typological study with a language sample extended as proposed above.

7 Conclusion

In this paper, I took a new perspective on the question of the grammatical nature of the detransitivization that happens in reduced psych alternation pairs in Romance and Germanic languages, which has long been under intense debate. Contrary to previous classifications based on strict theoretical assumptions or on studies on a single language or genus, I proposed a typological approach

based on patterns of voice syncretism. The analysis of an elementary language sample, opposing Romance and Germanic languages to a selection of other Indo-European languages, as well as genetically unrelated languages, demonstrated and validated the new approach.

The sample showed significant patterns with respect to voice syncretisms of psych detransitivization markers: Psych detransitivization is most frequently syncretic with anticausativization, and much less frequently with antipassivization. Voice syncretism of the markers frequently involves two or more functions. Both generalized middle voice markers and dedicated anticausative markers are typical choices for psych detransitivization; based on the initial sample, it can be assumed that if a language features marked anticausativization as well as psych detransitivization, the marker of the former is also used for the latter. This typological pattern can inform descriptive and empirical research on Romance and Germanic languages.

Using the typological approach proposed in this paper, the findings of the elementary sample should be used as hypotheses for a study with a larger sample. The apparent proximity of psych detransitivization to anticausativization can serve as a basis for hypotheses about the grammatical and semantic behavior of Romance and Germanic reduced psych alternation pairs to be tested on corpus data and in experiments. Such studies have the potential to carve out family- and language-specific details, which together with the typological perspective laid out in this paper will significantly improve our knowledge on the psych alternation.

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Glossary

1 = first person
3 = third person
ABL = ablative
ACC = accusative
ACT = active voice
ANTC = anticausative
ANTIP = antipassive
AOR = aorist
AUX = auxiliary
CAUS = causative
CL = noun class
CONJ = conjunction
DAT = dative
DEF = definite
DEM = demonstrative
DETR = detransitivization
ELA = elative
F = feminine
FACT = factitive
FV = final vowel
GEN = genitive
INCH = inchoative
INF = infinitive
INS = instrumental
LOC = locative
M = masculine
MID = middle voice
N = neuter
NACT = non-active voice
NOM = nominative
OBJ = object
PASS = passive
PFV = perfective
PL = plural
PRS = present
PST = past
PTCP = participle
PTV = partitive
RECP = reciprocal
REFL = reflexive
REM = remote
SG = singular
SI = subject index

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Dative-Experiencer Verbs

Dative Experiencer Psych Verbs in Old French – The Role of the Preposition *à*

Lisa Figura

Universität Hamburg, Deutschland

Abstract This paper investigates the omission of the preposition *à* with some dative Experiencer psych verbs in Old French. In order to answer the question what the omitted *à* tells us about the verb and the object, the semantic meaning of the psych verbs is taken as point of departure, since meaning – among other things – determines a lexical entry. The qualitative data analysis clearly shows that the use of *à* does not only depend on the psych meaning of a psych verb, as there are several cases where it is omitted although the psych interpretation is straightforward. For these cases, I have identified possible reasons for the omission of the preposition. This suggests that *à* does not indicate dative case in a reliable way.

Keywords Psych verbs. Old French. Preposition *à*. Argument structure. Semantics.

Index 1 Introduction. – 2 Some Remarks on Old French and the Preposition *à*. – 3 Analysis of Old French PVs. – 4 Summary and Discussion. – 5 Conclusion.



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1 Introduction

Psych verbs¹ (PVs) are verbs that express mental or emotional concepts showing an argument encoding the theta role EXPERIENCER. This verb group includes verbs of perception (*hear, see, ...*), cognition (*believe, know, ...*), and verbs of emotion (*love, like, ...*). For a long time, PVs have been controversially discussed concerning many languages from a synchronic as well as from a diachronic perspective, and in many different frameworks.² PVs show synchronic and diachronic variation within one language and across languages.

Since Belletti and Rizzi's (1988) seminal work, PVs have usually been divided into three classes according to the argument which realizes the EXPERIENCER. This paper deals with Belletti and Rizzi's 3rd class examining data from Old French, where the dative object is the EXPERIENCER and the nominative subject encodes the STIMULUS. The particularity of this class in Old French is the fact that the dative object³ may still occupy a preverbal position (1), which is also possible in other Romance languages, e.g. Modern Spanish as in (2):

- (1) **A l'abé e a monies plut mult sa conpaignie**
to the abbot.OBJ⁴ and to monks.OBJ please.3SG much his company
'The abbot and the monks liked his company a lot.'
(1173-BECKET-BFM-R,117.2989)

1 I am very thankful to the anonymous reviewers who helped to improve this paper with their suggestions.

2 For early works, cf. von Seeffranz-Montag 1984; Pesetsky 1987; Sigurðsson 1989; Belletti, Rizzi 1988; etc. For (Old) Germanic languages, cf. Barðdal 1997; Barðdal, Eythórsson 2003; Bayer 2004; Fanselow 2002, Fischer, Blaszcak 2001; Fischer 2004; etc. For (Old) Romance languages, cf. Masullo 1993; Arteaga 1994; Fernández-Soriano 1999; Rivero 2004; Kailuweit 2005; Mathieu 2006; Fischer 2010, 2019; Alexiadou, Iordăchioaia 2014; Fábregas, Marín 2015; Jiménez-Fernández, Rozwadowska 2016; Giusti, Iovino 2019; etc.

3 The grammatical status of dative Experiencers is discussed: The question is whether they are subjects or rather indirect objects that are moved to a sentence-initial position. These theoretical discussions are not addressed here. However, it shall be noted that dative Experiencers pass certain subjecthood tests in some languages, e.g. in Icelandic (cf. Barðdal 2023 for a novel summary), but not in German, Dutch, Italian, Spanish, and Romanian (cf. Kagan 2020 for a short overview, referring especially to Bayer 2004 and Rákosi 2006). For a discussion of the availability and properties of oblique subjects in Old Germanic and Old Romance languages cf. Fischer 2010. She compares Old French oblique subjects to Modern Icelandic oblique subjects because they pass relevant subject tests.

4 For convenience, the examples in this paper are not entirely glossed. The glosses only indicate the syntactic function of the (Experiencer) object and morphological information for relevant pronouns and verbs, that is, case and number. Tense and mood are adapted only in the English translation. Also, French elements that do not exist as such in English (partitive or plural indefinite article) are marked.

- (2) **A** **Ana** *le* ***gusta***-Ø *el* *chocolate*.
 to Anne.OBJ CL.DAT like-3SG the chocolate
 ‘Anne likes chocolate.’

In contrast to many other Romance languages, Modern French lost the possibility of placing the Experiencer object preverbally.⁵ Nowadays, the Experiencer may occupy the preverbal position only by topicalization marked by a prosodic break, in (3) illustrated with a comma, or by dislocation with doubling (Fischer 2019, 111):

- (3) **A** **Marie,** *la* *musique* *classique* *lui* ***plaît***.
 to Mary.OBJ the music classic she.DAT like.3SG
 ‘Mary likes classic music.’

A closer look at Old French PVs reveals the fact that the preposition *à* is sometimes omitted when the Experiencer occupies the preverbal position, as in (4):

- (4) *Et* ***la*** ***dame*** *couvint* *morir*.
 And the lady.OBJ be.necessary.3SG die.INF
 ‘And the lady had to die.’
 (127X-CASSIDORUS-PENN-P,4.29_1)

Focusing on this particular finding, this paper carries out a semantic analysis of the Old French PVs *chaloir*, *convenir*, *estouvoir*, *faillir* and *loisir* found in the MCVF-PPCHF corpus (*Modéliser le changement: Les voies de français and Penn-BFM Parsed Corpus of Historical French*). In this corpus, the objects of these PVs are annotated as dative objects. This annotation is quite obvious, as these verbs provide an impersonal or/and intransitive argument structure allowing a dative object – only *faillir* additionally has a transitive argument

⁵ The phenomenon that the dative Experiencers have lost the possibility of occupying the preverbal position is taken up as research question in my PhD thesis *Dative Experiencer Psych Verbs in (Old) French* (Figura in prep.).

structure allowing an accusative object.⁶ Further evidence comes from Buridant (2019, 108 f.) who defines these PVs as verbs requiring dative case. For these reasons, this paper starts from assuming a dative Experiencer and not an accusative Experiencer.

In order to answer the question what the omitted *à* tells us about the verb and the object, the semantic meaning of PVs is taken as point of departure, since meaning – among other things – determines a lexical entry. Simply put: A specific meaning requires a certain argument structure which allows for a certain theta role and hence, a certain case.⁷ The study of these five PVs will illustrate that some of the apparent PVs also provide a non-psych meaning reflected in their differing argument structures. It will be shown that contrary to previous studies (e.g. Troberg 2013) one cannot directly connect the psych meaning with the preposition *à*, as in some contexts dative Experiencers occur without *à* although the psych meaning is clearly intended.

The aim of this paper is a qualitative analysis of the above-mentioned PVs in order to clarify why they sometimes appear with the preposition *à* and sometimes without. The paper is organized as follows: Section 2 makes some observations on relevant characteristics of Old French, including the role that the preposition *à* played in this period. In Section 3 the data analysis is carried out, its results are discussed in Section 4. Section 5 concludes.

2 Some Remarks on Old French and the Preposition *à*

In order to better understand the phenomenon that will be investigated in this paper, I will give a brief overview of some relevant syntactic features of Old French. After that, the preposition *à* will be examined in more detail.

⁶ According to Beatrice Santorini (p.c.), for the annotation also the type of clitic of a verb was used to determine its object: if the verb occurs with dative clitics elsewhere in the corpus, the object was annotated as dative, correspondingly for the accusative. This also holds for bare objects which were coded as datives if the verb occurred with dative clitics. The problem with this idea is that sometimes the same verb occurs with dative clitics, and sometimes with accusative clitics. Until now no satisfactory solution has been found. Checking the distribution of accusative and dative clitics of the PVs analyzed in this paper shows for all of them that the dative predominates. This aspect is open for further research. Nevertheless, I need to rely on the annotation of the corpus for the scope of this paper, that is, I run search queries asking for objects annotated as dative. However, in Section 3 I will also point out cases where the annotation seems to be wrong.

⁷ PVs are challenging for theories of linking that assume that case selection is determined by thematic roles – another reason that has given rise to the high number of different syntactic and semantic approaches (see above).

2.1 A Sketch of Some Syntactic Properties of Old French

The Old French period is assumed to last until around 1300 (Trips, Stein 2019, 241).⁸ There are several characteristics in which Old French differs from Modern French.⁹ All these facts are strongly debated.

Old French has been described as a null subject language. It has been assumed that null subjects have decreased in the thirteenth century and that the null subject property has been lost at the end of the sixteenth century (Arteaga 1994). According to Balon and Larivée (2016), however, Old French has lost the null subject option as early as 1200. Old French is claimed to be a symmetric V2 language (Roberts, Roussou 2003). Regarding word order, the decrease in V2 and increase in SVO in the history of French has often been considered the characteristic feature of Middle French (see the discussion in Smith 2002, 434 f.). Although, also this hypothesis has been controversially discussed (e.g. Rinke, Meisel 2009), it has been agreed more and more that French was a V2 language (Cardinaletti, Roberts 2002) until at least the fifteenth century (e.g. Labelle, Hirschbühler 2018). Old French distinguishes between nominative case (*cas sujet*) and oblique case (*cas régime*). However, it is morphologically only marked in masculine nouns. Pronouns – like in most Romance languages – show a distinction between the direct object (DO) and the indirect object (IO).

The disintegration of the two-case system (in favor of the extension of the *cas régime*) can be described as a movement taking place regionally and diachronically. It goes westwards around 1200 and ends in the northeast after 1300, with northern France maintaining the use of the two cases until the fourteenth century (Buridant 2019, 87).¹⁰

Having briefly outlined the linguistic environment in which PVs have to be discussed, different views on the preposition *à* in Old French will be depicted in what follows.

⁸ For a critical view on periodization, cf. Wolfe 2020.

⁹ Such general trends of the language should be considered in potential follow-up studies. For example, Wolfgruber (2017, 72) noted for Medieval French a tendency for transitive patterns caused by the developing stability of SVO and the abundant use of *on*.

¹⁰ Cf. Marchello-Nizia et al. 2020, 649 for slightly diverging indications, according to which the disintegration of the two-case system is evident from the earliest texts written in Western dialects, while it is maintained in Northern and Eastern dialects until the Middle French period.

2.2 The Preposition *à* in Old French

The *Grande Grammaire Historique du Français* questions whether there are already “des emplois grammaticaux” (Marchello-Nizia et al. 2020, 867) of prepositions in Old French. On the one hand, some uses show affinities with those of Modern French, where these prepositions are regarded as grammatical. On the other hand, these same uses are far less fixed in Old French. There is a considerable variability in these contexts that also concerns IOs (Marchello-Nizia et al. 2020, 867):

[L]e complément d’objet second n’est pas toujours introduit par *à*: en AF, on peut encore trouver des constructions du type *dona le roi un cheval* ‘il donna un cheval au roi’ où le complément d’attribution n’est marqué que par le cas (régime), comme en latin (*dare alicui aliquid* ‘donner quelque chose à quelqu’un: litt. quelqu’un_{DATIF} quelque chose_{ACCUSATIF}’).

Although the authors refer to IOs as secondary complements, one can assume that IOs occurring as single complements are also concerned: Marchello-Nizia et al. (2020, 869) indicate that the systematic *à*-marking of IOs and the use of IOs as secondary complements can only be observed for Middle French. During this period, the different uses of the preposition *à* become more grammaticalized.

Referring to the Old French two-case system, Jensen (1990, 28) discusses the unmarked dative as “accusative in dative function” and claims that the accusative may assume the role of an indirect object in Medieval Gallo-Romance, when it is used without a preposition.¹¹ However, he also mentions that absolute datives are generally found with verbs that take the dative case, that is, verbs or locutions of giving, lending, pleasing, harming, ordering, and communicating. Listing some more PVs, Jensen (1990) assigns unmarked datives to many impersonal verbs and states that the unmarked dative is quite often represented by a pronoun. According to him (and against Foulet 1935), the position of the absolute dative in relation to the verb is not constrained in any way.

However, the corpus study of Trips and Stein (2019) presents a different picture. They explore the syntactic realizations of the dative complements of *plaire* ‘please’ and *donner* ‘give’ in the SRCMF (*Syntactic Reference Corpus of Medieval French*) and MCVF corpora.

¹¹ Jensen (1990) compares the unmarked (or absolute) dative to the genitive juxtaposition, with which important characteristics are shared: unmarked datives are used only with proper nouns or with common nouns designating human beings, the nouns have the singular form and refer to different individuals (they never refer to a class or a category).

In these corpora, the absolute dative occurs infrequently in the oldest texts. Trips and Stein (2019, 241) thus claim that it is uncommon in Old French:

[t]he common realisation of the former dative argument is either a PP (*à*+NP or *à*+PRO) or a pronoun (PRO), i.e. it was formally distinguishable from the direct object.

For *plaire* they indicate only two cases of NPs without preposition, whereas the pronoun appears in the SRCMF in 121 cases and in the MCVF in 62 cases without preposition. This finding is complemented by my analysis in Section 3 showing that more PVs are used with ‘bare’ pronouns and NPs as dative.

Roberge and Troberg (2007, 301) analyze thematic IOs in Modern French and claim, taking a controversial point of view, that

there is no clear evidence that dative *à* behaves any differently, structurally speaking, than locative or neuter *à*, or lexical prepositions for that matter.

Therefore, their analysis treats all IOs as PPs.¹² Troberg (2013) shows how dative Experiencer PVs in Modern French can be incorporated into this structural analysis. The question arises as to whether this is also true for Old French PVs and if so, how a missing preposition would affect Troberg’s analysis. Of course, the different positions (only postverbal in Modern French vs. preverbal or postverbal in Old French) need to be considered. According to Troberg (2013), the preposition *à* could mean both ‘at’ and ‘to’ in Medieval French.¹³ Therefore, it encodes both a directional and a locative meaning, as many simple prepositions in Old and Middle French do. The author argues that it was the directional meaning ‘to’ that licensed the IO of a particular group of verbs (called “the verbs of helping and hindering”). Her data illustrate that

12 The authors put forward the idea of a transitivity restriction on thematic IOs which is considered to be structural. They pursue the generalization that “there is no thematic IO without DO” (Roberge, Troberg 2007, 305) and treat PVs as a subclass of unaccusatives whose object becomes the grammatical subject whereas the optional IOs can be merged elsewhere.

13 In her work on Medieval French, Troberg (2013) provides an account of the shift in the expression of certain objects from dative, that is, an IO with the preposition *à*, to accusative, that is, a DO without preposition.

when *à* loses this directional meaning in the latter half of the 15th century, a DO replaces the IO of verbs of helping and hindering. (Troberg 2013, 4)¹⁴

If a similar development were to be observed for PVs, this would possibly explain the omission of the preposition.

This short overview of some positions and findings in the literature gives a somewhat diverging picture of the Old French preposition *à*.¹⁵ In terms of a temporary working hypothesis, though, it allows for the following thoughts: If *à* can be seen as a dative marker, and dative is connected to the theta role EXPERIENCER, and PVs go hand in hand with the EXPERIENCER because of their psych notion, one can be tempted to ask where there is the interruption in the chain. Certainly, one answer could be that the whole chain was not triggered yet in Old French – even if *à* was already connected with dative in general – simply because there was no need for a prepositional dative marker due to the morphological case marking (see above and Marchello-Nizia et al. 2020). The situation and the development of the Old French case marking system is very complex (see Buridant 2019 for very detailed explanations). Against this background, this reasoning is perhaps not the most obvious. However, the analysis in the next section shows certain instances where it is not ruled out. Another answer could be that the polysemous semantics offered by some PVs trigger different argument structures and therefore, they do not always occur with dative case. As the analysis in Section 3 shows, there are PVs that may also occur with non-psych meanings. In other words, one could assume that the use of *à* together with dative Experiencer depends on if the PV is intended with its psych meaning or not. The following analysis shows that this is not the case, as there are several occurrences where *à* is omitted although the psych interpretation is straightforward.

14 Crucially, she argues that Path is structurally derived. This contrasts the traditional view that Path is attributed to the inherent meaning of the preposition and, hence, that this notion is eroded over time (cf. Dufresne et al. 2001; Goyens et al. 2002; Kilroe 1989; and Martineau 2002). Troberg (2013, 161) contends that despite the apparent meaning of the preposition as ‘to’ in some contexts, *à* only provides the sense of ‘at’ and is thus a Place function in Modern French. According to her, the seemingly directional meaning of *à* is derived from other elements in the context: Lexical properties of verbs like ‘to come’ provide the sense of direction, implies that Marie receives the flowers, and come implies that Paul will change his location

15 For an extensive overview on the preposition *à* and its functions, cf. Buridant 2019, 693 f.

3 Analysis of Old French PVs

In this section¹⁶ the preverbal IOs of the PVs *chaloir*, *convenir*, *estovoir*, *faillir*, and *loisir* found in the MCVF-PPCHF¹⁷ corpus are discussed.¹⁸ The data collection has been carried out using CorpusSearch for search queries looking for dative objects of these PVs. As mentioned in the introduction, Buridant (2019, 108 f.) defines these verbs to require a dative object. According to him, they have an underlying “adjectif attribut”, so that for example *abelir a aucun* ‘to beautify someone’ is reanalyzed as *estre bel* ‘to be beautiful’. Buridant even cites several PVs without the preposition *à*, but this finding is only descriptive.¹⁹ Therefore, the following analysis tries to find an explanation considering meaning and argument structure of each PV.

First, the meanings and possible argument structures of the PVs are given, based on the DEAF (*Dictionnaire Étymologique de l'Ancien Français*, Etymological Dictionary of Old French), the AND (*Anglo-Norman Dictionary*)²⁰ and the TL (*Altfranzösisches Wörterbuch*, Old French Dictionary by Tobler-Lommatzsch). The definitions and examples are quoted as they appear in the corresponding dictionary entries. Then three examples of each PV are analyzed: One example with preverbal IO with *à*, one example with preverbal IO without *à*

16 The aim of this paper is a qualitative analysis of certain PVs. Quantitatively, the data relies on a comparatively small number of examples, so that far-reaching theoretical conclusions cannot be drawn on this basis. The character of this analysis is descriptive and is intended as a sketch, zooming in on a point in time during an ongoing change.

17 MCVF (*Modéliser le changement: Les voies de français*) and PPCHF (*Penn-BFM Parsed Corpus of Historical French*) are two unified and morphosyntactically annotated corpora of Old and Middle French, which together contain over 1.6 million words of running text. The included texts date from around 842-1585 and represent various genres. A potential follow-up study should take into account the influence of versification which also causes null subjects (Buridant 2019, 637), so an effect on the use of *à* cannot be ruled out. Generally, it has been shown that translation practices and text type related peculiarities are more relevant than previously thought (e.g. Wolfsgrubner 2017).

18 *Plaire* ‘to please’ is often cited as the prime example for PVs and it is one of the most frequent ones throughout the MCVF-PPCHF. However, it is not comparable to the PVs discussed here not only due to its high frequency but also because of the particular set phrase *si Dieu plaît*. Here, the dative Experiencer occurs always in a preverbal position without *à*. These facts require a statistical consideration, which is not part of this paper, so that *plaire* has been excluded.

19 At least for ditransitive constructions, the author mentions versification as a possible reason for omitting *à* (Buridant 2019, 107). However, the examples considered in the following analysis are from various text genres.

20 The term ‘Anglo-Norman’ is commonly used for the variety of French spoken in Britain between 1066 and the middle of the fifteenth century. According to Rothwell (2006), “‘Anglo-French’, or ‘The French of England’, perhaps better reflects the reality of the situation”. This variety “shared with the medieval French of the mainland the majority of its vocabulary, grammar, and pronunciation”. Due to its quality as a reliable reference for Old French it is included here.

and one example including another complement. IOs can be lexical, pronominal or a quantifier.²¹

The five PVs analyzed in this section can be grouped according to two interrelated properties, namely their semantics and their argument structure. As mentioned above, I assume that the argument structure of a verb depends on its semantics, which is the point of departure in the following analysis. Therefore, the number of possible meaning is the first characteristic feature to think of to groups: *chaloir* and *estouvoir* have only one semantic interpretation, whereas *loisir* shows two and *faillir* and *convenir* offer a larger variety of meanings. Importantly, only *faillir* and *convenir* include semantics that do not share psych notions. Second, the PVs differ in terms of their possible argument structures: again, *chaloir* and *estouvoir* can be grouped together, as both display an impersonal argument structure. For both of them, the intransitive structure is available. *Loisir* only provides an impersonal construction. *Convenir* is indicated to be intransitive, reflexive, or impersonal, and *faillir* may be used transitively, intransitively, reflexively, and impersonally. All PVs analyzed here have an impersonal argument structure, which has already been analyzed by (Mathieu 2006).²² These characteristics will be discussed for each verb in what follows.

One could assume that the preposition *à* only occurs within the psych meanings and is dropped whenever the non-psych meaning is intended: The preposition is strongly connected to the psych meaning, as it licenses the EXPERIENCER which is itself connected to dative case. However, it will be shown that this assumption is too simple and cannot be maintained. The analysis shows that in some contexts dative Experiencers may occur without *à* although the psych meaning is clearly intended. For these cases, the missing *à* can be explained by other reasons.

21 Clitics have been excluded because they generally appear – due to their status as clitic elements – in a preverbal position in Old French as well as in Modern French. Furthermore, this paper does not consider the omission of *à* with postverbal dative Experiencers. The preverbal dative Experiencers are an interesting object of investigation as they get lost over time. A comparison of preverbal with postverbal dative Experiencers would require a broader and especially a quantitative analysis.

22 According to von Seeffranz-Montag (1983, 524), impersonal constructions with Experiencers are very productive in encoding PVs in many languages. More generally, this type of “affective impersonal construction” may be categorized as “lexical impersonal construction” (Creissels 2019, 7). The impersonal expression seems to reflect the unvolitional or uncontrollable aspect. Von Seeffranz-Montag (1983, 535) indicates for French that there has been a tendency for referential (or human) nominative subjects instead of dummy subject constructions from the seventeenth century onwards.

3.1 *Chaloir*

According to the DEAF, *chaloir* only has a psych meaning: “avoir de l’intérêt pour qn, être sujet de souci, importer” (‘to be of interest to sb, to be of concern, to matter’). The TL indicates that it is an intransitive verb which is often used in an “impersonal and subjectless”²³ construction. It describes the meaning of *chaloir* in a more concrete way, depending on the sentence type (imperative, question) and mentioning uses with *de* or *en* as “*Cui chaut de ce?*” ‘Who cares about this?’, *cui* being used for the *cas régime*. Also, the AND defines *chaloir* as an impersonal verb, meaning “to matter, be of importance, concern”. Next to impersonal constructions with and without the pronoun *il*, the AND cites questions as “*quin chalt?*” (‘who cares?’). The AND entry for *quin* underlines the interpretation of dative, indicating its meaning as “(as an indirect object) to, for (etc.) whom, which person?” and giving a similar example with the verb *chaloir*.

All these observations are confirmed by the data in the MCVF-PPCHF. However, there are only three IOs, all are in a preverbal position and all of them are part of an impersonal construction with a null subject. Interestingly, they stand in contrast to the five cases with different complements found in the corpus, which belong to impersonal constructions with realized subjects. Some of these cases are discussed in what follows.

Chaloir with preverbal IOs with *à*:

Two of the three preverbal IOs show the preposition and are both represented by a lexical element, as the one cited in (5):

- (5) *mes a la dame n'en chault de tout cela.*
 But to the lady.OBJ not PTV matter.3SG about all this
 ‘But the lady does not care about all this.’
 (1450-XV-JOIES-MCVF-P,52.1381)

In this example, the dative Experiencer *la dame* is mentioned next to the quantifier *tout cela* representing the STIMULUS. The preposition *de* is doubled by the adverbial partitive clitic *en*.

23 As the TL is written in German, all given quotations are my English translation.

Chaloir with preverbal IOs without *à*:

In this example from a Picard author, the IO is represented by a pronoun and does not display the preposition:

- (6) *Moi ne caut u nous aillons, [...]*
 I.DAT.OBJ not matter.3SG where we go.1PL
 ‘I do not care where we go, [...]’
 (122X-AUCASSIN-MCVF-M,27_verse.745)

The pronoun *moi* represents the EXPERIENCER, the PP *u nous aillons* is the STIMULUS. Considering the Old French use of strong and weak object pronouns, there are two developments which might favor the omission of *à* in these cases. First, according to Kaiser (1992) and shown earlier by Brunot (1905) and Foulet (1935), as early as the thirteenth century stressed object pronouns increasingly appear in the function of a subject.²⁴ As the subject pronouns do not bear the preposition *à*, Old French speakers may have been confused. Second, a competition with regular impersonal patterns including the weak object pronoun like *il me caut* might increase this confusion. Interestingly, Buridant (2019) explains the use of the strong pronouns by listing several PVs. He cites examples where the preverbal strong object pronoun appears without *à*, similar to the one in (6), defining them as null subject impersonal constructions. This supports the view of interpreting *moi* as dative object and not as subject. Buridant (2019, 667) identifies this construction as “[...] une construction épisodique, en concurrence des formes faibles [...], avec l’impersonnel quand il se présente sans sujet au regard de *il* ou *ce* saturant la zone préverbale”. Being episodic suggests that the construction in (6) was not very common.

Chaloir with other complements:

What stands out for some of the constructions of *chaloir* with other complements is the introduced theta role MEASURE²⁵ by e.g. *plus* (as in *Vous en avez bien d’aultres dont il vous chault plus que de moy* – ‘You have many others [women] who are more important to you than me’

²⁴ Brunot and Bruneau (1965, 276) give a broader time span “[...] dès la fin du XIII^e siècle, moi est le sujet d’un verbe. Au XIV^e siècle, Froissart écrit indifféremment : « il et ses gens » ; « lui et ses gens »”. According to von Wartburg (1965), forms derived from the nominative are preferred for emphasis to those derived from the accusative and “[d]ès le 14^e s. on hésite entre *il* et *lui* comme nominatif accentué”.

²⁵ Arguments with the theta roles MEASURE or AMOUNT indicate amount, length, duration, cost, etc., that is, extensions along a dimension.

146X-CNNA-MCVF-P,71.1597). The dative IO in these cases only appears as a clitic pronoun, which does not occur with a preposition and was not included in my analysis. More relevant are questions asking for the Experiencer where the *à* is omitted, as in (7):

- (7) - *Cui* *chalt* ?
 Who.DAT.OBJ matter.3SG
 ‘Who cares?’
 (1155-ENEAS2-BFM-R,85.1943)

According to Buridant (2019, 1003 f.), though, *cui* generally can be employed with or without preposition. The author adds that this *wh*-pronoun is used for the *cas régime* with animate referents, whereas the form *qui/ki/chi* is valid for the *cas sujet*. This not only confirms the dative Experiencer, it also is in line with the fact that case marking can be the reason for omitting the preposition (see above and Marchello-Nizia et al. 2020).

3.2 *Convenir*

According to the DEAF, there are two meanings available for *convenir*: The first one includes “s’assembler, se réunir; venir avec qn; tomber d’accord au sujet de, reconnaître la vérité de; déterminer qch. par un accord mutuel; etc.” (‘to assemble, to meet; to come with sb; to agree about, to acknowledge the truth of; to determine sth. by mutual agreement’). ‘To assemble, to meet’ clearly does not contain any psych notion. ‘To agree, to acknowledge’ can be considered less straightforward, as some sort of mental action takes place. However, it has an agentive and volitional character, not an experiencing one. This first meaning of the DEAF contrasts with the second meaning of *convenir* that includes “être nécessaire; falloir” (‘to be necessary; to have to’), where the psych component of an experience becomes clearer: there has to be someone who experiences a necessity and is aware of it, otherwise one would not claim something to be necessary. The TL adds the notions of “to fit” and “to be suitable”. The AND indicates three possible argument structures for *convenir* and connects them to more or less diverging semantics: the intransitive argument structure implies the meanings “to come together, convene, to come to, make an agreement, agree, do what one can, be fitting / right, to have to, be necessary”. For the impersonal argument structure, it lists “to be agreed, to be necessary, to befall”. The reflexive verb is connected to the semantics of “to need”. These entries show a certain overlap which suggests that the argument structure does not seem to indicate the different

meanings in a reliable way.²⁶ Thus, one can expect the EXPERIENCER in both intransitive and impersonal structures found in the MCVF-PPCHF. The TL mentions the use of the dative argument as agents with *que* or without any complement, but also accusative structures with infinitives representing agents.

In the MCVF-PPCHF, 49 constructions with only IOs can be found next to 21 constructions with other complements, 9 out of them are DOs of the transitive use of *convenir*. There are a few cases where *convenir* appears with two complements in the same sentence. There, the IO is always a clitic²⁷ and the second complement often indicates the MEASURE (as for example in *mais sousfrir lor convint tant que pour celle fois*, ‘but it suited them to bear [it] this one time’ 1374-FROISSART-5-MCVF-P,561.2257). In 29 cases the IO is used without preposition *à*, out of which 11 cases show the dative Experiencer in a preverbal position. Here, the IO can be represented as a pronominal or lexical element whereas the subject is always annotated as an omitted impersonal pronoun, as in (8). As mentioned above, the PVs analyzed here are impersonal verbs (Mathieu 2006). With this type of verbs, it is particularly common to drop the impersonal subject pronoun (Buridant 2019, 638). This underpins the annotation in these cases. Interestingly, the corpus shows constructions with realized impersonal subject pronouns only when the dative Experiencer is postverbal.

Convenir with preverbal IO with *à*:

(8) is one out of only three examples where the IO is in a preverbal position with *à* in the corpus. The subject is an omitted impersonal pronoun, the personal pronoun *toi* represents the dative Experiencer:

- (8) *a toi ne couient pas abstenir quar et*
to you.DAT.OBJ not must.3SG not abstain.INF because and
ge sui poruec enuoiez
I be.AUX.1SG for this send.PTCP
‘You should not evade because I have been sent for this, [...]’
(1190-DIALGREG2-BFM-P,58.148)

²⁶ Maybe this difficulty in connecting the different semantic meanings to different argument structures made Mathieu (2006) identify the dative/accusative alternation erroneously as Dative Sickness, a process replacing accusative Experiencers by dative Experiencers (Eythórssón 2000, 2002).

²⁷ Accusative as well as dative clitics can be found. This suggests that especially for verbs with different semantics such as *convenir*, a broader study including clitics may be revealing.

The psych notion of the verb in terms of an obligation is clearly indicated here.

Convenir with preverbal IO without *à*:

(9) is an impersonal construction with a null subject, the STIMULUS is represented by the main clause the conjunction *que* refers to. The EXPERIENCER is represented by the proper name *Lapsus*.

- (9) *La se sont si entr'encontré d++es lances que*
 There REFL be.AUX.3PL so meet.PTCP INDF.ART spears that
Lapsus couvint cheoir a terre
 Lapsus.OBJ must.3SG fall.INF to ground
 'Then, spears collided so that Lapsus had to fall to the ground.'
 (127X-CASSIDORUS-PENN-P,26.619)

The context of example (9) reports a fight which forces the psych reading: being involved in a fight almost implies any kind of physical or emotional experience. The cited clause then describes the moment during the fight when Lapsus falls to the ground as a consequence of the collision of the spears, indicated by *si ... que*. This collision seems to trigger an uncontrollable hard blow because of which Lapsus experiences the movement of falling down (probably falling off a horse). Thus, the psych meaning is clearly given, even though the dative Experiencer *Lapsus* is not marked with *à*. This is a very interesting and puzzling finding.

Convenir with other complements:

The following example shows quite clearly the non-psych meaning 'to agree', where some kind of mental action, but no real experience takes place (see above):

- (10) *Et convint le roi d'Engleterre, ensi que je fui*
 And agree.3SG DEF.ART king.SBJ of England as that I be.AUX.1SG
enfourmés, enprunter a Jaquemon d'Artevelle [...] chienqante mille
 inform.PTCP, borrow-INF to Jaquemon d'Artevelle.OBJ five hundred thousand
mars
 mars.OBJ
 'And the King agreed, as I was informed, to borrow five hundred thousand
 mars to Jaquemon d'Artevelle [...].'
 (1372-FROISSART-4-MCVF-P,450.2203)

According to the annotation, there is an omitted impersonal subject pronoun and *le roi d'Engleterre* represents a DO. However, this annotation seems to be wrong: *le roi d'Engleterre* is better interpreted as subject of the clause and as the agent of 'to agree'. Evidence for this is given by the context: first, the whole text passage can be characterized as report, a fact which is also underlined by the insertion *ensi que je fui enfourmés*. It is reported in a neutral way that different nations served the king at their own expense so that the question about payment is discussed. Reporting about an agreement on this question fits in this neutral description, rather than an evaluation like being necessary. Second, later in the text the king's act is referred to as promises, which fits the meaning of 'to agree':

Et qant li rois d' Engleterre remonstroit ces proumesses a son conseil que Jaques d' Artevelle et li pais de Flandres de bonne volenté li offroient [...]. (1372-FROISSART-4-MCVF-P,450.2210)²⁸

Despite the semantic overlap in the impersonal and intransitive argument structure of *convenir*, the examples discussed above suggest that there might be a slight difference concerning the distribution of the preposition *à*: Example (10) for *convenir* without *à* could be interpreted with a non-psych meaning 'agree'. Example (8) with the preposition can be more readily associated with the psych meaning 'be necessary'. The examples cited by the AND confirm this tendency. Intransitive uses of *convenir* with the non-psych meaning 'come together, convene, agree' do not show *à*. Among the impersonal examples, connected with the psych meaning 'be necessary, befall', there are some that display the preposition. However, (9) constitutes a considerable counterexample, which perhaps the historical consideration to classify it as a transition example, can rectify. When arguing from an etymological perspective, the development of *convenir* and its possible argument structures seems to be quite obvious: people have to 'come together', that is, to 'con-vene' in order to 'agree' on something. Facts that are 'agreed on' are 'necessary'. Therefore, one can assume that the intransitive argument structure is basic and then the impersonal one is added, as impersonal constructions with EXPERIENCERS are very productive in encoding PVs in many languages (von Seeffranz-Montag 1983, 524).²⁹ Such changes

²⁸ 'And when the King of England demonstrated theses promises to his consul that Jaques d'Artevelle and the country of Flanders offered him with pleasure [...].'

²⁹ However, according to the AND, the earliest attestations of each argument structure do not show significant differences: The few examples date around 1100-1150. However, this may also be due to the geographic restriction of the AND. Generally, this idea needs to be verified on the basis of more data.

in meaning and argument structure are observed by Blank (1997): He describes the transfer into the cognitive domain, from verbs of action to verbs of perception, as typical for the general change from concrete to abstract.³⁰ Once such a change with respect to the core meaning has taken place, changes in the theta roles and in the argument structure are the consequence (Blank 1997, 188 f.). This kind of development can probably be assumed for many PVs because they all denote an abstract emotion or perception. This observation by Blank (1997) mainly concerns metaphors. Concerning *convenir*, though, one should rather assume a metonymy: In contrast to metaphor, it is essential for metonymy to come about that the underlying aspects actually are in a relation with each other (Blank 1997, 235 f.).³¹

This reasoning could locate (9) right at some kind of transition point of the semantic change of *convenir*, that is, being in between the non-psych and psych meaning and that is the reason why it does not show *à*. Also, as mentioned above, *à* possibly expressing Path could play a role here. The original meaning ‘come together’ would include Path, but not EXPERIENCER, whereas the later developed psych meaning would have the EXPERIENCER, but not Path.

3.3 *Estouvoir*

According to the DEAF and the TL, there is just one meaning available for *estouvoir*: “falloir, être nécessaire” (‘to have to’, ‘to be necessary’). The AND additionally adds the similar meanings of “to be indispensable” and “to be inevitable (to)” and characterizes the verb as impersonal. The TL describes the argument structure as intransitive and impersonal with possible infinitival uses for accusative and dative, but also mentions reflexive constructions.³²

In the MCVF-PPCHF, all IO and DO show infinitives. Buridant (2019, 638) indicates *estouvoir* as a special case in his section on the

30 Klein and Kutscher (2005) argue that the vast majority German PVs had a non-psych, i.e. a physical, reading in earlier stages of the language. They define this kind of polysemy as characteristic for PV, and claim that the non-psych reading determines the case selection of these verbs.

31 The associative-psychological basis of metonymy is contiguity in terms of temporal, spatial or other conceptual interrelatedness of two concepts in our knowledge of the world (Blank 1997, 235 f.).

32 Furthermore, constructions with elements denoted as nominative subjects are indicated in the TL, as in “Uns d’els i estoveit morir” (‘One of them had to die there’). Such cases are intricate as they have to be interpreted based on the morphological appearance as well as on the context. For example, the indefinite article *uns* can be singular in *cas sujet* and plural in *cas régime*. The verb form of *estouvoir* indicates the former option.

omission of Old French subject pronouns: the frequent absence of the subject pronoun with *estovoir* is mentioned next to the omission with auxiliaries and *il y a*-constructions. This fact is confirmed by the data found in the MCVF-PPCHF. The corpus displays constructions with either only DO or only IO. All of the 13 IO constructions are annotated as impersonal constructions where the impersonal pronoun is omitted. Even though the TL cites cases of nominal datives with the preposition (e.g. “A Guillaume estut enprunter”), none of the constructions in the MCVF-PPCHF includes the preposition *à*.

Estovoir with preverbal IO without *à*:

In four constructions, the IO is annotated as a pronoun or as a quantifier, the latter shown in (11):

- (11) *se a Cartage sordoit guerre, chascun conte*
 if at Carthage crop.up.3SG war every count.OBJ
estovroit server et [...]
 must.COND.3SG serve.INF and
 ‘If in Carthage a war broke out, every count would have to serve and [...].’
 (1155-ENEAS1-BFM-R,15.301)

The declension of the IO *chascun* confirms that it is the dative Experiencer and not the subject: the singular form *chascun* is only available for the *cas régime*.³³ In the *cas sujet* it marks the plural form, which is ruled out here due to the verbal conjugation. Again, it seems to be the case marking that makes *à* superfluous.

Interestingly, overtly realized impersonal subject pronouns can only be found when the IO is represented by a clitic, as in *il m’ estuet dormir* (‘I have to sleep’ 1279-SOMME-ROYAL-PENN-P,1,47.1259). The impersonal pronoun cannot be omitted here in order to avoid the weak form at the beginning of the clause.

Estovoir with other complements:

(12) shows parallels to constructions mentioned for *chaloir* with a certain type of optional complement, introducing the theta role

³³ Certainly, the *cas régime* generally includes dative as well as accusative objects, but as mentioned above, the accusative object is ruled out here because of the argument structures that are available for the psych meanings.

MEASURE indicated by *un poi*. In the corpus, it is annotated as DO of *s'estut*, the determiner *un* turns it into a noun:³⁴

- (12) *Un poi s' estut pur Deu preier.*
 INDF.ART bit.OBJ REFL must.3SG for God pray.INF
 'One has to pray to God a bit.'
 (1183-ADGAR-BFM-R,266.3495)

The meaning can be interpreted as impersonal, by which – according to the TL – those uses of reflexive *se* seem to be accompanied. In the few cases similar to this one, no IO is annotated. What stands out is the fact that uses with a reflexive pronoun as (12) can be found only here.

3.4 *Faillir*

According to the DEAF, *faillir* is a transitive verb with the semantics of “faire défaut, manquer” (‘to fail’, ‘to miss’, ‘to lack’). The entries of the AND and the TL are more complex: The TL completes this meaning by e.g. “to go wide”, “to lose”, “to break”, “to destroy”, “to refute”, or “to convict”. The AND confirms the meanings listed for the transitive use of *faillir* and adds “to lack, miss, be short of; to lose, “to fail to supply”, “(of an argument) to destroy, contradict, refute”, and “(of an agreement, a promise, etc.) to break”.

The TL also mentions the transitive meanings “to refuse to serve someone, to be rejected”, which are completed by the AND that defines many semantic notions for the intransitive form:³⁵

- to be wanting, lacking, absent; to be wanting, lacking, absent to (someone, something); to be missed, be forgotten; (of money) to be outstanding, (over)due
- to let down, disappoint; to be unfaithful, disloyal to
- to fail, be unsuccessful, not succeed; to be faulty, malfunction, not work properly; to fail to live a good life, to sin; to collapse, fail, be invalid; to collapse, fail, be invalid
- to fail (of harvest, crop, etc.); to be barren, not produce any fruits; to be unprofitable
- to miss a target

³⁴ An alternative syntactic analysis could be to interpret *un poi* as adverb fronted to the empty subject position, because the impersonal pronoun *il* is not overtly realized.

³⁵ According to the AND website, the “entries are organized on the basis of semantic principles: the core sense is always the first sense”. Additional senses or subsenses which may be more specific to a certain context are also indicated (<https://anglo-norman.net/help/>).

- to fail to happen, take place
- to wane, diminish, become less; to weaken, faint; (of wind) to drop, wane; to be failing in health, to be dying
- to cease, stop, come to an end; to run out
- to break, disintegrate
- to be wrong, to be mistaken, to err; to falter; to deceive, lie

Furthermore, the AND identifies a reflexive meaning with “(of harvest, crop) to fail; to cease to be productive”; “to collapse, break”, “to be necessary, befitting” and an impersonal use with “(something, someone) is lacking; it is necessary, befitting”.

Although the semantic notions for the intransitive argument structure are very fine-grained, one can detect a certain overlap in the meanings across the four different types of argument structure for *faillir*. This fact makes this verb similar to *convenir*. Another similarity to *convenir* can be seen in the metonymic interpretation. Here, mainly some of the transitive meanings listed above are concerned, e.g. ‘to destroy’. Crucially, exemplifying this meaning, Royo (2020, 375) explains that “non-psych causative verbs become a PV by means of a metaphorical extension of the semantics, as in “Al Xavier el destrossa aquesta tensió contínua – lit. ‘To Xavier this constant tension is destroying’”.

In the MCVF-PPCHF, 21 IO and 11 other complements which are all DO are attested. 4 of the 21 IO are preverbal, 3 of them with the preposition *à*.

Faillir with preverbal IO with *à*:

The context of the following example is that King Henry heard that he could stay in a certain place forever. Therefore:

- (13) *Ne a lui ne a++s suens nule rien ne failli*
 not to he.DAT.OBJ not to DEF.ART his.OBJ none nothing not lack.3SG
 ‘Neither he nor his relatives missed anything.’
 (1173-BECKET-BFM-R,113.2911)

Here, the verb is used with the meaning of ‘to be lacking’, typical for intransitive and impersonal structures: The King and his relatives are experiencing that nothing is lacking.

Nule rien is annotated as the quantifier subject of the clause. The two parts of the coordinated IO, the dative Experiencer, *lui* and *suens* are each introduced by the preposition. This contrasts the only case where the IO is preverbal without *à*:

Faillir with preverbal IO without *à*:

According to the annotation of the MCVF-PPCHF, (14) shows a dative IO that is not marked by the preposition. This annotation seems to be wrong. Probably, the PV is employed here with the transitive argument structure of ‘to be rejected’ and hence, presents an accusative object that is not marked by the preposition. Also, the psych interpretation is not straightforward, as ‘to reject’ mainly is a communicative act which does not automatically trigger a negative emotion of the rejected person (and/or the rejecting person). The subject, again, is annotated as an omitted impersonal pronoun. The context of the clause describes clothes intended for a trip to Sudan. Someone gives this particular type of clothing to anyone who comes to them as a messenger. Then it is said:

- (14) *N’ onque messages n’ i failli.*
 Not ever messenger.OBJ not there reject.3SG
 ‘No messenger was ever rejected there.’
 (137X-PRISE-MCVF-R.,3398)

The transitive psych meaning seems to fit well for this statement. The EXPERIENCER represented by the lexical item *messages* is thus better analyzed as an accusative object.

Faillir with DO:

The following example shows a typical transitive non-psych meaning of the verb, ‘to break’, referring to the theme *li tretié*, the singular form of *cas régime* and annotated as DO. *Li signeur* is the plural form of *cas sujet* and the postposed subject of the clause, showing agreement with *fallirent*:

- (15) *Et pour ce fallirent li tretié, et retournerent*
 And for this break.3PL DEF.ART.SG treaty.OBJ.SG and go.back.3PL
li signeur en France.
 DEF.ART.PL lords.SBJ.PL to France
 ‘And because of that the lords broke the treaty and went back to France.’
 (1372-FROISSART-4-MCVF-P,366.169)

In the corpus, transitive uses of this verb like the one in (15) never include the preposition *à*.

As for *convenir*, the examples of *faillir* discussed above suggest a distribution of *à* according to the argument structure despite

the semantic overlaps: If *faillir* is used as a PV requiring dative, it occurs with *à*. If it is used as a PV in a transitive structure or in its non-psych meaning, *à* is omitted. Historically, according to the AND the first attestation of the transitive construction is comparatively late, in 1319. The first intransitive argument structure with the meaning is already attested for 1113-19.³⁶ These dates fit with the identified argument structure in (13), (14), and (15) respectively. These examinations show that the possibility of *à* to express Path does not play a role here, because the omission of *à* can be explained by other reasons.

3.5 *Loisir*

The DEAF gives the meaning of “être permis” (‘to be allowed’). The AND adds “to be entitled”, “to be lawful” and as a second meaning “to please”, identifying the verb as impersonal. The TL describes the semantics by “to be possible, to be an opportunity”. These meanings do not clearly evoke a typical psych interpretation and therefore, the corresponding IO might not be immediately recognizable as EXPERIENCERS. However, *loisir* has been discussed as impersonal verb with Experiencer argument (von Seeffranz-Montag 1984, 532). This can be due to the fact than one can associate a mental or emotional experience while perceiving a permission instead of a ban.³⁷

There are no occurrences of preverbal IO without the preposition *à* in the MCVF-PPCHF.

36 This fact does not seem to be evident when looking at the etymological origin lat. *fallere* ‘to fail, to cheat’: the first meaning would require an intransitive argument structure, the second one a transitive argument structure. Therefore, one might expect the two to coexist with different case markings and different theta grids from the very beginning.

37 According to an anonymous reviewer, the meaning of ‘to be allowed’ rather suggests the theta role BENEFACTIVE. It is correct that one can certainly benefit from a permission. However, the definitions of theta roles often show overlaps. This is one of the reasons why the theoretical discussion about which theta roles should be adopted is still ongoing. Kagan (2020, 58) points out that the unification of the dative functions on a very abstract level is observed in the literature: the term ‘goal’ can cover (next to spatial GOALS) RECIPIENTS, BENEFACTIVES and EXPERIENCERS. It has also been proposed to subsume these thematic roles under a single macro-role, for syntactic reasons.

loisir with preverbal IO with *à*:

There are six occurrences of IO,³⁸ two of them preverbal and only these ones are accompanied by an omitted impersonal pronoun, as in (16).

- (16) *et a moi covaitant morrir leüst endroit a jesir,*
and to I.DAT.OBJ desire.GERUND die.INF allow.3SG place to lie.INF
'And to me, desiring to die, a place to lie buried was allowed.'
(1200-DIALAME-BFM-P,281.185)

Here, the psych meaning is given and the dative Experiencer is represented by a personal pronoun.

loisir with other complements:

When *loisir* is employed in a differing structure from the one with IO, it often displays the theta role MEASURE, as already noted for other PVs above. In (17), it is *en combien* indicating the amount:

- (17) *et si ministrat a lui en combien il liut.*
And so serve.3SG to he.DAT.OBJ as much it please.3SG
'And so he served him as much as it pleased.'
(1190-DIALGREG2-BFM-P,57.122)

The context of this clause, describing an altar server helping to prepare a mass, allows for both meanings of *loisir* as 'to be allowed' and 'to please'. The AND cites for the meaning "to please" the same source (*Dialogues of St. Gregory the Great*): "Li maufé li apparut Ramposnant lui tant com li lut" ('The devil appeared to him and insulted him as much as he liked'). This interpretation supports the same semantic interpretation for *loisir* in (17), showing a similar

38 Three of the six IO are relative clauses as in "<< O Dyeesse [...], A qui il loist par les debrisemens D+ +es cieulx aller" (133X-PERCEFOREST-PENN-P,76.241). Relative clauses can support the argumentation put forward in this paper because in Old French it was possible to omit the preposition here, forming a "construction absolue" (Buridant 2019, 862).

impersonal argument structure. However, the meaning ‘to be allowed’ is not ruled out here.³⁹

4 Summary and Discussion

In Section 2.2, I have depicted different views on the preposition *à* in Old French. According to Troberg (2013), the preposition *à* encodes both a directional and a locative meaning. She argues that when the preposition lost the directional meaning, a DO replaced the IO of a certain group of verbs. Troberg (2013, 170) claims that the interpretation of Path is inherent to the preposition and does not depend on the meaning of a verb. If this were true, dative Experiencers could not be affected by the loss of the directional meaning for two reasons: First, dative Experiencers are triggered by the semantics of the PVs. Second, Troberg (2013) characterizes the EXPERIENCER as location of the feeling. That is, even if the loss of the directional notion of *à* already started in Old French, the group of PVs should not have been affected. However, this reasoning might be less convincing in cases of less clear semantics, i.e. etymologically ambiguous cases or metonymic / metaphoric uses of verbs. Crucially, the argument structure of verbs can change according to a metaphoric change in their semantics (Blank 1997). I have argued that an etymological consideration of the complex semantics of *convenir* and *faillir* – displaying several argument structures together with psych and non-psych meanings – contributes to explain their different shapes. A metaphoric change is a shift where PVs can be observed at some kind of transition point. That is, they can be located in between the non-psych and psych meaning and that is the reason why they do not show *à*. As I have shown in Section 3, *faillir* can be used intransitively or impersonally with an Experiencer, but also transitively with or without Experiencer. Consider for instance its use in the sense of ‘to break’. Only if it is employed metaphorically, *faillir* would occur with an (accusative) Experiencer in this case. However, both of its meanings would not imply Path. *Convenir* in its original meaning of ‘to come together’ would include Path, but no EXPERIENCER, whereas the later developed psych meaning would have the EXPERIENCER, but no Path. All this suggests that the loss of the directional meaning of *à* argued by Troberg does not seem to explain the omission of the preposition with PVs.

39 The form *liut* in (17) is not straightforward in its interpretation. Searching *liut* in the DEAF, the dictionary indicates *lire* and *loisir*. *Lire*, though, can be ruled out from the context. Checking the conjugations for both verbs in the AND, none indicates *liut*. This form is most similar to the indicative past forms of *loisir*: “leust, liçt, lise, list, lit, lite, loist, lust, lyst”.

The detailed examination of *convenir* and *faillir* has shown semantic overlaps between their different argument structures. The analysis has suggested that there might be slight differences concerning the distribution of the preposition *à* depending on the argument structure. However, cases of *convenir* like (9) show that there are dative Experiencers that are not marked by *à*, although the psych meaning is evident. Similar to *estovoir*, this proves that a psych meaning is not a sufficient criterion for the use of *à* and thus, that the preposition cannot be considered a reliable dative marker.

Loisir always shows the preposition together with its dative Experiencers in this corpus. *Chaloir* and *estovoir* can only bear a psych meaning. Despite this fact, dative Experiencers of these verbs occur without the preposition *à*. For *chaloir* in (6) it has been claimed that the arising subject function of the stressed object pronoun plays a role. As subject pronouns do not occur with the preposition *à*, speakers could have been unsure about the use. Also, it seems as if the constructions in (6) are not very common which might increase the confusion with subject pronouns. Furthermore, morphological case marking on the object seems to sometimes make the use of *à* superfluous. This also seems to hold for *estovoir*. For *estovoir*, no occurrence with the preposition *à* is attested in the MCVF-PPCHF, though they have been reported from other corpora. In any case, it indicates that the psych meaning cannot be interpreted as the unique reason to display *à*.

The historical perspective has shown that meanings diverging a lot at first glance are in fact very close to each other. Even non-psych notions can be attributed to a psych meaning via metaphoric extension. In the end, it is possible that all the different meanings become more and more alike over time and thus, different types of argument structure may align. This can be observed when we look at Modern French: *convenir* and *falloir* (<*faillir*) got reduced in semantics and valency.⁴⁰ In terms of linguistic efficiency this only makes sense (see Schmitz 2012 comparing the economy of lexical entries of PVs and their possible reanalysis). In contrast, *chaloir*, *estovoir* and *loisir* disappeared completely.

The analyzed data in Section 3 clearly show that the use of *à* does not only depend on the psych meaning of a PV, as there are some cases where it is omitted although the psych interpretation is

40 *Le Petit Robert* mentions the impersonal form for *convenir*, but defines it as “verbe transitif indirect” or “verbe pronominal”, with the meaning “être approprié à (qqch.), être agréable ou utile (à qqn), reconnaître la vérité de, faire un accord” (‘to be suitable for (sth.), to be pleasant or useful (to sb.), to recognize the truth of, to make an agreement with’). *Falloir* is defined as “verbe impersonnel”, meaning “manquer, être l’objet d’un besoin / d’une nécessité ou d’une obligation” (‘to lack, to be the object of a need / of a necessity or of an obligation’).

straightforward. This is true not only for PVs with only one meaning bearing the psych notion, but also for verbs with both a psych and a non-psych meaning. For such cases, I have identified possible reasons for the omission of *à*. The evidence suggests that *à* does not indicate dative case in a reliable way.

As this paper only focuses on Old French, little can be said about the diachronic development of the preposition in these constructions or about the reasons for Middle and Modern French to make it obligatory. It should be mentioned, though, that one could argue with the general drift strengthening the analytic character of French which includes an extension of prepositions (Buridant 2019, 111).

Generally, the analysis also makes clear a methodological challenge: In the MCVF-PPCHF, some objects of PVs with several argument structures are identified as IO, although they are a DO. The object of e.g. *faillir* in (15) is a DO of its transitive use, and therefore, it is not used with the preposition *à*. This suggests that the annotation of the MCVF-PPCHF is not always reliable in this respect – a finding which makes possible follow-up studies more challenging.

5 Conclusion

I have discussed five Old French dative Experiencer PVs regarding their use with the preposition *à*. Since I have analyzed only some examples, no final conclusions can be drawn yet. However, my investigation allows the assumption that the use of the preposition *à* in some PV contexts is independent of its psych meaning and thus, independent of its argument structure. In previous studies, this was claimed to be decisive since *à* is assumed to license the EXPERIENCER in the dative case, generally indicated by the preposition. My data analysis has shown that psych meaning is not a sufficient criterion for the use of *à*. Consequently, *à* cannot be considered a reliable dative marker in Old French. These findings should be verified in larger studies including more PVs. Also, the Middle French period should be included in order to explain the diachronic development to Modern French, where the preposition *à* cannot be dropped anymore. Beyond that, my investigation suggests that the annotation of corpora is still in need of a more careful and detailed consideration of PVs with complex semantics.

Abbreviations

AND = *Anglo-Norman Dictionary*

DEAF = *Dictionnaire Étymologique de l'Ancien Français*

DO = direct object

IO = indirect object

MCVF-PPCHF = *Modéliser le changement: Les voies de français and Penn-BFM Parsed Corpus of Historical French*

PV = psych verb

SRCMF = *Syntactic Reference Corpus of Medieval French*

TL = *Altfranzösisches Wörterbuch* by Tobler-Lommatzsch

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The Variety of Syntactic Patterns of Dative Experiencer Verbs in Italian

Simonetta Vietri

Università degli Studi di Salerno, Italia

Abstract This article investigates the variety of syntactic constructions characterizing Dative Experiencer verbs in Italian. This psych class, whose representative verb has always been considered *piacere* ‘appeal’, includes only ten verbs, which in most cases share the inverted structure, i.e. the SVO and the OVS patterns. However, DE verbs display an irregular and idiosyncratic syntactic behaviour, given the abundance of (pronominal/reflexive) transitive/non-transitive constructions in which they may appear.

Keywords Dative verbs. Dative Experiencer. Alternation. Psych verbs. Inverted structure.

Index 1 Introduction. – 2 Subjecthood and Topicalization: An Overview. – 3 A Taxonomy of Psych Verbs. – 4 The Variety of Patterns of Dative Experiencer Verbs. – 5 Conclusions.

1 Introduction

Dative Experiencer verbs are well known for being unaccusative and receiving a stative interpretation cross-linguistically (Fábregas, Marín 2020). In their seminal work on psych verbs, Belletti, Rizzi (1988) place Italian dative verbs in Class III; the Experiencer is linked to the inherent dative case. The authors claim that both Dative and Accusative Experiencer verbs (such as *piacere* ‘appeal’ and *preoccupare* ‘worry’, respectively) have an underlying unaccusative structure.

Italian Dative Experiencer (DE) verbs, whose representative has always been considered *piacere* ‘appeal’, have been widely discussed in the literature as they display an inverted structure (Giusti, Iovino 2019), that is, DEs may appear in preverbal position. Perlmutter (1983) takes the Dative Experiencer to be an underlying (‘initial’) subject demoted to indirect object status at a later level of representation. Belletti, Rizzi (1988; 2012) and Cardinaletti (2004) claim that DEs are quirky subjects.

The aim of this study is to show that, in addition to the inverted structure and the stative semantics defining the much-discussed verb *piacere* ‘appeal’, the Dative Experiencer class also includes verbs, usually neglected, that exhibit a heterogenous syntactic and semantic behaviour. Italian Dative Experiencer verbs are not only characterized by variations in the position of the DE but also by the variety of syntactic structures in which they may appear. Thus, they constitute an unstable psych class, given their idiosyncratic syntactic behaviour.

The paper is structured as follows. Section 2 is an overview of the hypothesis advanced on the inverted construction of Dative Experiencer verbs. Section 3 briefly presents the taxonomy of psych predicates, while Section 4 provides a detailed examination of the syntactic properties of the verbs in the Dative Experiencer verb class. Section 5 draws some conclusions.

2 Subjecthood and Topicalization: An Overview

In this section I will give an overview of the different approaches to the analysis of the inverted structure, that is, the variation in the position of DEs (SVO vs OVS). This is the DE verb property that has been widely discussed in the literature and I will not investigate it any further since the aim of this article is to show that, besides the variation in word order (SVO vs OVS) and the subjecthood properties of Dative Experiencers, this class of verbs is also characterized by a variety of idiosyncratic syntactic constructions in Italian.

Belletti, Rizzi (1988; 2012) and Cardinaletti (2004) claim that DEs are quirky subjects in Italian; Masullo (1992) and Fernández-Soriano (1999) make the same claim for Spanish. The latter compares true Nominative subjects and Dative Experiencers in order to show that DEs are subjects in Spanish. Tubino (2009) states that preverbal DEs in Spanish are not quirky subjects, rather they are the result of Topicalization in the left periphery of the sentence. More recently, Jiménez-Fernández, Rozwadowska (2016; 2017), who analyse Spanish, English and Polish, claim that the distribution of DEs in the sentence depends on factors related to the argument structure and to the Information Structure.

In Italian, the verb *piacere* ‘appeal’, which is usually considered the representative of the Dative Experiencer class, is characterized by an inverted structure (Giusti, Iovino 2019) where the DE can appear in postverbal position as in (1) or in preverbal position as in (2). As Belletti, Rizzi (1988, 334) and Cardinaletti (2004) point out, the *piacere* ‘appeal’ class displays both orders, that is, Theme V Experiencer (SVO) and Experiencer V Theme (OVS). The same happens in the Spanish counterparts (3)-(4) (drawn from Jiménez-Fernández, Rozwadowska (2016), examples (5c-c')):

- (1) *Questo piace a Gianni*
this appeal.PRS.3SG to Gianni
‘This appeals to Gianni’
- (2) *A Gianni piace questo*
to Gianni appeal.PRS.3SG this
‘This appeals to Gianni’
- (3) *Esto le gusta a Angela*
this her appeal.PRS.3SG to Angela
‘This appeals to Angela’
- (4) *A Ángela le gusta esto*
to Angela her appeal.PRS.3SG this
‘This appeals to Angela’

Belletti, Rizzi (1988, 337) provide evidence that supports the subjecthood status of DEs. The authors point out that “Wh-extraction across a topicalized dative is weakly deviant [...], extraction across a preverbal Experiencer is fully natural” as shown in (5)-(6), respectively. In sentence (6) “the preverbal Experiencer patterns exactly like any other preverbal subject”, for example as in (7) (examples are drawn from Belletti, Rizzi 2016, (106a-c)):

(5) ?? *I libri che a Gianni ho dato sono questi*
the book that to Gianni give.PST.1SG are these
'These are the books I gave to Gianni'

(6) *I libri che a Gianni sono piaciuti sono questi*
the books that to Gianni please.PST.3SP are these
'These are the books that appealed to Gianni'

(7) *I libri che Gianni mi ha dato sono questi*
the books that Gianni me give.PST.3SG are these
'These are the books that Gianni gave me'

Furthermore, Belletti, Rizzi (1988, examples (107a-b)) point out the contrast between the Dative Experiencer in (8) and other dative arguments, such as in (9):

(8) ? *A nessuno gli piace essere mandato al diavolo*
to nobody to.him appeal.PRS.3SG be.INF send.PTCP to.the devil
'Nobody likes to be sent to hell'

(9) * *A nessuno gli hanno detto di andare al diavolo*
to nobody to.him tell.PST.3PL of go.INF to.the devil
'They told nobody to go to hell'

Belletti, Rizzi (1988, 337, examples (104-105)) suggest that the preverbal dative fills the subject position. Further evidence in favour of this hypothesis "is that the order Experiencer V Theme appears to be unmarked, i.e. the most natural order – the one which does not require contextual justification. For example [...] Topicalization of a dative verbal complement is rather odd, but a preverbal dative Experiencer is perfectly natural".

As (10)-(12) show:

(10) *Tutti sono preoccupati perché ho raccontato questa storia a Gianni*
all be.PRS.3PL worry.PTCP because tell.PST.1SG this story to Gianni
'Everyone is worried because I told this story to Gianni'

(11) ?? *Tutti sono preoccupati perché a Gianni ho raccontato questa storia*
all be.PRS.3PL worry.PTCP because to Gianni tell.PST.1SG this story
'Everyone is worried because I told Gianni this story'

- (12) *Tutti sono preoccupati perché a Gianni piace la linguistica*
all be.PRS.3PL worry.PTCP because to Gianni appeal.PRS.3SG the linguistics
'Everyone is worried because Gianni likes linguistics'

Similarly, Cardinaletti (2004, examples (19-20)) points out that DEs' behaviour differs from other dative arguments. The gerundive Aux-to-Comp constructions (13)-(14) and the Complementizer deletion constructions (15)-(16) are grammatical only when applied to DEs. The auxiliaries *essendo* 'being' and *avendo* 'having' move to the Complementizer position in (13)-(14); only (13) is grammatical because of the presence of the Dative Experiencer. As regards (15)-(16), the Complementizer *that* can be null only in the context indicated in (15) where *piacere* 'appeal' is embedded under the verb *credere* 'believe':

- (13) *Essendo a Gianni piaciuto molto il regalo, ...*
be.GDV to Gianni appeal.PTCP much the gift, ...
'Since Gianni really liked the gift, ...'
- (14) * *Avendo(gli) a Gianni dato questi libri, ...*
have.GDV(to.him) to Gianni give.PTCP these books, ...
'Having given Gianni these books, ...'
- (15) *Credevo a Gianni piacessero queste storie*
believe.PST.1SG to Gianni appeal.SBJV.3SG these stories
'I thought Gianni liked these stories'
- (16) ?? *Credevo a Gianni (gli) avesse dato questi libri*
believe.PST.1SG to Gianni (to.him) give.SBJV.3SG these books
'I thought s/he had given these books to Gianni'

On the contrary, Haspelmath (2001, 11-12) suggests that DE verbs should be placed on a continuous transitive-intransitive scale. The author affirms that:

On balance it seems that dative-experiencer constructions should be regarded as intransitive, i.e. not as "dative-subject constructions" [...] If one admits only two possibilities – either transitive (A – O), or intransitive (S – E) – then the results [...] might appear problematic. However, if one allows the possibility of intermediate stages between intransitive and transitive, then languages can be seen as occupying a particular point on the continuous transitive-intransitive scale. [...] Experiential predicates seem to constitute a class of their own with respect to

word order, intermediate between normal extended intransitive and transitive verbs.¹

Jiménez-Fernández, Rozwadowska (2016, 100) propose that DEs in Spanish may move to TP for both agreement and discourse rules. The authors' study is mainly based on the hypothesis advanced by Miyagawa (2007), who sets up a classification of languages as agreement-prominent languages (Indo-European languages) and discourse-prominent languages (Japanese). The former exploit agreement features to trigger movement, while the latter highlight focus features (Jiménez-Fernández 2010). On the basis of this parametric variation, Jiménez-Fernández (2010) proposes a third class of languages, such as Spanish, which is both argument- and discourse-prominent.

Jiménez-Fernández, Rozwadowska (2017, 236) mainly analyse the (unmarked) order OVS (preverbal Dative) used as a reply to an open question in Polish and in Spanish; here, I only cite the Spanish examples (17)-(18). The authors claim that:

From an argument-structure point of view, a preverbal DE is generated in the VP in a position higher than the nominative subject, and hence it is the closest candidate to move to spec-TP and satisfy the EPP under T. From an information-structure perspective, DEs occur first only in two situations, namely when they are part of the broad focus that the whole sentence performs [...] or when they function as topic.

- (17) Q: *¿Te has enterado de la noticia?*
 you hear.PST.2SG of the news
 ‘Have you heard the latest news?’
- A: A *Angela le gusta la pasta*
 to Angela her like.PRS.3SG the pasta
 ‘Angela likes pasta’
- B: # *La pasta le gusta a Angela*
 The pasta her like.PRS.3SG to Angela
 ‘Pasta pleases Angela’
- (18) Q: *¿Qué le gusta a Angela?*
 what her like.PRS.3SG to Angela?
 ‘What does Angela like?’

¹ In the citation **A** stands for the subject argument of a transitive clause, **O** refers to the transitive object and **S** to the intransitive subject, while **E** refers to the Experiencer argument. For a detailed analysis I refer the reader to Haspelmath (2001).

A:	A	Angela	le	gusta	la	pasta
	to	Angela	her	like.PRS.3SG	the	pasta
	'Angela likes pasta'					
B:	#	La	pasta	le	gusta	a
		the	pasta	her	like.PRS.3SG	to
	'Pasta pleases Angela'					

The status of Dative Experiencers is an issue under debate in the literature. As Butt et al. (2006, 1) affirm, "Dative subjects appear to be a fairly unstable part of a language's grammar [...]. [They] are found crosslinguistically and are a standard part of South Asian languages".

3 A Taxonomy of Psych Verbs

In this section I will briefly present the main properties of Italian psych verbs according to the taxonomy set up in Vietri (2024) to which I refer the reader for a detailed analysis, especially as regards the encoding of the causative/anticausative alternation (CAA).

Psych verbs can be stative predicates, as in the case of Subject Experiencer (SE) transitive verbs like *ammirare* 'admire' in (19) where the direct object has the semantic role of Object of Emotion.² SE transitive verbs present the reflexive construction as in (20):

- (19) *Maria*_{Experiencer} *ammira* *Gianni*_{Object of Emotion}
 Maria admire.PRS.3SG Gianni
 'Maria admires Gianni'

- (20) *Maria* (*si* *ammira* + *ammira* *se stessa*)
 Maria (*si* admire.PRS.3SG + admire.PRS.3SG herself)
 'Maria admires herself'

Psych verbs can be eventive predicates, as in the case of Accusative Experiencer (AE) verbs like *spaventare* 'frighten' in (21). A large subset of AE verbs undergo the causative/anticausative alternation:

² Belletti, Rizzi (1988) propose that the Theme and Experiencer roles constitute the θ -grid of psych verbs. Grimshaw (1990), Zaenen (1993) and Pesetsky (1995) claim that Theme is not the correct θ -role to be assigned in the case of Accusative Experiencer verbs that have a causative semantics like *frighten*. In particular, Pesetsky (1995) distinguishes the Causer of Emotion role from the Subject/Target of Emotion roles. In this study I adopt the Cause of Emotion θ -role for causative psych verbs and the Object of Emotion θ -role for stative verbs.

the transitive causative construction (21) alternates with the anticausative pronominal construction in (22). In the causative construction (21) the subject has the Cause of Emotion role while the Experiencer is expressed by the direct object (accusative). The sematic roles are inverted in the anticausative construction in (22), where the Experiencer is expressed by the Subject and the Cause of Emotion by the PP, which can be dropped. In this case, the anticausative construction presents a pronominal unaccusative verb, i.e. *spaventarsi* ‘get frightened, lit. frighten.si’:

- (21) *Il terremoto* _{Cause of Emotion} *spaventò* *Gianni* _{Experiencer}
the earthquake frighten.PST.3SG Gianni
‘The earthquake frightened Gianni’

- (22) *Gianni* _{Experiencer} *si spaventò* (*per il terremoto* _{Cause of Emotion})
Gianni **SI** frighten.PST.3SG for the earthquake
‘Gianni got frightened because of the earthquake’

Furthermore, the lexical causative verb *spaventare* ‘scare, frighten’ in (21) is in a periphrastic relation with the syntactic (or analytical) causative in (23). Unlike Subject Experiencer transitive verbs which reflexivize as in (20), Accusative Experiencer verbs do not reflexivize, i.e., sentence (24) is not accepted. The presence of repair particles like *persino* ‘even’ and emphatic reflexives (Postal 1993; Potts 2001) make (25) deviant:

- (23) *Il terremoto* _{Cause of Emotion} *fece* *spaventare* *Gianni* _{Experiencer}
the earthquake make.PST.3SG frighten.INF Gianni
‘The earthquake frightened Gianni’

- (24) * *Maria spaventò se stessa*
Maria frighten.PST.3SG herself
‘Maria frightened herself’

- (25) ?* *Maria spaventò (persino) se stessa*
Maria frighten.PST.3SG even herself
‘Maria frightened even herself’

The periphrastic relation between a lexical causative and a syntactic causative is the property/diagnostics that singles out Accusative Experiencer verbs which undergo the causative/anticausative alternation from those that do not. The lexical causative *spaventare* ‘frighten’ in (21) alternates with the marked anticausative *spaventarsi*

‘get frightened, lit. frighten.*si*’ in (22) and it is in a periphrastic relation with (23). On the contrary, an Accusative Experiencer verb like *sedurre* ‘seduce’ in (26) does not show the anticausative alternant, i.e. (27) is not accepted and is not in a periphrastic relation with the syntactic causative in (28). The latter is accepted only if *Maria* is interpreted as the Initiator of said event, while the Agent/Causee is expressed by the PP = *da Lea* ‘by Lea’, as in (29):

- (26) *Maria sedusse Gianni*
 Maria seduce.PST.3SG Gianni
 ‘Maria seduced Gianni’
- (27) * *Gianni si sedusse*
 Gianni si seduce.PST.3SG
 ‘*Gianni seduced himself’
- (28) # *Maria fece sedurre Gianni*
 Maria make.PST.3SG seduce.INF Gianni
 ‘Maria seduced Gianni’ (intended reading)
- (29) *Maria fece sedurre Gianni (da Lea)*
 Maria make.PST.3SG seduce.INF Gianni (by Lea)
 ‘Maria had Gianni seduced by Lea’

Subject Experiencer non-transitive verbs include verbs that can be unaccusative (*arrabbiarsi* ‘get angry’) or unergative (*gioire* ‘rejoice’) or both (*trasecolare* ‘boggle’). The PP, which can be dropped, is headed by the prepositions *di* ‘of’ and/or *per* ‘for’, or by the preposition *a* ‘at’. Most SE non-transitive verbs can be considered change-of-state verbs that show only the anticausative construction like (30) and lack the lexical causative, i.e. (31) is ungrammatical. However, (30) alternates with the syntactic causative in (32):

- (30) *Max_{Experiencer} (si arrabbiò + gioi) (di+for) quella notizia_{Cause of Emotion}*
 Max (si anger.PST.3SG + rejoice.PST.3SG) (of+for) that news
 ‘Max (angered + rejoiced) at that news’
- (31) * *Quella notizia_{Cause of Emotion} (arrabbiò + gioi) Max_{Experiencer}*
 that news (anger.PST.3SG + rejoice.PST.3SG) Max
 ‘That news (angered + *rejoiced) Max’

- (32) *Quella notizia*_{Cause of Emotion} *fece* (*arrabbiare + gioire*) *Max*_{Experiencer}
 that news make.PST.3SG (anger.INF + rejoice.INF) Max
 ‘That news made Max (angry + rejoice)’

Besides Subject Experiencer transitive/non-transitive verbs and Accusative Experiencer verbs, Dative Experiencer verbs form a very small class of verbs that show a variety of idiosyncratic syntactic patterns which I analyse in the next section.

4 The Variety of Patterns of Dative Experiencer Verbs

Besides the inverted structure, Dative Experiencer verbs show an idiosyncratic syntactic behaviour since they appear in a variety of syntactic constructions. Moreover, the paucity of Dative Experiencer verbs contrasts with the abundance of Accusative and Subject Experiencer verbs. In Vietri's (2024) taxonomy, there are 224 Accusative Experiencer verbs and 87 Subject Experiencer (transitive/non-transitive) verbs, while there are only 10 Dative Experiencer verbs.

The DE class includes the verbs *piacere* ‘appeal’, *manicare* ‘miss’, *garbare* ‘appeal’, *dispiacere* ‘regret’, *spiacere* ‘regret’, *rincrescere* ‘be sorry, regret’, *interessare* ‘interest’, *compiacere* ‘please’, *ripugnare* ‘disgust’, *importare* ‘matter’. I will analyse these one by one and show that they constitute a heterogeneous class where each verb can be distinguished from the others on the basis of the syntactic constructions in which they appear. Therefore, *piacere* ‘appeal’ cannot be considered the representative of this verb class.

I constructed example sentences based on data drawn from Italian dictionaries (De Mauro; Devoto-Oli; Treccani online; Zingarelli). The grammaticality judgments about these sentences are my own; in case of doubt, I searched the Italian Web Corpus 2020, accessible through the application Sketch Engine³ (Kilgarriff et al. 2004; 2010).

4.1 *piacere* ‘appeal’, *garbare* ‘appeal’, *manicare* ‘miss’

The DE verb *piacere* ‘appeal’ is universally considered a stative predicate, hence the subject has the role of the Object of Emotion. As already pointed out in Section 2, this verb is characterized by the inverted structure in (34) and presents a reflexive form as in (35). Being stative, the *fare*-construction in (36) has no periphrastic relationship

³ www.sketchengine.eu.

with (33)-(34); sentence (36) is a *fare*-infinitive construction which introduces a further argument (*Lei* 'she') that refers to the Initiator of the event expressed by the embedded infinitive:

(33) *Maria piace a Gianni*
Maria appeal.PRS.3SG to Gianni
'Maria appeals to Gianni'

(34) *A Gianni piace Maria*
to Gianni appeal.PRS.3SG Maria
'Gianni likes Maria'

(35) *Maria si piace*
Maria si like.PRS.3SG
'Maria likes herself'

(36) *Lei fece piacere a Gianni*
She make.PST.3SG appeal.INF Maria to Gianni
'She made Gianni like Maria'

The verbs *garbare* 'appeal' and *mancare* 'miss' in (37) behave similarly to *piacere* 'appeal': they are both stative verbs where the Subject plays the role of the Object of Emotion and which show the inverted structure in (38). However, unlike *piacere* 'appeal', neither verb appears in any reflexive construction, and thus (39) is not accepted:

(37) *Gianni (garbava + mancava) a Maria*
Gianni (appeal.IPFV.3SG + miss.IPFV.3SG) to Maria
'Gianni (liked + missed) Maria'

(38) *A Maria (garbava + mancava) Gianni*
to Maria (appeal.IPFV.3SG + miss.IPFV.3SG) Gianni
'Gianni (liked + missed) Maria'

(39) * *Maria si (mancava + garbava)*
Maria si (miss.IPFV.3SG + appeal.IPFV.3SG)
**Maria (missed + appealed) herself'

4.2 *dispiacere* ‘regret’ and *importare* ‘matter’

The verb *dispiacere* ‘regret’ displays a set of constructions which differentiate it from the verb *piacere* ‘appeal’; the two verbs only share the root (Latin *placēre*, prefix *dis-*) and the inverted structure in (41):

(40) *Ciò dispiace a Maria*
this regret.PRS.3SG to Maria
‘Maria is sorry about this’

(41) *A Maria dispiace ciò*
to Maria regret.PRS.3SG this
‘Maria regrets this’

(42) *Maria si dispiace (di + per) ciò*
Maria SI regret.PRS.3SG (of + per) ciò
‘Maria is sorry about this’

The pronominal construction in (42) has a different status from the reflexive construction that *piacere* ‘appeal’ presents in (35). The Dative Experiencer in (40)-(41) appears as a Subject Experiencer in (42), while the Subject of (40), i.e. *ciò* ‘this’, appears in (42) as a PP headed by the prepositions *di/per* ‘of/for’. Therefore, the Dative Experiencer constructions (40)-(41) alternate with the Subject Experiencer unaccusative pronominal construction (42).

Furthermore, the Dative constructions (40)-(41) are periphrastically related to the syntactic causative construction (43), where the subject *ciò* ‘this’ is the causal subject and *Maria* is the Experiencer:

(43) *Ciò fa dispiacere Maria*
This make.PRS.3SG regret.INF Maria
‘This causes Maria to feel sorry’

Unlike *piacere* ‘appeal’, the verb *dispiacere* ‘regret’ syntactically behaves more like a change-of-state predicate than a stative one. This is reflected in the pronominal construction in (42) and the periphrastic syntactic causative in (43). The pronominal form of *piacere* ‘appeal’ (35) is reflexive, whereas that of *dispiacere* ‘regret’ marks an alternation (cf. (40), (42) and (43)). Furthermore, the causative construction of *piacere* ‘appeal’ requires an additional argument (cf. (33)-(34), (36)), while the causative construction of *dispiacere* ‘regret’ in (43) keeps the same argument structure as in (41)-(42), that is, it functions as a periphrastic syntactic causative.

These syntactic patterns align with those of causative psych verbs, as illustrated by *spaventare* ‘frighten’ in (22)-(23).⁴ I suggest that the Subject in (40) (postposed in (41)), and the Subject in (43) both play the role of Cause of Emotion, unlike *piacere* ‘appeal’. Moreover, *dispiacere* ‘regret’, unlike *piacere* ‘appeal’, also shows the impersonal construction in (44), where both the Experiencer and the Cause of Emotion are expressed by a PP:

- (44) A Maria dispiace (della + per la tua) partenza
to Maria regret.PRS.3SG (of.the + for the your) departure
‘Maria is sorry about your departure’

The verb *spiacere* ‘regret’ behaves similarly to *dispiacere* ‘regret’:⁵ it shows the alternation between the Dative Experiencer constructions

4 eventive verbs; yet in practice, they do not produce a meaningful contrast between (i)-(ii):

- (i) *Quella iniziativa piacque* to *Gianni* *immediatamente*
that initiative appeal.PST.3SG to Gianni immediately
‘That initiative appealed to Gianni immediately’

- (ii) *Quell’ annuncio dispiacque* a *Gianni* *immediatamente*
that announcement displease.PST.3SG to Gianni immediately
‘That announcement displeased Gianni immediately’

The telicity test offers slightly more insight, but it still does not clearly distinguish the stative *piacere* ‘appeal’ in (iii) from the causative *dispiacere* ‘regret’ in (iv):

- (iii) *Quella iniziativa piacque* a *Gianni* in *cinque minuti/ per mesi*
that initiative appeal.PST.3SG to Gianni in five minutes/ for months
‘That initiative appealed to Gianni in five minute/per mesi’

- (iv) *Quell’ annuncio dispiacque* a *Gianni* in *cinque minuti/ ?per giorni*
that announcement displease.PST.3SG to Gianni in five minutes/ for days
‘That announcement displeased Gianni in five minutes/for days’

5 The verbs *spiacere* and *dispiacere* ‘displease’ are both formed of the negative prefixes *s-* and *dis-* and the verb *piacere* ‘appeal’. However, neither verb is an antonym of the verb *piacere* ‘appeal’. Moreover, the verb *dispiacere* ‘regret’ preceded by the negative marker *non* ‘not’ in (v) expresses a fairly positive judgement about an entity/event. The negative construction is semantically close to *piacere* ‘appeal’:

- (v) *Il film non è dispiaciuto* a *Paolo*
the movie not displease.PST.3SG to Paolo
‘The movie appealed to Paolo’

(45)-(46) and the Subject Experiencer pronominal construction (47). Furthermore, (45)-(46) are periphrastically related to the syntactic causative construction (48). However, unlike *dispiacere* 'regret', *spiacere* 'regret' lacks the impersonal construction, and thus (49) is not accepted:

(45) *Ciò spiace a Maria*
this regret.PRS.3SG to Maria
'Maria is sorry about this'

(46) *A Maria spiace ciò*
to Maria regret.PRS.3SG this
'Maria regrets this'

(47) *Maria si spiace (di + per) ciò*
Maria SI regret.PRS.3SG (of + per) ciò
'Maria is sorry about this'

(48) *Ciò fa spiacere Maria*
this make.PRS.3SG regret.INF Maria
'This causes Maria to feel sorry'

(49) * *A Maria spiace (della + per la tua) partenza*
to Maria regret.PRS.3SG (of.the + for the your) departure
'Maria is sorry about your departure'

The verb *rincrescere* 'be sorry, regret' in (50) also behaves like *dispiacere* (and *spiacere*) 'regret' in many aspects: it shows the inverted structure (51), and the Dative and the Subject Experiencer pronominal alternation between (50)-(51) and (52). However, the syntactic causative (53) is deviant, while the impersonal construction (54) is ungrammatical:

(50) *Questo contrattempo rincresce a Maria*
this setback regret.PRS.3SG to Maria
'Maria is sorry about this setback'

(51) *A Maria rincresce questo contrattempo*
to Maria regret.PRS.3SG this setback
'Maria is sorry about this setback'

- (52) *Maria si rincresce (di + per) questo contrattempo*
 Maria si regret.PRS.3SG (of + for) this setback
 ‘Maria get sorry about this setback’
- (53) ?* *Questo contrattempo fa rincrescere Maria*
 this setback make.PRS.3SG regret.INF Maria
 ‘This setback made Maria sorry’
- (54) * *A Maria rincresce di questo contrattempo*
 to Maria regret.PRS.3SG of this setback
 ‘Maria is sorry about this setback’

The verb *importare* ‘matter’ in (55) displays the inverted structure (56) and the impersonal construction (57). However, it is not related to any pronominal/reflexive form and shows no alternations:

- (55) *Ciò importa a Gianni*
 this matter.PRS.3SG to Gianni
 ‘This matters to Gianni’
- (56) *A Gianni importa ciò*
 to Gianni matter.PRS.3SG this
 ‘This matters to Gianni’
- (57) *A Gianni importa di ciò*
 to Gianni matter.PRS.3SG of this
 ‘This matters to Gianni’

4.3 *interessare* ‘interest’, *compiacere* ‘please’ and *ripugnare* ‘disgust’

Besides the inverted structure (59) with respect to (58), the verb *interessare* ‘interest’ also displays the alternation between the Dative Experiencer constructions (58)-(59) and the Accusative Experiencer construction in (60). This type of alternation is not shown by any of the verbs examined in sections 4.1 and 4.2:

- (58) *Quella ragazza interessa a Paolo*
 that girl interest.PRS.3SG to Paolo
 ‘Paolo is interested in that girl’

- (59) *A Paolo interessa quella ragazza*
 to Paolo interest.PRS.3SG that girl
 'Paolo is interested in that girl'

- (60) *Quella ragazza interessa Paolo*
 that girl interest.PRS.3SG Paolo
 'Paolo is interested in that girl'

Moreover, the DE/AE constructions (58)-(60) alternate with the Subject Experiencer pronominal construction (61), where the PP is headed by the preposition *a* 'to'. However, the pronominal construction (61) is not periphrastically related to the syntactic causative construction (62) which is not accepted (unlike *dispiacere* 'regret' in (42) which is instead periphrastically related to (43)):

- (61) *Paolo si interessa a quella ragazza*
 Paolo si interest.PRS.3SG to that girl
 'Paolo takes an interest in that girl'

- (62) * *Quella ragazza fa interessare Paolo*
 that girl make.PRS.3SG interest.INF Paolo
 '*That girl makes Paolo interested'

The verb *compiacere* 'please, make happy' in (63), like *interessare* 'interest', shows the alternation between the Dative Experiencer construction (63) and the Accusative Experiencer construction (64). However, unlike all the unaccusative verbs (auxiliary *essere* 'be') analysed previously, *compiacere* 'please' is unergative (auxiliary *avere* 'have') and the inverted dative structure (65) is ungrammatical. The intransitive pronominal verb *compiacersi* 'feel satisfaction' in (66) is a Subject Experiencer intransitive pronominal verb which is not semantically related to (63)-(64):

- (63) *Gianni compiace ai suoi genitori*
 Gianni please.PRS.3SG to.the his parents
 'Gianni pleases his parents'

- (64) *Gianni compiace i suoi genitori*
 Gianni please.PRS.3SG the his parents
 'Gianni pleases his parents'

- (65) * *Ai suoi genitori compiace Gianni*
to.the his parents please.PRS.3SG Gianni
'Gianni pleases his parents' (intended reading)
- (66) *Maria si compiace della vittoria della figlia*
Maria SI satisfy.PRS.3SG of.the victory of.the daughter
'Maria feels satisfaction for her daughter's victory'

The verb *ripugnare* 'disgust' in (67) is also unergative (auxiliary *avere* 'avere'); however, unlike *compiacere* 'please', it accepts the inverted structure (68) and does not show the alternation with the Accusative construction. In fact, sentence (69) is not grammatical. The syntactic causative (70) is periphrastically related to (67). No reflexive/pronominal forms are present:

- (67) *Quel discorso ha ripugnato a Maria*
that speech disgust.PST.3SG to Maria
'That speech (disgusted + sickened) Maria'
- (68) *A Maria ha ripugnato quel discorso*
to Maria disgust.PST.3SG that speech
'That speech (disgusted + sickened) Maria'
- (69) * *Quel discorso ha ripugnato Maria*
that speech disgust.PST.3SG Maria
'That speech (disgusted + sickened) Maria'
- (70) *Quel discorso ha fatto ripugnare Maria*
that speech make.PST.3SG disgust.INF Maria
'That speech (made Maria sick + disgusted Maria)'

5 Conclusions

In this article I have shown that the inverted structure (SVO vs OVS patterns) and the subjecthood properties of Dative Experiencers are not the only aspects that characterize dative psych verbs. The Dative Experiencer class includes few verbs but each of them exhibits a variety of idiosyncratic syntactic constructions in which *piacere* 'appeal' does not appear.

Figure 1 illustrates the heterogeneity of Dative Experiencer verbs: each of them displays a set of distinctive syntactic properties. I took

into account the properties (a) through (g) which are indicated in the rows of the table in Figure 1:

- (a) unergativity: e.g. *ripugnare* ‘disgust’ (Aux= avere ‘have’) in (67);
- (b) the inverted structure: e.g. *piacere* ‘appeal’ (unaccusative) in (34), *ripugnare* ‘disgust’ (unergative) in (68);
- (c) the reflexive construction: e.g. *piacere* ‘appeal’ in (35);
- (d) the DE/SE alternation: e.g. *dispiacere* ‘regret’ in (40) and (42);
- (e) the DE/AE alternation: e.g. *interessare* ‘interest’ in (58), (60);
- (f) the syntactic causative: e.g. *dispiacere* ‘regret’ in (43);
- (g) the impersonal construction: e.g. *importare* ‘matter’ in (57).

Except for the verbs *mancare* ‘miss’ and *garbare* ‘appeal’, all the others differ from one another in at least one property. Furthermore, the analysis has shown that *dispiacere* ‘regret’ and *spiacere* ‘regret’ display a causative semantic rather than a stative one.

Giusti, Iovino (2019, 39) state that “the class of inverted unergatives [...] is found in Latin but not in Italian”. This holds true for the unergative *compiacere* ‘please’ which shows no inverted structure; however, the verb *ripugnare* ‘disgust’ is unergative and accepts the inverted structure. On the one hand, the unergative *ripugnare* ‘disgust’ shows some properties of Accusative Experiencer verbs, for example the acceptability of the periphrastic syntactic causative (70). On the other hand, it accepts the inverted structure in (68), despite being unergative. On the contrary, the unergative verb *compiacere* ‘please’ does not show the inverted structure OVS, but alternates with a transitive (non-causative) construction in (63)-(64).

Table 1 shows the idiosyncratic syntactic behaviour of DE verbs which constitute a small, heterogeneous and unstable class of psych verbs.

A close examination of DE verbs shows that some of them may appear in DE and AE constructions (*interessare* ‘interest’, *compiacere* ‘please’), while others share some properties with change-of-state verbs (*dispiacere* ‘regret’, *spiacere* ‘regret’, *ripugnare* ‘disgust’). Therefore, Haspelmath’s (2001) suggestion on the continuous transitive-intransitive scale of DE verbs as regards the inverted structure can also be extended to the variety of the syntactic patterns in which DE verbs appear. Ultimately, *piacere* ‘appeal’ cannot be considered the representative verb of the whole class.

Table 1 Syntactic Constructions of Dative Experiencer verbs

	PIACERE 'appeal'	MANCARE 'miss'	GARBARE 'appeal'	DISPIACERE 'regret'	SPIACERE 'regret'	RINCRESCERE 'be sorry'	IMPORTARE 'matter'	INTERESSARE 'interest'	COMPIACERE 'please'	RIPUGNARE 'disgust'
(a) Unergative	-	-	-	-	-	-	-	-	+	+
(b) Inverted Structure	+	+	+	+	+	+	+	+	-	+
(c) Reflexive Construction	+	-	-	-	-	-	-	-	-	-
(d) DE/SE Intr. Pron. Alternation	-	-	-	+	+	+	-	+	-	-
(e) DE/AE Alternation	-	-	-	-	-	-	-	+	+	-
(f) Syntactic Causative	-	-	-	+	+	-	-	-	-	+
(g) Impersonal Construction	-	-	-	+	-	-	+	-	-	-

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Constructions with Psych Nouns

The Experienter in Psych Nominalizations: A Descriptive Approach to Catalan

Elga Cremades Cortiella

Universitat de les Illes Balears, España

Abstract Psych verbs have been extensively studied across various linguistic domains due to their distinctive properties compared to other verb classes. Psych verbs have been classified into three categories based on two criteria: the syntactic role of the experienter and that of the non-experienter argument. Psychological nominals, however, uniformly behave as subject-experienter predicates. This paper argues that the apparent neutralization of psych-verb classes in nominalizations stems primarily from the general absence of a *cause* argument in nominal structures – especially in nominals derived from Class II psych verbs. This phenomenon is accounted for through both the properties of external arguments and the aspectual properties of nominalizations.

Keywords Argument structure. Catalan. Syntax. Eventive structure. Experienter. Nominalizations.

Index 1 Introduction: Argument Structure and Nominalizations. – 2 Goals. – 3 Theoretical Framework: Psych Predicates and Arguments of Nominalizations. – 4 From Psych Verbs to Psych Nominals. – 5 Factors Conditioning the External Argument of Psych Nominals: Aspectual Properties and Characteristics of v-EA. – 6 Conclusions.

1 Introduction: Argument Structure and Nominalizations

Since the 1970s, there has been a debate regarding predicative nature of nouns. Some authors defend that, like verbs or prepositions, nominals (or at least some nominals) can introduce arguments syntactically, and that noun phrases are integrated into the sentence much like verb phrases, acting as a complement to a functional node – i.e., the NP occupies a complement position within the framework of the DP analogous to how the VP does within the framework of the TP. One of the defenders of this position is Grimshaw (1990), who defended that some nouns (what she called ‘complex event nouns’) could carry argument structure, whereas other (‘simple event nouns’) could not. On the other hand, different proposals (Hale, Keyser 2002, for instance) have argued that, while verbs (and, to a certain extent, prepositions) legitimize arguments, nouns or adjectives don’t have this capacity at a structural level – nouns are considered heads that do not take complements or specifiers. In that sense, Fábregas (2020) explains that, for instance, “the noun *war* does not specify a DP as being its agent or its patient” (1); the DP that participates in the event is introduced by a PP or a genitive modifier, and “whether it is interpreted as the person that triggers the war, the person that suffers it or something else is left to the conceptual component, which decides according to the semantic information of the noun” (2).

This paper will take the first perspective. Indeed, as Alexiadou, Haegeman and Stavrou (2007) noted, nouns can be divided into two classes, namely relational and absolute. While absolute nouns may not have inherent relations with to the nominal constituents that appear together with them, relational nouns (i.e. derived nominals, kinship nouns and nouns with inherent part-whole relations) exhibit an inherent relation with the nominal constituents that accompany them. This inherent relation is, to a certain point, like that of the verbs with their arguments. Therefore, we will consider that relational nouns can carry argument structure. This fact has been explained mainly from two different perspectives: either considering that a VP is present within the structure of nominals or suggesting that nominals have an event structure represented in terms of functional layers. Alexiadou (2001), for instance, suggests that there is evidence for Aspect and Voice within the structure of complex event nouns, and that nouns can carry argument structure because they have a grammatically defined aspect.

In fact, as Alexiadou, Haegeman and Stavrou (2007) point out, “the range of elements that can occur after nouns are closely related to the range of elements that occur after verbs” (479). For instance, in Catalan, both nouns and verbs can select CP complements, as in

(1), infinitival complements, as in (2) and locative PP complements, as in (3):

- (1) a. *Els experts afirmen que el problema és greu*
the.PL experts 3PL.assert that the problem 3SG.is serious
'The experts assert that the problem is serious.'
- b. *l'afirmació dels experts que el problema és greu*
the.SG assertion of the.PL experts that the problem 3SG.is serious
'The experts' assertion that the problem is serious.'
- (2) a. *Espero acabar la meva presentació a temps.*
1SG.hope finish.INF the.FEM my.FEM presentation in time
'I hope to finish my presentation on time.'
- b. *l'esperança de l'autor d'acabar la presentació a temps.*
the.SG hope of the author offinish.INF the.FEM in time
'The author's hope to finish the presentation on time.'
- (3) a. *Els estudiants van anar a Mallorca.*
the.PL students 3PL.PAST.AUX go to Mallorca
'The students went to Mallorca.'
- b. *l'anada dels estudiants a Mallorca*
the going of the students to Mallorca
'The students' trip to Mallorca.'

However, it is important to acknowledge that distinctions exist between nouns and verbs. In his 1970 paper "Remarks on Nominalization", Chomsky already noted some differences. To start with, the productivity of derived nominals is restricted, and certain verbal stems do not allow for all types of nominalizations – for instance, *militate* allows for an *-ing* nominalization, *militating*, but not for an *-ation* one (**militation*). Also, in some cases, the semantic relations between the associated proposition and the derived nominal are quite varied and idiosyncratic (Alexiadou, Haegeman, Stavrou 2007). Moreover, derived nominals have the internal structure of noun phrases, which might have, as direct consequences, both differences in the obligatoriness of complements (both the external and the internal arguments of nominals tend to be optional) and dissimilarities in case assignment properties (Cremades 2016). Indeed, although, at first sight, nouns and verbs are governed by the same principles of argument realization, scholars like Grimshaw (1990) or Alexiadou, Haegeman and Stavrou (2007) have observed that arguments receiving case directly in a verbal context (nominative case of Flex and accusative case of V) often appear as prepositional phrases (hereafter, PP) in the nominal domain. Also, transformations

that typically apply to sentences, such as raising to object or raising to subject, are not possible in derived nominals (even though, in English, they are possible with gerunds).

There have been different approaches to the cause of these differences. Grimshaw (1990) and Picallo (1991) attribute these differences to the complexity of the event structure to which nominalization bases attach. According to Grimshaw, there exist 3 types of relational nouns: (1) complex event nominals, which require arguments; (2) result nominals, which have a referential reading and therefore select a referential argument as external argument, and (3) simple event nominals, which lack an event structure and therefore do not legitimize an argument structure. Alexiadou (2001), on the other hand, considers that category formation does not involve any lexical operation, and that the behavior of both verbs and nominals follows from general processes operating in specific syntactic structures – hence the realization of arguments is related to the presence or absence of functional layers in the structure. In that frame, there are different types of nominals depending on whether they include certain layers of functional structure (such as VoiceP or AspectP) and depending on the feature specification of these functional layers (Alexiadou, Haegeman, Stavrou 2007).

Regardless of the given explanation, the dissimilarities in the realization of arguments, particularly external arguments (which often align with the subject in the verbal domain), are noteworthy. Indeed, many authors¹ have observed that nominals show restrictions on the realization of external arguments when compared to the verbs they relate with. Folli and Harley (2007), for example, defend that the restrictions have to do with the teleological capability of the noun of generating the event on its own, from start to finish. Sichel (2010), on the other hand, delves into a detailed analysis of restrictions on the realization of external arguments of nouns compared to related verbs and introduces the concept of the agent exclusivity effect to explain constraints in certain nominalizations, specifically those derived from causative verbs. Going a step further, Alexiadou et al. (2013b) argue that in English, the restriction is essentially an effect of direct participation. According to this view, the external argument of the nominalization must occupy the same space and time as the expressed event but doesn't necessarily have to be an agent. However, in some cases, the restrictions extend beyond this, particularly in the context of psychological nominalizations, since the event complexity and the preposition that is used to introduce external arguments might play a role as well – some prepositions are

¹ Grimshaw 1990; Pesetsky 1995; Marantz 1997; Harley, Noyer 2000; Folli, Harley 2008; Sichel 2009; 2010; or Alexiadou et al. 2013a.

restricted in their distribution in nominal environments (Alexiadou et al. 2013a; Cremades 2014).

To what extent do these restrictions apply to psychological nouns, specifically in Catalan? In this paper we will provide evidence showing that, in Catalan, only the experiencer can function as an external argument of psych nominals. We will also provide an account of the factors that can explain this restriction, namely aspectual characteristics of nominals – since some authors (Fábregas et al. 2012; Melloni 2017) consider that all truly psych nominals are stative, even though some have argued against this view (cf. Cremades 2014) – and the characteristics of external arguments themselves (Alexiadou et al. 2013a; Iordăchioaia 2008).

2 Goals

Departing from the idea that the structure of Determiner Phrase (DP) is parallel to that of CP, and that, like verbs, some nominals legitimize argument structure, the main goal of this paper is to delve into the study of argument structure of psych nominals in Catalan, specifically focusing on the realization and the characterization of the experiencer argument.

Thus, the paper aims to answer the question of how the experiencer argument is syntactically realized in Catalan psych nominals. Resolving this issue involves addressing some secondary questions:

1. How do verbs and nominals relate to each other (and how do psych verbs and nominals relate)?
2. How can the arguments of nominals realize? Are there external and internal arguments?
3. What does the distribution of arguments of psychological nominals depend on?

Section 3 presents the theoretical concepts upon which we will base the analysis: after a general characterization of psych predicates based on the categories established by Belletti and Rizzi in 1988 (3.1), the concept of an external argument is introduced, illustrating how it materializes in nominalizations (3.2). Section 4 explains how the nominal counterparts of various classes of psychological verbs are realized, providing answers to research questions 1 and 2. Finally, in section 5, an explanation is proposed for the third research question. All of this is intended to provide a comprehensive account of how a part of the argument structure of psychological nouns functions in Catalan.

3 Theoretical Framework: Psych Predicates and Arguments of Nominalizations

3.1 Psych Predicates

Psych predicates, and in particular psych verbs, are a subset of verbs that describe mental states, emotions, perceptions, or cognitive processes. These verbs play a crucial role in language to convey information about the inner thoughts, feelings, and experiences of individuals.

Understanding the syntactic and semantic properties of psych verbs has been a topic of interest in linguistics. Indeed, they have been the subject of numerous studies, from different perspectives, such as morphology (Fábregas 2015), syntax (Royo 2017), and the interface between syntax and morphology (Iordăchioaia 2008, 2019), as they have traditionally been considered to exhibit special properties that distinguish them from other verbal classes. In terms of Iordăchioaia (2019), “psychological verbs have long made the focus of intense linguistic debate due to their apparent special properties, which make them different from other standard verb classes” (57).

The reasons for these differences are multiple, but all of them are related to the realization of the semantic participants. To start with, the experiencer argument can be realized either as the subject, as a direct object or as an indirect object of the verb – even though many authors have noted that fronted experiencer datives in psych verb constructions qualify as quirky subjects (Belletti, Rizzi 1988; Masullo 1993). Secondly, the non-experiencer argument (which can be either a *stimulus*, a *cause*, or a *target of emotion*) can be realized as a subject, as a prepositional object or as a direct object. Finally, psych verbs are often ambiguous from an aspectual point of view: for instance, in Catalan, verbs such as *molestar* (annoy) can have an atelic eventive reading, as in (4), or a stative reading, as in (5):

- (4) *El Pere va molestar la Maria durant 5 minuts*
the Pere 3SG.PAST.AUX gobother the Maria during 5 minutes
‘Pere bothered Maria for 5 minutes.’

- (5) *El fum del tabac em molesta profundament*
the smoke of tobacco 3SG.ACC bothers deeply
‘Tobacco smoke deeply bothers me.’

In 1988, Belletti and Rizzi proposed a classification of psychological verbs into three different types based on two criteria: on the one hand, the syntactic function of the experiencer; on the other hand,

the syntactic function of the stimulus (theme, cause, or target of emotion) of the psychological state. Thus, they established the following classes of psychological verbs:

1. Type I, which includes verbs such as *love*, *admire*, *hate*, *fear*, *detest*, or *adore*, has the experiencer as the subject and the theme as the direct object.
2. Type II, such as *offend*, *bore*, or *distress*, has the experiencer as the direct object and the stimulus (often a cause) as the subject.
3. Type III, such as *please*, has the experiencer as the indirect object and the stimulus as the subject.

The uneven distribution of arguments of psychological verbs has been a topic of debate in studies on verbal argument structure, as there is no agreement on the thematic role corresponding to the non-experiencer argument (Levin, Rappaport Hovav 2005, 18). Scholars have discussed whether the roles are arbitrary and how the relationship between thematic roles and arguments can be defined. In fact, positing that Type II psychological verbs, like Type III, have an *experiencer* argument and a *theme* argument implies accepting that the relationship between thematic roles and arguments is arbitrary, which does not seem possible (for example, whenever there is an agent in the argument structure, it is this agent that performs as the external argument). Thus, if the experiencer occupies a more prominent position than the theme, it is necessary to consider that the external argument of Type II psychological verbs cannot be a theme but rather a cause. In this sense, Levin and Rappaport Hovav (2005) state that, in English, verbs like *frighten*, which have an experiencer object, describe “the causation of a psychological state in the experiencer, and they often even take animate, agentive subjects, making them close to prototypical transitive verbs” (18). For this reason (among others), authors like Royo (2017) propose nuances to the classification by Belletti and Rizzi (1988). Nevertheless, this three-class classification of verbs still serves as a reference point for the study of psychological predicates.

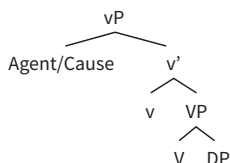
If instead of focusing on verbs we turn our attention to psychological nouns (i.e., nouns morphologically related to psychological verbs that denote a psychological state or emotion), this threefold division is somehow *neutralized*, and the general realization of arguments differs significantly. Indeed, as noted by Meinschaefer (2003), “only within this semantic class [psych nominalizations] we find verbs showing the same surface syntax and similar meaning, but presenting derived nouns contrasting crucially in how their semantic participants can be realized”. As we will see in this paper, in Catalan psych nominals the experiencer can always be considered the external argument. Hence psych nominals related to Type I verbs have the experiencer

as an external argument and the non-experiencer argument as an internal argument. Nominals related to Type II verbs do not allow the non-experiencer argument in their structure. In these cases, the non-experiencer argument is always licensed as an adjunct through prepositions such as *gràcies a* (thanks to), *per mor de/la causa de* (because of) and the experiencer is realized as the external argument of the nominal. Finally, nominals related to Type III verbs tend to realize the experiencer as the external argument and the non-experiencer argument as a prepositional complement introduced by *per* (for). As we will explain in section 4, this apparent neutralization of the external argument is related to the fact that, as stated by Melloni (2017), “all psych nominals have a state denotation” and this is valid crosslinguistically, as well as to the properties of external arguments themselves, which are precisely the properties that the experiencer argument exhibits in psych nominals and which we will describe in the next section.

3.2 The Realization of Arguments in Nominals and Nominalizations

The term *external argument* was introduced by Williams in 1980 and further developed in *Argument Structure and Morphology* (1981), where he assimilates this concept to that of the subject of a predication. However, the external argument can be distinguished from the subject because it is neither a case nor a syntactic position; rather, it is the most prominent among the list of arguments that make up the argument structure of any predicate. In the same line, Bosque and Gutiérrez-Rexach (2009) define the external argument as the argument corresponding to the subject and, as Williams observed, state that it “has a prominent place within the argument structure of a verb, as it completely saturates a propositional function,” a fact that has a structural reflection because “this argument is not obtained like the others” (Bosque, Gutiérrez-Rexach 2009, 256-7). The source of external arguments, however, has been a matter of debate. In 1996, Kratzer, and later in 1998, Hale and Keyser, proposed that the external argument – which they mainly identify with the thematic roles of agent and cause – is only what is introduced in a verbal projection different from the lexical projection of V: specifically, they consider it to be what appears within the projection of the abstract causal node represented as vP, as represented in (6). Kratzer argued that the external argument must be separated from the VP it combines with, and she adopted the Voice Hypothesis, which Alexiadou et al. (2015) formulate as in (7).

(6)



(7) The Voice hypothesis

Voice is responsible for the introduction of external arguments. The same head introduced a DP in the active and licenses a PP in the passive.

In that frame, causer PPs are special, since they can appear in the absence of Voice, such as in (8). We mark the causer PP with *italics*:

(8) The window broke *from the storm*.

Alexiadou et al. (2013a), however, consider that external arguments are not introduced in vP nor in Voice, but in a specific node for introducing external argument that they call *v-EA*. According to the authors, this node makes “the relation to the external argument explicit”. The node *v-EA* does not introduce a further event, it always introduces a DP in its specifier, and it determines the thematic relation between the external argument and the event exposed by the vP in its complement (Alexiadou et al. 2013a). Additionally, this node can hold three types of semantic participants and therefore can be of three types:

1. v-EA-indirect participant
2. v-EA-direct participant
3. v-EA-agent

These three possibilities maintain a subset relation: while agents are direct participants, and agents and direct participants can qualify as indirect participants, the other way around is not possible. The selection of the variant depends on Voice head, which can take an active *v-EAP* as its complement or give a Voice alternation. According to the authors, in English Voice can be of three types: Passive, *-ation* or *-ing*. Hence, each type of Voice can select for a particular *v-EAP* (Alexiadou et al. 2013a).

In active sentences, then, external arguments can take on the semantic roles of cause (9a), agent (9b), or experiencer (9c). The following sentences exemplify the three possibilities, with the external argument identified in *italics*:

- (9) a. *The storm* caused significant damage to the town.
 b. *The detective* solved the mysterious case.
 c. *The tourist* enjoyed the beautiful scenery.

Although the experiencer is not usually conceived as an external argument *per se*, several authors have pointed out that it exhibits characteristics that allow it to be considered as such, to the extent that it shares features with the agent. An example of this can be found in Rozwadowska (2012), who suggests breaking down thematic roles into distinctive features and notes that the experiencer and the agent often share the feature [+animate].

Unlike verbs, eventive nouns cannot accommodate all these thematic roles as arguments. As it has already been pointed out, nominals and nominalizations show “certain restrictions in the realization of their external arguments compared to their verbal sources” (Alexiadou et al. 2013b, 74). As we have already mentioned, Folli and Harley (2007) consider that the cause for these restrictions is the teleological capability of the subject to generate an event. Hence only if the entity that works as external argument can carry out the event, the nominal will allow for it to realize as external argument. Let’s consider the examples in (10). Since *la pluja* (the rain) cannot collapse anything on its own, it cannot be the external argument of the nominal *col·lapse* (collapse) and it can only appear if legitimized by an explicit PP (*a causa de*):

- (10) a. *La pluja sol col·lapsar les autopistes a Mallorca.*
the.FEM rain tends to collapse the.PL highways in Mallorca
‘The rain usually collapses the highways in Mallorca.’
b. *el freqüent col·lapse de les autopistes a Mallorca*
the frequent collapse of the.PL highways in Mallorca
‘The frequent collapse of the highways (in Mallorca) (due to the rain).’
c. **el freqüent col·lapse de la pluja de les autopistes a Mallorca*
the frequent collapse of the rain of the.PL highways in Mallorca
*‘the rain’s frequent collapse of the highways (in Mallorca)’

According to Sichel (2010), the reason for these restrictions is that only animate causers can be arguments of nominals. While both animate and inanimate cause DPs are acceptable in the verbal frame, only the animate causer is appropriate in the derived nominal frame (Sichel 2010). In (11), we can observe the difference between the realization of the cause in the verbal domain (11a-b) and in the nominal domain (11c-d), where only explicit prepositions can introduce inanimate cause DPs. The italics indicate the phrase with the thematic role of the cause:

- (11) a. *Those words* offended his father.
 b. His father got offended *by those words*.
 c. *the offense* *{of/by} *those words* {of/*by} his father.
 d. the offense of his father *because of those words*.

Arguments of nominals also differ from arguments of verbs in terms of realization possibilities. Meinschaeffer (2003) already noted that, in French, arguments of derived psych nominalizations can be of three types:

In French, nominalizations derived from psychological verbs basically dispose of three types of syntactic constructions to realize semantic participants in the event denoted: prepositional phrases headed by *de* 'of', prepositional phrases headed by prepositions other than *de*, such as *par* 'by' and *pour* 'for', and possessive determiners like *son*, *sa* 'his, her, its'.

In Catalan, external arguments of nominalizations can be realized in four different ways: prepositional phrases headed by *de*, as in (12); prepositional phrases headed by prepositions other than *de*, such as *entre*, as shown in (13), or *per part de* – often identified with the passive and illustrated in (14) –; relational adjectives, as shown in (15), and possessive pronouns – which always materialize the most prominent nominal argument, following the *possessor* > *agent/experiencer* > *theme* hierarchy, exemplified in (16).² External arguments are marked in bold letters:

- (12) *Tothom* *va* *veure* *l'entrada* *de l'orquestra* *a* *l'escenari*
 everybody 3SG.PAST see the entrance of the orchestra in the stage
 'Everybody saw the orchestra's entering the stage.'

- (13) *L'acord* *entre* *les dues parts* *va* *tenir lloc* *dijous passat*
 The agreement between the two parties 3SG.PAST have place Thursday last
 'The agreement between the two parties took place last Thursday.'

² In certain cases, external arguments may be realized as clitic pronouns, as illustrated by *Li facilitaran l'escriptura del conte* ('Someone will ease their writing of the tale'). However, clitic extraction is not uniformly permitted across all contexts. As a detailed examination of the conditions governing this variation lies beyond the scope of the present study, the issue will not be addressed further.

- (14) *La construcció de la casa per part d'aquella empresa va ser ràpida*
The building of the house by part of that company 3SG.PAST be fast
'The building of the house by that company was fast.'
- (15) *El viatge presidencial als EUA va ser molt polèmic*
The trip presidential to the USA 3SG.PAST be very controversial
'The presidential trip to the USA was very controversial.'
- (16) *El seu odi a les matemàtiques sembla no tenir limit.*
The their hatred of the math seems not have.INF limit
'Their hatred of math seems to know no bounds.'

Apart from their realization, these constituents frequently display syntactic behaviors characteristic of external argumenthood, including the ability to control PRO in non-finite clauses, bind anaphoric elements, and convey agentive or experiencer roles. As Grimshaw (1990) observes, external arguments in nominalizations occupy higher syntactic positions, whereas internal arguments are structurally lower and more closely integrated into the lexical core of the noun. This analysis is further supported by Alexiadou et al. (2013b), who argue that external arguments of nominals can be diagnosed through their syntactic effects, particularly binding and control.

Accordingly, as illustrated in (17), external arguments of nominalizations – unlike internal arguments – can control the PRO subject of an infinitival clause. Crucially, this control relation persists even when the external argument is unexpressed, as shown in (18).

- (17) a. *L'atac dels militars_i als civils_j per PRO_i espantar-los_j.*
The attack of the military to the civilians to scare them.
'The military_i attack on civilians_j to PRO_i scare them_j.'
- b. **l'atac dels militars_j als civils_i per PRO_i espantar-los_j.*
the attack of the military to the civilians to scare them.
'*the military_j attack on civilians_i to PRO_j scare them_i.'
- (18) *l'agressió ø_i a la víctima per PRO_i robar-li la cartera*
the aggression on the victim to steal-3SG.DAT the wallet
'the assault on the victim for stealing their wallet.'

In addition to controlling the PRO subject, external arguments of nouns can bind anaphoric elements, as NPs can serve as binding domains with anaphoric or pronominal elements bound within them:

- (19) *La renúncia d'aquell polític, a la seva identitat és un exemple*
the renunciation of that politician to the his identity is an example
d'autoodi.
of self-hatred.
'That politician's, renunciation of his, identity is an example of self-hatred.'

Therefore, within noun phrases headed by nominals or nominalizations that take arguments, elements such as *de*-phrases, *entre*-phrases, *per part de*-phrases, relational adjectives or possessive pronouns typically function as external arguments. However, since *de*-phrases and adjectives can also express internal arguments, structural form alone is not a reliable diagnostic, and this is why properties such as binding or control must be taken into account.

Indeed, the contrast between *l'ajuda de la gent* (the help from the people) and *la fabricació de sabates* (the manufacturing of shoes) exemplifies how *de*-phrases can realize different argument roles within nominalizations, which can be distinguished through their syntactic and semantic behavior. In *l'ajuda de la gent* the phrase *de la gent* functions as the external argument, typically understood as the agent or source responsible for providing the help. This status is supported by syntactic diagnostics associated with external arguments, such as the ability to control PRO subjects in non-finite clauses. For example, in a construction like *l'ajuda de la gent per PRO reconstruir el país* (The help from the people to rebuild the country), *de la gent* controls the PRO subject of the infinitival verb, indicating a subject-like syntactic behavior. Additionally, *de la gent* can bind anaphoric elements, as seen in sentences like *l'ajuda de la gent a si mateixa* (The help from the people to themselves), which further confirms its status as an external argument. In contrast, in *la fabricació de sabates*, the *de sabates* phrase denotes the theme or product of the manufacturing event and does not display these syntactic properties. It neither controls PRO nor binds anaphors, reflecting its role as an internal argument that is thematically integrated and syntactically less active.

This distinction is also relevant in complex nominals with multiple *de*-phrases, such as *el temor de molta gent dels efectes de la covid* (the fear of many people of the effects of COVID). Although both complements are introduced by *de*, empirical diagnostics reveal a structural asymmetry: *de molta gent* can bind reflexives or control PRO in purpose clauses, while *dels efectes de la covid* cannot. These syntactic contrasts provide a principled, non-circular basis for identifying *de molta gent* as the external argument (experiencer) and *dels efectes de la covid* as the internal argument (target of emotion).

Once it has been explained how psychological predicates are understood and how external arguments of nominalizations are

realized, it is necessary to analyze how arguments of psychological nouns, particularly external arguments (which are the focus of this contribution), realize.

4 From Psych Verbs to Psych Nominals

In this paper, we will understand psych nominals as nouns that are morphologically related to psych verbs, i.e., those that denote a feeling, an emotion, or the psychological state of an experiencer. As we will show, the external argument of psych nominals is always the semantic participant with the role experiencer. Therefore, regarding the syntactic configuration of their arguments, psych nominals are not parallel to the verbs they are morphologically related to.

As we have already mentioned, psych verbs can be divided into three classes according to the realization of the experiencer: type I verbs, like *estimar* (to love) or *odiar* (to hate) in Catalan, are subject experiencer; in type II verbs, such as *preocupar* (to worry) or *humiliar* (to humiliate), the experiencer is the direct object, and in type III verbs, such as *agradar* (to like) or *plaure* (to please), the experiencer is an indirect object.

However, this classification is not valid for nouns, even though this does not mean that the three classes of predicates have the same types of arguments, nor does it mean that the experiencer argument has the same properties in all cases.

Let's focus initially on nouns related to type I psychological verbs, such as *estimar* (to love), *odiar* (to hate), *adorar* (to adore) or *detestar* (to detest). Comparing the configuration of verbs (20) and the related nominals (21) allows us to see that the configuration is similar: the experiencer argument is realized as the external argument both in the verbal and in the nominal structures, and the non-experiencer argument (*stimulus* or target of emotion) is realized as the direct object of the verb or as a prepositional phrase introduced by a directional preposition (*a*, *cap a*, *per*) in the nominal structure. The experiencer in the nominal structure can be realized as a possessive pronoun, which indicates that it must be interpreted as the external argument:

- (20) a. *Encara ara molta gent tem els efectes de la covid-19.*
still now many people 3sg.fear the effects of the covid-19.
'Even now many people fear the effects of covid-19.'
- b. *Tothom sap que en Lluís estima molt la seva filla.*
Everybody knows that the Lluís loves much the his daughter
'Everybody knows that Lluís loves his daughter very much.'

- (21) a. *el temor de molta gent {dels/pels} efectes de la covid-19.*
the fear of many people of the effects of the covid-19.
'many people's fear of the effects of covid-19.'
- b. *L'amor d'en Lluís {cap a/per/envers} la seva filla.*
the love of the Lluís {to/for/towards} the his daughter.
'Lluís' love for his daughter.'
- (22) a. *el seu temor {dels/pels} efectes de la covid-19.*
the their fear of the effects of the covid-19.
'their fear of the effects of covid-19.'
- b. *El seu amor {cap a/per/envers} la seva filla.*
the his love {to/for/towards} the his daughter.
'His love for his daughter.'

These nominals, like the verbs that they are morphologically related to, have an experiencer that could be considered the external argument and a non-experiencer argument (the stimulus of the psychological state) that could be considered as a direct internal argument.

The experiencer also functions as an external argument in nominals morphologically related to Type II psych verbs. Although these verbs realize the non-experiencer argument as the subject and the experiencer as a direct object, in nominal configurations, the distinctions are not maintained – the realization of the experiencer argument is the same as in nominals related to type I verbs, as Meinschaeffer (2003) already pointed out when she observed that the argument realized as a verbal subject is “blocked” in these nominalizations.

Examples (23) and (24) show psychological verbs with an accusative experiencer and the morphologically related nominals. In (25) we show how, once again, the experiencer can be realized as a possessive pronoun:

- (23) a. *Aquest tema avorreix profundament els alumnes*
this topic bores deeply the students
'This topic deeply bores the students'
- b. *Aquestes males pràctiques desanimen els candidats*
these.FEM bad.FEM.PL practices 3PL.discourage the candidates
a la plaça.
to the position.
'These bad practices discourage candidates for the position.'

-
- (24) a. *l'avorriment* *dels alumnes* {*per/a causa d'*} *aquest tema*.
the boredom of the student {for/due to} this topic.
'the students' boredom due to this topic'
- b. *el desànim* *dels candidats* *a causa d'* *aquestes males*
the discouragement of the candidates because of these bad
pràctiques.
practices
'the candidates' discouragement because of these bad practices'
- (25) a. *el seu* *avorriment* {*per/a causa d'*} *aquest tema*.
the their boredom {for/due to} this topic.
'their boredom due to this topic'
- b. *el seu* *desànim* *a causa d'* *aquestes males* *pràctiques*.
the their discouragement because of these bad practices
'their discouragement because of these bad practices'

As Melloni (2017) pointed out for the case of Italian, “a restricted subset of nominalization from psych verbs show a different pattern”, and they allow for an agentive reading. It is the case of *umiliazione*, *seduzione*, *consolazione*, *mortificazione*, etc. in Italian, and the same happens with nouns such as *humiliació*, *seducció*, *consolació* or *mortificació* in Catalan. However, the agentive construction, in these cases, is not truly psychological – it corresponds to a “more concrete, actional process (under the control of an Agent) aimed at causing the result state” (Melloni 2017, 254). According to the author, some of the Type II psych verbs are *strongly agentive* and come with two different specifications. In terms of Melloni (2017):

[U]nder one reading, they [verbs such as *umiliazione*] are causative verbs with a psychological interpretation only, which encode reference to the resulting mental state; under the other reading, they are process/activity verbs with an actional (non-psychological) interpretation. (Melloni 2017, 279)

Nominalizations of these verbs can then select either the activity/process structure, as in (26a), or the result state in a causative construction as in (26b), which is the more general pattern with the rest of nominals related to Type II verbs (*preocupar*, *amoïnar*, *avorrir* or *irritar*, for instance). Only this second structure is truly psychological, which means that the external argument when these nominalizations are psychological is the experiencer.

- (26) a. *la humiliació del Joan a la Marta va marcar un abans*
the humiliation of the Joan to the Marta 3SG.PAST mark a before
i un després.
and an after
'Joan humiliating Marta marked a turning point.'
- b. *la humiliació del Joan després de l'examen va ser dura.*
the humiliation of the Joan after of the exam 3SG.PAST be hard
'the humiliation Joan felt after the exam was hard.'

Nominals related to Type III verbs show a similar pattern. The verbal construction requires the non-experiencer argument to be the subject and the experiencer argument to be realized as an indirect object (PP headed by *a*), as shown in (27); however, in the nominal configuration, the experiencer is realized either as a PP headed by *de* (28) or a possessive pronoun (29), and the non-experiencer argument is legitimized through another preposition, mainly *per*:

- (27) a. *La sintaxi agrada molt a aquells alumnes de català.*
the syntax likes much to those learners of Catalan
'Those Catalan learners like syntax very much.'
- b. *Al Francesc li interessa el món de l'esport*
to the Francesc 3sg.DAT interests the world of the sport
'Francesc is interested in the sports world.'
- (28) a. *El gust dels alumnes de català per la sintaxi*
the taste of the learners of Catalan for the syntax
'Catalan learners' liking of syntax
- b. *l'interès del Francesc pel món de l'esport*
the interest of the Francesc for the world of the sport
'Francesc's interest for the sports world.'
- (29) a. *El seu gust per la sintaxi*
the their taste for the syntax
'Their liking of syntax'
- b. *el seu interès pel món de l'esport*
the his of the Francesc for the world of the sport
'His interest for the sports world.'

It is possible to observe, therefore, that a very similar pattern applies to all three types of psych nominalizations: the experiencer presents the possibilities of inherent realization in external arguments, and especially as PP headed by *de*, as shown in (21), (24) and (28), or as possessive pronouns, as exemplified in (22), (25) and (29). Moreover,

they can create binding domains (as proved with the possessive pronouns) and control the PRO subject of infinitive clauses (30):

- (30) *el temor de molta gent, de PRO_i contraure la covid-19*
the fear of many people of contracting the covid-19
'many people's_i fear of PRO_i contracting covid-19'

Experiencer participants are, thus, the true external arguments in psych nominals – they are realized as the highest argument and legitimize the other participants through specific prepositions (*a, per, envers, cap a*, etc.).

These external arguments can even be realized as PP headed by *per part de*, even though this possibility is somehow restricted. Badia (2002) indicated that the external argument of stative nominals (among which psych nominals) cannot take this realization in Catalan, in line with Giorgi and Longobardi (1991), who explained that psych nominals in Italian cannot be inserted into passive configurations, and Meinschaeffer (2003), who noted a similar phenomenon in the case of French and prepositional phrases headed by *par*. However, it seems that, at least in Catalan, some psych nominals allow for an experiencer realized prepositional phrases headed by *per part de*. In (31), we can see data from Corpus Textual Informatitzat de la Llengua Catalana (CTILC) that prove that this configuration is possible with, at least, nominals such as *amor* (love), *por* (fear) or *preocupació* (worry):

- (31) a. *la por per part de Portugal de veure's mermada la seva autonomia.*
the fear by part of Portugal of see 3SG.REFL reduced the its autonomy
'Portugal's fear of seeing its autonomy reduced.'
- b. *l'amor vers la terra catalana per part de poetes inspirats*
the love to the land Catalan by part of poets inspired
'the love for Catalan lands by inspired poets'
- c. *preocupació per part de l'arquitecte per tal que quedi*
worry by part of the architect for it that 3SG.remain.SUBJ.PR
ben palès
well evident
'the architect's preoccupation for it become evident'

Actually, even the *Gramàtica de la llengua catalana* (IEC, 2016) acknowledges this realization when explaining, in the section on what they call *nouns' selected arguments*, that *per part de* can also introduce in certain cases the nominal phrase that expresses the experiencer, namely with nominals such as *por* (fear), *temor* (dread), *amor* (love), *desig* (desire), *odi* (hatred), *interès* (interest), or *admiració*

(admiration) (IEC 2016, 532). This can be explained by two factors: on the one hand, these nominals' experiencer is [+animate] and has a certain agentive character; on the other hand, the use of passive nominal constructions has spread due to the need to mark agentivity and animacy (Cremades 2017).

Furthermore, it must be noted that some nouns related to type III verbs (as well as with verbs that can fluctuate between types II and III, like *interessar*), allow for another realization, with the non-experiencer argument as the only argument of the noun. The experiencer, in these cases, cannot always be recovered and, if it is expressed, it is realized as a prepositional phrase introduced by *per a*, which should be considered adjunct. In these cases, however, the nominals have a different, more referential, reading, which makes us doubt that they are true psych nominals:

- (32) a. *el plaer de la lectura (??per a aquests joves)*
 the pleasure of the reading for these youngsters
 'the pleasure of reading (for these youngsters)'
 b. *l'interès de la política per a la població*
 the interest of the politics for the population
 'the interest of politics for the people'

All in all, external arguments of psychological nouns are always experiencers (except for those latter cases). Then, two types of non-experiencer arguments are distinguished: causes and *stimulus*, *target of emotion* or *object of experience* (in terms of Bogard 1995). While causes (direct or indirect) are never realized as arguments but legitimized through more explicit prepositions, the stimulus or target of emotion (i.e., the non-experiencer argument in nominals related to class I verbs) can be realized as prepositional phrases headed by *a* – what has been called *dative objective* (Cremades 2014, 2017) – or other directional prepositions, such as *per*, *envers* or *cap a* (towards).

But what causes this distribution of arguments of psych predicates in the nominal domain? The answers are related both with the eventuality that psychological nouns designate (Fábregas et al. 2012, Melloni 2017) and with the properties of the external arguments themselves (Alexiadou et al. 2013a; Iordăchioaia 2019). In the next section, we will delve into these two questions.

5 Factors Conditioning the External Argument of Psych Nominals: Aspectual Properties and Characteristics of v-EA

This section intends to provide an explanation for the apparent neutralization of external arguments of psych nominals. For nominals related to type I verbs, we could postulate that the same configuration is preserved – the experiencer is the external argument, and the *stimulus* or target of emotion is the internal argument. For nominals related to type II and type III verbs, however, other explanations are required. On the one hand, if we understand – as already mentioned – that the non-experiencer of psych verbs with an accusative experiencer is a Cause, it seems that the reason why the external argument must be the experiencer is clear: the external argument of nominalizations can never be a cause. As for nouns related to psych verbs with a dative experiencer, the admission of a single argument seems to be related to aspectual properties, to the extent that they can only have a stative reading and therefore only allow for the insertion of one argument (the experiencer). In the following sections, we explain in more detail the stativity of psychological nouns and the properties of the node v-EA that prevent the cause from manifesting as an external argument of nominalizations.

5.1 Aspectual Properties of Nominals

In 1994, Fullana already suggested that nominalizations related to type II psych verbs cannot be classified as what she called *process* nominalizations (i.e., *eventive*) because they do not express any *process*, nor as result nominals because they are not the result of the verb's action (for instance, the Catalan nominal *preocupació*, i.e. worry, is not the result of *preocupar*, i.e. to worry). She states, then, that psych nominals have a psychological or mental existence parallel to the existence of the action expressed by the verb, which is why Fabra (1918) already defined them as *states* (Fullana 1994, 187).

According to Iordăchioaia (2019), even psych verbs of type II are stative. She considers that “the truly psychological meaning of psych verbs comes with the stative aspectual properties” (65). Melloni (2017) observes this behavior as well, when she states that “some OE verbs – though preserving a fundamentally causative, hence complex event structure – are necessarily unambiguously stative” (257). She then explains that, even if all object experiencer verbs are characterized by causation, only verbs that imply a change of state in the Experiencer are dynamic, and there are, in fact, three possible readings for these verbs, related to three different semantic structures, shown in (33) – from Melloni (2017):

- (33) a. [[xACT_{<MANNER>}] CAUSE [BECOME [y <STATE>]]]
 b. [xCAUSE [BECOME [y <STATE>]]]
 c. [xCAUSE [y <STATE>]]

Some verbs can have the first reading, but only if they can be conceptualized as a “more or less specific activity/process” (Melloni 2017) – true psych verbs depict, however, states or emotions that are triggered by causes and therefore can only enter the structures in (33a) and (33b).

In that context, psych nominals only preserve “the core aspectual semantics of OE verbs” (Melloni 2017) and are therefore stative. Fábregas et al. (2012) also state that psych nominals can only denote states. Indeed, when comparing typical eventive nominals with psych nominals, only the former fulfill the diagnostics of dynamicity, at least in Catalan.

Only eventive nominals, for instance, can combine with predicates such as *tenir lloc* (take place), as in (34); *aturar*, *acabar*, *finalitzar* (stop, end, finish), as in (35); *assistir*, *presenciar* (to attend, to witness), as in (36); can take the adjectives *lent* (slow) or *ràpid* (fast), as in (37); can complement the preposition *durant* (during), as in (38), or the DP *el procés de...* (the process of...), as in (39):

- (34) a. *la construcció de l'edifici va tenir lloc en dos anys*
 the construction of the building 3SG.AUX.PAST take place in two years
 ‘The construction of the building took place in two years.’
 b. **L'interès del Francesc per l'esport va tenir lloc en dos anys*
 the interest of the Francesc for the sport 3SG.AUX.PAST take place
 in two years
 *‘Francesc’s interest in sport took place in two years.’
- (35) a. *Van aturar la construcció a causa del mal temps.*
 3PL.AUX.PAST interrupt the construction because of the bad weather
 ‘The construction was interrupted due to the bad weather.’
 b. **Van aturar l'avorriment dels alumnes*
 3PL.AUX.PAST interrupt the boredom of the learners
 *‘The students’ boredom was interrupted.’
- (36) a. *Tothom va presenciar l'enderrocament de l'edifici*
 everybody 3SG.AUX.PAST witness the demolition of the building
 ‘Everybody witnessed the demolition of the building.’
 b. **Tothom va presenciar l'interès d'en Francesc per l'esport*
 everybody 3SG.AUX.PAST witness the interest of the Francesc for the sport
 *‘Everybody witnessed Francesc’s interest in sports.’

- (37) a. *La ràpida destrucció de l'edifici* *va sorprendre* *tothom*
the rapid destruction of the building 3SG.AUX.PAST surprise everybody
'The rapid destruction of the building surprised everyone.'
- b. **El ràpid amor d'en Lluís* *per la seva filla...*
the rapid love of the Lluís for the his daughter...
'*Lluís' rapid love for his daughter...'
- (38) a. *Durant la* *construcció de l'edifici* *van passar*
during construction of the building 3PL.AUX.PAST happen
moltes coses.
many things
'Many things happened during the construction of the building.'
- b. **Durant l'interès del Francesc per l'esport* *van passar*
during the interest of the Francesc for the sport 3PL.AUX.PAST happen
moltes coses.
many things
'*Many things happened during Francesc's interest for sport.'
- (39) a. *El procés de* *construcció de l'edifici* *va ser* *molt lent.*
the process of construction of the building 3SG.AUX.PAST be very slow
'The process of building the building was very slow.'
- b. **El procés de desànim dels candidats* *va ser*
the process of discouragement of the candidates 3SG.AUX.PAST be
molt lent.
very slow
'*The process of discouragement was very slow.'

In contrast, psych nominals can serve as complements of stative nouns like *estat* (state) or *sensació* (sensation), as in (40), or predicates like *donar mostres de* (to show signs of) (41), *sentir* (to feel) or *experimentar* (to experiment) (42), or can be complemented by adjectives such as *intens* (intense), *fort* (strong), *lleuger* (light) or *dèbil* (slight) (43), which are impossible in the case of eventive nominalizations:

- (40) a. **un estat de construcció*
*a state of construction
- b. *un estat d'avorriment*
'A state of boredom'
- (41) a. **donar mostres de construcció*
*give proves of construction
- b. *donar mostres d'interès*
Give proves of interest

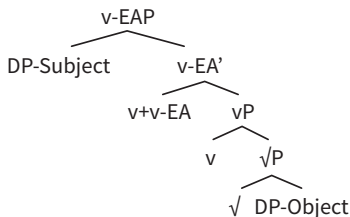
- (42) a. **{sentir/experimental}* *enderrocament*
 **{feel/experiment}* *demolition*
 b. *{sentir/experimental}* *temor*
 To {feel/experiment} *fear*
- (43) a. **un {fort/lleuger/intens}* *enderrocament*
 **a {strong/light/intense}* *demolition*
 b. *un {fort/lleuger/intens}* *avorriment*
 a {strong/light/intense} *boredom*

This implies, as Grimshaw (1990) argued, that psychological nominalizations encode a single eventuality (a state) and, therefore, only allow for the insertion of a single argument (which is the experiencer). As Melloni (2017) explains, “no external argument expressing Cause is expected in the argument structure of OE nominalizations” (254). The other participants, then, must be recovered as adjuncts and, therefore, must be legitimized through semantically more explicit prepositions, such as *per culpa de* (because of), *a causa de* (due to), or *gràcies a* (thanks to), for example.

5.2 The Characteristics of External Arguments

Another factor that can explain why nominals’ only external argument can be the experiencer is the configuration of external arguments themselves and the fact that nominals can’t allow for direct or indirect causers to be their external arguments. As we have already stated, we consider, like Alexiadou et al. (2013a), that the external argument is not directly generated at the VP but rather in an explicit node v-EA (v-External Argument), which introduces a determiner phrase in the specifier position and determines the thematic relationship between the experiencer and the event. According to the authors, this determiner phrase can be of three types: an indirect participant, a direct participant, or an agent.

(44)



To explain why some predicates can select certain types of arguments and not others, the authors posit a Voice node above v-EA that introduces morphological changes (such as passive voice or nominalizations). Thus, they explain that “specific Voices can select for specific vP-EAs,” (Alexiadou et al. 2013b, 171) and that “in constructions showing an agent exclusivity effect [...], Voice selects for v-EA-agent” (173). Since Voice can be of three types (passive, nominal, or active), only active Voice selects for any type of v-EA: in the nominal and passive Voice, only v-EA agent is possible.

This would explain how and why causes (indirect or direct participants) cannot manifest as external arguments of nominals and therefore must remain *outside* the argument structure of nouns related to type II verbs. The experiencer, then, is the only argument in the structure (hence the most prominent one) and the cause is recovered as an adjunct (introduced by the preposition *per* or *a causa de*).

6 Conclusions

This paper has provided evidence that, although traditionally psychological verbs have been classified into three categories according to the distribution of the argument with the thematic role of experiencer and the non-experiencer argument (which can be theme or cause), these differences in distribution are somehow *neutralized* in psych nominals, and the argument that should be considered as the external argument is always the experiencer.

The apparent neutralization of the classes of psychological verbs is mainly related to two factors. On the one hand, nominals cannot legitimize a cause as their external argument (which bans the external argument of type II from the nominal structure), a phenomenon that can be explained by the characteristics of external arguments. On the other hand, psych nominals are always stative. Thus, even if some psychological verbs encode two subevents – a cause (which is the eventuality that allows for the insertion of the non-experiencer argument) and a state (which is the eventuality that allows for the insertion of the experiencer argument) –, psych nominals encode a single event – the state. Therefore, whereas nominals related to subject experiencer verbs somehow *inherit* the verbal structure, nominals related to object experiencer verbs ban the non-experiencer argument and therefore realize the experiencer as external argument, somehow *neutralizing* both types of structures. However, this neutralization is only apparent, since the prepositions legitimizing non-experiencer arguments present a high variability and it would be necessary to delve into the analysis of these non-experiencer arguments to determine how this variability can be explained. This would be, however, the subject of another paper.

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Psych Light Verb Constructions in Catalan

Basic Typology

Jordi Ginebra

Universitat Rovira i Virgili, España

Abstract This paper provides a descriptive account of psych light verb constructions in Catalan. The goal is to present orderly and systematic data as a preliminary step for future research. To achieve this goal, a typology of light verb predicates is established based on the syntactic position of the Experiencer argument. The paper also has an applied purpose and offers some contrastive comments between Catalan and Spanish, and between Catalan and English, which may help in the development of future tools for Catalan learners.

Keywords Light verb constructions. Psych predicates. Argument structure. Semantic roles. Catalan.

Index 1 Introduction. – 2 Theoretical Assumptions. – 3 Empirical Work. Methodology. – 4 General Results. The Four Basic Classes of Catalan PLVCs. – 5 Detailed Results. Class I: S Exp. – 6 Detailed Results. Class III.1: Dat Exp with S Stimulus. – 7 Detailed Results. Class III.2: Dat Exp with S Psych Experience. – 8 Detailed Results. Class V: PP_{GEN} Exp. – 9 An Additional Question. What about Psych Copular Predicates? – 10 Concluding Remarks.

1 Introduction

In this paper,¹ I present the current state of descriptive research on psychological predicates with light verbs in Catalan. Psychological predicates form an interesting group of predicates because emotional experiences play a central role in human life (Wierzbicka 1999). Therefore, the way languages encode these experiences has attracted scholarly attention for many years. In addition, psychological predicates – specifically psychological verbs (or psych-verbs) – are considered a key subject in syntax, semantics, and cross-linguistic typology. In many languages, these verbs diverge syntactically and semantically from more prototypical verbs, presenting challenges for linguists attempting to map both the universal features and specific variations of these verbs across languages. The crucial point of discussion, specially since Belletti and Rizzi (1988), is the mapping between semantic roles and syntactic positions.² But there are other aspects (which are ultimately related to the first) such as the eventive/aspectual structure of these predicates,³ the possible agentive nature of some of them – which poses a problem for certain theoretical frameworks (though not for all), since to accept an agent constituent may imply the attribution of more than one semantic role to the same argument – (Bogard 1995; Martínez-Linares 1998; Royo 2017), or the syntactic and semantic flexibility of a big deal of particular (or of groups of) psych verbs.⁴ And, in the end, what exactly defines a psych predicate (Bouchard 1995, 259-386). Recent general accounts can be found in Marín (2015) and in Rozwadowska and Bondaruk (2020).

On the other side, light verb constructions (or support-verb constructions) are also claimed to pose challenges to current syntactic and semantic theories. In a traditional grammatical framework, the verb carries the main semantic and predicational weight in the sentence and selects for the arguments. But in light

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2 Van Voorst 1992; Pesetsky 1995; Cheung, Larson 2015; Filip 1996; Rosselló 2002; Mendivil Giró 2004; Kailuweit 2005; Varchetta 2010; Acedo-Matellán, Mateu 2015; Royo 2017, among many others.

3 Arad 1998; Parodi, Luján 2000; Di Tullio 2004; Sanromán Vilas 2005; Marín 2011; Kailuweit 2015.

4 Mendivil Giró 2005; Suárez 2012; Royo 2017; Kailuweit 2018; Fábregas, Marín 2020; Iacobuzio, Silva 2022.

verb constructions this does not seem to be the case – or not always (or at least it is controversial).⁵ This state-of-affairs led some schools of thought to claim for a specific grammatical status of light verbs (LV), different from regular or full (or lexical) verbs (Gross 1981, Jung 2002, Butt 2010). Other researchers deny or qualify this assertion,⁶ pointing out that the term *light verb* refers to a specific use of lexically full verbs (Fleischhauer, Hartmann 2021, 138). Be that as it may, the fact is that in recent years the study of light verb constructions (LVCs) has increased a lot. Some lines of current research are the degree of “lightness” of a LV (it contributes little predicative meaning to the LVC, but can encode aspect, valency, or other content features),⁷ the syntactic properties of the noun (Alba-Salas 2002; Melloni 2017; Piscioti, Masini 2025) and the contrast between particular languages.⁸ One of the main topics at present is the semantic, syntactic and pragmatic relationship between LVCs and their synthetic counterparts – often focusing on the (more) flexible modification properties of LVCs.⁹ General accounts of current research on LVCs can be found in Baños et al. (2022), Pompei et al. (2023) and in Riccio and Fleischhauer (2025).¹⁰

Moreover, there is a last controversial issue about LVCs. Some linguists reject (overtly or covertly) the possibility of establishing systematic grammatical statements in this field, and they fit LVCs into the sphere of verb-noun collocations or idioms and, therefore, they deal with this class of constructions in the framework of phraseology and the study of idiomatic or semi-idiomatic expressions.¹¹

5 Gross 1981; Grimshaw, Mester 1988; Jayaseelan 1988; Mendiàvil Giró 1999; De Miguel 2006; 2008; 2011.

6 See Butt, Geuder 2001; Bustos Tovar 2011; Ramchand 2014; Bruening 2016.

7 Koike 1995; Acedo-Matellán, Pineda 2019; Fleischhauer 2021; Kwo 2025.

8 Elena 1991; Ginebra, Navarro 2015; Martín Salcedo 2016; D’Andrea 2021; D’Andrea 2022; Alvarez-Morera 2022, inter alia.

9 Sanromán Vilas 2009; Bonial, Pollard 2020; Fleischhauer, Neisani 2020; Alvarez-Morera 2023b; Alvarez-Morera, Ginebra, Oltra-Massuet 2025; Piscioti, Masini 2025.

10 Work has also been done on LVCs from both a diachronic perspective and applied perspectives, such as language teaching, translation, and lexicography. I am not providing references on these topics.

11 This is the position of John Sinclair’s school, which emphasises the verb-noun combination as the minimum unanalysable unit of meaning and rejects or marginalises the idea that the formation of these constructions is based on principles of compositionality. The issue could be expressed in these terms: if the correspondence of LVs with the corresponding psych noun in one language or between languages can be described in grammatical or semantic terms – in terms of the ‘system’ – it must be concluded that the expressions in which they appear are not (phraseological) collocations. On the contrary, if it is necessary to “list” the specific verb-noun pairs, we must accept that we are in the domain of phraseology or lexicology (Alonso Ramos 1994-95, 23-4; 2004, 190-2; Ginebra 2003, 39-40).

If both psych verbs and LVCs pose challenges to current syntactic and semantic theories, it seems reasonable to think that psych light verb constructions (PLVCs), since they are a class of predicates that participate in the properties of psych predicates and at the same time in the properties of LVCs, are structures of great interest: that they are a compelling subject for linguistic research. For example, one of the questions that would need to be explored is whether the specificity of psych predicates in relation to general predicates is retrieved in PLVCs in relation to general or “regular” LVCs: whether the psych domain in the world of LVCs shows specific syntactic and semantic properties (as it has been claimed for psych verbs in connection with general verbs). Another – related – question to explore is the grammatical connections between PLVCs and psych verbs, and the parallels that can be drawn between the two classes of predicates. This intersection of study (psych predicates and LVCs) has begun to receive attention in recent years.¹²

In any case, these – and other – questions are first of all empirical issues (although not just empirical issues). So, data is required. This paper, a descriptive account of PLVCs in Catalan – a work that has not yet been carried out – is aimed at providing evidence along these lines.¹³ My aim is just to present orderly and systematic data on Catalan PLVCs, as a preliminary step for future research. One of the reviewers asked whether the psych domain is really an essential parameter of my study, or whether it is rather a typology of Catalan LVCs in which all examples happen to be psych predicates. He or she is right to raise this question. I can’t say anything for sure at this stage. My intention is to provide information so that further work can arrive to general claims and to explanatory statements.

My paper, finally, has also an applied purpose. Catalan is a language that in recent years has aroused considerable interest, not only among scholars and academics outside the Catalan-speaking area, but also as a foreign language. The field of light verb constructions is particularly complex for language learners so any contrastive input should be useful for them. In this paper, I provide some contrastive comments between Catalan and Spanish and Catalan and English

12 See Viñas-de-Puig 2008; 2009; 2014; Wiskandt 2025; Wiskandt, Turus 2025; Piscioti, Masini 2025 and partly Di Tullio 2015, 196-9 and Pompei, Piuono 2023, 111-20.

13 For Catalan psych verbs, see Cabré, Mateu 1998 and Rosselló 2002. Today the author of reference on this subject is Royo 2017; 2018; 2019; 2021; 2023, among others). Some studies have been made of Catalan light verbs (or of Catalan LVs in a cross-linguistic approach), but none of them focus on psych light verbs, apart from those by Viñas-de-Puig (2008, 2009, 2014) (he adopts an interesting theoretical approach, but actually provides very little descriptive data). See, among others (with different purposes and different theoretical frameworks), Alvarez-Morera 2023a; 2023b; 2024; Castell 1999; Colominas 2001; Monllaó 2003; Ginebra 2006; 2008; 2017; 2023; Montserrat 2014; Bartra 2011; Ginebra, Navarro 2015 and Marco, Bracho 2024.

that may help the implementation of future applied tools for Catalan language teaching and for translation.

Finally, I must note that I will not address an interesting topic about PLVCs that relates not only to grammatical explanation but also to language teaching: the fact that the phenomenon is (at least apparently) defective, discontinuous. For a unit such as *tenir enveja* (lit. *to have envy* ‘to envy’), for example, there is the full verb counterpart (*envejar* ‘to envy’) and the copular predicate counterpart (*estar envejós* ‘to be jealous/envious’). But in Catalan this is not systematic (I put aside now the question of the aspectual differences between the three versions here), as tables 1-5 show (examples created by the author). I will make just some comments regarding this question later (section 9).

Table 1 The complete set of psychological predicates. A sample

PLVC	psych verb	psych copular predicate
1. <i>La Laia té enveja de la seva</i> Laia has envy of her <i>germana.</i> sister. ‘Laia is jealous/envious of her sister’	<i>L. enveja la seva</i> Laia envies her <i>germana.</i> sister. ‘Laia envies her sister’	<i>L. està envejosa de</i> Laia is envious of <i>la seva germana.</i> her sister. ‘Laia is jeaolus/envious of her sister’
2. <i>La Laia té respecte a</i> Laia has respect for <i>l’autoritat.</i> the-authority. ‘Laia respects authority’	<i>L. respecta l’autoritat.</i> Laia respects the-authority. ‘Laia respects authority’	<i>L. és respectuosa amb</i> Laia is respectful with <i>l’autoritat.</i> the-authority. ‘Laia respects authority’

Table 2 The set without psych copular predicate. Examples

PLVC	psych verb	psych copular predicate
1. <i>La Laia té veneració pel</i> Laia has veneration for-the <i>seu avi.</i> her grandpa. ‘Laia has a great admiration for her grandpa’	<i>La Laia venera</i> Laia reveres <i>el seu avi.</i> her grandpa. ‘Laia has a great admiration for her grandpa’	
2. <i>Aquest senyor té odi als</i> This man has hate to-the <i>catalans.</i> Catalans. ‘This man hates the Catalans’	<i>Aquest senyor odia</i> This man hates <i>els catalans.</i> the Catalans. ‘This man hates the Catalans’	

Table 3 The set without psych verbs

PLVC	psych verb	psych copular predicate
1. <i>La Laia té ansietat.</i> Laia has anxiety. 'Laia is anxious'		<i>La Laia està ansiosa.</i> Laia is anxious. 'Laia is anxious'
2. <i>La Laia té afecte</i> Laia has affection <i>als Andorrans.</i> to-the Andorrans. 'Laia is fond of / loves the Andorrans'		<i>La Laia és afectuosa amb</i> Laia is affectionate with <i>els andorrans.</i> the Andorrans. 'Laia is fond of / loves the Andorrans'

Table 4 Just psych verbs

PLVC	psych verb	psych copular predicate
1.	<i>La Laia lamenta la situació.</i> Laia regrets the situation. 'Laia regrets the situation'	
2.	<i>La Laia deploa l'error.</i> Laia regrets the-mistake. 'Laia regrets the mistake'	

Table 5 Just PLVCs

PLVC	psych verb	psych copular predicate
1. <i>La Laia té aversió al risc.</i> Laia has aversion to-the risk. 'Laia is risk-averse'		
2. <i>La Laia té animadversió a la vida burgesa.</i> Laia has aversion to the life bourgeois 'Laia has an aversion to bourgeois life'		

The structure of the paper is as follows. In section 2, I give the core theoretical assumptions of the work and a basic working reference typology of psych predicates with LV. In section 3 I explain the methodology of the empirical research. In section 4 I give the general results and present the four basic classes of Catalan PLVCs. In the following sections (5-8) I provide the details of each one of these four basic classes. In section 9, I add a reflection on the relationship between Catalan PLVCs and Catalan psych predicates with copular verbs. I close the paper (section 10) with some concluding comments.

2 Theoretical Assumptions

2.1 Basic Constituents of the Psych Predicates with LV

The three basic constituents of psych predicates with LV are the following. The first expresses the life experience denoted in these constructions by the psych noun (at times abbreviated as PN), which is expressed by the verb in psych predicates containing a full lexical verb. I label this constituent with the term *psychological experience* (at times abbreviated as PE). I could have used *emotion*, *emotional state*, *emotional experience*, *feeling*, or others. Furthermore, I do not intend to give any terminological value to the phrase *psychological experience* or engage in any encyclopedic discussion. The second constituent denotes the person who undergoes the psychological experience and is called the *experiencer* (at times abbreviated as Exp). The third constituent denotes the fact or thing that triggers the psychological experience of the experiencer, which I refer to as *stimulus* (at times abbreviated as STI), as in the case of *psychological experience* for practical reasons, and not because of any theoretical commitment. As is well known, in the field of the study of psych predicates there is no general agreement as to the semantic function / thematic role of this item (nor whether it is the same in all classes of psych predicates). Among others, the following terms have been used: *theme*, *stimulus*, *source*, *trigger*, and *cause*.

One question open to debate is whether the *basic* constituents of the psych predicate with LV are also *essential*. That is, whether all three need to be present for one to speak of a LV psych predicate. In this paper, I assume not. And I further assume that the only essential constituents are the experiencer and the psychological experience. If this were not so, I could not classify as psychological a predicate such as *El vell té por* (lit. *The old man has fear* 'The old man is scared'), because it does not express the stimulus.¹⁴

¹⁴ This view seems to contradict that of such other authors as Viñas-de-Puig (2009), for whom the source argument (my stimulus) is an essential and universal item of what he calls Basic Experience Structure. One way to make these two views coincide would be to argue that, for example, a sentence such as *El vell té por* always has an implicit or generic constituent that refers to the source/stimulus (see Di Tullio 2015, 199). I will not pursue this issue here. On the other hand, my view means that here I cannot discuss sentences such as *Aquesta habitació tan fosca fa por* (lit. *This room so dark makes fear* 'This dark room is scary'), since does not contain an experiencer – but see Becker, Guzmán Naranjo 2020, 498 for a different claim.

2.2 Basic Reference Typology of Psych Predicates with LV

I have established five working reference classes of PLVCs, based on the criterium followed by Belletti-Rizzi (1988) in their analysis of psych verbs: the syntactic function of the experiencer. As is well known, Belletti-Rizzi distinguished class 1 (subject Exp), class 2 (object Exp) and class 3 (dative Exp). This has resulted in the first three classes of my general typology of PLVCs. Moreover, in the PLVCs we can find the Exp introduced by prepositions which are not dative prepositions. This has led me to add two other classes (class IV and class V).

In addition, each class has been divided into subclasses according to the structural distribution of the other basic constituents of psych predicates. To specify and formalize these classes and subclasses, I have benefited from contributions from several scholars, including Giry-Schneider (1987), Gross (1989), Bouchard (1995), and various works by Alba-Salas (2016, 2017, 2019) – although none of these authors attempted to outline the syntactic patterns of PLVCs. I represent the five classes schematically in (1). This typology is intended as a working reference framework – just a tool for the description of Catalan data. Examples in (1) come from Catalan, Spanish, French and English. The symbols stand for the following: S (subject), DO (direct object), Dat (dative phrase), PP (prepositional phrase – dative and PP_{GEN} excluded), PP_{GEN} (genitive prepositional phrase), v (light verb), Exp (experiencer).¹⁵

Class I

1. S Exp + v + DO psych experience 2. S Exp + v + PP psych experience
1. *El vell té por.* (Cat. 1971, CTILC)
The old-man has fear.
'The old man is scared'
2. *I flew into a rage.* (eng. COBUILD 2003)

Class II

1. S stimulus + v + DO Exp + PP psych experience 2. S psych experience + v + DO Exp
1. *Cela a mis Pierre dans une rage terrible.* (fr. Bouchard 1995, 275)
That has put Pierre into a rage terrible.
'That put Pierre into a terrible rage'
2. *L'havia presa una por inconfessable.* (Cat. 2019, CTILC)
ACC-has taken a fear unconfessable.
'A terrible fear paralyzed her'

¹⁵ As will be seen later, I divide the subclasses into types based on the eventive features of the predicates. In more detailed research, it may be interesting to assess whether the concept of LVCs families, used by Fleischhauer (2021) for German, can be adapted to obtain more descriptive precision.

Class III

1. S stimulus + v + DO psych experience + Dat Exp 2. S psych experience + v + Dat Exp 3.
S stimulus + v + PP psych experience + Dat Exp

1. *A l'Enriqueta li feien por les màquines.* (Cat. 2011, CTILC)
To the-Enriqueta DAT made fear the machines.

'Enriqueta was scared of machines'

2. *[A la Tatiana] li agafa por.* (Cat. 2019, CTILC)
[To Tatiana] DAT catches/takes fear.

'Tatiana gets scared'

3. *No les viene en agrado hacer algo útil.*
No DAT-PL come in pleasure to-do something useful.

'They do not like to do something useful' (sp. Google Search, 17 May 2025)

Class IV

1. S stimulus + v + DO psych experience + PP Exp 2. S psych experience + v + PP Exp

1. *Cela a éveill  en Pierre une rage terrible.* (fr. Bouchard 1995, 275)
That has awoken in Pierre a rage terrible.

'That awoke in Pierre a terrible rage'

2. *Entr  en ellos el p nico.* (sp. Alba-Salas 2016, 11)
Entered in them the panic.

'They panicked'

Class V

- S stimulus + v + DO psych experience + PP_{GEN} Exp

Al nord d'Europa l'all no ha tingut mai l'admiraci 
In-the north of-Europe the-garlic not has had never the-admiration
de la gent. (Cat. 1972, CTILC)

of the people.

'In Northern Europe, garlic has never been admired by people'

Class IV expresses the Exp as a PP, and the psych experience as the DO (class IV.1) or has the subject (class IV.2). The syntactic distribution of these constituents can be explained under the localist hypothesis and in terms of a metaphorical approach, in line with Cognitive Linguistics and other theoretical frameworks (Talmy 2000; Morimoto 2001; Croft, Cruse 2004). Thus, if it is assumed that semantic domains are structured in terms of the spatial relations, like location and movement, the psych experience can be seen as semantically recategorized as a physical object (a Figure, according to Talmy's semantics), so that it can "be placed". And the Exp is semantically recategorized as a place or as a recipient, where the psych experience goes or is located (Cifuentes, Llopis Ganga 1996; Landau 2010; Alba-Salas 2016, among many others). In a sentence like *Cela a  veill  en Pierre une rage terrible*, the PE "converted"

into a “physical object” (*une rage terrible*) is located in a “place” (*en Pierre*). Alba-Salas (2016) calls this Exp *locative experienter*. In contrast, in class II.1 (*Cela a mis Pierre dans une rage terrible*) the psych experience (*une rage terrible*) is the “place” and the Exp (*Pierre*) is the “physical object” – the Figure.

Class V also expresses the Exp has a PP, but in a clearly different fashion, both from semantic and syntactic points of view (and for that reason I use a different label, PP_{GEN}). Semantically the Exp cannot be seen as a place or as a recipient where the figure is or goes, but rather as a source. Syntactically, the PP Exp (*de la gent*) is in fact what is often called a subjective genitive of the noun (*admiració*). This PP is not an argument of the verb, but of the PN, so classe V constructions cannot be classified as PLVCs strictly speaking. Nevertheless, I have included them in the list because they are psych predicates and contain an LV, a PN, and an Exp. They also have a long tradition as a subject of study in the field of LVCs within the theoretical framework of Lexicon-grammar, where they are referred to as *converse constructions* (Gross 1989).

3 Empirical Work. Methodology

First, I provided a comprehensive alphabetical list of Catalan psych nouns (PN) by means of lexicographic data, manually collected, mainly from the DIEC2. I compiled about 300 nouns. I selected a sample: the first 18 nouns [tab. 6]. The evidence came from de CTILC – a free-access corpus of general contemporary written Catalan (1833-today) created by the Institut d’Estudis Catalans (Institute for Catalan Studies) –, where I checked the concordances of all the tokens of the 18 lemmas in order to find the sentences with PLVC. I obtained 1.216 PLVC-sentence tokens. And I analysed them to see how they fit into the classes established in 2.2.

Table 6 The 18 psych nominal lemmas and their number of tokens in the CTILC

<i>abúlia</i> ‘abulia’ (64)	<i>alegament</i> ‘happiness’ (2)
<i>aclapament</i> ‘overwhelming feeling’ (91)	<i>alegrança</i> ‘happiness’ (27)
<i>acolloniment</i> ‘fear’ (slang) (3)	<i>alegria</i> ‘happiness’ (8.932)
<i>acomplexament</i> ‘feeling of inferiority’ (9)	<i>alleugeriment</i> ‘sense of relief’ (37)
<i>acontentament</i> ‘satisfaction’ (39)	<i>alleujament</i> ‘sense of relief’ (331)
<i>admiració</i> ‘admiration’ (2.873)	<i>amargor</i> ‘bitterness’ (767)
<i>adoració</i> ‘worship’ (716)	<i>amarguesa</i> ‘bitterness’ (87)
<i>afecte</i> ‘affection, love’ (3.832)	<i>amargura</i> ‘bitterness’ (373)
<i>alarma</i> ‘alarm’ (532)	<i>amoïnament</i> ‘worry’ (12)

In addition, I selected other 15 frequent PN from the list of 300 items. They are randomly chosen nouns, which my intuition as a Catalan native speaker indicates are frequent in the language: *angoixa* ‘anguish’, *atabalament* ‘confusion’, *confiança* ‘trust’, *desànim* ‘discouragement’, *disgust* ‘displeasure’ *il·lusió* ‘illusion’, *interès* ‘interest’ *mania* ‘bad obsession’, *paciència* ‘patience’, *pànic* ‘panic’, *por* ‘fear’, *ràbia* ‘rage’, *sorpresa* ‘surprise’, *tristesa* ‘sadness’ and *vergonya* ‘shame’. The reason to add these nouns is that the first 18-nouns list gave poor results. I obtained 1.216 PLVC-sentence tokens, as I said, and this amount may appear to be enough, but 576 of these 1.216 tokens correspond to PLVCs with *alegria* ‘happiness’, and 502 to PLVCs with *afecte* ‘affection, love’. The remaining 138 tokens are distributed among 16 nouns. Some PN (*abúlia*, *aclapament*, *acolloniment*, *acomplexament*, *amarguesa*) are never found in a PLVC. Some others (*acontentament*, *alegament*, *alegrança*, *alleujament*, *amoïnament*) are found once.

For each one of the psych nouns from the second list (the 15-nouns list), I searched for the verbs with which they most frequently co-occur, using the CTILC query application, which allows retrieval of data on collocations. This task led me to read and examine around 7,500 new concordances. Thus, I found occurrences of PLVCs with patterns that had not appeared in the exploration of the concordances of the 18 nouns mentioned earlier. I should note that the query application does not allow looking directly for the co-occurrence of two specific items, and the way to get a token of a LVC is not always easy (see Fleischhauer 2021 for other problems related to extraction of LVCs from current corpora). Finally, I complemented the research by consulting dictionaries: the DDL, the DEIEC, and the DIEC2. I searched for both the nouns in the list of the 18 PN and those in the random 15-nouns list, and also all the LVs that the previous search had provided me.

PLVCs with just one token were discarded. In the sentences included in the dataset, the first letter has been modified to always be capitalized. Catalan sentences from before 1913 have been orthographically standardized. It should be remembered that the focus of the work is the syntactic typology of PLVCs. The purpose is not to provide quantitative data. General statements in next sections about Catalan PLVCs must be understood as a projection drawn from the data obtained in the analysis of these 33 psych nouns.

4 General Results. The Four Basic Classes of Catalan PLVCs

Let me note three previous general observations before presenting the typological results of the analyses carried out. The first is that, according to the CTILC data, the number of psych nouns that occur

in PLVCs is very small in percentage terms – approximately 6% of the total tokens of PNs. Laporte, Ranchhod, and Yannacopoulou (2008), in their corpus study of French LVCs (not just PLVCs), found that LVCs made up 4% of the total predicative nouns in their corpus. The second is that there are PNs that never appear in PLVCs or appear only once. The third is that there are LVs that appear with a certain frequency but occur with very few nouns (sometimes only one).

That being said, let us now turn to the general results of the work. In contemporary Catalan, constructions corresponding to classes I, III and V are common. More specifically, to classes I.1, III.1, III.2 and V. Therefore, what would be the 4 basic constructions in Catalan do not correspond to 4 of the classes of the general reference typology, but to 3, with the particularity that two of the basic Catalan constructions correspond to 2 subclasses of the same general class. According to what is shown in (2) and exemplified in (3).

(2) Common Catalan PLVCs

- a. Class I.1
- b. Class III.1
- c. Class III.2
- d. Class V

- (3) a. *El vell té por.* (1971, CTILC)
The old-man has fear.
'The old man is scared'
- b. *A tu et fa vergonya sortir a passejar amb mi.*
To you DAT makes shame to go out to walk with me.
'You are embarrassed to go for a walk with me' (2011, CTILC)
- c. *A la Patrícia li va agafar molta por.* (1977, CTILC)
To Patrícia DAT caught/took much fear.
'Patrícia got very scared'
- d. *L'all no ha tingut mai l'admiració de la gent.*
the-garlic not has had never the-admiration of the people.
'Garlic has never been admired by people' (Cat. 1972, CTILC)

Class I.2 is possible in Catalan but rarely attested. I give some details about this pattern in section 5. Class II is even more rarely attested. The CTILC contains some tokens of class II.1 sentences (only with *alarma*), illustrated in (4). The sentence in (4a), with *tenir en* 'to

have in', is stative. The sentence in (4b), with *posar in* 'to put in', is inchoative. Today they sound rather weird or bookish.¹⁶

- (4) a. *Sovintejava [...] en nostra capital l'esclat d'explosius*
It-was-frequent in our capital the-explosion of-explosives
que la tenien en continua alarma.
that Acc had in constant alarm. (1910, CTILC)
'By that time, bombs were exploding frequently in our capital, leaving
her in a constant state of alarm'
- b. *Una bronjada de carmí clapava sos pòmuls de*
A brushstroke of carmine speckled her cheekbones of
cera, en alarma a la Delfina.
wax, in alarm to the Delfina. (1890, CTILC)
'A brushstroke of carmine speckled her cheekbones with wax, putting
Delfina on alert'

As for class II.2, data are still more reduced. I found the sentence provided in (1, class V), with *prendre* 'to take', repeated here as (5):

- (5) *L'havia presa una por inconfessable.* (2019, CTILC)
acc-has taken a fear unconfessable.
'A terrible fear paralyzed her'

Class III.3 and class IV are not found in contemporary Catalan. I leave for further research to look for an explanation. I will make just a quick note. At least for class IV, the cause could be related to the phenomenon described by Alba-Salas (2016) for Spanish with the label *El triunfo del experimentante dativo* 'the victory of the dative Exp' (which I cannot comment on here). In the case of Catalan, moreover, the locative clitic with a human referent is syncretic with the dative clitic (*li* sing. *els/los* plural; the locative clitic is *hi*), as shown in (6) with a regular directed motion verb.

- (6) a. *La policia va portar el noi a la comissaria.* → *La policia hi va portar el nen.*
The police PAST take the boy to the The police LOC PAST take the
police-sation. boy.

¹⁶ As a supplementary work, I searched for this structure with nominal units that are not part of the list of 33 psych nouns under scrutiny in my research, and I found the string "*posar* + OD (Exp) + *en commoció*" (*to put* + OD Exp + *in commotion*) with 12 tokens, the last one from 1955.

'The police took the boy to the police station' b. <i>La policia va portar el noi al comissari.</i> The police PAST take the boy to the chief. 'The police took the boy to the chief'	'The police took the boy there' → <i>La policia li va portar el nen.</i> The police DAT PAST take the boy. 'The police took him the boy'

If we adopt the localist perspective again, what could be said is that this property of Catalan pronouns invalidates, in sentences with clitics, the metaphorisation of the Exp as a "place", since the result is never "visible": the Exp never ceases to appear as a dative clitic. Thus, a great number of hypothetical class IV psych sentences tend to confuse / to reduce to the strong class III. The locative Exp turns into a dative Exp.

5 Detailed Results. Class I: S Exp

Class I.1 has been shown in (1) and (3), repeated here as (7):

- (7) *El vell té por.* (1971, CTILC)
The old man has fear.
'The old man is scared'

In this sentence, the argument *El vell* expresses the experiencer and is realized as the subject. The argument *por* 'fear' denotes the psych experience and is realized as the direct object of the LV *tenir* 'to have'. The third constituent, the stimulus, is not expressed (but see next paragraph).

Class I.1 PLVCs could be considered the analytical counterpart of Belletti-Rizzi's (1988) class 1 psych verbs. However, there are two clear differences. First, and most obviously, with psych verbs the stimulus is formalized as a DO. In *El vell tem la nit* 'The old man fears the night', the phrase *la nit* 'the night', the stimulus, is the DO. In *El vell té por* the DO position is full, occupied by the constituent indicating the PE. So, when there is a stimulus, it is realized as a prepositional complement of the DO: *El vell té por de la nit* (*por de la nit* 'fear of the night').

But there is another difference. Class 1 psych verbs are stative. In contrast, only some Catalan class I.1 PLVCs are stative. The LVs *agafar* 'to take, to catch', *cobrar* 'to collect (payment)', *prendre* 'to take', *posar* 'to put' and *perdre* 'to lose' build dynamic predicates with, in the first four cases, inchoative aspectual meanings. In the fifth case (*perdre*, 'to lose'), of terminative aspectual meaning. In

addition, the light verb *tenir* 'to have' has a telic eventive reading when it selects a psych noun with an article. Thus, in Catalan, subclass I.1 divides in 7 types (8).

- (8)
1. Stative transitive with the verb *tenir* 'to have'
 2. Inchoative dynamic transitive with the verb *agafar* 'to catch, to take'
 3. Inchoative dynamic transitive with the verb *cobrar* 'to collect payment'
 4. Inchoative dynamic transitive with the verb *prendre* 'to take'
 5. Inchoative dynamic transitive with the verb *posar* 'to put'
 6. Terminative dynamic transitive with the verb *perdre* 'to lose'
 7. Telic dynamic transitive with the verb *tenir* 'to have'

The following are examples of the types 2-7 (type 1 has already been illustrated). Type 2 in (9). Type 3 in (10). Type 4 in (11). Type 5 in (12). Type 6 in (13). Type 7 in (14).

- (9)
- a. *La criatura agafa por.* (1984, CTILC)
The child takes fear.
'The child gets scared'
 - b. *[El pare] agafà mania a la Felissa.* (1977, CTILC)
[My father] took obsession to the Felissa.
'[My father] became obsessed with Felissa'
- (10)
- a. *D'ençà del primer dia, Anselma li cobrà* (1898, CTILC)
From of-the first day, Anselma DAT collected
un viu afecte.
an alive love.
'From the very first day, Anselma developed a deep affection for him'
 - b. *Al sentir-se anomenar així, van cobrar* (1898, CTILC)
In-the to-feel to-call this-way [they] PAST collect
confiança, ja no tractaren de demanar més socors.
confidence, already not tried of to-ask-for more help
'Being addressed that way gave them confidence; they no longer tried to ask for help'
- (11)
- a. *La vella Diamandula prenia paciència.* (1965, CTILC)
The old Diamandula took patience.
'The old Diamandula was patient'
 - b. *Havia pres afecte a la mansa bestiola.* (1932, CTILC)
[She] had taken affection to the mild little-animal.
'[She] became fond of the mild little animal'

- (12) a. *En Timeu havia posat afecte al capità.* (1965, CTILC)
The Timeu had put affection to-the captain.
'Timeu got affection for the captain'
- b. *Ell no posa interès en les coses.* (1933, CTILC)
He not put interest in the things.
'He does not take an interest in things'
- (13) a. *A l'últim el Quimet va perdre la paciència.* (1962, CTILC)
At the-last the Quimet past lose the
patience.
'At last Quimet lost his patience'
- b. *Ha perdut la il·lusió de viure.* (1992, CTILC)
[She] has lost the illusion of to-live.
'[She] has lost the joy of living'
- (14) a. *Vallclara tingué una sorpresa ben inesperada.* (1946, CTILC)
Vallclara had a surprise very unexpected.
'Vallclara had a very unexpected surprise'
- b. *La Galana va tenir una alegria.* (191, CTILC)
The Galana PAST to-have a joy.
'Galana felt joy'

Hence, only subclass I.1 type 1 would be close to Belletti-Rizzi class 1 verbs, because only subclass I.1 type 1 is stative (Di Tullio 2015, 196). This type 1 of Catalan PLVCs (with the verb *tenir* 'to have' and a bare OD noun), the only one of the seven subclass I.1 types with stative value, is the most common PLVC in Catalan, in terms of frequency but also in terms of the property to be combined with more different psych nouns.

Besides *tenir*, the CTILC provides tokens of other light verbs in stative subclass I.1 psych LVC, but they have a very low frequency and very restricted distribution. These verbs are *dur* and *portar* (both mean 'to carry, to bring'). The first is found with *admiració*, *adoració*, *afecte* i *amargura* (15a). The second, with *afecte* (45 tokens) (15b) and once or twice with other PN (*angoixa*, *paciència*, *ràbia*, *disgust*), in most cases with a determiner.¹⁷

¹⁷ Nota bene: the structure we are dealing with differs from the one underlying the sentence *La seva arribada va portar alegria a la casa* (2016, CTILC) 'Her arrival brought joy to the house', where the subject is not the Exp but the stimulus (class II.1). It should be pointed out that use of *dur* and *portar* as stative LVs with a subject Exp seems to be obsolete. Most tokens belong to the XIX century or to the first half of the XX century (although we still find *dur admiració* in 1993 and *dur afecte* in 1982).

- (15) a. *Tots sabem l'afecte que li duu, a* (1906, CTILC)
 All [we] know the-affection that DAT carries, to
la Mila.
 the Mila.
 'We all know how fond he is of Mila'
- b. *Si no fos veritat que li porto un gran* (1926, CTILC)
 If not was truth that DAT [I] carry a great
afecte, jo no et seguiria.
 affection, I not DAT follow.
 'If it weren't true that I care deeply for her, I wouldn't follow you'

Some comments about types 2-7 are in order here. The difference between types 2-5 has not yet been studied in detail. The four are dynamic and inchoative. The contrast between 2 and 4 (the more frequent) seems to come from the fact that with *agafar* the subject does not have semantic features of will and intentionality, and with *prendre* it does (or at least in central Catalan; not all varieties of Catalan share this property). So, the verb *agafar* in (9a) and (9b) cannot be replaced by *prendre*.¹⁸ The verb *prendre* in (11a) cannot be replaced by *agafar*. But the verb *prendre* in (11b) can be replaced by *agafar*, probably because the event described allows for a reading partly intentional and partly accidental. The problem increases when type 4 (*posar* 'to put') is added to the set, especially when compared to *prendre* 'to take'. Thus, the verb *posar* in (12a) can be replaced by *prendre*, but this is not clearly the case for (12b). The contrast, probably, has to do again with the event described. The predicates *posar interès* and *prendre interès* are related to the lexical psych verb *interessar-se* which, according to Royo (2019, 79-80), has the meaning of a voluntary action by the Exp ('to take interest'), as an initiator of their own process of change. This is not the case for *posar afecte*. But further research is needed. It seems that the only thing that can be said at present in terms of syntactic or semantic contrast between the two LVs (not between the two predicates) is that *posar* selects for two mandatory complements (the PE as DO, the STI as

¹⁸ This contrast does not work in all the cases when the LVC is not a psych LVC. Thus, LVCs like *agafar/prendre força* 'to gain strength' or *agafar/prendre impuls* 'to gain momentum' are synonyms. I leave for another occasion the task of comparing Catalan LV *prendre* with the results from Nicoletti's work on Italian LV *prendere* (Nicoletti 2025).

PP), but *prendre* does not.¹⁹ As for *cobrar* ‘to collect (payment)’, I have little to say for now. It is worth highlighting that the predicate *cobrar afecte* ‘to collect love, affection’, contrary to what would seem logical if we take into account the underlying metaphor that allegedly grounds it, selects the Exp as the subject, and not the stimulus, unlike what happens with a verb semantically close verb, *rebre* ‘to receive’, which selects the stimulus as the subject (in other words: *cobrar afecte* does not mean ‘to receive love’ but ‘to love’).

It should be added that in type 6 the object requires an article and, if there isn’t one, sentences can often be ungrammatical (**perdre por*), but not always (*perdre interès* is fine). Finally, in type 7 (14a), it is not possible in Catalan to say *tenir sorpresa* (stative reading), and *tenir una sorpresa* does not mean *to be surprised* but *to get surprised*. In other words, if I got surprised and, as a result, I am in a state of surprise, in Catalan I can say neither *tinc sorpresa* nor *tinc una sorpresa*. The appropriate sentence is *Estic sorprès*. Thus, *He tingut una sorpresa i per això estic sorprès* ‘I got surprised and, therefore, I am surprised’. Some authors observe that the stative *Aktionsart* is inherently present in the Romance LVs equivalent of *to have* (Pompei, Piunno 2023, 112). This means that, in type 7, the noun overrides its *Aktionsart* over the verb’s (aspectual coercion, according to Pustejovsky 1995).

As noted above, it should be pointed out that class I.2 is rarely attested in contemporary Catalan. The structure that formalizes the psych experience by means of a prepositional complement is dynamic inchoative and is built in Catalan with the light verb *entrar* ‘to enter’ (v + PP) (16):

- (16) [El rei] va entrar en pànic i va ordenar (2021, CTILC)
[The king] PAST to-enter in panic and PAST to-order
la retirada.
the withdraw.
‘[The king] panicked and ordered to withdraw’

In this sentence, as in the previous subclass, the argument *El rei* is the Exp and is realized as the subject. The argument *en pànic* indicates the PE and is realized as a prepositional complement of the

19 The fact that *posar* requires two complements has led me to wonder whether I should split type 4 from subclass I.1 and classify it as a separate subclass. So, subclass I.1 would correspond to structure (i) and the new subclass to structure (ii).

- (i) S Exp + v + DO psych experience
- (ii) S Exp + v + DO psych experience + PP stimulus

However, I have not taken the step because, in fact, there are sentences in the other types of I.1 that also require a second complement, depending on the particular psych noun.

LV *entrar* ‘to enter, to get in’. The expression of the stimulus can only be expressed by an adjunct. For example: “El rei va entrar en pànic a causa de l’arribada de les tropes enemigues” (‘the king panicked because of the arrival of the enemies’).

Apart from *pànic*, no other PN constructs with *entrar en* ‘to enter in’. Phrases like **entrar en por*, **entrar en ira*, **entrar en ràbia*, **entrar en amor* would sound strongly weird. In Old Catalan it is more common to find sentences of this subclass (17) (verbs *caure en* ‘to fall in’ and *metre en* ‘to put in’) (data from CICA, but research still needed).²⁰

- (17) a. *Molt fortment se meravellà lo sant* (XIV century)
Very strongly REFL amazed the holy
hom, com ten sobtosament era caut en tristícia.
man, how so suddenly was fallen in sadness.
‘The holy man was absolutely amazed, how he had so suddenly fallen into sadness’
- b. *E sabets què fa, Regina, vostre fill?* (XIV century)
And [you] know what does, Queen, your son?
Met-se en amor d’algunes velletes pobres.
[He] puts. REFL in love of-some old-women poor.
‘Do you know what your son is doing, My Queen? He falls in love with some poor old women’

In connection with the contrast between PLVCs and the general drawing of Catalan LVCs, it must be said that *entrar en* is fine with a great variety of non-psych predicative nouns. It combines with activity nouns (translations just to identify the items) (*entrar en batalla* ‘enter in battle’, *entrar en combat* ‘enter in combat’, *entrar en conversa* ‘enter in conversation’, etc.) – expressing the beginning of the activity – and with stative nouns (*entrar en contacte* ‘enter in contact’, *entrar en vigor* [lit. *enter in force*] ‘come into effect’, *entrar en conflicte* ‘enter in conflict’, *entrar en relació* ‘enter in relationship’, *entrar en decadència* ‘enter in decline’, etc.) – expressing the inception into the state.

²⁰ In today’s English there is the well-known (more or less) idiomatic expression *to fall in love* (not available in Catalan), which also corresponds to this subclass I.2.

6 Detailed Results. Class III.1: Dat Exp with S Stimulus

Class III of psych light verb constructions has two subclasses, III.1 and III.2, both frequent and productive in Catalan. Class III.1 can be divided in 4 types (18).

- (18) 1. Stative transitive with the verb *fer* ‘to do, to make’
2. Dynamic causative with the verb *donar* ‘to give’
3. Dynamic causative with the verb *dur* ‘to carry, to bring’
4. Dynamic terminative with the verb *prendre* ‘to take’

The following sentences are examples of the two types. Type 1 corresponds to (19) and type 2 corresponds to (20). Types 3 and 4 are both in (21), because these two types are marginal.

- (19) a. *A l'Enriqueta li feien por les màquines.* (2011, CTILC)
To the-Enriqueta DAT made fear the machines.
‘Enriqueta was scared of machines’
- b. *A Mariela li va fer ràbia no saber-li correspondre.* (2018, CTILC)
To Mariela DAT PAST to-make rage not
to-know. DAT reciprocate.
‘Mariela was angry that she did not know how to reciprocate’
- (20) a. *Quina alegria em dones, Déu meu!* (1947, CTILC)
What joy DAT.1PERS [you] give God mine!
‘What joy you give me, oh my God!’
- b. *Soc incapaç de donar un disgust tan gros a l'Emília.* (1984, CTILC)
[I] am incapable of to-give an upset so
big to the-Emília.
‘I am incapable of giving Emília such an upset’
- (21) a. *Això et durà algun alleujament.* (1956, CTILC)
This DAT bring some relief.
‘This will bring you some relief’
- b. *Es va aturar i com si aquella pregunta li hagués pres tota l'alegria.* (1970, CTILC)
REFL PAST to-stop and as if that question
DAT had taken all the-happiness.
‘He stopped, as if that question had taken away all his joy’

The default word order for type 1 predicates is Dat + v + S (with obligatory dative pronoun duplication). The dative Exp occupies the initial position as the topic of the sentence. It is what has been often called a “psychological subject” (Royo 2017, 27), a “logical subject” (Di Tullio 2015, 188) or, in a more general framework, a dative subject (Barðdal et al. 2012; Rigau 2013, 129-30). This dative Exp argument corresponds to what traditional grammars call the indirect object, but a minimally attentive observation shows that the place of this dative argument is parallel to the place of the Exp dative of Belletti-Rizzi’s (1988) class 3 psych verbs. The Exp argument of a verb such as the Catalan *agradar* ‘to like’ and Spanish *gustar* (it. *piacere*) has been described as an external dative, corresponding to what today some authors call a high applicative (Cuervo 2008, 66-8; Pineda 2014, 64; Royo 2017, 56-65). For Spanish, Cuervo (2010) has directly related the synthetic predicates of the type *A María le gusta el chocolate* (to María DAT likes chocolate ‘María likes chocolate’) with the analytic predicates of the type *A María le da rabia el desorden* (to María Dat gives rage the disorder ‘María is angry at the disorder’), in which we find the external dative *A María*, the LV *dar* ‘to give’ and a direct object with a bare noun (*rabia* ‘rage’). The Catalan structure in (19) is parallel to this structure, although the LV is a different one (strictly speaking, Sp. *dar* would correspond to Cat. *donar*, while Cat. *fer* would correspond to Sp. *hacer*). The bare noun, denoting the EP, has full predicational value. Thus, this type of PLVCs could be considered the analytical counterpart of Belletti-Rizzi’s (1988) class 3 psych verbs.²¹

In (19) the constituents *por* ‘fear’ and *ràbia* ‘rage’ denote the PE and are realized as the direct object of the LV *fer*. The stimulus argument of (19), which I have classified as a subject, also presents a semantic/grammatical value in this construction that distances it from the standard subject (causer, agent, or holder). In some theoretical frameworks it should be considered an internal argument, although there is no general agreement on its precise syntactic status. I will not deal with this here. Nor will I deal with the possibility of the existence of an alternant of this type 1 with an eventive causative meaning. Thus, for Viñas-de-Puig (2009, 2014), a predicate like *fer por* (lit. to make fear), in addition to the one that corresponds to the construction illustrated in (19), admits a non-stative reading, with a

21 In his contrastive corpus study, Wiskandt (2025, 111-14) identifies tokens of *donar por* (‘to give fear’) in present-day Catalan. Indeed, the CTILC, for example, contains 12 occurrences of the unit. Most Catalan linguists, however, claim that expressions like *donar por* (instead of *fer por*) can only be found in texts subject to strong interference from Spanish. This is the reason I have not taken this construction into account here. In any case, this is an interesting issue that deserves further debate. See Alvarez-Morera (2023a) for a general approach to the use of the LVs *fer* and *donar* in present-day Catalan (not restricted to PLVCs).

causer/agent subject, which would be illustrated by a sentence such as *El teu germà em va fer por per divertir-se* (your brother made me fear for enjoying ‘your brother frightened me for fun’). In any case, it is an infrequent alternative, as Viñas-de-Puig himself acknowledges, pointing out that only a few psych nouns accept this reading. This issue needs further research.²² The contrast between this pattern (class III.1 type 1) and class I.1 type 1 should also be studied, because both are stative (*Al vell li fa por la nit* / *El vell té por de la nit*).

Type 2 presents the standard default word order of a ditransitive predicate. It is an eventive construction. The subject stimulus is also an agent or a causer. Both types 1 and 2 use the same verb (*dar* ‘to give’, cat. *donar*) in Spanish. French and Italian pair with Catalan for type 1 (*faire*, *fare*), but it must be kept in mind that there is no strict parallelism between the three languages (see Pompei, Piunno 2023 for details on the connections between some Romance languages on this point – Catalan excluded). English lacks type 1.

7 Detailed Results. Class III.2: Dat Exp with S Psych Experience

In Catalan, subclass III.2 of psych light verb constructions has 4 types (22):

- (22) 1. Inchoative dynamic with the verb *agafar*
- 2. Inchoative dynamic with the verb *entrar*
- 3. Inchoative dynamic with the verb *venir*
- 4. Terminative dynamic with the verb *passar*

These are examples of the 4 types:²³

- (23) a.

<i>[A la Tatiana]</i>	<i>li</i>	<i>agafa</i>	<i>por.</i>
<i>[To Tatiana]</i>	DAT	takes/catches	fear.
‘Tatiana gets scared’			

 (2019, CTILC)

²² Drawing on my intuition as a native speaker, I have examined the 300 psych nouns in the above-mentioned list, and I think that none of them, with the precise exception of *por*, fits into a hypothetical causative eventive reading of this type with an agent subject. See Alvarez-Morera et al. (forthcoming) for more details about the single predicate *fer por*.

²³ Nota bene. With the verb *agafar* we have an alternation: the verb *agafar* belongs to two different structures (I.1 and III.2). Sentences *A la tia Paulina li agafa por* (lit. To the aunt Paulina takes fear) and *La Tia Paulina agafa por* (lit. Aunt Paulina takes fear) are semantically equivalent, although the functional distribution of the arguments differs.

- b. *Quan ella li preguntava coses, [a ell] li* (2020, CTILC)
When she DAT asked things, [to him] DAT
agafava vergonya.
took shame.
'When she asked him questions, he felt embarrassed'
- (24) a. *Al noi li entrà por i volgué plorar.* (1932, CTILC)
To-the boy DAT entered fear and he-wanted to-cry.
'The child became frightened and wanted to cry'
b. *El rostre se li enfosquí i li entrà ràbia.* (1932 CTILC)
The face REFL DAT darkened and DAT entered rage.
'His face darkened, and he became angry'
- (25) a. *Aquella alegria no em venia del* (1934, CTILC)
That happiness not DAT.1PERS came from-the
fet material d'estalviar-me uns quants diners.
fact material of-save-REFL some moneys.
'That joy did not come to me from the material fact of saving money'
b. *Em va venir una ràbia boja.* (1985 CTILC)
DAT.1PERS PAST to-come a rage mad.
'I got really angry'
- (26) a. *Aquesta amargor li passaria si tingué* (1980, CTILC)
That bitterness DAT would-pass if [he] had
fe. d'estalviar-me uns quants diners.
faith. of-save-REFL some moneys.
'That bitterness would leave him if he had faith'
b. *Al menut li havia passat la por.* (1937 CTILC)
To-the child DAT had past the fear.
'The child was no longer afraid'

As in subclass III.1, the constituent expressing the experiencer is realized as a dative. Its default position, in Catalan, is also preverbal (with obligatory pronominal duplication). The comments made about subclass III.1 dative Exp also apply. The constituent conveying the psychological experience, unlike what is found in subclass III.1, is not realized as the direct object of the LV but as the subject. Naturally, this is not a "canonical" subject – a conventional agent/causer subject –, but what some schools of thought call an internal argument (but not a DO, because it agrees with the verb): its position is postverbal and can be replaced by the partitive clitic *en*. In these structures, the stimulus does not appear (it could be expressed by an adjunct). The main syntactic contrast between subclass III.1 and subclass III.2, then, is that in subclass III.2 the stimulus is not

realized as an argument and that the PE is realized as the “subject” (a position which in class III.1 is occupied by the stimulus).

The PE argument is a bare NP in type 1, but not necessarily in types 2 and 3. The possible semantic differences between types 1, 2 and 3 have not been studied. As a starting methodological principle, I have considered that each LV heads a specific structure (a type). However, this point can be modified if future research shows that two or more LVs are interchangeable in all contexts. In this case, it would simply be a matter of synonymy. If the LVs are to be considered just grammatical units (free morphemes), then in these cases we would have to speak of a kind of free alternance or of allomorphy.

From the aspectual point of view, type 4 is terminative and requires the definite article in the PE argument. The explanation seems simple: when, for example, someone stops being afraid, the “fear suffered” by that person is an identified referent in the communication act and so requires the definite article. Finally, it should be borne in mind that the verb *passar* ‘to pass, to happen’ is polysemic and, therefore, the semantic contrast between *passar la por* and the construction with the bare object, *passar por*. In the first case – for example, in the sentence (26b) (*li havia passat la por*) – the meaning is ‘the fear stopped’. In the second case – for example, in a sentence like *La Marta passa por* (lit. Marta passes fear) – the meaning is ‘Marta is afraid’.²⁴

8 Detailed Results. Class V: PP_{GEN} Exp

Class V expresses the Exp as a PP_{GEN}, as is explained in 2.2. The subject denotes the stimulus and the DO denotes the psych experience. In Catalan, class V of psych light verb constructions has 5 types (27), illustrated in (28): Types 1-4 are stative. Type 5 is telic.

- (27)
1. Stative transitive with the verb *tenir* ‘to have’
 2. Stative transitive with the verb *fer* ‘to make’
 3. Stative transitive with the verb *rebre* ‘to receive’
 4. Stative prepositional with the verb *gaudir* ‘to enjoy’
 5. Telic dynamic transitive with the verb *guanyar* ‘to win’

²⁴ This sentence forces me to consider whether the structure corresponding to *La Marta passa por* is a type to be added to class I.1 PLVCs. At the moment I believe that it is not a LVC, since in this sentence the verb *passar* is not a LV, but a lexical verb which is equivalent to *experimentar* ‘to experience’, *patir* ‘to suffer’. It should be noted that *tenir por*, on the one hand, and *experimentar por* / *patir por* / *sentir por* ‘to feel fear’ and *passar por*, on the other hand, are equivalent predicates (they are discursive synonyms). However, they do not structure the syntactic-semantic components of the whole in the same way.

- (28) a. *Al nord d'Europa l'all no ha tingut mai l'admiració de la gent.* (1972, CTILC)
To-the north of-Europe the-garlic not has had
never the-admiration from the people.
'In northern Europe, garlic has never been admired by people'
- b. *Monuments arqueològics de tota mena [...] que fan l'admiració dels estrangers.* (1946, CTILC)
Monuments archaeological of all type that
make the-admiration of-the foreigners.
'Monuments of all kinds, which inspire the admiration of foreigners'
- c. *Fer prèdiques [...] per tal de rebre [...] l'admiració de l'inacabable estol de passarells.* (2000, CTILC)
To-make speeches in order to receive
the-admiration from the-endless flock of fools.
'Giving speeches in order to win the admiration of the endless flock of fools'
- d. *Lope de Vega gaudia de l'admiració de tothom.* (2019, CTILC)
Lope de Vega enjoyed from the-admiration of everybody.
'Lope de Vega enjoyed everyone's admiration'
- e. *Joan Antoni havia guanyat no solament llur afecte, sinó que tots quatre sentien per ell un respecte barrejat d'admiració.* (1926, CTILC)
Joan Antoni had earned not only their
affection, but all four felt for him a
respect mingled of-admiration.
'Joan Antoni had not only earned their affection, but all four of them felt for him a respect mingled with admiration'

The DO of all these sentences needs a definite determiner. A sentence like **L'all no ha tingut mai admiració de la gent* (see 28a) would be ungrammatical. On the other hand, types 1-3 can be seen, following the Lexicon-grammar (see 2.2), as the *converse* structure of class I.1 type 1, as is shown in (29).

- (29) a. *L'all té l'admiració de la gent.*
STI PE EXP
The-garlic has the-admiration from the people.
'Garlic is admired by people'
- b. *La gent té admiració a l'all.*
EXP PE STI
The people have admiration to the-garlic.
'People admires garlic'

In addition, it is worth highlighting again that this structure is restricted. It works with nouns like *admiració*, *afecte*, *alegria*, and a few others, but not with *adoració*, *amargor*, *por*, *vergonya*, and many others. Finally, although in this structure the distribution of semantic roles seems clear, it is obscured in sentences like (28e). Theoretically, the subject *Joan Antoni* corresponds to the stimulus and the genitive possessive pronoun *llur* corresponds to the Exp. But isn't it the case that intuition leads us to recognise that the referent of *Joan Antoni* does also experience something?

9 **An Additional Question. What about Psych Copular Predicates?**

I have restricted my work on psych predicates to PLVCs, and I have obviously left out “regular” psych predicates (with a full verb). I have also left out psych predicates with copular verbs, but this may not be so obvious. Although from a structural point of view the contrast between LVs and copular verbs is clear in a language like Catalan (at least for Catalan grammatical tradition), from a cross-linguistic perspective (and with a view to teaching and building translation guidelines) the difference is not always clear, and the boundaries can be fuzzy. It might be of interest to consider as a whole structures with both types of verbs in the case of psych predicates. A well-known case can work as an example. The Catalan sentence *El vell té por* (1, 3 and 4) is the usual default translation for the English sentence *The old man is afraid*. In other words, it seems that Catalan subclass I.1 (type 1) of PLVCs usually “corresponds” to English copular psych predicates with an adjective, as shown in the schematic in (30).²⁵

(30)	Catalan	English
	S Exp + <i>tenir</i> + DO PE	↔ S Exp + <i>to be</i> + Adj PE

There are precedents of dealing with the two phenomena together (although they do not specifically focus on PLVCs). In the study of LVCs, some approaches include copular verbs among the light verbs. This is the case, for example, of the German grammatical tradition,

²⁵ See also Ginebra (2006). According to John Sinclair’s functional categories (1991), this contrast is between *colligations*. In (29), the Catalan colligation is the “regular” equivalent to the English one. Colligations in Spanish and Italian are similar to Catalan, although the three Romance languages, on this point, do not fully match. Catalan and Spanish, for example, say *tenir gelosia* and *tener celos* (lit. to have jealousy ‘to be jealous’), but Italian *essere geloso* (to be jealous). See D’Andrea (2022, 9) for a brief comment on the Spanish-Italian contrast.

which dates back to Polenz (1963) and Helbig (1983-84). German grammarians use the term *functional verb* (*Funktionsverb*) – and *verb-noun periphrasis* (*Funktionsverbgefüge*) for the LVC – to refer to copular predicates as LVC when the attribute is a PP: *im Begriff sein* ‘to be ready’ or *in der Lage sein* ‘to be able’ (see also, among others, Fleischhauer 2021). The French Lexicon-grammar approach also equates LVCs (using the term *support verb*) with nominal predicates linked by the copular verb (Danlos 1988, Ranchhod 1988, Gross 1996, among others).²⁶

This more general perspective could also help the diachronic analysis of Catalan. In Catalan today, constructions such as those in (31), copular constructions with the copular verb *estar* followed by a PP containing the NP, are ungrammatical:

- (31) a. **La Laia està en alegria.*
The Laia is in happiness.
‘Laia is happy’
b. **L'àvia estava en tristesa.*
Grandma was in sadness.
‘Grandma was sad’
c. **Sé que estàs en por.*
I-know that you-are in fear.
‘I know you are scared’

But in Old Catalan they were frequent (or more frequent: detailed research is still needed):

- (32) *En tristor estave lo sant hom en* (Ramon Llull, 14th century, CICA)
In sadness was the holy man in
lo carçre.
the prison.
‘The holy man was sad in prison’

Nevertheless, it should be noted that, at least for the time being, these are general trends. There are some cases of these constructions. In Catalan today, *La Laia està en por* (Laia is in fear) is not possible, but *La Laia està en xoc* ‘Laia is in shock’ is. In fact, in English *Laia is in sadness* is not possible either, but *in shock* is. Although *shock* clearly

26 It would be still more interesting to adopt a broader perspective (beyond LVCs and copular sentences) and cover the entire variation and distribution of construction types of psychological expressions found in language use. This is what Becker and Guzmán Naranjo (2020) do in their parallel corpus study of seven European languages.

denotes a psych experience, perhaps the expression *in shock* comes from the universal language of medicine, which has a specific style that goes beyond languages and cultures.

10 Concluding Remarks

Analyzing Catalan PLVCs is not an easy task. I have provided an initial description of the field. It is too early to determine the extent to which further and more detailed research will benefit from the data provided and shed light on the complex world of psych predicates, on the one hand, and the no less complex world of LVCs (and PLVCs), on the other. Nevertheless, some concluding descriptive remarks can be drawn.

Catalan PLVCs do not fill all the slots provided in the reference working typology established at the beginning of the work. Regular Catalan PLVCs belong to class I.1 (S Exp and OD psych experience), class III.1 (S stimulus and Dat Exp), class III.2 (S psych experience and Dat Exp), and class V (S stimulus and Exp as a genitive PP complement of the OD). The other classes are either not attested or are rarely attested in Catalan. For every attested class, Catalan has both stative and eventive constructions. The number of different single LVs found in inchoative eventive types is greater than the number found in stative types.

Regarding the specificity of Catalan PLVCs compared to Catalan psych verbs, one point deserves attention. Most Catalan PLVCs are subject Exp structures, primarily of the class I.1 type 1 (with the verb *tenir* 'to have'). In contrast, the number of subject Exp psych verbs in Catalan is very small, around 25 units. Conversely, the number of PLVCs with OD Exp is very small (virtually non-existent), whereas the number of OD Exp psych verbs exceeds 250. As for predicates with Dat Exp, the pattern mirrors that of subject Exp: Catalan has just over 10 Dat Exp psych verbs, but hundreds of Dat Exp PLVCs. These contrasts deserve further attention, but a short remark is in order here: they may be related to the fact discovered by Piasciotta and Masini for Italian (2025, 167): LVCs are the preferred strategy to convey stative psych predicates (Belletti and Rizzi's class 1 and class 3 verbs are stative, while those in class 2 are mainly eventive).

Regarding the specificity of PLVCs faced to general framework of LVCs, two points are worth noting. First: not all Catalan LVs are found in Catalan psych LVCs. Among the Catalan LVs collected in various works on LVC, we find units such as *anar* 'to go', *llençar* 'to throw', *pegar* 'to hit', *clavar* 'to nail down' or (slang) *fotre* 'fer' that are not attested in this work. Second: some common Catalan LVC structures (for example, "S Exp + *entrar en* + OD PE") are also not attested (or rarely attested) in PLVCs.

Furthermore, it is interesting to highlight the syntactic versatility of LVs in psych structures. The verb *agafar* works in S Exp and with Dat Exp constructions. The verb *prendre* works in inchoative S Exp and in terminative Dat Exp constructions. The verb *tenir* works in stative and inchoative S Exp constructions, and also in PP_{GEN} Exp constructions. Etc.

Finally, regarding the question raised at the beginning of this paper about whether LVCs fit into the sphere of collocations, phraseology, and idiomatic expressions, the fact is that, despite the general statements made about the semantic and syntactic properties of every LV, it is often impossible to predict whether a verb will be used with a specific psych noun. This supports the claim that – at least to some extent – it is the noun that idiosyncratically and arbitrarily selects for the verb. But, as Wiskandt points out (2025, 103), more “empirical data are also needed to support or falsify the assumption”. It is likely that future research will shed more light on the subject.

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This volume collects a broad selection of research perspectives on psych predicates in Romance languages. The individual chapters present studies on different languages – Spanish, Catalan, Italian, French, and Latin, among others – as well as sub-phenomena – the psych alternation, dative-experiencer verbs, psych nouns, and light verb constructions. Different methodologies and theoretical approaches complement each other and benefit from discussions across framework boundaries. For instance, there are different opinions across the chapters on how to classify the pronominal constructions of object-experiencer verbs: are they anticausatives, autocausatives, antipassives? The volume also highlights the value of an interaction between theoretical and data-driven approaches, as empirical chapters in the volume show that data sometimes contradict the assumptions made on theoretical grounds. Finally, the cross-linguistic studies in some contributions complement findings on individual languages in the other chapters.



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