Psych Predicates in Romance Languages
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The Nature of Psych Detransitivization in Romance and Germanic
A Typological Approach

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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.

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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 inistence 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 transitivizing/detransitivizing typological parameter described by Nichols et al. (2004): Transitivizing 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 inistence 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 enervate 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* *zlil.*
conversation 1SG.ACC anger.PST
'The conversation made me angry.'

b. *Ja* *uzhe* *togda* *zlil-**sja**.*
1SG.NOM already then anger.PST-REFL
'I was already angry at that time.'

c. *Sergej* *zlil-**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 Nesset (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 Nesset'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 "absolutive" categories show an antipassive function. The relations between all these functions are modeled in a Cognitive Grammar network (Enger and Nesset 1999, 38). Interestingly, they also include a category labeled "mental events" and provide an example (Enger and Nesset 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 (mode1248; 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-ĕ 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* *mese* *meghat-já* *a* *férfi-t.*
DEF fairy.tale:NOM touch.emotionally-3SG DEF man-ACC
'The fairy tale touches the man.'

b. *A* *férfi* *meghat-**ódik*** *a* *mesé-től.*
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. *Ystävä-n* *näkeminen* *inno-sta-a* *nais-ta.*
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 transitivizing language type. Transitivization 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 detransitivized 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 *-γda-/-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. Transitivization 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-γa-ba*
dog children-ACC be.scared-CAUS-PST
'A dog scared the children.'
c. *keüked noqai-du čoči-γa-**γda**-ba*
children dog-DAT be.scared-CAUS-PASS-PST
'Some children were scared by a dog.'

The marker *-γda-/-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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