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## Psych reflexive alternation in Ukrainian and Russian<sup>1</sup>

### Abstract

This paper investigates the psych reflexive alternation in Ukrainian and Russian with a focus on the EO/ES (Experiencer Object / Experiencer Subject) alternation. Building on previous cross-linguistic research, we examine whether this alternation constitutes a subtype of the causative/anticausative alternation (CAA) or represents an independent phenomenon. Drawing on data from Ukrainian and Russian, as well as comparative evidence from Greek, Romanian, Brazilian Portuguese, Serbian, and Polish, we propose a three-way classification of psych verbs based on their morphosyntactic properties. We demonstrate that these classes differ systematically in terms of case marking, argument realization, as well as their compatibility with instrumental NPs and causative prepositional phrases. The analysis reveals that while some EO/ES alternations in Ukrainian and Russian share surface similarities with CAA, their syntactic behaviour and interpretation often diverge in crucial ways. Our findings support the view that the EO/ES alternation in these languages should be treated as a distinct psych verb alternation rather than as an instance of the causative alternation.

**Keywords:** psych verbs, EO verbs, psych reflexive alternation, causative/anticausative alternation, Russian, Ukrainian.

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## 1. Introduction

Psych verbs, i.e., verbs that encode emotional states or mental experiences, present a long-standing challenge in linguistic theory. Their morphosyntactic behaviour often appears to diverge from that of prototypical action verbs, largely because the experiencer argument can be realized in different syntactic positions (e.g., as either subject or object). The recent debate concerns the question whether their puzzling properties are due to the specificity of the experiencer argument and consequently to the unique properties of this class of verbs or whether their special properties can be explained independently, for example, in terms of their aspectual or event structure properties. One of the controversial problems addressed in the most recent literature is whether they are a subclass of change of state (CoS) verbs. On the assumption that verb alternations are an important test for identifying particular semantic classes of verbs with predictable syntactic structures (Levin 1993), a question arises whether psych verbs participate in similar verb alternations as non-psych CoS verbs. Causative/anticausative alternation (CAA) is typical of CoS verbs (Haspelmath 1993, Levin/Rappaport Hovav 1995, Piñon 2001, Reinhart 2002, Chierchia 2004, Alexiadou et al. 2006, Schäfer 2008, Koontz-Garboden 2009, Alexiadou et al. 2015). In contrast to English, in Slavic and Romance languages its morphological realization is overt and involves the reflexive morpheme in the intransitive variant. Example (1) below illustrates CAA for CoS verbs in English:<sup>2</sup>

- (1) a. *John/the wind broke the window.*  
       b. *The window broke (\*by John) / (from the wind).*

In Russian (2) and in Ukrainian (3), CoS verbs alternate in the following way:

- (2) a. *Poryv        vietra        slomal        vietku.*  
       gust.NOM    wind.GEN    break.PST.PFV    branch.ACC  
       ‘The gust of wind broke the branch.’

<sup>2</sup> Throughout the paper we use the widely accepted convention of marking unacceptability, optionality and obligatoriness in the following way: an asterisk marks unacceptability, but when it appears in front of parentheses \*(xx) it indicates that the constituent inside parentheses is obligatory, when it appears inside parentheses (\*xx) it indicates that the constituent inside the parentheses is not allowed. Mere parentheses without any asterisk indicate optionality of the constituent. The following abbreviations are used here: ACC – accusative, ACT – active, AUX – auxiliary, GEN – genitive, INS – instrumental, IPFV – imperfective, NACT – non-active, NOM – nominative, PFV – perfective, PRES – present, PST – past, RF – reflexive.

- b. *Vietka slomalas' (\*poryvom vietra) / (iz-za poryva vietra).*  
 branch.NOM break.PST.PFV.RF gust wind.INS / because of gust wind.GEN  
 'The branch broke (\*with the gust of wind).'

- (3) a. *Poryv vitru zlamav hilku.*  
 gust.NOM wind.GEN break.PST.PFV branch.ACC  
 'The gust of wind broke the branch.'

- b. *Hilka zlamalas' (\*poryvom vitru) / (čerez poryv vitru).*  
 branch.NOM break.PST.PFV.RF gust wind.INS / because of gust wind.GEN  
 'The branch broke (\*with the gust of wind).'

EO (Experiencer Object) verbs in Slavic and Romance languages also systematically have an ES reflexive counterpart. However, it turns out that the morphosyntactic properties of the stimulus (i.e. non-experiencer) argument in the ES reflexive counterpart are often different from those of the causer<sup>3</sup> argument of the anticausative variant of CoS verbs.

In Ukrainian (4) and in Russian (5), the instrumental NP cannot be replaced with *čerez* / *iz-za* or *z pryvodu* / *po povodu* PPs ('because of' / 'for the reason'), as demonstrated in (4c) or (5c), respectively. Thus, the argument patterns in the case of psych verbs are as if in the complementary distribution with those of CoS verbs illustrated above in (2)–(3). Namely, the stimulus cannot be realized in the cause phrase but must be realized as the NP in the instrumental case, whereas the cause of CoS verbs cannot be realized in the instrumental NP but only in some dedicated cause PP. Moreover, in (4) and (5) the stimulus expressed in the instrumental case is obligatory whereas the cause(r) in CAA with CoS verbs is optional. Such clear opposite patterns suggest important differences between the two classes of verbs.

- (4) a. *Uspixy don'ky zaxopliujut' bat'ka.*  
 successes.NOM daughter.GEN delight.PRES.IPFV father.ACC  
 'The daughter's successes delight the father.'
- b. *Bat'ko zaxopliujet'sia \*(uspixamy don'ky).*  
 father.NOM delight.PRES.IPFV.RF successes.INS daughter.GEN  
 'The father is delighted \*(with the daughter's successes).'
- c. *Bat'ko zaxopliujet'sia (\*čerez uspixy / \*z pryvodu uspixiv don'ky).*  
 father.NOM delight.PRES.IPFV.RF because of / from reason successes.GEN daughter.GEN  
 'The father is delighted (\*because of the daughter's successes).'

<sup>3</sup> We use the terms 'cause' and 'causer' interchangeably.

- (5) a. *Xorošije ocenki dočeri vosxiščajut otca.*  
 good marks.NOM daughter.GEN delight.PRES.IPFV father.ACC  
 'The daughter's good marks delight the father.'
- b. *Otec vosxiščajet šia \*(xorošimi ocenkami dočeri).*  
 father.NOM delight.PRES.IPFV.RF good marks.INS daughter.GEN  
 'The father is delighted \*(with the daughter's good marks).'
- c. *Otec vosxiščajet šia (\*iz-za / \*po povodu xorošix ocenok dočeri).*  
 father.NOM delight.PRES.IPFV.RF because of / for reason good marks.GEN daughter.GEN  
 'The father is delighted (\*because of the daughter's good marks).'

The pattern in (4)–(5) is similar to Polish Psych Verb Alternation (PVA) discussed extensively in Rozwadowska/Bondaruk (2019) and in Bondaruk/Rozwadowska (2024), who argue that PVA in Polish is not an instance of CCA and that alternating EO verbs are different from CoS verbs (see Section 2.4. below). This conclusion goes against Alexiadou/Iordăchioaia's (2014) account of alternating EO verbs in Greek and Romanian, who argue that eventive EO verbs in those languages exhibit the psych causative alternation.

In view of the above, we intend to contribute to this debate and to take a closer look at the psych reflexive alternation in Ukrainian and Russian, with a view to verifying whether EO/ES alternation in these languages is an instance of CAA or whether it is a separate alternation. We carry out our argumentation in the generative tradition, although we remain neutral as far as its various instantiations are concerned, because verb alternations as such are important in all linguistic frameworks, especially in debates related to the semantics-syntax interface. Since among psych verbs in Ukrainian and Russian we observe different complementation patterns, we have divided psych verbs into three subclasses on the basis of their morphosyntactic properties. Additionally, we have tried to make some generalizations about their semantics, since it is expected that the members of particular subclasses also share semantic properties.

The paper is divided into four sections. In the introduction, we present the theoretical background and motivation for the study, focusing on the debate surrounding the EO/ES alternation in psych verbs and its relation to the causative/anticausative alternation. We also formulate the central research question and outline our methodological approach. In Section 2, we review relevant cross-linguistic data on psych verbs, drawing on Greek, Romanian, Brazilian Portuguese, Serbian, and Polish, to provide a broader typological context. Section 3 presents our classification of psych

verbs in Ukrainian and Russian into three distinct classes based on morphosyntactic criteria. We analyze their syntactic behaviour, including case marking, argument realization, and compatibility with the instrumental case and various prepositional phrases expressing cause. The final section summarizes the main findings and discusses their theoretical implications, particularly with regard to the distinction between causation and subject matter interpretations.

## 2. Background

In this section we introduce the basics of the argument structure of psych verbs as well as the status of EO/ES alternation in different languages. Following the rich literature on psych verbs, we assume that they take at least two arguments, i.e., experiencer and stimulus. Experiencer is understood here as a participant that undergoes a certain psychological change or is in a certain psychological state. As Landau (2010) extensively demonstrates, experiencers are special not only cognitively but also linguistically. However, it has been argued by numerous scholars that the special nature and properties of structures with experiencers are not due to the special status of the experiencer participant but to the ambiguity or underdetermination of their aspectual properties (see Pesetsky 1995, Arad 1999, Rothmayr 2009, Grafmiller 2013, Alexiadou/Iordăchioaia 2014, Żychliński 2016, Hirsch 2018). In other words, such approaches suggest that behavioural morphosyntactic properties of constructions with experiencers depend on whether they have a stative or an eventive interpretation. This is correlated with a variety of the non-experiencer participant. It may either be a cause or a target/subject matter (T/SM), often subsumed under the concept of the object of emotion (as in Pesetsky 1995). Stimulus is thus a cover term that comprises these three different roles, illustrated in (6) and (7):

- |   |   |
|---|---|
| (6) a. [The article in the <i>Times</i> ] angered/enraged Bill. | Causer  |
| b. Bill was very angry at [the article in the <i>Times</i> ].   | Target of Emotion<br>(Pesetsky 1995:56)         |
| (7) a. [The television set] worried John.                       | Causer  |
| b. John worried about [the television set].                     | Subject Matter of Emotion<br>(Pesetsky 1995:57) |

Note that (6a) and (7a) describe causative events, whereas (6b) and (7b) describe states. Moreover, (7) is an example of the EO/ES alternation

in English. This alternation in English is very rare. Let us turn now to other languages which exhibit EO/ES alternation quite systematically and frequently. This cross-linguistic background is important because it reinforces the distinct character of EO/ES alternation across languages.

## 2.1. Greek and Romanian

Alexiadou/Iordăchioaia (2014) claim that EO verbs in Greek and Romanian exhibit alternative SE forms. However, the properties of these alternations vary depending on whether the EO verb is eventive or stative. The authors argue that the EO/ES alternation in eventive contexts in Greek and Romanian is a subtype of the causative/anticausative alternation. This alternation has the same morphological marking as the causative/anticausative alternation in these languages, namely the intransitive variant in both types of alternation carries non-active morphology in Greek and the reflexive clitic in Romanian. Crucially, these languages typically employ the same phrases to encode causer arguments in the ES alternants as those that appear in the anticausative variants in the causative alternation of CoS verbs. In Greek it is the preposition *me* ‘with’ as in (8). Romanian, by contrast, utilizes reflexive morphology in combination with the preposition *de la* ‘from’ to introduce causer arguments, as in (9) (see Alexiadou/Iordăchioaia, 2014: 63). As shown in (10), in Greek the preposition *me* ‘with’ is regularly used in the alternating forms of psych verbs, whereas in Romanian it is the preposition *de la* ‘from’, as illustrated in (11). These patterns provide evidence that the relevant PPs function as causers, rather than as T/SM roles in the sense of Pesetsky (1995):

- (8) a. *O Janis ekapse ti supa.* Greek causative verb  
       the John burnt.ACT the soup  
       ‘John burnt the soup.’  
       b. *I supa kaike me ti dinati fotia.* Greek anticausative verb  
       the soup burn.NACT with the strong fire  
       ‘The soup burnt from the strong fire.’
- (9) a. *Ion a ars mâncarea.* Romanian causative verb  
       John has burnt food.the  
       ‘John burnt the food.’  
       b. *Mâncarea s-a ars de la focul puternic.* Romanian anticausative  
       food.the RF.has burnt of at fire strong.VERB  
       ‘The food burnt with the strong fire.’

- (10) a. *Ta nea enohlisan ti Maria.*  
 the news annoyed.ACT the Mary.ACC  
 ‘The News annoyed Mary.’
- b. *I Maria enohlithike me ta nea.*  
 the Mary annoyed.NACT with the news  
 ‘Mary got annoyed with the news.’
- (11) a. *Știrile au enervat-o pe Maria.*  
 news.the have annoyed-her Mary.ACC  
 ‘The news annoyed Mary.’
- b. *Maria s-a enervat de la/\*de către știri.*  
 Mary RF.has annoyed of at/by news  
 ‘Mary got annoyed with/\*by the news.’

(Alexiadou/Iordachioaia: 63, ex. (27), (29), (28), (30))

In contrast, for stative EO verbs in Greek and Romanian, Alexiadou and Iordachioaia (2014) observe that the object of emotion in the alternating verb forms is introduced by distinct markers. In Greek, the prepositions *de* ‘of’ or *ja* ‘about’ are used, neither of which encode a causer. In Romanian, a range of prepositions may appear, depending on the specific verb, again without indicating a causer role.

## 2.2. Brazilian Portuguese

Cançado et al. (2020) demonstrate that in Brazilian Portuguese (BP), the EO/ES alternation is very productive in the stative reading: nearly all EO verbs in BP exhibit an inversion pattern, where the experiencer appears in the subject position and the stimulus surfaces in the PP headed by the preposition *com* (‘with’). They note that the eventive interpretation is also possible (e.g., in (13b) below). These constructions include the reflexive clitic *se*, a common marker of argument structure alternations and inversions in BP. Example (12a) illustrates a transitive EO verb, while (12b) shows its intransitive ES alternant, marked with the *se* reflexive morpheme, and with the experiencer in subject position.

- (12) a. *O menino travesso / o disparo da arma assustou / amedrontou o cachorro*  
 the boy mischievous / the firing of gun frightened / scared the dog  
 ‘The mischievous boy / the firing of the gun frightened / scared the dog.’
- b. *O cachorro se assustou / amedrontou.*  
 the dog RF frightened / scared  
 ‘The dog got frightened/scared.’

The alternation in (12) resembles the CAA alternation. Frequently, in the ES alternant the stimulus is obligatory and is realized as a complement of the preposition *com* ‘with’, (13b).

- (13) a. *A partida do filho preocupou/angustiou/entristeceu a mãe.*  
 the departure of the son worried/distressed/saddened the mother  
 [stimulus, experiencer]  
 ‘The son’s departure worried/distressed/saddened his mother.’
- b. *A mãe se preocupou/angustiou/entristeceu com a partida do filho.*  
 the mother RF worried/distressed/saddened with the departure of the son  
 [experiencer, stimulus]  
 ‘The mother got worried about/distressed by/sad about her son’s departure.’

Cançado et al. (2020) argue that with psych verbs this is not a causative alternation, because the stimulus is obligatory, in contrast to CoS verbs, where the causer argument is rare and optional. This suggests that the PP phrase headed by *com* ‘with’ might be a T/SM rather than a causer.

### 2.3. Serbian

As demonstrated in Kovačević (2020) for Serbian, EO psych-verbs do exhibit the causative alternation, though in the form that diverges from the canonical causative/anticausative pattern observed with CoS verbs. As illustrated with examples such as *zaprepastiti* (‘to amaze’) or *razbesneti* (‘to anger’), these verbs alternate with reflexive ES-forms in which the experiencer becomes the grammatical subject.

- (14) a. *Njegov brat je zaprepastio Jovana svojim ponašanjem.*  
 His brother AUX amazed/dazzled Jovan.ACC self’s.INS behaviour.INS  
 ‘Jovan’s brother amazed/dazzled him with his behaviour.’
- b. *Jovan se zaprepastio bratovim ponašanjem.*  
 Jovan.NOM SE amazed brother.INS behaviour.INS  
 ‘Jovan got amazed by his brother’s behaviour.’
- (15) a. *Njegov brat je razbesneo Jovana svojim ponašanjem.*  
 His brother.NOM AUX angered Jovan.ACC self’s.INS behaviour.INS  
 ‘Jovan’s brother angered him with his behaviour.’
- b. *Jovan se razbesneo od bratovog ponašanja.*  
 Jovan.NOM SE anger from brother’s behaviour.GEN  
 ‘Jovan got angry from his brother’s behaviour.’



In the ES alternant, the stimulus is typically realized as a bare noun phrase marked with the instrumental case. The absence of the instrumental NP renders the sentence ungrammatical, indicating that this element functions as a necessary complement of the psych verb. Arguably, it represents a T/SM. On the other hand, the instrumental case-marked bare NP is not the only means of expressing the stimulus participant in EO/ES alternations in Serbian. The verb *razbesneti* ‘to anger’ demonstrates this variation. In its transitive use, *razbesneti* selects a stimulus realized as a bare NP in the instrumental case, as shown in (15a). However, in its ES variant, the verb takes a prepositional phrase headed by *od* ‘from’, with a genitive case-marked NP as its complement, as illustrated in (15b). This indicates that Serbian allows multiple encodings of the stimulus participant, depending on the verb and context.

Crucially, however, the stimulus argument typically realized either as an instrumental-marked bare noun phrase or as a prepositional phrase headed by *od* (‘from’) remains obligatory in the reflexive variant. This suggests that the ES-alternants of EO psych-verbs in Serbian are not fully detransitivized in the way typical of anticausative constructions.

The complementation pattern of Serbian SE-constructions is illustrated in (16) after (Kovačević 2020).

- (16) a. *Jovan se zaprepastio bratovim ponašanjem / ??od bratovog*  
 John.NOM SE amaze.PST.PFV brother.INS behavior.INS / from brother's  
*ponašanja.*  
 behavior.GEN  
 ‘John got amazed by his brother’s behavior.’
- b. *Jovan se razbesneo \*sestrinim ponašanjem / od sestrinog*  
 John.NOM SE anger.PST.PFV sister's.INS behavior.INS / from sister's  
*ponašanja.*  
 behavior.GEN  
 ‘John got angry from his sister’s behavior.’
- c. *Jovan se ohrabrio bratovim ponašanjem / od bratovog*  
 John.NOM SE encourage.PST.PFV brother's.INS behavior.INS / from brother's  
*ponašanja.*  
 behavior.GEN  
 ‘John got encouraged by his brother’s behavior.’
- d. *Jovan se osramotio svojim ponašanjem / \*od svog ponašanja.*  
 John.NOM SE embarrass.PST.PFV self'SINS behavior.INS / from self's behavior.GEN  
 ‘John embarrassed himself with his behavior.’

For our purposes it is important to recall Kovačević's (2020) conclusion that in Serbian some ES alternants allow instrumental NPs but not *od* (from)-PPs whereas others allow only *od*-PPs but not instrumental NPs, and that still others license both instrumental NPs and *od*-PPs. Kovačević emphasizes that "Not all object experiencers are the same". We show in the sections that follow that also in Ukrainian and Russian not all EO psych verbs are the same.

## 2.4. Polish

Rozwadowska/Bondaruk (2019) and Bondaruk/Rozwadowska (2024) challenge the view that EO/ES alternation in Polish represents a sub-species of CAA. Instead, they argue that these patterns constitute a distinct type of alternation which they term the psych verb alternation (PVA). Their work contains an extensive discussion of the differences between CAA and PVA in Polish and has served as a starting point and inspiration for our investigation into Ukrainian and Russian psych verb alternations. Using the same methodology as in Alexiadou/Iordăchioaia's (2014), these authors show that the realization of the stimulus argument in EO/ES alternation is distinct from CAA alternation of CoS verbs. They demonstrate that the majority of EO verbs regularly alternate with ES reflexive variants, where the stimulus appears in the instrumental case-marked NP. The pattern is similar both in the perfective and the imperfective aspect. The EO/ES alternation in Polish is illustrated in (17)–(19). In (17) there is a transitive EO predicate *cieszyć* 'to please'. The imperfective structure in (17a) describes a state, while the perfective one in (17b) EO verb forms refers to an onset to a state and has the eventive interpretation. In (18) there are reflexive ES alternants of (17).

- (17) a. *Nagroda cieszyła Marka.*  
 prize.NOM please.PST.IPFV Mark.ACC  
 'The prize pleased Mark.'

- b. *Nagroda ucieszyła Marka.*  
 prize.NOM please.PST.PFV Mark.ACC  
 'The prize started to please Mark.'

- (18) a. *Marek cieszy się (nagrodą).*  
 Mark.NOM please.PRES.IPFV.RF prize.INS  
 'Mark is pleased with the prize.'

- b. *Marek ucieszył się (nagrodą).*  
 Mark.NOM please.PST.PFV.RF prize.INS  
 'Mark got pleased with the prize.'

With some reflexive ES alternants, the stimulus argument is optional, as in (18), with others it is obligatory, (19b):

- (19) a. *Matematyka/Maria*      *interesuje*      *Marka*.  
 maths.NOM/Mary.NOM    interest.PRES.IPFV    Mark.ACC  
 ‘Maths interests Mark.’
- b. *Marek*      *interesuje się*      *\*(matematyka) / \*(Marią)*.  
 Mark.NOM    interest.PRES.IPFV.RF    maths.INS / Mary.INS  
 ‘Mark is interested \*(in maths / in Mary).’

The above patterns are different from CAA alternation illustrated for Polish in (20):

- (20) a. *Podmuch*      *wiatru*      *złamał*      *gałąź*.  
 gust.NOM    wind.GEN      break.PST.PFV    branch.ACC  
 ‘The gust of wind broke the branch.’
- b. *Gałąź*      *złamała się*      *(od podmuchu wiatru)*.  
 branch.NOM    break.PST.PFV.RF    from gust.GEN    wind.GEN  
 ‘The branch broke from the gust of wind.’
- c. *Gałąź*      *złamała się*      *(\*podmuchem wiatru)*.  
 branch.NOM    break.PST.PFV.RF    gust.INS      wind.GEN  
 ‘The branch broke (\*with the gust of wind).’

As visible above, the causer in CAA alternation of CoS verbs appears optionally in the causer *od* ‘from’-phrase whereas the stimulus argument of psych verbs is realized in the instrumental case, with some verbs obligatorily (19b), with others optionally (18). Additionally, Bondaruk and Rozwadowska argue that the ES variants exhibit unergative rather than unaccusative behaviour, indicating that their syntactic structure and event decomposition differ fundamentally from anticausative constructions typical of CoS verbs. The most important insight of their approach is that the arguments in the instrumental case do not introduce causative semantics and thus do not code a causer, but a T/SM – the entity that triggers an emotional response. The authors extensively argue that EO/ES alternation in Polish is not an instance of ACC but that it is a different alternation which they refer to as the reflexive psych verb alternation.

Interestingly, similar patterns can be observed in Ukrainian and Russian. However, in contrast to Polish – where the psych reflexive alternation is relatively productive – in Ukrainian and Russian this type of alternation appears to be restricted to specific subsets of psychological verbs. To capture the differences in psych verbs, we propose a fine-grained classificati-

on in Ukrainian and Russian motivated by the argument structure patterns. This classification is discussed in detail in Section 3.

### 3. Classification of psych verbs in Ukrainian and Russian

Kriuchkova (1979) divided psych verbs into the following semantic categories: (i) verbs of interest and passion, (ii) verbs of astonishment, (iii) verbs of cult and self-abasement, (iv) verbs of estimation, (v) verbs of mockery, (vi) verbs of displeasure or dissatisfaction, (vii) verbs of fear, and (viii) verbs of harassment. This system offered a detailed account of emotional distinctions and contributed to the understanding of the semantic diversity of psych verbs. However, while rich in descriptive value, Kriuchkova's classification was primarily semantically motivated and did not consistently reflect the syntactic or morphological behaviour of these verbs. As a result, verbs with different grammatical properties were often grouped together, making it difficult to draw morphosyntactic generalizations across or within classes.

In our investigation, a new classification, syntactically motivated, has been adopted. Our classification (to be justified in the subsequent sections) includes the following three broader categories, listed in (21)–(23):

- (21) Class I: Verbs with the obligatory stimulus in the instrumental case which cannot be replaced with a cause prepositional phrase.
- (22) Class II. Verbs which allow double construal, i.e., the stimulus is either an NP in the instrumental case or is expressed in some kind of cause PP.
- (23) Class III: Verbs where stimulus cannot be realized as an NP in the instrumental case, but can be optionally realized as a cause PP.

Verbs within each group tend to show similar patterns in terms of subject–object realization, case marking, and verb alternations they may take part in. It offers a better foundation for analyzing psych verbs in Ukrainian and Russian based on grammatical behaviour. Let us illustrate each class with representative examples, focusing on their complementation patterns.

#### 3.1. Obligatory stimulus realized as the NP in the instrumental case

In Ukrainian examples (24) and Russian (25), (repeated from (4)–(5) above), the instrumental NP cannot be replaced with *čerez* / *iz-za* or *z*

*pryvodu / po povodu* PPs ('because of' / 'for the reason') as illustrated in (24c) or (25c). Note that all these PPs appear in canonical anticausative structures (see examples (2) and (3) in Section 1).

- (24) a. *Uspixy don'ky zaxopliujut'/zaxopyly bat'ka.*  
 successes.NOM daughter.GEN delight.PRES.IPFV/PST.PFV father.ACC  
 'The daughter's successes delight / started to delight the father.'
- b. *Bat'ko zaxopliujet'sia/zahopyvsia \*(uspixamy don'ky).*  
 father.NOM delight.PRES.IPFV.RF/PST.PFV.RF successes.INS daughter.GEN  
 'The father is delighted / started to be delighted \*(with the daughter's successes).'
- c. *Bat'ko zaxopliujet'sia/zaxopyvsia (\*čerez uspixy / \*z pryvodu*  
 father.NOM delight.PRES.IPFV.RF/PST.PFV.RF because of / for reason  
*uspixiv) don'ky.*  
 successes.GEN daughter.GEN  
 'The father is delighted / started to be delighted (\*because of the daughter's successes).'
- (25) a. *Xorošije ocenki dočeri vosxiščajut/vosxitili otca.*  
 good marks.NOM daughter.GEN delight.PRES.IPFV/PST.PFV father.ACC  
 'The daughter's good marks delight / started to delight the father.'
- b. *Otec vosxiščajet'sia/vosxitilsia \*(xorošimi ocenkami dočeri).*  
 father.NOM delight.PRES.IPFV.RF/PST.PFV.RF good marks.INS daughter.GEN  
 'The father is delighted / started to be delighted \*(with the daughter's good marks).'
- c. *Otec vosxiščajet'sia/vosxitilsia (\*iz-za / \*po povodu*  
 father.NOM delight.PRES.IPFV.RF/PST.PFV.RF because of / for reason  
*xorošix ocenok dočeri).*  
 good.GEN marks.GEN daughter.GEN  
 'The father is delighted / started to be delighted (\*because of the daughter's good marks).'

The following verbs belong to the first group of our classification, because they behave in the same way: *zaxopliuvatysia/vosxiščat'sia* ('to be delighted'), *cikavytysia/interesovat'sia* ('to be interested'), *liubuvatysia/liubovat'sia* ('to admire'), *začarovuvatysia/očarovyvat'sia* ('to be fascinated'), *nadyxatysia/vooduševliat'sia*, *vdoxnovliat'sia* ('to get inspired') *prynyžuvatysia/unižat'sia* ('to humble'), *oburiuvatysia/vozmuščat'sia* ('to be indignant'), *turbuvatysia/bespokoit'sia* ('to worry, to be concerned') and *vražatysia/izumliat'sia* ('to be amazed').

Let us now take a little detour to the ES reflexive psych verbs *liubuvatysia/liubovat'sia* ('to admire'), which do not have transitive EO variants, but behave like most of the verbs of the first subclass. They are presented in (26)–(27) for Ukrainian and Russian respectively:

- (26) a. \**Cia kartyna liubuje/zaliubuvala mene.*  
 this.ACC picture.NOM admire.PRES.IPFV/PST.PFV me.ACC  
 \*‘This picture admires / started to admire me.’
- b. *Ja liubujus /zaliubuvavsia \*(cijeju kartynoj).*  
 I.NOM admire.PRES.IPFV.RF/PST.PFV.RF this.INS picture.INS  
 ‘I admire / started to admire \*(this picture).’
- c. *Ja libujus /zaliubuvavsia (\*čerez ciu kartynu /*  
 I.NOM admire.PRES.IPFV.RF/PST.PFV.RF because of this picture.ACC /  
 \**z pryvodu cijeki kartyny).*  
 from reason this.GEN picture.GEN  
 ‘I admire / started to admire (\*because of this picture).’
- (27) a. \**Eta kartina liubujet/zaliubovala mienia.*  
 this.ACC picture.NOM admire.PRES.IPFV/PST.PFV me.ACC  
 \*‘This picture admires / started to admire me.’
- b. *Ja liubujus /zaliubovalsia \*(etoj kartinoj).*  
 I.NOM admire.PRES.IPFV.RF/ PST.PFV.RF this.INS picture.INS  
 ‘I admire / started to admire \*(this picture).’
- c. *Ja libujus /zaliubovalsia (\*iz-za / \*po povodu*  
 I.NOM admire.PRES.IPFV.RF/PST.IPFV.RF because of / for reason  
*etoj kartiny).*  
 this.GEN picture.GEN  
 ‘I admire / started to admire (\*because of this picture / \*for the reason  
 of this picture).’

The verbs *liubuvatysia/liubovat'sia* (‘to admire’) require obligatorily the instrumental case in the ES variant and cannot co-occur with *iz-za* or *po povodu* (‘because of’ / ‘for the reason’) PPs. The ungrammaticality of (26a) and (27a), where the subject is non-human and the experiencer is expressed as an object (\*‘This picture admires me’ – an impossible transitive construction), confirms the absence of a transitive counterpart. Only the ES reflexive form is grammatical, as shown in (26b) and (27b). Despite the lack of alternation, these reflexive forms still require the use of the instrumental case (*kartynoj/kartinoj*) to mark the non-experiencer participant. Importantly, these instrumental NPs cannot be replaced by causal prepositional phrases (*čerez, iz-za, z pryvodu, po povodu*), as illustrated in (26c) and (27c), which are ungrammatical. This pattern supports the interpretation of the instrumental NP as a target or subject matter (T/SM) rather than a cause.

The pattern in (26)–(27) has important implications for our investigation: Even though *liubuvatysia/liubovat'sia* does not alternate with an EO form, the syntactic and semantic behaviour of the instrumental NP remains consistent

with the verbs that do. Therefore, the presence of the instrumental case alone – particularly in constructions where substitution by causal PPs is impossible – can serve as an independent diagnostic for identifying T/SM arguments.

In both Ukrainian (28) and Russian (29), the verbs *vražatysia/izumliat'sia* ('to be amazed') require their stimulus argument to be expressed by an NP in the instrumental case. As shown in (28b) and (29b), omission of this NP is only possible with the perfective forms (*vrazytysia / izumit'sia*), while in the imperfective (*vražatysia/izumliat'sia*) the instrumental NP is obligatory (28d, 29d). Importantly, substitution of the instrumental NP with causal prepositional phrases (*čerez / iz-za, z pryvodu / po povodu*) is ungrammatical (28c, 28e; 29c, 29e).

- (28) a. *Krasa lisu vražaje/vrazyla poeta.*  
 beauty.NOM forest.GEN amaze.PRES.IPFV/PST.PFV poet.ACC  
 'The beauty of the forest amazes / amazed the poet.'

- b. *Poet vrazyvsia (krasoju lisu).*  
 poet.NOM amaze.PST.PFV.RF beauty.INS forest.GEN  
 'The poet got amazed (with the beauty of the forest).'

- c. *Poet vrazyvsia (\*čerez krasu /*  
 poet.NOM amaze.PST.PFV.RF because of beauty.GEN /  
*\*z pryvodu krasy lisu).*  
 from reason beauty.GEN forest.GEN  
 'The poet got amazed (\*because of the beauty of the forest).'

BUT:

- d. *Poet vražajet'sia \*(krasoju lisu).*  
 poet.NOM amaze.PRES.IPFV.RF beauty.INS forest.GEN  
 'The poet is amazed \*(with the beauty of the forest).'

- e. *Poet vražajet'sia (\*čerez krasu / \*z pryvodu krasy lisu).*  
 poet.NOM amaze.PRES.IPFV.RF by beauty / from reason beauty.GEN forest.GEN  
 'The poet is amazed (\*because of the beauty of the forest).'

- (29) a. *Diejatielnost' druga izumliajet/izumila jego.*  
 activity.NOM friend.GEN amaze.PRES.IPFV/PST.PFV he.ACC  
 'The friend's activity amazes/amazed him.'

- b. *On izumilsia (diejatielnostiu druga).*  
 he.NOM amaze.PST.PFV.RF activity.INS friend.GEN  
 'He got amazed (with the friend's activity).'

- c. *On izumilsia (\*iz-za / \*po povodu diejatielnosti druga).*  
 he.NOM amaze.PST.PFV.RF because of / for reason activity.GEN friend.GEN  
 'He got amazed (\*because of the friend's activity).'

BUT:

- d. *On izumliajetsia \*(diejatielnostiu druga).*  
 he.NOM amaze.PRES.IPFV.RF activity.INS friend.GEN  
 ‘He is amazed \*(with the friend’s activity).’
- e. *On izumliajetsia (\*iz-za / \*po povodu diejatielnosti druga)*  
 he.NOM amaze.PRES.IPFV.RF because of / for reason activity.GEN friend.GEN  
 ‘He is amazed (\*because of the friend’s activity).’

Examples (24)–(29) show that verbs of this class obligatorily select an instrumental NP as the realization of the stimulus/target in the imperfective, and do not allow substitution by causal PPs. We take these properties as crucial evidence for the conclusion that the verbs in class 1 form a coherent subclass of reflexive psych verbs in which the instrumental marks a target or subject matter rather than a cause and that the EO/ES alternation is not an example of CAA, but an instance of PVA. In some cases, verbs in this class permit omission of the stimulus NP but only in the perfective variant. Interestingly, this omission is correlated with the eventive interpretation, because in the majority of cases perfectivity in Slavic languages imposes the eventive interpretation (see Biały 2005, Bondaruk/Rozwadowska 2024 for Polish, among others).

Note that Alexiadou/Iordăchioaia (2014) claim that psych causative alternation in Greek and Romanian is possible only on the eventive interpretation. Since otherwise the complementation patterns for perfective and imperfective variants are the same for the languages under the analysis here, we do not want to claim that perfective psych verbs are different from the imperfective ones in terms of the nature of PVA. This puzzle deserves further research, though.

When looking from the semantic perspective, class 1 encompasses verbs of passion and interest, displeasure and concern. Apparently, these verbs have stative roots and cross-linguistically form a coherent class in requiring an obligatory stimulus (see Section 2).

### 3.2. Double construal verbs

The verb *tišytysia/radovat'sia* (‘to please’) behaves differently from the verbs discussed in Section 3.1. In Ukrainian example (30) and Russian (31), the instrumental NP can be replaced with *čerez / iz-za* or *z pryvodu / po povodu* PPs (‘because of / ‘for the reason’), as shown in (30c) and (31c), which at first sight supports the interpretation of the instrumental phrase as expressing cause. These NPs in (30b) and (31b) and the corresponding PPs in (30c) and (31c) can be omitted when the verbs are used in the perfective form (*vtišytysia/obradovat'sia* ‘to get pleased’).



- (30) a. *Xoroši rezul'taty testu tišat'/vtišyly jogo.*  
 good results.NOM test.GEN please.PRES.IPFV/PST.PFV he.ACC  
 'The good test results please / started to please him.'
- b. *Vin vtišyvsia (xorošymy rezul'tatamy testu).*  
 he.NOM please.PST.PFV.RF good results.INS test.GEN  
 'He got pleased (with the good test results).'
- c. *Vin vtišyvsia (čerez xoroši rezultaty testu /*  
 he.NOM please.PST.PFV.RF because of good results.ACC test.GEN /  
*z pryvodu xorošyx rezultativ testu).*  
 from reason good results.GEN test.GEN  
 'He got pleased (because of the good test results).'

BUT:

- d. *Vin tišyvsia \*(xorošymy rezul'tatamy testu).*  
 he.NOM please.PST.IPFV.RF good results.INS test.GEN  
 'He was pleased \*(with the good test results).'
- e. *Vin tišyvsia \*(čerez xoroši rezultaty testu /*  
 he.NOM please.PST.IPFV.RF because of good results.ACC test.GEN /  
*z pryvodu xorošyx rezultativ testu).*  
 from reason good results.GEN test.GEN  
 'He was pleased \*(because of the good test results).'
- (31) a. *Obilije pišči radovalo/obradovalo dietiej.*  
 abundance.NOM food.GEN please.PST.IPFV/PST.PFV children.ACC  
 'The abundance of food pleased / started to please children.'
- b. *Dieti obradovalis' (obilijem pišči).*  
 children.NOM please.PST.PFV.RF abundance.INS food.GEN  
 'The children got pleased (with the abundance of food).'
- c. *Dieti obradovalis' (iz-za / po povodu obilija*  
 children.NOM please.PST.PFV.RF because of / from reason abundance.GEN  
*pišči).*  
 food.GEN  
 'The children got pleased (because of the abundance of food).'

BUT:

- d. *Dieti radovalis' \*(obilijem pišči).*  
 children.NOM please.PST.IPFV.RF abundance.INS food.GEN  
 'The children were pleased (with the abundance of food).'
- e. *Dieti radovalis' \*(iz-za / po povodu obilija*  
 children.NOM please.PST.IPFV.RF because of / from reason abundance.GEN  
*pišči).*  
 food.GEN  
 'The children were pleased \*(because of the abundance of food).'

The mere optionality of cause(r) is a well-documented characteristic of causative/anticausative alternations cross-linguistically, as was mentioned in the introduction. In such alternations, the cause(r) or the external argument is often syntactically optional yet semantically recoverable. Thus, the ability to omit these constituents in perfective forms aligns with typologically common patterns in causative constructions. However, the mere optionality of this constituent does not mean that the instrumental NP is equivalent to cause(r). Rather, we would like to follow the idea familiar from the literature (Reinhart 2016, Fábregas/Marín 2020) that the cause(r) and the T/SM arguments are indistinct and that sentences containing psych verbs may have different construals. In Reinhart's model the cause(r) is associated with the feature [+c] (i.e., +cause change), while the T/SM has the feature [-m] (i.e., -mental state). The clusters [+c] and [-m] are indistinct, as there is no feature for which they are counterspecified. Reinhart (2016) also notes that although (6a) (repeated for convenience below as (32a)) does not entail (32b), it is still possible to construe (32a) as equivalent to (32b), i.e., that Bill got angry about some properties of the article itself.

- [illegible]

According to Reinhart, sentence (32a), then, has two semantic construals, depending on whether the article is viewed as the cause [+c] or as the subject matter [-m]. Contextual considerations may enforce disambiguation of the two construals. Another example is given in (33) with the verb *to worry*:

- (33) a. [Her health] worried Lucie. Subject Matter [-m]  
b. [The doctor's] letter worried Lucie. Cause [+c]

Reinhart notes that in (33a), it is easiest to interpret Lucie's health as the subject matter of her worry, while in (33b) it is more natural to interpret the doctor's letter as the cause, namely that it made Lucie worry about something else. This means that OE verbs allow different derivations: in (33a) *her health* realizes the internal [-m] argument whereas in (33b) *the doctor's letter* realizes the [+c] argument.

In a similar vein, Fábregas/Marín (2020) identify a subclass of OEPVs (Object Experiencer Psychological Verbs) called *sorprender* ‘surprise’

verbs whose subject in the absence of a second complement is also interpreted as the target of emotion. Compare (34a) and (34b) below:

- (34) a. *Pedro desmotivó a María acerca de su trabajo.*  
         Pedro discouraged DOM María about of her work  
         ‘Pedro discouraged Maria from her work.’
- b. *El trabajo desmotiva a María*  
         the task demotivates DOM María  
         ‘The task demotivates Maria.’

Fábregas/Marín (2020: 124)

Fábregas/Marín note that in the absence of prepositional complements the subject is interpreted also as the Target-of-Emotion, as in (34b), where the task can be the object that Maria directs the demotivation at as well as the entity that causes the feeling. They claim that in such cases the only overt argument satisfies both roles. We would prefer to say that this is an example of contextually conditioned polysemy, because according to the widely recognized and accepted (R)UTAH (see Baker 1988, Baker 1997) there is a one-to-one correspondence between syntactic slots and theta roles. The Uniformity of Theta Assignment Hypothesis is quoted in (35) below:

- (35) Uniformity of Theta Assignment Hypothesis (UTAH):<sup>4</sup>  
       Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-structure (Baker 1988:46).

In view of the above observations made for English or Spanish, it could be suggested that some EO verbs allow two different construals if the stimulus is optional. If it is present in the form of the instrumental NP or some PP, then it is interpreted as the T/SM. If it is omitted, then an optional cause phrase can be added, as in (32c) and (33c).

<sup>4</sup> RUTAH (Relativized UTAH) is used by Baker (1997) to describe Belletti and Rizzi’s (1988) syntactic account of the linking problem with psych verbs based on movement. According to this approach the experiencer is always higher than the theme at deep structure. The different surface realization of arguments is an outcome of A-movement of the theme to the subject position with EO verbs. Note that theme at that time was a thematic relation that covered many semantic roles that later on received more specific labels. In the context of psych verbs, *theme* is now replaced by the term “stimulus”. Pesetsky’s (1995) approach solves the linking problem by introducing two distinct roles: cause vs. T/SM.

Let us look now at the next pair of representative examples of the second subclass of psych verbs presented in (36) and (37):

- (36) a. *Raptovyj rist cin tryvožyt'/roztryvožyv naselennia.*  
 sudden increase.NOM prices.GEN worry.PRES.IPFV/PST.PFV population.ACC  
 'The sudden increase of prices worries / started to worry the population.'  
 b. *Naselennia roztryvožylos' (raptovym rostom cin).*  
 population.NOM worry.PST.PFV.RF sudden increase.INS prices.GEN  
 'The population got worried (with the sudden increase of the prices).'  
 c. *Naselennia roztryvožylos' (čerez raptovyj rist*  
 population.NOM worry.PST.PFV.RF because of sudden increase.ACC  
*cin / z pryvodu raptovogo rostu cin).*  
 prices.GEN / from reason sudden increase.GEN prices.GEN  
 'The population got worried (because of the sudden increase of the prices).'

BUT:

- d. *Naselennia tryvožyt'sia' \*(raptovym rostom cin).*  
 population.NOM worry.PRES.IPFV.RF sudden increase.INS prices.GEN  
 'The population is worried \*(with the sudden increase of the prices).'  
 e. *Naselennia tryvožyt'sia \*(čerez raptovyj rist cin /*  
 population.NOM worry.PRES.IPFV.RF because of sudden increase.ACC prices.GEN/  
*z pryvodu raptovogo rostu cin).*  
 from reason sudden increase.GEN prices.GEN  
 'The population is worried \*(because of the sudden increase of the prices).'
- (37) a. *Prijezd gostiej trievožit/rastrievožil moju mamu.*  
 arrival.NOM guests.GEN worry.PRES.IPFV/PST.PFV my.ACC mother.ACC  
 'The arrival of the guests worries / started to worry my mother.'  
 b. *Moja mama rastrievožilas' (prijezdom gostiej).*  
 my.NOM mother.NOM worry.PST.PFV.RF arrival.INS guests.GEN  
 'My mother got worried (with the guests' arrival).'  
 c. *Moja mama rastrevožilas' (iz-za / po povodu prijезда*  
 my.NOM mother.NOM worry.PST.PFV.RF because of / from reason arrival.GEN  
*gostiej).*  
 guests.GEN  
 'My mother got worried (because of the guests' arrival).'

BUT:

- d. *Moja mama trievožitsia' \*(prijezdom gostiej).*  
 my.NOM mother.NOM worry.PRES.IPFV.RF arrival.INS guests.GEN  
 'My mother is worried \*(with the guests' arrival).'

- e. *Moja mama trievožitsia \*(iz-za / po povodu prijezda*  
 my.NOM mother.NOM worry.PRES.PFV.RF because of / from reason arrival.GEN  
*gostiej).*  
 guests.GEN  
 'My mother is worried \*(because of the guests' arrival).'

In the Ukrainian examples (36) and Russian (37), the instrumental NP can be replaced with the causative prepositional phrases *čerez, iz-za / z pryvodu, po povodu* ('because of' / 'for the reason'). Notably, both the instrumental NPs (36b, 37b) and the corresponding PPs (36c, 37c) are optional – but only in the perfective forms (*roztryvožyt'sia / rastrievožyt'sia*). While some interpretations might take this optionality to suggest that the NP is not a true cause argument but an optional adjunct, such a conclusion is not straightforward. As cross-linguistic studies on causative/anticausative alternations have shown (Alexiadou/Anagnostopoulou/Schäfer 2015, Levin/Rappaport Hovav 1995), anticausatives involve an event structure with a CAUSE-event leading to a result that can be further specified by a causer-PP. In the absence of such a PP, however, no implicit causer argument is semantically entailed. Therefore, the mere optionality of the causer-PP – particularly in perfective contexts – should not be taken to imply the presence of an underlying argument, but rather reflects the possibility of modifying the cause component in the event description. As for the verbs *xvyliuvatysia/volnovat'sia* ('to worry'), *mučytysia/mučit'sia* ('to suffer') from the same subclass of psych verbs, they behave similarly in both languages. In Ukrainian and Russian examples with the verbs *xvyliuvatysia/volnovat'sia* and *mučytysia/mučit'sia* the instrumental case can be replaced with *čerez / iz-za* or *z pryvodu / po povodu* PPs ('because of' / 'for the reason') as in (38c) or (39c). Again, both the instrumental NPs (38b, 39b) and the corresponding PPs (38c, 39c) are optional when used in the perfective forms (*rozxvyliuvalys' / razvolnovat'sia*), as in class 1 verbs.

- (38) a. *Dolia ditej xvyliuje/rozxvyliuvala bat'kiv.*  
 fate.ACC NOM children.GEN worry.PRES.IPFV/PST.PFV parents.ACC  
 'The children's fate worries / started to worry the parents.'
- b. *Bat'ky rozxvyliuvalysia (doleju ditej).*  
 parents.NOM WORRY.PST.PFV.RF fate.INS children.GEN  
 'The parents got worried (with the children's fate).'

- c. *Bat'ky           rozxylyuvalysia   (čerez doliu /           z pryvodu   doli*  
 parents.NOM   worry.PST.PFV.RF   because of fate.ACC /   from reason   fate.GEN  
*ditej).*  
 children.GEN  
 'The parents got worried (because of the children's fate).'

BUT:

- d. *Bat'ky           xylyiujut'sia           \*(doleju ditej).*  
 parents.NOM   worry.PRES.IPFV.RF   fate.INS children.GEN  
 'The parents are worried \*(with the children's fate).'
- e. *Bat'ky           xylyiujut'sia           \*(čerez doliu /           z pryvodu   doli*  
 parents.NOM   worry.PRES.IPFV.RF   because of of fate.ACC /   from reason   fate.GEN  
*ditej).*  
 children.GEN  
 'The parents are worried \*(because of the children's fate).'

- (39) a. *Trievogi           tekuščiego dnia           volnujut/razvolnovali   nasielienije.*  
 concerns.NOM   this           day.GEN   worry.PRES.IPFV/PST.PFV   population.ACC  
 'The concerns of these days worry / started to worry the population.'
- b. *Nasielienije   razvolnovalos'   (trievogami tekuščiego dnia).*  
 population.NOM   worry.PST.PFV.RF   concerns.INS   this           day.GEN  
 'The population got worried (with the concerns of these days).'
- c. *Nasielienije   razvolnovalos'   (iz-za / po povodu           trievog*  
 population.NOM   worry.PST.PFV.RF   because of / from reason   concerns.GEN  
*tekuščego dnia).*  
 this           day.GEN  
 'The population got worried (because of these days' concerns).'

BUT:

- d. *Nasielienije   volnujetsia'           \*(trievogami tekuščiego dnia).*  
 population.NOM   worry.PRES.IPFV.RF   concerns.INS this day.GEN  
 'The population is worried \*(with the concerns of these days).'
- e. *Nasielienije   volnujetsia'           \*(iz-za / po povodu trievog*  
 population.NOM   worry.PRES.IPFV.RF   because of / from reason concerns.GEN  
*tekuščego dnia).*  
 this           day.GEN  
 'The population is worried \*(because of these days' concerns).'

### 3.3. Verbs with an optional cause PP and no instrumental case

To the third group of our classification belong the following verbs:  
*obražatysia/obižat'sia* ('to be offended'), *zlytysia/zlit'sia* ('to get

angry'), *hnivatysia/sierdit'sia* ('to be angry') as well as the verbs *soromytysia/stydit'sia* ('to be ashamed'). All these verbs do not allow instrumental NP as in the Ukrainian ES example (40b) and the Russian one (41b) but accept *čerez / iz-za* or *z pryvodu / po povodu* ('because of' / 'for the reason') PPs as in (40c) and (41c). The PPs (40c) and (41c) are optional – but only in the perfective forms (*obrazytysia/obidiet'sia, rozizlytysia/razozlit'sia, rozhnivatysia/rassierdit'sia*).<sup>5</sup>

- (40) a. *Poviedinka brata hnivaje/rozhnivala Andrija.*  
behaviour.NOM brother.GEN anger.PRES.IPFV/PST.PFV Andrew.GEN  
'The brother's behaviour angers/angered Andrew.'
- b. \**Andrij rozhnivavsia poviedinkoju brata.*  
Andrew.NOM anger.PST.PFV.RF behaviour.INS brother.GEN  
\* 'Andrew got angry with the brother's behaviour.'
- c. *Andrij rozhnivavsia (čerez povedinku / z pryvodu*  
Andrew.NOM anger.PAST.PFV.RF because of behaviour.ACC / from reason  
*povedinky brata).*  
behaviour.GEN brother.GEN  
'Andrew got angry because of the brother's behaviour.'

BUT:

- d. *Andrij hnivajet'sia \*(čerez povedinku brata /*  
Andrew.NOM anger.PRES.IPFV.RF \*because of behaviour.ACC /  
*z pryvodu povedinky brata).*  
from reason behaviour.GEN brother.GEN  
'Andrew is angry \*(because of the brother's behavior).'
- (41) a. *Poviedienije brata sierdit/rassierdilo Andrieja.*  
behaviour.NOM brother.GEN anger.PRES.IPFV/PST.PFV Andrew.GEN  
'The brother's behaviour angers/angered Andrew.'

<sup>5</sup> All the verbs of anger allow a T/SM argument expressed by means of other PPs, illustrated for Ukrainian in (i) and for Russian in (ii):

- (i) *Andrij hnivajet'sia na brata.*  
Andrew.NOM anger.PRES.IPFV.RF on brother.ACC  
'Andrew is angry at his brother.'
- (ii) *Andriej sierditsia na brata.*  
Andrew.NOM anger.PRES.IPFV.RF on brother.ACC  
'Andrew is angry at his brother.'

Like in Kovačević (2020) for Serbian, the referent of the NP expressing the T/SM cannot be associated with the causer argument. Such targets are not discussed in our paper.

- b. \**Andriej rassierdilsia poviedienijem brata.*  
 Andrew.NOM anger.PST.PFV.RF behaviour.INS brother.GEN  
 \*‘Andrew got angry with the brother’s behaviour.’
- c. *Andriej rassierdilsia (iz-za / po povodu poviedienija brata).*  
 Andrew.NOM anger.PST.PFV.RF because of / from reason behaviour.GEN  
 brother.GEN  
 ‘Andrew got angry (because of the brother’s behavior).’

BUT:

- d. *Andriej sierdit'sia \*(iz-za / po povodu poviedienija brata).*  
 Andrew.NOM anger.PST.PFV.RF because of / from reason behaviour.GEN  
 brother.GEN  
 ‘Andrew angers \*(because of the brother’s behavior).’

Similarly, in the Ukrainian example (42) and in the Russian example (43) the Instrumental NP is not possible as in (42b) and (43b). Instead, in this case we can use *čerez / z pryvodu* and *iz-za / po povodu*-PPs as in (42c) and (43c). At the same time these PP's can be optional when the verbs are used in the perfective form (*soromytysia/zastydit'sia*) as in (42d) and (43d).

- (42) a. *Nevdalyj makijaž soromyv/zasoromyv Mariju.*  
 unsuccessful make up.NOM ashamed.PST.IPFV/PST.PFV Mary.ACC  
 ‘Unsuccessful make up ashamed / started to ashamed Mary.’
- b. \**Marija soromylas'/zasoromylas' nevdalym makijažem.*  
 Mary.NOM ashamed.PST.PFV.RF/PST.PFV.RF unsuccessful make up.INS  
 \*‘Mary was ashamed / started to be ashamed of the unsuccessful make up.’
- c. *Marija soromylas' \*(čerez nevdalyj makijaž / z pryvodu nevdalogo makijažu).*  
 Mary.NOM ashamed.PST.IPFV.RF because of unsuccessful make up.INS / from reason  
 unsuccessful make up.GEN  
 ‘Mary was ashamed \*(because of the unsuccessful make up).’
- d. *Marija zasoromylas' (čerez nevdalyj makijaž / z pryvodu nevdalogo makijažu).*  
 Mary.NOM ashamed.PST.PFV.RF because of unsuccessful make up.INS / from reason  
 unsuccessful make up.GEN  
 ‘Mary started to be ashamed (because of the unsuccessful make up).’



- (43) a. *Poviedienije učienika stydit/zastydilo učitielia.*  
 behaviour.NOM student.GEN ashame.PRES.IPFV/PST.PFV teacher.ACC  
 'The behaviour of the student ashames / started to ashame the teacher.'
- b. \**Učiteľ styditsia/zastydilsia poviedienijem učienika.*  
 teacher.NOM ashame.PRES.IPFV.RF/PST.PFV.RF behaviour.INS student.GEN  
 \*'The teacher is ashamed / got ashamed with the student's behaviour.'
- c. *Učiteľ styditsia \*(iz-za / po povodu poviedienija*  
 teacher.NOM ashame.IPFV.RF because of / from reason behaviour.GEN  
*učienika).*  
 student.GEN  
 'The teacher is ashamed \*(because of the student's behaviour).'
- d. *Učiteľ zastydilsia (iz-za / po povodu poviedienija*  
 teacher.NOM ashame.PST.PFV.RF because of / from reason behaviour.GEN  
*učienika).*  
 student.GEN  
 'The teacher got ashamed (because of the student's behaviour).'

To summarize, the verbs in Class 3 diverge from those in Classes 1 and 2. They do not allow the instrumental case but accept cause-PPs typical of anticausatives. Again, as in the previous classes, the omission of the stimulus is possible only in the perfective variant. Since their behaviour seems to be similar to that of CoS verbs, it might be the case that they belong to the class describing internally caused eventualities (as opposed to externally caused eventualities of CoS verbs). In other words, the stimulus here is an internal causer co-identified with the experiencer.

#### 4. Conclusions

Table 1 below presents the morphosyntactic features of psych verbs, with particular attention paid to how the distribution of the arguments of the psych verbs is realised. Not all verbs behave uniformly in this respect: some reflexive psych verbs license the instrumental case, while others do not. Similarly, some verbs accept a prepositional phrase to express the causer, whereas others exclude this option entirely. These patterns are important for identifying how individual verbs or verb classes differ in their syntactic and case-marking properties. The table highlights these contrasts, helping to clarify the grammatical behaviour of psych verbs across different constructions.

Class	Psych Verb (Ukrainian)	Psych Verb (Russian)	Instr. Case	UA: <i>čerez</i>	RU: <i>iz-za</i>	UA: <i>z pryvodu</i>	RU: <i>po povodu</i>	UA: <i>vid</i>	RU: <i>ot</i>
1.	<i>cikavytysia</i>	<i>interesovat'sia</i>	+	–	–	–	–	–	–
	<i>zaxopliuvatysia</i>	<i>vosxiščat'sia</i>	+	–	–	–	–	–	–
	<i>začarovuvatysia</i>	<i>očarovyvat'sja</i>	+	–	–	–	–	–	–
	<i>nadyxatysia</i>	<i>voodooševliat'sia</i>	+	–	–	–	–	–	–
	<i>liubovatysia</i>	<i>liubovat'sia</i>	+	–	–	–	–	–	–
	<i>prynyžuvatysia</i>	<i>unižat'sia</i>	+	–	–	–	–	–	–
	<i>oburiuvatysia</i>	<i>vozmuščat'sia</i>	+	–	–	–	–	–	–
	<i>turbuvatysia</i>	<i>bespokoit'sia</i>	+	–	–	–	–	–	–
	<i>vražatysia</i>	<i>izumliat'sia</i>	+	–	–	–	–	–	–
2.	<i>liakatysia</i>	<i>pugat'sia</i>	(+)	–	–	–	–	–	–
	<i>dylvuvatysia</i>	<i>udivliat'sia</i>	(+)	–	–	–	–	–	–
	<i>mučytysia</i>	<i>mučit'sia</i>	(+)	(+)	(+)	(+)	(+)	+	+
	<i>tišytysia</i>	<i>radovat'sia</i>	(+)	(+)	(+)	(+)	(+)	–	–
	<i>xvyliuvatysia</i>	<i>volnovat'sia</i>	(+)	(+)	(+)	(+)	(+)	–	–
	<i>tryvožytysia</i>	<i>trievožit'sia</i>	(+)	(+)	(+)	(+)	(+)	+	+
3.	<i>obražatysia</i>	<i>obižat'sia</i>	–	(+)	(+)	(+)	(+)	–	–
	<i>zlytysia</i>	<i>zlit'sia</i>	–	(+)	(+)	(+)	(+)	–	–
	<i>hnivatysia</i>	<i>sierdit'sia</i>	–	(+)	(+)	(+)	(+)	–	–
	<i>soromytysia</i>	<i>stydit'sia</i>	–	(+)	(+)	(+)	(+)	–	–

Table 1: The distribution of the instrumental case and the causative prepositional phrases with ES psych verbs in Ukrainian and Russian<sup>6</sup>

From the above table it follows that the stimulus in Class I (verbs such as *zaxopliuvatysia/vosxiščat'sia* ‘to be delighted’, *cikavytysia/interesovat'sia* ‘to be interested’, *liubovatysia/liubovat'sia* ‘to admire’) is realized obligatorily in the instrumental case and cannot be replaced with causative prepositional phrases. This clearly shows that their EO/ES alternation is not an instance of the CAA. This conclusion is fully compatible with the account of Polish EO/ES alternation presented in Rozwadowska/Bondaruk (2019) and Bondaruk/Rozwadowska (2024). At the same time, this pattern

<sup>6</sup> The brackets (...) indicate that the instrumental case or the prepositional phrase is optional. Note that our table is based on the perfective (eventive) ES variant. As described in the text, optionality of the stimulus is valid only for the perfective alternant.

supports the claim that the instrumental case functions as an exponent of the T/SM and not the cause(r).

Class II verbs (*tišytysia/radovat'sia* 'to be pleased', *xvyliuvatysia/volnovat'sia* 'to worry', *tryvožytysia/trievožyt'sia* 'to worry', *mučytysia/mučit'sia* 'to suffer') allow for double construal. In these cases, the stimulus can appear either as an instrumental NP or in the form of a causative prepositional phrase. Moreover, the optionality of the stimulus in perfective forms correlates with eventive readings, while in imperfective forms its overt realization is typically required, consistent with stative interpretations.

Class III verbs (*obražatysia/obižat'sia* 'to be offended', *zlytysia/zlit'sia* 'to get angry', *hnivatysia/sierdit'sia* 'to be angry', *soromytysia/stydit'sia* 'to be ashamed') categorically exclude the instrumental case but allow causative PPs, which are optional in perfective contexts. These verbs display patterns that are radically different from Classes I and II, suggesting that their ES reflexive forms involve internal causation, i.e., the experiencer itself acts as the internal source of the psychological state.

The analysis of psychological verbs in Russian and Ukrainian reveals that the EO/ES alternation constitutes a morphosyntactically and semantically distinct phenomenon, separate from the canonical causative/anticausative alternation (CAA). In EO constructions, the experiencer is realized as the grammatical object, while in ES constructions, it surfaces as the subject, and the stimulus argument is frequently expressed via an instrumental case-marked NP. Crucially, such instrumental NPs are not interpretable as causers but rather as targets or subject matters (T/SM) of emotion.

Although some verbs permit causative prepositional phrases such as *čerez* or *iz-za* ('because of'), others categorically exclude them, further underscoring the difference between EO/ES alternation and CAA. All in all, with respect to our main goal to verify the status of the instrumental case and the causative PPs, we have identified only three different morphosyntactic patterns. The distribution of the stimulus argument demonstrates that EO/ES alternation is governed by different principles: in Class I verbs the stimulus is obligatorily realized as a T/SM in the instrumental case, in Class II verbs it allows double construal with either the instrumental or a causative PP, and in Class III verbs only causative PPs are possible.

Furthermore, the alternation is sensitive to aspectual distinctions: perfective forms tend to license the omission of the stimulus, correlating with eventive readings, whereas imperfective forms typically require its overt realization, consistent with stative interpretations.

These findings support a refined syntactic classification of psych verbs in Russian and Ukrainian, whereby verbs exhibiting comparable morpho-syntactic behaviour are grouped into coherent subclasses. This classification provides empirical grounding for the claim that EO/ES alternation in Slavic languages cannot be subsumed under causative alternations observed in change-of-state verbs, and instead, reflects a distinct reflexive psych alternation governed by argument structure, aspect, and stimulus interpretation, even though not all alternating verbs are the same. The complexity of the phenomenon, together with cross-linguistic variation, opens new perspectives for future research on the typology of psych verb alternations.

What all these verbs have in common is the possibility to omit the stimulus only in the perfective variant. We suspect that this is correlated with the eventive interpretation of perfective psych verbs in Russian and Ukrainian. However, the exact correlation between grammatical aspect and argument structure alternations remains an important agenda for future research.

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