Argument and case linking of Polish Experiencers

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Abstract

This article aims to test whether the Theta System of Reinhart (1996, 2000, 2001, 2002) can account for the puzzles associated with psychological verbs in Polish. The first puzzle, called argument linking, relates to the mapping of the Experiencer onto a subject or an object position. The second puzzle, referred to as case linking, concerns the fact that Experiencers may be marked for different cases in the same sentence position. The analysis of Object Experiencer (OE)/Subject Experiencer (SE) alternations in Polish carried out in this article demonstrates that the predictions of the Theta System about Experiencer argument linking are borne out by the Polish data. SE alternants of eventive OE verbs in Polish show unergative properties, which directly follows from the mechanisms of the Theta System. However, the Theta System faces problems when confronted with dyadic OE verbs with dative Experiencers. The model predicts that dative Experiencers are merged internally, as a part of an unaccusative structure. This prediction is untenable for Polish, because dative Experiencers of dyadic predicates show some characteristics of external arguments, and hence must merge externally. Consequently, the conclusion drawn is that the Theta System can provide solutions to some, but not all, of the argument and case-linking puzzles associated with Polish Experiencers.

Keywords: Experiencer, linking, Theta System, psych causative alternation, Polish

Résumé

Cet article vise à vérifier si le système Theta de Reinhart (1996, 2000, 2001, 2002) peut expliquer les énigmes associées aux verbes psychologiques en polonais. La première question, relative à la liaison d'argument, concerne la position de l'expérienceur comme sujet (ES) et de l'expérienceur comme objet (EO) La deuxième question, relative à la liaison des cas, concerne le fait que les expérienceurs, bien qu'occupant la même position dans la phrase, peuvent être marqués pour des cas différents. L'analyse des alternances EO / ES en polonais réalisée dans le présent article montre que les prédictions du système Thêta concernant la liaison des arguments d'expérienceurs sont corroborées par les données polonaises. Les variantes ES des verbes

éventifs EO en polonais présentent des propriétés inergatives, qui découlent directement des mécanismes du système Thêta. Cependant, le système Thêta rencontre des problèmes lorsqu'il est confronté à des verbes EO dyadiques et à des expérienceurs datifs. Le modèle prédit que les expérienceurs datifs sont fusionnés à l'interne, comme faisant partie de la structure non accusative. Cette prédiction est indéfendable pour le polonais, car les expérienceurs datifs des prédicats dyadiques présentent certaines caractéristiques des arguments externes et doivent donc fusionner de manière externe. Par conséquent, on conclut que le système Thêta peut fournir des solutions à certaines, mais non pas à toutes, les questions sur la liaison des arguments et des cas associées aux expérienceurs polonais.

Mots clés, Expérienceur, liaison, système Thêta, alternance prédicat psychologique/causatif, langue polonaise

1.   INTRODUCTION

In any theory that assumes a uniform mapping between syntax and semantics (see Perlmutter and Postal's 1984 Universal Alignment Hypothesis, or Baker's 1988 Uniformity of Theta Assignment Hypothesis (UTAH), Experiencers have constituted a puzzle.[1] Cross-linguistically, Experiencers may be mapped onto either a subject or an object position in an apparently arbitrary fashion. This goes against any rules linking a particular theta role with a specific sentence position (Belletti and Rizzi 1988; Grimshaw 1990; Pesetsky 1995; Arad 1998a, 1998b, 2002; Anagnostopoulou 1999; Pylkkänen 2000; Reinhart 2001; Landau 2010, among others). The two distinct mappings of the Experiencer theta role are illustrated in (1) and (2) below, where the Experiencer *Mark* functions as a subject and an object, respectively:

(1)   Mark/he worries (about global warming).

(2)   Global warming worries Mark/him.

Not only is the syntactic position associated with Experiencers non-uniform, but so is their case marking. Experiencers found in the object position may bear either the accusative case, as in (2) above, or the dative, as in (3) below, while Experiencers in the subject position are commonly marked with the nominative, as shown in (1):

(3)   Good music appeals to Mark/him.

   The puzzles of the mapping of an Experiencer onto a particular sentence position and of the Experiencer case marking are also apparent in the case of Polish psych verbs. Just like in English, Polish Experiencers may be realised in the subject or object position. This is illustrated in (4) and (5), respectively:

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[1]The following abbreviations have been used in the article: AAE: Anaphor Agreement Effect; ACC: accusative; DAT: dative; EPP: Extended Projection Principle; GEN: genitive; IPFV: imperfective; INF: infinitive; INSTR: instrumental; LOC: locative; NOM: nominative; OE: Object Experiencer; PFV: perfective; PL: plural; REFL: reflexive; SE: Subject Experiencer.

(4) Marek-ø   martwi   się   (globaln-ym   ociepleni-em).
    Mark-NOM   worries   REFL   global-INSTR   warming-INST
    'Mark worries about global warming.'

(5) Globalne-ø ocieplenie-ø   martwi   Mark-a.
    global   warming-NOM   worries   Mark-ACC
    'Global warming worries Mark.'

The data in (4) and (5) closely correspond to their English counterparts in (1) and (2). The Experiencer in the object position in (5) is assigned accusative case. However, dative case marked Experiencers are also perfectly licit in Polish, as confirmed by (6), an equivalent of the English example (3):

(6) Mark-owi   podoba   się   dobra-ø   muzyka-ø.
    Mark-DAT   appeals.to   REFL   good   music-NOM
    'Good music appeals to Mark.'

In the literature, different solutions to the issue of non-uniform Experiencer linking have been put forward. Among them is Belletti and Rizzi's (1988) well-known relativised UTAH, in which the Experiencer is always projected higher than the other argument, even though it does not always occupy the same position in the sentence. A different approach to the Experiencer puzzle is taken by Reinhart (1996, 2000, 2002, 2016),[2] the founder of the Theta System. Reinhart's model will be used here in order to analyse the argument and case linking puzzles surrounding Polish accusative and dative Experiencers. In the Theta System, theta roles are decomposed into features, and their mapping onto syntactic positions is performed in accordance with specific merging instructions, linking particular feature clusters with specific sentence positions. In this model, the Experiencer may be mapped onto an internal or an external argument, due to the fact that it forms a mixed feature cluster (for details, see sections 3 and 4). The Theta System is also capable of deriving the case marking of Experiencers from their theta role specifications. Consequently, the Theta System has the potential to account for the distinct mappings of Polish Experiencers (see (4) and (5)), as well as for their two different case realisations (see (5) and (6)). The Theta System has not previously been applied to Polish Experiencers, and therefore its application is likely to throw new light on their puzzling syntactic behaviour.

    The aims of this article are twofold. First, an attempt is made to analyse the way Experiencers are linked to particular argument positions in Polish. As regards accusative case marked Experiencers, the focus is laid on the so-called psych causative alternation (a term coined by Alexiadou and Iordăchioaia 2014) in Polish, in which Object Experiencers systematically alternate with Subject Experiencers. An attempt is made to determine whether the Theta System of Reinhart (1996, 2000, 2002, 2016) – in which Subject Experiencer (SE) alternants of eventive Object Experiencer (OE)

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[2]Reinhart (2016) is based on Reinhart (2000), a revised version of which was to be published by Linguistic Inquiry Monographs, but was not completed due to Reinhart's death. It was published posthumously in Everaert et al. (2016).

verbs are treated cross-linguistically as unergative – can successfully account for the Polish causative alternation. As for dative Experiencers, their proposed linking properties in the Theta System are evaluated against the properties of dative Experiencers in Polish. The second objective of the article is to verify the adequacy of the Theta System for the case linking of Polish Experiencers. In particular, the question of whether the accusative and dative case marking of Polish Experiencers may be derived from their theta properties is addressed, as was originally proposed for accusative Experiencers by Reinhart (1996, 2000, 2002, 2016), and extended to dative Experiencers in German by Marelj (2013). I argue that the Theta System makes correct predictions for argument linking of Experiencers in Polish, since SE cognates of eventive OE verbs behave like unergative predicates. This directly follows from the mechanisms available in the Theta System. However, the model faces problems when confronted with dyadic OE predicates with dative Experiencers. The Theta System treats these as internal arguments, merged within an unaccusative structure (see also Pesetsky 1995). This prediction is not borne out by the Polish data, since dative Experiencers of dyadic OE verbs pattern as external arguments with respect to binding, and therefore must be merged externally. Furthermore, the case linking of accusative Experiencers of stative OE verbs, as well as of dative Experiencers, in Polish, faces problems that the Theta System cannot easily deal with. The overall conclusion reached here is that Theta Theory can solve some but not all of the puzzles surrounding Experiencers in Polish, as well as in other languages.

The article consists of six sections. Section 2 introduces the various classes of OE verbs in Polish. Section 3 focuses on the main tenets of the Theta System relevant for the analysis carried out here. Section 4 presents the psych causative alternation in Polish and provides evidence for the unergative analysis of this alternation advanced by Reinhart (1996, 2000, 2002, 2016), but also evidence against the rival approach of Alexiadou and Iordăchioaia (2014), where SE cognates of eventive OE verbs are considered to be unaccusative. Some space is devoted to the tests adopted in the literature to distinguish unergative from unaccusative verbs (see for Polish, Cetnarowska 2000, 2002). Section 5 focuses on the case linking of Polish Object Experiencers in the Theta System. It first mentions the stipulations necessary to account for the accusative case marking of Experiencers in constructions with stative OE verbs in Polish, and then discusses the problems surrounding the internal linking of dative Experiencers in Polish, which make it impossible to derive the dative case of the Experiencer from its theta role specifications. Section 6 concludes the article.

2. OBJECT EXPERIENCER VERBS IN POLISH – GENERAL CHARACTERISTICS

In their seminal work on psychological predicates, Belletti and Rizzi (1988) recognize three types of psychological verbs in Italian, as exemplified in (7), (8) and (9) below, taken from Belletti and Rizzi (1988: 291–292):

(7) Class I: Subject Experiencer (SE) verbs, nominative Experiencer, accusative Theme[3]
(*temere* 'fear' class):
Gianni   teme   questo.
Gianni   fears   this
'Gianni fears this.'

(8) Class II: Object Experiencer (OE) verbs, nominative Theme, accusative Experiencer
(*preoccupare* 'worry' class):
Questo   preoccupa   Gianni.
this   worries   Gianni
'This worries Gianni.'

(9) Class III: OE verbs, nominative Theme, dative Experiencer (*piacere* 'please' class):

   a. A Gianni piace   questo.
     to Gianni pleases   this
     'This pleases Gianni.'

   b. Questo   piace   a Gianni.
     this   pleases   to Gianni
     'This pleases Gianni.'

In Polish, the three classes proposed by Belletti and Rizzi (1988) can also be found. Let us first focus on OE verbs in Polish, which belong to Class II or Class III in Belletti and Rizzi's (1988) typology, as they can take an Experiencer marked for accusative or dative, respectively.[4] This is illustrated in (10) and (11) below (see also (5) and (6) above):

(10) Marek-ø   irytował   Ew-ę.
Mark-NOM   irritated   Eve-ACC
'Mark irritated Eve.'

(11) Marek-ø   podobał   się   Ew-ie.
Mark-NOM   appealed.to   REFL   Eve-DAT
'Mark appealed to Eve.'

In (10), the verb *irytować* 'to irritate' co-occurs with the accusative case marked Experiencer, whereas in (11) the reflexive verb *podobać się* 'to appeal to' licenses a dative Experiencer. OE verbs with the dative Experiencer, called Class III OE predicates in Belletti and Rizzi's (1988) classification, are aspectually uniform in that they are always stative. They do not participate in any alternations in which the Experiencer surfaces in the subject position. In turn, Class II OE verbs, that is, OE verbs with the accusative case marked Experiencer, are polysemous and may be associated with three different readings, namely (i) agentive, (ii) eventive, and (iii) stative (Pesetsky 1995; Arad 1998a, 1998b, 1999, 2002; Rothmayr 2009; Landau 2010; Alexiadou and Iordăchioaia 2014, among others). The agentive reading, illustrated

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[3]Belletti and Rizzi (1988) call the other argument of psych verbs beside the Experiencer a Theme. Following Pesetsky (1995), we will refer to this argument in section 4 as a Cause (with eventive psych verbs) or Target/Subject Matter (with stative ones).

[4]Class I verbs in Polish from Belletti and Rizzi's (1988) typology are examined in sections 4.2 and 4.3.

in (12), is forced by the presence of an Agent-oriented adverbial *celowo* 'on purpose'. It is always eventive, and it involves the Agent acting in such as way as to trigger some mental state in the Experiencer.

(12) Marek-ø   celowo   (z)irytował   Ew-ę.
     Mark-NOM   on.purpose   irritated   Eve-ACC
     'Mark irritated Eve on purpose.'

The eventive and stative readings of OE verbs of Class II are illustrated in (13) and (14), respectively:

(13) a. Marek-ø   niechcący   zirytował   Ew-ę.
         Mark-NOM   unintentionally   irritated.PFV   Eve-ACC
         'Mark unintentionally irritated Eve.'
     b. Hałas-ø   w   mieszkaniu   zirytował   Ew-ę.
         noise-NOM   in   flat   irritated.PFV   Eve-ACC
       'The noise in the flat irritated Eve.'

(14) Brak-ø   pieniędzy   irytował   Ew-ę.
     lack-NOM   money   irritated.IPFV   Eve-ACC
     'The lack of money irritated Eve.'

In (13), either an non-agentive causer or a human causer acting non-agentively can be used, and both yield an eventive interpretation: in (13a), it is something about Mark that has irritated Eve, and in (13b), it is the noise that has evoked the psychological state in the Experiencer. The eventive reading in (13a) and (13b) is unambiguously marked by the perfective form of the verb, with the prefix *z-*.[5] In (14), the presence of an inanimate object of emotion, coupled with the imperfective verb form, triggers the stative interpretation. Following Rozwadowska (2012: 549), we assume that eventive OE verbs refer to the onset of a state (see Marín and McNally 2011), and are punctual. Stative OE verbs, in turn, refer to the state itself.

Biały (2005) argues that Polish OE verbs of Class II should be divided into stative and non-stative (eventive). He uses a number of tests to distinguish stative from eventive OE verbs in Polish. His tests include: (i) the use of punctual adverbials (*yesterday*), (ii) the imperative, (iii) habitual interpretation, and (iv) bound iterativity. Non-stative OE verbs, given the appropriate context, can give rise to the three interpretations illustrated in (12)–(14) above. Stative OE verbs, in turn, are resistant to agentive and eventive interpretations, sometimes disallowing them altogether. The main focus of this article is on eventive OE verbs which, according to Biały (2005), comprise the following predicates: *irytować* 'to irritate', *straszyć* 'to scare', *obrazić* 'to insult', *oczarować* 'to spellbind', *rozbawiać* 'to amuse', *rozgiewać* 'to annoy', etc. Eventive OE verbs participate in the psych causative alternation, which will be discussed in detail in section 4. In Biały's (2005) classification, stative OE verbs include predicates such as: *martwić* 'to worry', *przygnębić* 'to depress', *interesować* 'to interest', *fascynować* 'to fascinate', *smucić* 'to sadden', *cieszyć* 'to please', etc. In contradistinction to stative OE verbs, eventive OE verbs

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[5]The perfective and imperfective forms of psychological verbs in Polish are discussed around example (15).

in Polish can give rise to the verbal (eventive) passive (for details concerning the passivisation of stative and eventive OE verbs in Polish, see Bondaruk et al. 2017a). The thematic makeup of stative OE verbs in Polish, as well as the issue of accusative case marking of the Experiencer found with the verbs of this type, will be tackled in section 5.1.

Before embarking on an analysis of argument and case linking of accusative and dative Experiencers in Polish, let us mention the fact that the majority of Polish verbs, including psychological predicates, show two distinct aspectual forms: perfective and imperfective. This is exemplified in (15) for an OE verb like *interesować* 'to interest':

(15) a. Fizyka-ø   interesowała   student-ów.
        physics-NOM   interested.IPFV students-ACC
        'Physics interested students.'
     b. Fizyka-ø   zainteresowała   student-ów.
        physics-NOM   started.to.interest.PFV students-ACC
        'Physics started to interest students.'

The perfective verb form in (15) is prefixed with *za-*, as in (15b), whereas the verb in the imperfective, as in (15a), carries no prefix at all. Imperfective OE verbs describe a state, and hence are considered to be stative, while perfective OE verbs forms refer to an onset to a state (Rozwadowska 2012), and are therefore taken to be eventive. Perfective forms of OE verbs are eventive because they can co-occur with the verb *stać się* 'to happen', as is made clear in (16a), and can figure in the imperative, as shown in (16b):

(16) a. Fizyka-ø   zainteresowała   Mark-a. Stało   się to
        physics-NOM   started.to.interest.PFV Mark-ACC happened REFL this
        dzięki eksperymentom wykonywanym w szkole.
        thanks experiments   made   at school
        'Physics started to interest Mark. This happened thanks to the experiments made at school.'
     b. Zainteresuj student-ów   fizyk-ą!
        interest.PFV students-ACC physics-INSTR
        'Make students interested in physics!'

Imperfective OE verbs are incompatible both with the verb *stać się* 'to happen' and with the imperative, as can be seen in (17):[6]

(17) a. Fizyka-ø   interesowała   Mark-a.   *(Stało   się to
        physics-NOM   interested.IPFV Mark-ACC   happened REFL this
        dzięki eksperymentom wykonywanym w szkole.)
        thanks experiments   made   at school
        'Physics interested Mark. *(This happened thanks to the experiments made at school.)'
     b. *Interesuj student-ów   fizyk-ą!
         interest.IPFV students-ACC physics-INSTR
         '*Interest students in physics!'

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[6]However, stative predicates are perfectly licit in negative imperatives, as in (i):
   (i) Don't be angry with me!

To sum up, all perfective (prefixed) forms of OE verbs in Polish are eventive, whereas the imperfective forms of OE verbs co-occurring with accusative Experiencers (i.e., Class II OE verbs) may be eventive or stative. All imperfective forms of OE verbs with the Experiencer in the dative (i.e., Class III OE verbs) are stative.

3.   THETA SYSTEM – AN OUTLINE

The Theta System was devised by Reinhart (1996, 2000, 2002) as an interface between the conceptual system and the computational system (syntax). It comprises the lexicon as an integral part, and lexical entries serve as an input to syntax. Consequently, the Theta System communicates directly with syntax and communicates, indirectly, with the Inference, Context and Sound systems, by means of the computational system (syntax). The Theta System rests on the assumption that the lexicon is a rich repository of grammatically relevant information. This way, the Theta System radically departs from neo-constructivist theories of grammar, in which the lexicon is impoverished and comprises just a set of roots (see Marantz 1997; Borer 2003, 2005). The guiding principle of the Theta System is the Lexicon Uniformity Principle, reproduced in (18) below from Reinhart (2016: 5):

(18)   Lexicon Uniformity Principle
       Each verb concept corresponds to one lexical entry with one thematic structure. →
       The various thematic forms of a given verb are derived by lexicon operations from
       one thematic structure.

The Lexicon Uniformity Principle specifies that each verb has only one thematic structure from which other thematic forms are derived by means of pre-syntactic operations, such as decausativisation, whose application is illustrated in (23) at the end of this section.

The Theta System consists of the following items: (i) lexical entries, (ii) operations on entries, and (iii) merging instructions. Lexical entries represent coded concepts specifying theta relations, decomposed into two binary features, such as *cause change* [+/-c] and *mental state* [+/-m]. The cause relation is defined by Everaert et al. (2012: 9) as follows: "a /+c feature corresponds to the *cause* relation and is associated with a participant whose relation to the event denoted by the verb is perceived as providing (by its existence or actions) a sufficient condition for that event to take place".[7] The /+m feature relates to the mental state of the participant that is relevant to the event. The two binary features mentioned above yield eight different clusters, depicted in (19) below (Marelj 2004: 8; see also Reinhart 2002):

(19)   a.   [+c +m]   Agent
       b.   [+c -m]   Instrument
       c.   [-c +m]   Experiencer
       d.   [-c -m]   Theme

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[7]The notation is adopted here from Reinhart (2000, 2002, 2016), where /α corresponds to the feature and value α.

e.	[+c]	Cause
f.	[-c]	Recipient/Goal/Benefactor
g.	[-m]	Subject Matter/Source
h.	[+m]	Sentient[8]

In (19), the feature clusters are paired with the traditional theta role labels. However, this is only done for expository reasons. There is, in fact, no one-to-one relation between the feature clusters and the traditional labels (Marelj 2004: 9, Everaert et al. 2012: 5). This is so because some theta roles are underspecified, that is to say, they are associated with just one feature, and for this reason they give rise to varying contextual interpretations. For instance, a unary [/+c] cluster may be realised as an Agent, Cause, or Instrument (see (22a) below).

In addition to feature clusters, the Theta System contains the mapping procedure linking a particular theta cluster with a specific syntactic position. The mapping procedure covers the marking operation which singles out entries for merging, as specified in (20) below, and the merging instructions, depicted in (21) below, which make reference to indices. The index notation has been adopted from Williams (1981), where the index 1 is assigned to an external argument, while the index 2 is associated with an internal argument.

(20) Lexicon marking: Given an n-place verb entry, n > 1

    a. Mark a [-] cluster with index 2.[9]

    b. Mark a [+] cluster with index 1.

    c. V with a [+] cluster and a fully specified cluster [/α/ -c] is marked for ACC.

(21) Merging instructions

    a. When nothing rules this out, merge externally.

    b. An argument realising a cluster marked 2 merges internally; an argument with a cluster marked 1 merges externally.

<div align="right">(Everaert et al. 2012:10)</div>

It transpires from the formulation of the marking operation in (20) that monadic verbs are not affected by any marking. Their sole argument is always mapped externally by instruction (21a), which follows from the economy condition stating that a one-step derivation is more economical than a two-step one involving Merge and Move. Since the external argument is always required by the Extended Projection Principle (EPP), it is the most economical derivation that satisfies the EPP that wins out. Consequently, in the Theta System, underived one place verbs are treated as unergative (see Reinhart 2001: 9). By instruction (20a), the [-] clusters are marked 2, and by instruction (21b), they are merged internally. The [-] clusters comprise: [-c -m], [-c] and [-m]. The [+] clusters, which cover the clusters [+c +m], [+c] and [+m], receive index 1 by instruction (20b), and by instruction (21b), they are merged externally.

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[8]The feature [+m] is associated with subjects of verbs such as *see*, *hear*, *love*, *know*, *believe*, which are traditionally assumed to realise the Experiencer theta role.

[9]The notation a [-] cluster refers to a cluster whose features all have the value -. By analogy, a [+] cluster denotes a cluster whose features all have the value +.

Finally, the mixed clusters, that is [-c +m] and [+c -m], where the former corresponds to the traditional label of the Experiencer, while the latter represents the Instrument, are not assigned any index by (20), and therefore they are free to merge either internally or externally. The varying syntactic realisations of Experiencers in the Theta System are particularly well-suited to account for the psych causative alternation that is analysed in detail in section 4. Finally, (20c) specifies that accusative case marking will take place provided the verb is associated in the lexicon with both a [+] cluster and a [/α/ -c] cluster. In other words, the accusative may be assigned to [-c -m] (the Theme) and [-c +m] (the Experiencer) only in the presence of a [+c] cluster which always merges externally (see (20b) and (21b)). This captures Burzio's Generalisation (Burzio 1986), which blocks accusative case assignment in the absence of an external argument. The problem of the accusative case linking of Experiencers will be elaborated in section 5.

The final component of the Theta System corresponds to operations on lexical entries, the so-called arity operations (Reinhart 2001, 2002; Reinhart and Siloni 2005). Arity operations come in three types: saturation, reduction and causativisation. The only one of these operations that is relevant to the discussion in this article is reduction (also called decausativisation or expletivisation, the former term is used in Everaert et al. 2012, while the latter can be found in Reinhart 2000, 2001, 2002). This operation takes place in the lexicon. It is involved in deriving the causative/anticausative alternation (see Levin and Rappaport Hovav 1995), and it removes a feature cluster from a lexical entry.[10] To illustrate the way reduction works, let us have a look at the following pair:

(22) a. John$_{Agent}$/the hammer$_{Instrument}$/the gust of wind$_{Cause}$ has broken the window.
      b. The window has broken.

The verb *break* has a lexical entry containing two clusters, [+c] and [-c -m], both of which are realised in (22a). In (22a) the [-c -m] argument is assigned accusative case in the presence of the [+c] cluster, as predicted by (20c). The transitive entry, given above, then undergoes reduction whereby the [+c] cluster is eliminated, yielding the intransitive entry with just the [-c -m] cluster. The [-] cluster is marked with the index 2 (see (20a) above), and is hence merged internally (see (21b)). Subsequently, the [-c -m] cluster moves to Spec, TP to satisfy the EPP. The schematic derivation of unaccusatives from causatives is depicted in (23) (reproduced from Everaert et al. (2012:13)):

(23) Unaccusatives

      a. Decausativisation input: V$_{ACC}$ [+c]$_1$, [-c -m]$_2$

      b. Decausativisation output: V [-c -m]$_2$

      c. The door$_k$ opened t$_k$

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[10]Everaert et al. (2012: 12) note that whereas eliminating an argument from a semantic representation is illicit, argument reduction in the lexicon is perfectly licit.

In turn, underived intransitives, illustrated in (24), have only one argument, and as a result they are not subject to lexical marking, as in (20). Consequently, their sole argument is mapped externally, in accordance with (21a), and they are unergative.

(24) a. Agentive unergatives: *walk*, *run*,   V [+c +m]
     b. Theme unergatives: *glow*, *tremble*   V [-c -m][11]
     c. Max ran.
     d. The diamond glowed.   (Everaert et al. 2012: 13)

Underived intransitives differ from unaccusatives in that the former merge their sole argument externally, while the latter, being derived from causatives, merge their sole argument internally. This way, the distinction between unaccusatives and unergatives is accounted for in the Theta System. As we shall see in the subsequent section, the operation of reduction that underlies the causative/anticausative alternation, as in (23), has an important role to play in the psych causative alternation.

4. THE PSYCH CAUSATIVE ALTERNATION IN POLISH IN THE THETA SYSTEM

The term *psych causative alternation* is borrowed from Alexiadou and Iordăchioaia (2014) to capture the fact that psychological predicates in many languages participate in the causative/anticausative alternation (see also Levin 1993, Levin and Rappaport Hovav 1995, Pesetsky 1995, Reinhart 2002). Specifically, OE verbs, which are considered to be causative, regularly alternate with SE verbs which are anticausative. This alternation is illustrated in (25) below for English and in (26) for Polish:

(25) a. Something worries Lucie.
     b. Lucie worries   (Reinhart 2016: 51).

(26) a. Coś-ø   irytowało   Ew-ę.
     something-NOM irritated.IPFV   Eve-ACC
     'Something irritated Eve.'
     b. Ewa-ø   irytowała   się.
     Eve-NOM   irritated.IPFV   REFL
     'Eve got irritated.'

The psych causative alternation, as in (25), is not frequently attested in English (see Pesetsky 1995, Reinhart 2016, Alexiadou 2016). Among the verbs that undergo this alternation in English, Pesetsky (1995) lists *worry*, *puzzle*, *grieve* and *delight*. Other OE verbs in English typically have the intransitive variant realised in the form of an adjective. This kind of alternation is much more widespread in languages other than

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[11]Reviewer 2 points out that verbs *glow* and *tremble* are different in that the former is externally caused, while the latter is internally caused. However, according to Levin and Rappaport Hovav (1995), *glow* is internally, not externally, caused. Reinhart (2016: 32–33) argues that notions such as 'externally caused' and 'internally caused' are pragmatically determined, for instance a diamond normally glows due to its inherent properties, but on the other hand, a diamond may glow in a different way depending on the source of light. Consequently, internal and external causation are not treated by Reinhart (2016) as linguistically coded, but rather as properties of events in the real world.

English (see Levin 1993 for French, Italian, and Russian alternations; Alexiadou and Iordăchioaia 2014 for Greek and Romanian data; and Reinhart 2016 for Hebrew and Dutch OE/SE alternants). The psych causative alternation, exemplified in (26) above, is very frequent in Polish (see Biały 2005, Rozwadowska 2007). The sentence in (26a) is transitive and causative, whereas its SE variant in (26b) is intransitive, and it shows reflexive marking, typical of valency reduction processes in Polish.

4.1.   Delimiting the psych causative alternation in Polish

Alexiadou and Iordăchioaia (2014) emphasise that only eventive OE verbs participate in the psych causative alternation. This is because the other argument of eventive OE verbs (beside the Experiencer) represents a Cause, and only those predicates which, in Reinhart's (2000, 2001) model, have a [+c] argument (consistent with an Agent, a Cause or an Instrument interpretation, as in (22a) above) may undergo the causative/ anticausative alternation. As has been noted in section 2, eventive OE verbs in Polish (and in general) may have an animate or inanimate Cause, provided the animate entity does not act intentionally. The Cause status of the non-Experiencer argument of eventive OE verbs follows from the fact that in a sentence like (27) below the phase *brak pieniędzy* 'the lack of money' is a direct cause of Eve's irritation.

(27) Brak-ø   pieniędzy   zirytował   Ew-ę.
     lack-NOM   money   irritated.PFV   Eve-ACC
     'The lack of money irritated Eve.'

As regards stative OE verbs, they never license a Cause argument, and hence can never undergo the psych causative alternation. The other argument of these verbs (beside the Experiencer) is a Target or Subject Matter (henceforth, T/SM), following Pesetsky 1995. The T/SM argument is evaluated by the Experiencer either positively or negatively, but it never has any causal relation with the state of the Experiencer. This is illustrated in (28) below, in which *matematyka* 'maths' serves as a T/SM argument, since it is positively evaluated by the Experiencer.[12] However, this phrase does not trigger Eve's state of fascination, and therefore cannot be interpreted as a Cause.

(28) Matematyka-ø   fascynuje   Ew-ę.
     maths-NOM   fascinates.IPFV   Eve-ACC
     'Maths fascinates Eve.'

Both the eventive OE verb z*irytować* 'to irritate', in (27), and the stative *fascynować* 'to fascinate', in (28), alternate with SE verbs, as can be seen in (29) and (30), respectively:

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[12]Reviewer 1 asks if there is any evidence that the accusative of the Experiencer in (28) is structural. The evidence comes from the fact that the accusative in (28) turns into the genitive under negation, as in (i) (see also section 4.3):

(i) Matematyka-ø   nie   fascynuje   *Ew-ę/Ew-y.
    maths-NOM   not   fascinates.IPFV   *Eve-ACC/Eve-GEN
    'Maths does not fascinate Eve.'

(29) Ewa-ø   zirytowała   się   (brak-iem   pieniędzy).
     Eve-NOM   got.irritated.PFV   REFL   lack-INSTR   money
     'Eve got irritated with the lack of money.'

(30) Ewa-ø   fascynuje   się   *(matematyk-ą).
     Eve-NOM   fascinates.IPFV   REFL   maths-INSTR
     'Eve is fascinated with maths.'

In the above-mentioned data, the argument that is not the SE is a T/SM, which is either obligatory, as in (30), or optional, as in (29). In both (29) and (30), the T/SM argument is evaluated by the Experiencer either negatively, as in (29), or positively, as in (30). Sentence (29) clearly differs in meaning from (27). In the former the lack of money is evaluated negatively by Eve, while in the latter the lack of money makes Eve irritated. The alternations like (29) and (30) above will be analysed in some detail in section 5. They cannot be subsumed under the psych causative alternation, as they host a T/SM argument, either obligatorily or optionally, and hence are not intransitive.

    The anticausative variant of (27) is provided in (31) below:

(31) Ewa-ø   zirytowała   się   (przez brak   pieniędzy).
     Eve-NOM   got.irritated.PFV   REFL   because-of   lack money
     'Eve got irritated because of the lack of money.'

The SE verb in (31) is clearly intransitive, and the Cause phrase may be optionally realised by means of *przez* a 'because of'-phrase.[13] The psych verb in (31) is also followed by the reflexive marker *się*, whose function is elaborated in section 4.2. The alternation between (27) and (31) is an instance of the psych causative alternation (see also (26)), whose analysis within the Theta System is undertaken in section 4.2.

4.2. The psych causative alternation in Polish in the Theta System

Before turning to an analysis of the psych causative alternation in Polish, let us first focus on how OE verbs in English are analysed in the Theta System. Reinhart (2000, 2001, 2002, 2016) treats OE verbs as triadic, containing in their lexical entry the clusters [+c], [-c +m] and [-m], which correspond to the Cause, Experiencer and T/SM, respectively. Consequently, the lexical entry of an OE verb is as follows:

(32) V_{OE} < $[+c]_1$, $[-c +m]_{ACC}$, $[-m]_2$>

The entry in (32) shows that the [+c] merges externally, whereas [-m] is always merged internally (see (20)). The Experiencer, [-c +m], is free to merge either externally or internally, and appears with the accusative case, which follows from the presence of [+c] in the underlying thematic in (32). The Cause and T/SM, present in (32),

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[13]Although the Cause *przez* 'because of'-phrase in (31) is homophonous with an agentive *przez*-by'-phrase, found in passive sentences, the two must be kept separate. Reviewer 2 notes that a *przez*-phrase is felicitous in the passive, but not in the active, when it contains an animate phrase. This seems to indicate that it corresponds to an Agent and not to a Cause. Once the T/SM argument is omitted in (29), it becomes indistinguishable from (31) with the Cause phrase missing.

cannot co-occur (see the T/SM restriction of Pesetsky 1995: 60), which is accounted for in the Theta System by appealing to the notion of feature distinctness:

(33) Feature Distinctness
   a. Two indistinct θ-roles cannot both be realised on the same predicate.
   b. Distinctness of feature sets: α is distinct from β iff α and β are counterspecified for a certain feature f.   (Reinhart 2016: 60)

Under the definition in (33b), the clusters [+c] and [-m] are indistinct, as there is no feature for which they are counterspecified. And (33a), in turn, predicts that these two clusters cannot be realised in the same predicate, as confirmed by (34):

(34) *The doctor's letter worried Lucie about her health.   (Reinhart 2016: 60)

Since OE verbs cannot realise the Cause and the T/SM argument together, these verbs may be associated with the following two cluster sets: (i) [+c], [-c +m], or (ii) [-c +m], [-m]. In the former scenario, the [+c] cluster always merges externally (see (20b)), and the Experiencer must then merge internally and be associated with accusative (see (20c)), as can be seen in (35):

(35) The doctor worried Lucie.

In the latter case, the [-m] role, which is merged internally, moves to Spec, TP to satisfy the EPP, which accounts for the backward binding facts, illustrated in (36):

(36) His$_i$ health worried every patient$_i$.   (Reinhart 2016: 64)

The pronominal variable binding in (36) is accounted for by the fact that the [-m] argument, which originates inside the VP, is c-commanded by the Experiencer, and is subsequently moved to Spec, TP (as originally proposed in Belletti and Rizzi 1988). The Experiencer in (36) remains in situ and bears the accusative case.[14] Consequently, two distinct derivations are available for OE verbs in the Theta System. Still another derivation is possible for OE verbs in the Theta System. In this derivation, the lexical entry of an OE verb is affected by decausativition, as in (23) (see section 3 above), which eliminates the [+c] cluster from the lexical entry of the OE verb and makes it a two-place predicate. Decausativisation has a role to play in a sentence such as (37).

(37) Lucie worried about her health.

In (37), the [-m] cluster and the [-c +m] cluster merge internally, and it is the latter that moves to Spec, TP to satisfy the EPP, because it is not assigned accusative case once the [+c] is eliminated in the course of decausativisation (see (20c)).

   Having presented the way the various structures with OE verbs in English (and cross-linguistically)[15] are derived in the Theta System, let us now turn to an analysis of the psych causative alternation in Polish within the Theta System. Example (27),

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[14]Structures like (36) have a dual nature (Rákosi 2006: 52). On the one hand, the structure in (36) is unaccusative, as both arguments of the verb are merged internally. On the other, (36) involves structural accusative case.

[15]The analysis of OE verbs proposed in the Theta System is meant to hold universally.

repeated for convenience below as (38), selects the Cause, *brak pieniędzy* 'lack of money' and the Experiencer, *Ewę* 'Eve', which correspond to the clusters [+c] and [-c +m], respectively (see (19) above). No T/SM cluster is realised in the presence of the Cause argument in (38), as predicted by Feature Distinctness in (33) above.

(38) Brak-ø   pieniędzy   zirytował   Ew-ę.
     lack-NOM   money   irritated.PFV Eve-ACC
     'The lack of money irritated Eve.'

The marking procedure in (20) determines that the [+c] cluster is marked with the index 1, which, following the merging instruction in (21), is merged externally. The other cluster, corresponding to the Experiencer, is then merged internally and is assigned accusative case in accordance with (20c). In order to derive (31), repeated for convenience below as (39), the decausativisation operation must remove the [+c] cluster.[16]

(39) Ewa-ø   zirytowała   się   (przez   brak   pieniędzy).
     Eve-NOM   got.irritated.PFV REFL   because.of lack   money
     'Eve got irritated because of the lack of money.'

Example (39) contains the reflexive marker *się*, which, following Reinhart's (2016) suggestions made for Romance languages, might be taken to indicate that in Polish, unlike in English, accusative case is not fully eliminated in the course of decausativiation, but rather leaves a residue (Marelj and Reuland 2016: 186). It is the reflexive that absorbs the residual accusative case after decausativisation has applied in (39). Consequently, *się* in (39) is not an argument, but rather a kind of expletive (for a detailed analysis of reflexive SE verbs in Dutch, see Marelj and Reuland 2016: 223).[17] Since the SE verb *zirytować się* 'to irritate' in (39) is monadic, the marking procedure does not affect it (see (19)). By instruction (21a), the sole argument of *zirytować się* 'to get irritated' in (39) (the Experiencer *Ewa* 'Eve'), is merged externally. The resulting structure has only an external argument and hence is unergative. In this way, the puzzle relating to two different mappings of the Experiencer, the internal or external, can be given a straightforward account in the Theta System. Since the Experiencer represents a mixed cluster, it is not marked in the lexicon. Once the [+c] reduction takes place, the Experiencer may be mapped onto an external argument. In the subsequent section, an attempt is made to verify whether SE cognates of Polish eventive OE are indeed unergative, as predicted by the Theta System.

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[16]In the Theta System, the anticausative variant is derived from the causative one. This is different from Pesetsky (1995), where the opposite direction of deriving the causative/anticausative alternation is proposed for psych verbs.

[17]It remains an open question whether the reflexive found in (39) (and with other reflexive SE verbs) is a clitic (for a positive respose, see Witkoś 1998, for a negative, see Medová 2009). An analysis of the reflexive as a clitic with SE verbs in Italian can be found in Marelj and Reuland (2016: 199). An analysis of the Dutch *zich*, which is not a clitic, with SE verbs, is proposed in Marelj and Reuland (2016: 215). I leave aside here the question of which of these two analyses is valid for Polish reflexive SE verbs.

4.3. Are SE cognates of eventive OE verbs in Polish unaccusative or unergative?

The unergative status of SE verbs participating in the psych causative alternation, advocated in the Theta System, seems to find empirical support in a number of languages. Reinhart (2000, 2001, 2016) argues that SE variants of OE verbs in English, Hebrew and Dutch are unergative. Marelj (2004) treats SE alternants of OE verbs in Serbo-Croation as unergative. Rákosi (2006: 55) and Jurth (2017, 2018) analyse SE verbs alternating with eventive OE verbs in Hungarian as unergative.

A different treatment of SE verbs alternating with eventive OE predicates is due to Alexiadou and Iordăchioaia (2014). They analyse OE/SE alternations in Greek and Romanian and argue that SE variants of eventive OE verbs are unaccusative, rather than unergative. They provide three arguments in favour of this claim. The first argument is based on meaning and relates to the fact that SE cognates of eventive OE verbs in the languages analysed express a change of state, in a way typical of anticausatives (Levin and Rappaport Hovav 1995). However, this claim seems questionable in light of the fact that SE alternants of OE verbs in a number of languages, including Spanish (Marín and McNally 2011) and Polish (Rozwadowska 2012), have been treated as inceptive, referring to an onset of the state, not to the change of state itself. Secondly, SE alternants of eventive OE verbs can co-occur with the same range of PP-Causes that are typically found with anticausatives.[18] The Cause-PP characteristic of Polish anticausatives is introduced by the P *od* 'from', as in (40) below:

(40) Okno-ø   zbiło   się   od   podmuchu   wiatr-u.
      window-NOM   broke.PFV   REFL   from   gust   wind-GEN
      'The window broke from the gust of wind.'

Alternating SE verbs also admit the Cause *od*-phrase, as can be seen in (41):

(41) Ewa-ø   zirytowała   się   od   nadmiaru   obowiązków.
      Eve-NOM   got.irritated.PFV REFL   from   excessive   duties
      'Eve got irritated from too many duties.'

However, Cause *od*-PPs are not only possible with unaccusatives, as in (40), but can also be found with unergatives, as in (42):

(42) Marek-ø   skakał   od   nadmiaru   energii.
      Mark-NOM   jumped   from   excessive   energy
      'Mark jumped from too much energy.'

Since *od*-PPs, expressing Cause, may be found with both unaccusatives and unergatives in Polish (see (40) and (42)), their availability with the SE form, as in (41), does not bear on the status of this verb. This casts some doubt on the validity of Alexiadou and Iordăchioaia's (2014) argument that Cause-PPs diagnose the unaccusativity of

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[18]Alexiadou and Iordăchioaia (2014) observe that the PP-Cause phrases, found with alternating SE verbs, are different from the PPs introducing a T/SM argument in both Greek and Romanian.

SE cognates of eventive OE verbs. The final argument, mentioned by Alexiadou and Iordăchioaia (2014: 65), to support the unaccusative status of the SE form relates to the availability of modification by *by itself*, which is typically found in anticausatives (see Chierchia 2004, Alexiadou et al. 2006, among others), as shown in (43):

(43) The vase broke by itself.

However, in Polish the modification by *sam*, the Polish equivalent of *by itself*, is also possible in unergatives. This is illustrated in (44), taken from Malicka-Kleparska (2012: 90), where the verb *wlata* 'flies' is unergative, not unaccusative:

(44) Ta   forsa-ø   sama   wlata   w   kieszeń.
      this money-NOM   by.itself   flies   into   pocket
      'The money pours into the pocket by itself.'

No other pieces of evidence for the unaccusative status of SE cognates of eventive OE verbs have been provided by Alexiadou and Iordăchioaia (2014).

Since two approaches to SE variants of alternating OE verbs are available, the question arises whether Polish SE verbs participating in the psych causative alternation are unergative, as predicted by the Theta System, or unaccusative, as postulated by Alexiadou and Iordăchioaia (2014). A number of tests that have been posited in the literature in order to distinguish unaccusative from unergative verbs either do not apply to Polish or do not yield conclusive results. In Russian, the genitive of negation may optionally affect an internal argument, but it can never affect an external argument, which makes it possible to draw the line between unergatives and unaccusatives in this language (see Pesetsky 1982, Schoorlemmer 1995). This test, however, is inapplicable to Polish, as can be seen in (45) and (46) below (see also Witkoś 1998: 228):

(45) a. Do   domu   wszedł   pies-ø.   unaccusative
          in   house   came   dog-NOM
          'A dog came into the house.'
      b. Do   domu   nie   wszedł   pies-ø /*ps-a.
          in   house   not   came   dog-NOM/*dog-GEN
          'A dog didn't come into the house.'

(46) a. Do   domu   wleciał   motyl-ø.   unergative
          in   house   flew   butterfly-NOM
          'A butterfly flew into the house.'
      b. Do   domu   nie   wleciał   motyl-ø /*motyl-a.
          in   house   not   flew   butterfly-NOM/*butterfly-GEN
          'A butterfly didn't fly into the house.'

In neither (45b), with the unaccusative verb *wejść* 'to come', nor in (46b), containing an unergative verb *wlecieć* 'to fly', does the sole argument become genitive under negation.

Levin and Rappaport Hovav (1995) note that resultative phrases may be predicated of internal, not external, arguments, and they are therefore licit with

unaccusatives, but banned with unergatives.[19] This test does not distinguish unaccusatives from unergatives in Polish, as both these types of predicates can co-occur with resultatives, as shown in (47) and (48) below, respectively:

(47) Piec-ø   rozgrzał   się   do   czerwoności.   unaccusative
     oven-NOM   got.hot.PFV   REFL   to   redness
     'The oven heated up until it became red.'

(48) Człowiek-ø   wykrwawił   się   na śmierć.   unergative
     man-NOM   bled.PFV   REFL   to death
     'The man has bled to death.'

Another unaccusativity diagnostic proposed for Dutch, German and English refers to the possibility of pronominal (adjectival) use of participles (Hoekstra 1984). Only participles of unaccusative verbs can be felicitously used as prenominal adjectival modifiers in German, as shown in (49a), in contradistinction to participles formed from unergative verbs, which cannot be so used, as demonstrated in (49b):

(49) a. der   eingeschlafene   Student   unaccusative
        the   fallen-asleep   student
     b. *der   gearbeitete   Student   unergative
        the   worked   student   (Alexiadou et al. 2004: 6)

Cetnarowska (2002, 2004) argues that unaccusative and unergative verbs in Polish differ in the availability of resultative adjectives ending in *-ły*, as can be seen in (50), taken from Cetnarowska (2002: 64):

(50) a. wychudłe   dziecko   unaccusative
        thinned   child
     b. *zadzwoniły   pacjent   unergative
        phoned   patient

Although this test seems to properly distinguish unaccusatives from unergatives in Polish, it does not apply to reflexive verbs (Cetnarowska 2002: 68), which form their resultative adjectives by means of the morpheme *-n-/-t-*, as illustrated in (51):

(51) a. umyć   się   umyte   dziecko
        wash   REFL   washed   child
     b. zdenerwować   się   zdenerwowany   człowiek
        irritate   REFL   irritated   man

Since SE alternants of eventive OE verbs in Polish are always reflexive (see (49b)), that is, they co-occur with the reflexive marker *się*, they form their resultative

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[19]Unergatives may license resultatives only if a fake reflexive is used (see Levin and Rappaport Hovav 1995), as in (i) below:

(i) The men yelled themselves hoarse.
    Although the reflexive is present in the Polish example with the unergative verb in (48), it is not a fake reflexive, as without it the sentence becomes ungrammatical:

(ii) Człowiek-ø   wykrwawił   *(się).
     man-NOM   bled.PFV   REFL
     'The man has bled.'

adjectives in a way different from unaccusatives (see (50a)). Consequently, the formation of the resultative *-ly* adjective cannot be used to determine the status of SE cognates of eventive SE verbs in Polish.[20]

Having pointed out some problems with unaccusativity diagnostics in Polish, let us now turn to those tests which can diagnose unaccusativity in this language. Cetnarowska (2000, 2002) discusses three tests that may be used to draw the line between unaccusative and unergative predicates in Polish.[21] The first test relates to impersonal passives in *-no/-to*, which are felicitous with unergatives, but not with unaccusatives, as shown in (52) and (53), from Cetnarowska (2002: 64):[22]

(52) *Wyrośnię-to   w   atmosferz-e   terror-u.[23]   unaccusative
      grew.up-to.PFV in   atmosphere-LOC   terror-GEN
      'They grew up in an atmosphere of terror.'

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[20]Other diagnostics are proposed in the literature to distinguish unaccusative from unergative verbs, but they do not apply to Polish. For instance, in Germanic and Romance, unaccusatives require the auxiliary *have*, while unergatives select *be* in the perfect tenses (see Alexiadou et al. 2004: 5, a.o.). In Polish, the plus-perfect tense, which is considered to be archaic, makes use of the auxiliary *be* for both types of verbs (Cetnarowska 2000: 36). Still another test for unaccusativity relates to locative inversion, which, according to Levin and Rappaport Hovav (1995: 220–224), is possible with unaccusative, but not with unergative verbs. However, this test does not yield any contrast when applied to Polish unaccusative and unergative predicates, as shown in (i) and (ii) below:

(i) Na   ulicach topił   się   śnieg.   unaccusative
     in   street   melted REFL   snow
     'Snow melted in the streets.'

(ii) Na   ulicach śmiało się   wielu   ludzi.   unergative
     in   streets laughed REFL   many   people
     'Many people laughed in the streets.'

[21]Out of the three tests mentioned in the text after Cetnarowska (2000, 2002) only the test based on impersonals diagnoses deep unaccusativity, viz. it depends on semantic properties of the predicates involved. The other two tests, namely the distributive *po*-phrase, as well as *na*- and *po*- prefixation only diagnose surface unaccusativity, which is sensitive to the surface position of the argument (Levin and Rappaport Hovav 1995). The fourth test adopted by Cetnarowska (2000, 2002) relies on the derivation of resultative adjectives. This test has already been discussed in relation to (50) and (51), and has been dismissed as not applicable due to the reflexive nature of the SE verbs under scrutiny.

[22]Cetnarowska (2002: 66) observes that the impersonal construction requires the subject to be human. Consequently, (i) below is ungrammatical even though it contains an unergative verb:

(i) *Szczeka-no   na   wszystkie koty.   unergative
     barked-no.IPFV on   all   cats
     'They barked at all cats.'

[23]Sentence (52) becomes grammatical once the perfective form of the verb is replaced with its imperfective variant (Cetnarowska 2002: 64, footnote 19), as in (i) below, which is associated with the iterative/habitual interpretation:

(53) Zadzwonio-no   po   lekarz-a.   unergative
     phoned-no.PFV   for   doctor-ACC
     'They phoned for a doctor.'

Let us now check how this test works for an SE alternant of an eventive OE verb,
found in (31), repeated as 54 below:

(54) Ewa-ø   zirytowała   się   (przez   brak   pieniędzy).
     Eve-NOM   got.irritated.PFV REFL   because.of   lack   money
     'Eve got irritated because of the lack of money.'

The verb *zirytować się* 'to get irritated' may be used in the *-no/-to* impersonals, as can
be seen in (55):

(55) Zirytowa-no   się.
     got.irritated-no.PFV   REFL
     'They got irritated.'

Consequently, the SE form in (55) behaves like an unergative verb in (53) but unlike
the unaccusative verb in (52).[24]

   The second test that has been adopted by Cetnarowska (2000, 2002) to distin-
guish unaccusatives from unergatives in Polish is based on distributive *po*-phrases
(see Pesetsky 1982 for a similar test adopted for Russian). These phrases are
felicitous with objects of transitive verbs, as in (56).

(56) Kupili-śmy   po   książ-ce.
     bought-1PL   po   book-LOC
     'We bought a book each.'

When applied to unaccusative and unergative verbs, the test indicates that at least
some unaccusative verbs (for instance, those referring to appearance or disappear-
ance) can be used with the distributive *po*-phrase. This is shown in (57):

(57) Z   każdej   klasy   przyszło   po   rodzic-u.   unaccusative
     from   each   class   came   po   parent-LOC
     'There came a parent from each class/grade.'   (Cetnarowska 2000: 41)

In contrast, unergative verbs are much less acceptable with *po*-phrases, as shown
in (58):

   (i) Wyrasta-no   w   atmosferz-e   terror-u.
       grew.up-no.IPFV   in   atmosphere-LOC   terror-GEN
       'They were growing up in an atmosphere of terror.'

[24]Cetnarowska (2000: 37) notes that unaccusatives as well as unergatives may occur in
another type of impersonal structure, the impersonal reflexive construction, as in (i) and (ii)
below:

   (i) Wyrosło   się   w   atmosferz-e   terror-u.   unaccusative
       grew.up.PFV   REFL   in   atmosphere-LOC   terror-GEN
       'One grew up in an atmosphere of terror.'

  (ii) Zadzwoniło   się   po   lekarz-a.   unergative
       called.PFV   REFL   for   doctor-ACC
       'One called for a doctor.'

(58) ?*Z   każdej   klasy   zadzwoniło   do   szkoły   po   rodzic-u.
       from each   class   phoned   to   school   po   parent-LOC
       'A parent from each class/grade phoned the school.'   (Cetnarowska 2000: 41)

Cetnarowska (2000: 41) emphasises that native speakers' judgements vary a lot for sentences like (57) and (58). When the test based on distributive *po*-phrases is applied to SE variants of eventive OE verbs, it results in ungrammaticality, as in (59):

(59) *Z   każdej   klasy   zirytowało   się   po   rodzic-u.
      from   each   class   got.irritated.PFV   REFL   po   parent-LOC
      'A parent from each class got irritated.'

The unacceptability of (59) indicates that SE cognates of eventive OE verbs behave as unergatives with respect to the distributive po-phrase (see (58)), and not as unaccusatives (see (57)). The predictions of this test, however, are far less clear than those based on *-no/-to* impersonals (see (55)), because they are subject to considerable speaker variation.

The final test adopted by Cetnarowska (2000, 2002) involves *na-* and *po-*prefixed verbs (see Pesetsky 1982 and Schoorlemmer 1995 for a similar diagnostic applied to Russian). These prefixed verbs can quantify over their objects, as in (60), where the phase *szklanek* 'glasses' surfaces in the partitive genitive:

(60) Na-tłukl-iście   szklan-ek.
      na-broke-2PL   glasses-GEN
      'You have broken a lot of glasses.'

These prefixed verbs can also quantify over the sole argument of an unaccusative verb, as in (61), provided the verb refers to appearance or movement (Cetnarowska 2002: 59).

(61) Na-rosło   chwast-ów.
      na-grew   weeds-GEN
      'There have grown so many weeds.'

However, prefixed unergative verbs do not license the partitive genitive, as in (62):

(62) *Na-śpiewało   dziec-i   w   naszym   bloku.
       na-sang   children-GEN   in   our   block
       'There have sung so many children in our block of flats.' (Cetnarowska 2002: 59)

SE variants of eventive OE verbs may be prefixed with *na-* or *po-*, as shown in (63), but then the resulting structure has an impersonal interpretation:

(63) Po-irytowało   się   ludz-i.
      po-irritated   REFL   people-GEN
      'One made many people irritated.'
      (Intended: *'A lot of people got irritated.')

The sentence in (63) can only have an agentive interpretation in which somebody made a lot of people irritated, not the interpretation in which a lot of people got irritated. Consequently, the grammaticality of (63) does not allow us to draw any conclusions as to the status of the SE verb.

Finally, the sole argument of the SE alternant exhibits subject-like properties in that it has some control over the event, as shown in (64), where the Subject Experiencer controls the PRO subject with the Agent theta role:

(64) Ewa-ø   zirytowała   się   [żeby PRO pokaz-ać   kto   tu   rządzi].
     Eve-NOM   got.irritated.PFV REFL   in.order.to show-INF   who   here   rules
     'Eve got irritated to show who rules here.'

The surface subject of unaccusatives, in turn, has no control over the event, and therefore sentence (65) is totally unacceptable:

(65) Trawa-ø   zazieleniła   się   *([żeby PRO   powit-ać   wiosnę]).
     grass-NOM   got.green.PFV   REFL   in.order.to   welcome-INF   spring
     'The grass has become green to welcome spring.'

   All in all, the evidence presented in this section has shown some similarities in syntactic behaviour between SE alternants of eventive OE verbs in Polish and unergatives. The arguments provided by Alexiadou and Iordǎchioaia (2014) in favour of the unaccusative status of SE forms have turned out not to be valid for Polish. Consequently, it seems that the psych causative alternation is amenable to the analysis offered by Reinhart (2000, 2001, 2016), and the Theta System makes good predictions for the mapping of Object and Subject Experiencers in Polish.

5.   CASE LINKING OF POLISH OBJECT EXPERIENCERS IN THE THETA SYSTEM

In the Theta System, case is determined in the lexicon, and it is predictable from theta roles (Marelj 2013: 158). According to Reinhart (2000, 2002, 2016), if the lexical entry of a verb contains a [+c] cluster and a fully specified cluster [/α/ −c], then the verb is marked in the lexicon with the ACC feature (see (20c) above). This type of case marking has been adopted in section 4.2 for eventive OE verbs in Polish, which have in their lexical entries a Cause, that is a [+c] cluster, and a [-c +m] cluster, associated with the Experiencer. These verbs are equipped with the [+ACC] feature in the lexicon which allows them to assign accusative case to their complement. Still, the accusative case of Experiencers, found with stative OE verbs in Polish, must be accounted for, especially as these verbs lack a Cause argument. This problem is addressed in section 5.1 below. Another issue, to be examined in section 5.2, relates to the lexical entries of dative Experiencers in Polish and their case mapping in the Theta System. Finally, in section 5.3, some problems regarding the argument and case linking of dative Experiencers in the Theta System, which emerge from the analysis of dative Experiencers in Polish, are discussed.

5.1.   Case linking of Experiencers found with stative OE verbs in Polish

It has been noted in section 4.1 that stative OE verbs do not have a Cause argument, but instead they have a T/SM. For instance, in (66) below, the stative OE verb *interesować* 'to interest' takes a [-c +m] and a [-m] argument, where the former corresponds to the Experiencer, and the latter corresponds to the T/SM:

(66) Fizyka-ø   interesuje   Ew-ę.
     physics-NOM   interests.IPFV   Eve-ACC
     'Physics interests Eve.'

To be able to account for the accusative case on the Experiencer in (66), it is necessary to assume that the lexical entry of *interesować* 'to interest' contains, in addition to the two clusters mentioned above, a [+c] cluster. Accusative case is licensed in the Theta System in accordance with (20c), repeated for convenience as (67) below:

(67)   V with a [+] cluster and a fully specified cluster [/α/ -c] is marked for ACC.

<div align="right">(Reinhart 2002: 255)</div>

However, in order to block the actual realisation of a Cause (i.e., the [+c] cluster) in sentences with stative OE verbs like (66), an assumption must be made, following Reinhart (2002: 27), that the realisation of [+c] for stative OE verbs is frozen in the lexicon. In other words, although the [+c] cluster is present in the lexical entry of stative OE verbs, it is never sent off to syntax. The argument linking in (66) proceeds in the following way: the [+c] cluster is marked as 1, while the [-m] cluster is assigned the index 2 (see (20)). The Experiencer, being a mixed cluster, that is, [-c +m], does not have any index. Since the Experiencer bears accusative case, it must merge internally in (66). Consequently, both arguments of the stative OE verb *interesować* 'to interest' merge internally, and the structure of this verb resembles that of double object unaccusatives (see Belletti and Rizzi 1988), except that accusative case is assigned to the Experiencer. Finally, in order to satisfy the EPP, the [-m] argument of the stative OE verb in (66) moves to Spec, TP. The schematic derivation of (66) in the Theta System is depicted in (68):[25]

(68) [$_{TP}$[$_{DP}$ fizyka[$_{-m}$]] [$_{VP}$ interesuje [$_V$ [$_{DP}$ Ewę[$_{-c +m}$]] [$_v$ t$_{interesuje}$ t$_{fizyka}$]]]]
          physics   interests   Eve

As was noted in section 4.1, stative OE verbs in Polish regularly alternate with SE verbs. A sentence like (66) above has an SE alternant, as in (69):

(69) Ewa-ø   interesuje   się   fizyk-ą.
     Eve-NOM   is.interested.IPFV REFL physics-INSTR
     'Eve is interested in physics.'

The lexical entry of *interesować* 'to interest' is the same in (69) as in (66), and it includes the clusters [+c], [-c -m] and [-m]. The [+c] cluster is eliminated in the latter case by the reduction operation, as is the accusative case.[26] The [-m] cluster

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[25]Reviewer 1 suggests that backward binding could be used as a test to show that the T/SM originates inside the VP. However, as extensively analysed in Bondaruk et al. (2017b: 125–127), backward binding is inoperative in Polish.

[26]Reviewer 2 suggests that non-reflexive and reflexive *interest*, as in (66) and (69), respectively, might be associated with different VP structures. Actually, this claim is corroborated in the Theta System, as the non-reflexive verb in (66) is associated with an unaccusative structure (see (68)), with both arguments merged inside the VP. In turn, the reflexive verb in (69) has a structure in which only the instrumental case marked DP is merged inside the VP, while the

is marked 2 and is merged internally. The [-c +m] cluster, associated with the Experiencer, merges externally by (21a) to satisfy the EPP. Since in (69) the verb is not marked with accusative case, the Experiencer is free to merge externally, unlike in (66), where it merges internally due to the accusative case marking available from the verb. Consequently, in the Theta System, the alternations between stative OE verbs and their SE variants are derived in the same way as the alternations between eventive OE verbs and their SE counterparts, that is, by means of reduction. This is different from Alexiadou and Iordăchioaia (2014), for whom only eventive OE verbs participate in the psych causative alternation, whereas stative OE verbs are involved in a different type of alternation.

Although the analysis of stative OE verbs in Polish, carried out in the Theta System, is capable of accounting for the accusative case on the Experiencer, it does so at the cost of positing a [+c] cluster for stative OE verbs which is never lex-icalised. The postulation of [+c] in the lexical entries of stative OE verbs saves Burzio's (1986) Generalisation, according to which accusative case is assigned only in the presence of an external argument. However, it is not at all certain whether Burzio's Generalisation is operative in Polish (see Bondaruk et al. 2017b, who argue that this generalisation does not hold in the case of Polish stative OE verbs, which assign structural accusative to the Experiencer, despite the fact that these verbs do not project any Cause, even an implicit one). In *adversity impersonal* constructions like (70) below, the accusative may be assigned even though no exter-nal argument is projected (for an analysis of adversity impersonals in Polish, see Kibort 2004, 2008).

(70) Drog-ę   zawiało   śnieg-iem.
      road-ACC   covered.PFV   snow-INSTR
      'The road was covered with snow.'

In (70), the accusative case is assigned to the phrase *drogę* 'road' in spite of the fact that the sentence does not exhibit any external argument.[27] Consequently, it seems that Burzio's Generalisation is not universal (for a similar conclusion reached on the basis of data from languages other than Polish, see Haider 1985; Haegeman

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Experiencer is merged as an external argument. The reflexive *się* absorbs the residue of the accusative case, as argued for reflexive SE verbs, as in (39) in section 4.2 above.

Reviewer 3 suggests that in sentences like (68), weak reduction takes place, in that only the [+c] cluster is absorbed, but not the [+ACC] property of the verb. In (69), in turn, full reduction takes place, whereby both the [+c] and the [+ACC] property in the lexical representation of the verb are absorbed. The former scenario has been proposed for stative OE verbs in Polish by Bondaruk et al. (2017b), while the latter one is maintained for reflexive SE verbs in this article.

[27]Reviewer 3 notes that in Lavine and Franks (2008), Russian adversity impersonals are taken to host an implicit external cause. This approach also seems to be justified for Polish adversity impersonals, as in (i):

(i) Żołnierz-a   zabiło   na miejscu.
     soldier-ACC   killed   on spot
     'The soldier was killed on the spot.'

1986; Woolford 1993; 1997; Bennis 2004, among others).[28] Since Burzio's Generalisation is not valid cross-linguistically, positing a [+c] cluster that is never lexicalised, just to save the generalisation, seems to be a highly dubious move.

To wrap up, the way the Experiencer of stative OE verbs in Polish (and in other languages) is assigned accusative case in the Theta System is highly problematic. The accusative case marking of the Experiencer crucially depends on the [+c] cluster, which must be present in the lexical entry of an OE verb, even though it is never lexicalised. It is the [+c] cluster which guarantees that a stative OE verb is associated with the ACC feature in the lexicon (see (20c)/67 above). The Theta System maintains Burzio's Generalisation, but the validity of this generalization has been questioned for a number of languages, including Polish. Consequently, the Theta System solution to the case linking puzzle associated with accusative Experiencers of stative OE verbs in Polish (as well as in other languages), turns out to be untenable.

5.2. Argument and case linking of dative Experiencers in Polish

OE verbs with dative case marked Experiencers are generally considered to be unaccusative (Pesetsky 1995; Reinhart 2000, 2002; Landau 2010, among others). These verbs have two arguments, neither of which expresses causation. They do not have any [+c] alternate, either. As a result, following Reinhart (2000, 2002), a verb like *podobać się* 'appeal to', illustrated in (71) below, will have a lexical entry as in (72), where the [-c -m] cluster corresponds to the T/SM argument, while the [-c] cluster represents the Experiencer:

(71) Kryminały-ø   podobaj-ą   się   Mark-owi.
      detective.stories-NOM   appeal.to-3PL   REFL   Mark-DAT
      'Detective stories appeal to Mark.'

(72) [-c -m], [-c]

In (72), the T/SM argument is associated not only with the feature [-m], as has been proposed for the T/SM argument of stative OE verbs with accusative Experiencers (as in (66) above), but also with the [-c] feature. According to the theta role specifications in (19) above, the T/SM argument is only associated with the [-m] feature, which accounts for the fact that in many cases the T/SM argument may also serve as a Cause (see for instance (27) with (29) and (31)). In (71), the phrase *kryminały* 'detective stories' is not a possible Cause, and hence its feature specification is [-c -m]. This creates a new problem for the lexical entry of a stative OE verb like *interesować* 'to interest' in (66). Since the T/SM argument of a stative OE verb, as in (66), can never act as a Cause, we would expect the same feature cluster for the T/SM argument of stative OE verbs with both the accusative and dative

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[28]Reviewer 2 suggests that the data like (70) should be viewed as Figure-Ground structures, as proposed by Svenonius (2010), rather than as counterexamples to Burzio's Generalisation. This approach seems to be untenable because Figure-Ground structures are locative; referring either to a stative location (Place) or to dynamic motion (Path). In (70) no location is at issue, either stative or dynamic, and the sentence gives rise to an affectedness reading in which something has happened to the road.

Experiencer. However, if the T/SM in (66) were specified as [-c -m], then by instruction (20c/67), it would be associated with accusative case, hence blocking accusative case marking of the Experiencer (see Rákosi 2006: 65, who observes that the choice between [-m] ad [-c -m] clusters in the Theta System has consequences for case marking). For this reason, it is necessary to propose two distinct feature specifications for the T/SM argument, one for the T/SM argument of stative OE verbs with Experiencers in the accusative, and another for the T/SM of OE verbs with dative Experiencers, even though they are semantically alike.

In the Theta System, dative Experiencers of verbs like *appeal to* are treated as part of an unaccusative structure (Reinhart 2000, 2002). The dative Experiencer of a dyadic predicate (as in (71)) is associated with the feature [-c] and is merged internally by instruction (20a). The [-c +m] specification of the Experiencer, in turn, allows for its internal or external merge, as was shown in section 4.2. Since dative Experiencers of dyadic predicates disallow an unergative derivation, they must be specified as simply [-c]. In spite of being [-c], the dative Experiencer, as in (71) above, must be interpreted in the semantics as [-c +m], following Marelj (2004: 68). This allows for the satisfaction of the Principle of Full Interpretation, reproduced in (73) below:

(73) The Principle of Full Interpretation
      For the purposes of interpretation all clusters must be fully specified.

                                                              (Marelj 2004: 67)

The Principle in (73) predicts that the unary [-c] cluster, as in (72), must be expanded to [-c +m]. This happens in the semantics, but not in the syntax (Marelj 2004: 69). The reason for positing the Principle of Full Interpretation is related to the fact that the underspecified [-c] cluster associated with the dative Experiencer is ambiguous, and hence may be interpreted either as [-c -m] or as [-c +m]. If the two interpretations of the [-c] cluster were possible in (71), then the sentence *Detective stories appeal to Mark* would entail that *Mark appeals to detective stories*, which is not possible. Thus, in order to avoid illicit interpretations, underspecified clusters, such as [-c], must be fully specified in the semantics.

Since the entry of the verb in (71), provided in (72), contains two [-] clusters, both of which are marked with index 2, they are both merged internally. No accusative case is assigned, as the [+c] cluster is missing in this case. Subsequently, the [-c -m] cluster moves to Spec, TP to satisfy the EPP, deriving (71).[29] Case linking of the Experiencer in (72) is performed by means of a lexicon marking procedure, as in (74) below:

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[29]The movement of the dative Experiencer to Spec, TP, making it a quirky subject, is not possible in Polish (as well as in many other languages, including English and Hungarian; see Rákosi 2006: 68). This is confirmed by the fact that the verb always agrees in φ-features with the nominative subject, even when the dative Experiencer appears at the left periphery of the clause, as in (i) below:

(i) Mark-owi   podoba-ły   się   kryminał-y.
     Mark-DAT   appealed-PL REFL   detective.stories-NOM.PL
     'Detectives stories appealed to Mark.'

(74)   The unary clusters [-c] and [-m] require inherent case (or an adposition, depending on the morphological inventory of the language).

(Rákosi 2006: 37)

In addition to (74), Marelj (2013: 161) proposes the following linking procedure:

(75)   [-c] → DAT

The procedure in (75) determines that the [-c] cluster is assigned dative case, where [-c] corresponds not only to dative Experiencers, as in (71), but also to a Recipient/ Beneficiary/Goal (see (19) above).[30] As we shall see in section 5.3, Polish dative Experiencers do not pattern with Goals or Beneficiaries, which casts serious doubt on treating the former on a par with the latter.

5.3.   Problems for argument and case linking of Polish dative Experiencers in the Theta System

The most serious problem for argument linking of Polish dative Experiencers within the Theta System, presented in section 5.2, concerns the unaccusative status of OE verbs hosting this type of Experiencer. OE verbs with dative Experiencers in Polish seem to have an external argument, the Experiencer, and therefore they cannot be regarded as unaccusative. The evidence in favour of the external argument status of the dative Experiencer is based on binding. In Polish, reflexive pronouns are subject-oriented, that is, they are subject-bound (Willim 1989, Reinders-Machowska 1991). This is illustrated in (76):

(76) a. Marek-ø$_1$ opowiedział   Ew-ie$_2$ o   sobie$_{1/*2}$.
         Mark-NOM   told.PFV   Eve-DAT   about   himself/*herself
         'Mark has told Eve about himself.'
      b. Marek-ø   opowiedział   Ew-ie$_2$ o   swojej$_{1/*2}$ siostrze.
         Mark-NOM   told.PFV   Eve-DAT   about   self's$_{1/*2}$ sister
         'Mark has told Eve about his sister.'

In (76a) the anaphor *sobie* 'himself' may only be bound by the nominative subject *Marek* 'Mark', and can never be co-referential with the dative object *Ewie* 'Eve'. Likewise, the possessive anaphor *swój* 'self's in (76b) must be bound by the subject *Marek* 'Mark', not by the object *Ewa* 'Eve'. Since they are subject-oriented, anaphors in Polish cannot be bound by dative Goals (76a–b), an issue that is addressed below.

Dative Experiencers behave like external arguments in that they can bind anaphors.[31] This is noticeable in the case of dative Experiencers, found with non-

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[30]Reviewer 1 mentions that the Theta System of Reinhart (1996, 2000, 2002, 2016) is only meant to account for abstract Case, not morphological case. Here Marelj's (2013) expansion of the Theta System to morphological dative case is assumed.

[31]The syntactic behaviour of dative Experiencers in Polish with respect to subjecthood tests, such as raising, control, resumptive pronouns and binding is examined in Bondaruk and Szymanek (2007), Jiménez-Fernández and Rozwadowska (2017), and Citko et al. (2018). In fact, dative Experiencers behave like subjects only with respect to binding.

verbal predicates like *żal* 'regret/sorrow', *strach* 'fear', *wstyd* 'shame', *szkoda* 'pity', etc. (see Bondaruk and Szymanek 2007), as can be seen in (77):

(77) Mark-owi$_1$ jest   żal   siebie$_1$.
      Mark-DAT   is   sorrow   himself-GEN
      'Mark feels sorry for himself.'

The dative Experiencer in (77) binds the anaphor *siebie* 'himself', and thus behaves like a subject in sentences (76a–b) above. The non-verbal predicate in (77) is dyadic (the other argument beside the Experiencer, being the anaphor *siebie* 'himself'), not monadic, and consequently, it turns out to be problematic for the claim made in the Theta System that dative Experiencers of dyadic verbs merge internally (see section 5.2).[32] Although dative Experiencers with non-verbal predicates, as in (77), can bind anaphors, verbal predicates like *podobać się* 'to appeal to' resist anaphor binding by the dative Experiencer, as shown in (78):

(78) Mark-owi$_1$ podobaj-ą   się   *swoje$_1$/jego$_1$ obrazy.
      Mark-DAT   appeal-3PL   REFL   *self's/his   paintings-NOM
      'Mark likes his paintings.'

Example (78) contains the possessive anaphor *swój* 'self's'. The anaphor *siebie* 'himself' is impossible in (78), because it lacks nominative case, associated with the T/SM position of verbs like *podobać się* 'to appeal to'. The possessive anaphor is disallowed in (78), which might be taken to cast doubt on the claim made above that dative Experiencers act as external arguments with respect to binding. However, there is an independent explanation for why anaphors are impossible with OE verbs selecting dative Experiencers. The reason why anaphors are banned in sentences like (78) is related to the Anaphor Agreement Effect (AAE), first observed by Rizzi (1990), which specifies that anaphors cannot be found in sentence positions associated with agreement. In Polish, only nominative case marked nouns determine verbal agreement, and therefore an anaphor placed in the nominative case marked position is blocked by the AAE.[33] In (78), the possessive anaphor is contained within the nominative case marked nominal, and consequently, its occurrence is illicit under the AAE (see Gogłoza and Łęska 2018, who have confirmed the validity of the AAE in sentences with dative Experiencers in Polish via experimental

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[32]Reviewer 1 mentions the option of merging dative Experiencers in an external argument position with monadic psych predicates. This is possible with adverbial predicates like *smutno* 'sad', illustrated in (i) below, but not with predicates like *żal* 'regret/sorrow' in (77), which is clearly dyadic, not monadic. The same applies to the verb *podobać się* 'to appeal to', as in (79) below, which is clearly dyadic.

(i) Mark-owi   jest   smutno.
    Mark.DAT   is   sad
    'Mark is sad.'

[33]The possessive anaphor always agrees in φ-features and case with the noun it modifies, and therefore the possessive anaphor within the nominative case marked nominal is also marked for the nominative. The possessive pronoun, in turn, never agrees in case or φ-features with the nominal it modifies.

studies).[34] By contrast, an anaphor contained in a sentence with a non-verbal predicate like (77) is marked for the genitive, and therefore it is not blocked by the AAE. Despite the fact that the possessive anaphor in (78) is impossible due to the AAE, a possessive pronoun is perfectly legitimate in this case. However, if an anaphor with predicates like *podobać się* 'to appeal to' surfaces in a case different from the nominative, the dative Experiencer can bind it. This is the case in (79), taken from Witkoś (2008: 303–304):

(79) Nowak-om$_2$ spodobały   się   [nowe   książki-ø   Kowalsk-ich$_1$
      Nowak-PL.DAT   appealed.to   REFL   new   books-NOM   Kowalski-PL.GEN
      o   sobie$_{1/2}$].
      about   each other-LOC
      'The Nowaks liked the Kowalskis' new books about themselves/each other.'

In (79), the anaphor may be bound either by the possessive DP *Kowalskich* 'the Kowalskis'' or by the dative Experiencer *Nowakom* 'the Nowaks'. The anaphor *sobie* in (79) is embedded within the nominative T/SM and is marked for the locative, hence the AAE does not block it. A detailed analysis of the binding possibilities of OE verbs selecting dative Experiencers in Polish can be found in Witkoś and Meyer (2018); it is not elaborated on here due to space limitations.[35]

Since dative Experiencers in Polish can bind subject-oriented anaphors, provided the AAE does not block this possibility, we must conclude that they are external arguments (see Nikolaeva 2014 for a similar proposal concerning Russian Experiencers, and Citko et al. 2018, who argue that dative Experiencers in Polish are placed in Spec, vP). Consequently, OE verbs with dative Experiencers project the Experiencer in an external argument position, and therefore they cannot be viewed as unaccusative (contra Miechowicz-Mathiasen and Scheffler 2008).

The claim that OE verbs with dative Experiencers in Polish are not associated with an unaccusative structure raises a problem for the argument linking of dative Experiencers, proposed in the Theta System. As was noted in section 5.2, dative Experiencers of dyadic verbs are specified as [-c] in the lexicon, which guarantees

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[34]The AAE has been relied on in Bondaruk et al. (2017b) in order to block anaphor binding by accusative Experiencers in sentences such as (i) below:

(i) Mark-a$_1$ martwią   *swoje$_1$/jego$_1$ dzieci-ø.
     Mark-ACC   worry.3PL   *self's/his   children-NOM
     'His children worry Mark.'

Sentence (i) closely resembles (78), except for the case marking of the Experiencer.

[35]Reviewer 2 mentions the contrast in the binding potential of accusative and dative Experiencers in Polish. Actually, Tajsner (2008) notes that accusative Experiencers can also bind anaphors provided the anaphor is deeply embedded. This is illustrated in (i) below, taken from Tajsner (2008: 349):

(i) Mari-ę$_1$ irytowały   [historie-ø   ze   swojego$_1$ dzieciństwa].
     Marie-ACC   irritated.IPFV   stories-NOM   from   self's   childhood
     'Stories from her childhood irritated Mary.'

Tajsner (2008) as well as Witkoś et al. (2018) claim that there is speaker variation with regard to the acceptability of (i). All of the native speakers I consulted found an example like (i) to be unacceptable with an anaphor.

that they merge internally. This line of analysis is untenable for Polish dative Experiences of dyadic psych predicates, whose behaviour with respect to binding proves that they must merge externally. Moreover, the [-c] specification of dative Experiencers in Polish would make them identical to dative Goals. This, however, cannot be maintained, as dative Experiencers can act as anaphor binders, as shown in (79) above, whereas dative Goals never bind anaphors, as demonstrated in (76a–b). The problem of the theta features associated with dative Experiencers cannot be solved by simply treating them on a par with accusative Experiencers, that is as [-c +m], because this kind of mixed cluster may be merged not only externally, as required for dative Experiencers, but also internally. This is due to the fact that this cluster is not marked in any way in the lexicon (see (20)). It is not possible to force the external merge of the dative Experiencer by the EPP, due to the fact that the Experiencer never occupies the Spec, TP position, (evidenced by the fact that it never controls verbal agreement (see footnote 29)). It is the nominative case marked T/SM argument that always determines verbal agreement in the structures under consideration and it normally fills the Spec, TP position.[36] Consequently, we are left with no lexical entry for dative Experiencers in Polish, and hence we cannot derive the dative case of the Experiencer from its theta specifications. All in all, dative Experiencers in Polish give rise to insurmountable problems for the Theta System and its extension, proposed to account for the morphological dative case by Marelj (2013).

6. CONCLUSIONS

The article has aimed to test how well the Theta System of Reinhart (1996, 2000, 2002, 2016) can account for the linking puzzles typical of Experiencers cross-linguistically, with a special focus on Polish. It has been demonstrated that the model makes good predictions for the mapping of Subject and Object Experiencers in Polish. The analysis of the OE/SE verb alternations in this language has shown that the Theta System can account without any problem for the fact that Object Experiencers in

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[36]The nominative T/SM fills Spec, TP in sentences like (71). Reviewer 2 asks about how the derivation of verbs with accusative Experiencers differs from those hosting dative Experiencers in Polish. Assuming that the Experiencer always c-commands the T/SM (see Pesetsky 1995, Landau 2010), in the T/SM first word order, as in (i) below, OE verbs with accusative Experiencers involve the smuggling type of movement, whereby the T/SM comes to be placed above the Experiencer and hence becomes a closer goal for T to undergo Agree with. For these OE verbs, I follow Wiland's (2016) account, involving remnant movement, modelled on Belletti and Rizzi's (2012) proposal made for Italian.

(i) Głupie   gadanie-ø   irytuje   Mark-a.
    idle   talk-NOM   irritates Mark-ACC
    'Idle talk irritates Mark.'

The T/SM first order of OE verbs with dative Experiencers, as in (71), does not involve any smuggling, as the dative case of the Experiencer is inherent. As such, it does not count for the purposes of the Defective Intervention Effect (Chomsky 2000), and does not block the movement of the T/SM to Spec, TP. A complete analysis of Experiencer-first and T/SM-first word order with psych verbs in Polish within Chomsky's (2008) feature inheritance model may be found in Bondaruk (2019).

Polish can be mapped either internally or externally, whereas Subject Experiencers are always merged externally. Consequently, SE alternants of eventive OE verbs in Polish, and in other languages, are always unergative, not unaccusative, contra Alexiadou and Iordăchioaia (2014). Although the Theta System can account for the argument linking of Polish Experiencers, it turns out to be problematic for non-alternating OE verbs of Class III in Belletti and Rizzi's (1988) typology, that is, those with the Experiencer marked with dative case. In the Theta System, the dative Experiencer of a dyadic psych predicate represents a part of an unaccusative structure, and hence always merges internally. It has been argued that dative Experiencers found with dyadic psych predicates in Polish show the hallmarks of external arguments, and therefore must merge externally. However, the external position of Polish dative Experiencers of dyadic psych verbs cannot easily be incorporated into the Theta System. There are two further aspects of the Theta System that are problematic for Experiencers in any language. The first problem relates to the requirement that the [+c] cluster be present in the lexical entry of stative OE verbs, even though it is never lexicalised. This stipulation has been made in the Theta System to be able to assign accusative case to the Experiencer, in line with Burzio's (1986) Generalisation. This generalisation, however, has been demonstrated in the literature to be empirically wrong. Another problematic issue in the Theta System concerns the different feature specifications of T/SM arguments found with stative OE verbs and co-occurring with Experiencers marked either for accusative or dative. Positing two different feature clusters for the T/SM argument with the two types of Experiencer is not semantically motivated, but is necessary in order to handle the different case marking of the Experiencer; this proposition has only a theory-internal motivation. Consequently, the Theta System is capable of accounting for some of the puzzles surrounding Experiencers, while some others remain unexplained by the model.

REFERENCES

Alexiadou, Artemis. 2016. English psych verbs and the causative alternation: A case study in the history of English. *Questions and Answers in Linguistics* 3(2): 1–14.

Alexiadou, Artemis, and Gianina Iordăchioaia. 2014. The psych causative alternation. *Lingua* 148: 53–79.

Artemis Alexiadou, Elena Anagnostopoulou, and Martin Everaert, eds. 2004. *The unaccusativity puzzle. Explorations of the syntax-lexicon interface*. Oxford: Oxford University Press.

Alexiadou, Artemis, Elena Anagnostopoulou, and Florian Schäfer. 2006. The properties of anticausatives crosslinguistically. In *Phases of interpretation*, ed. Mara Frascarelli, 187–211. Berlin: Mouton de Gruyter.

Anagnostopoulou, Elena. 1999. On Experiencers. In *Studies in Greek syntax*, ed. Artemis Alexiadou, Geoffrey Horrocks, and Melita Stavrou, 67–93. Dordrecht: Kluwer.

Arad, Maya. 1998a. Psych-notes. *UCL Working Papers in Linguistics* 10: 203–223. London: University College London.

Arad, Maya. 1998b. VP-structure and the syntax-lexicon interface. MIT Occasional Papers in Linguistics #16. Cambridge, MA: Massachusetts Institute of Technology.

Arad, Maya. 1999. What counts as a class? The case of psych verbs. *MIT Working Papers in Linguistics* 35:1–23.

Arad, Maya. 2002 Universal features and language-particular morphemes. In *Theoretical approaches to universals*, ed. Artemis Alexiadou, 15–39. Amsterdam: John Benjamins.

Baker, Mark. 1988. *Incorporation. A theory of grammatical function changing*. Chicago: University of Chicago Press.

Belletti, Adriana, and Luigi Rizzi. 1988. Psych-verbs and θ-theory. *Natural Language and Linguistic Theory* 6(3): 291–352.

Belletti, Adriana, and Luigi Rizzi. 2012. Moving verbal chunks in the low functional field. In *Functional heads and the cartography of syntactic structures*. vol. 7, ed. Laura Brugé, Anna Cardinaletti, Giuliana Giusti, Nicola Munaro, and Cecilia Poletto, 129–137. Oxford: Oxford University Press.

Bennis, Hans. 2004. Unergative adjectives and psych verbs. In *The unaccusativity puzzle. Explorations of the syntax-lexicon interface*, ed. Artemis Alexiadou, Elena Anagnostopoulou, and Martin Everaert, 84–114. Oxford: Oxford University Press.

Biały, Adam. 2005. *Polish psychological verbs at the lexicon-syntax interface in cross-linguistic perspective*. Frankfurt am Main: Peter Lang.

Bondaruk, Anna. 2019. The syntax of accusative and dative Experiencers in Polish. Ms., John Paul II Catholic University of Lublin.

Bondaruk, Anna, and Bogdan Szymanek. 2007. Polish nominativeless constructions with dative Experiencers: Form, meaning and structure. *Studies in Polish Linguistics* 4: 61–99.

Bondaruk, Anna, Bożena Rozwadowska, and Wojciech Witkowski. 2017a. Passivisation of Polish Object Experiencer verbs vs. the unaccusativity hypothesis (Part 1). *Studies in Polish Linguistics* 12(2): 57–73.

Bondaruk, Anna, Bożena Rozwadowska, and Wojciech Witkowski. 2017b. Passivisation of Polish Object Experiencer verbs vs. the unaccusativity hypothesis (Part 2). *Studies in Polish Linguistics* 12(3): 123–144.

Borer, Hagit. 2003. Exo-skeletal vs. endo-skeletal explanations: Syntactic projections and the lexicon. In *The nature of explanation in linguistic theory*, ed. John Moore and Maria Polinsky, 31–67. Stanford, CA: CSLI Publications.

Borer, Hagit. 2005. *The normal course of events*. Oxford: Oxford University Press.

Burzio, Luigi. 1986. *Italian syntax: A government-binding approach*. Dordrecht: Reidel.

Cetnarowska, Bożena. 2000. The unergative/unaccusative distinction in Polish. In *Proceedings of GLiP-1*, ed. Piotr Bański and Adam Przepiórkowski, 35–46. Warszawa: IPIPAN.

Cetnarowska, Bożena. 2002. Unaccusativity mismatches and unaccusativity diagnostics from Derivational Morphology. In *Many morphologies*, ed. Paul Boucher and Marc Plénat, 48–81. Somerville, MA: Cascadilla Press.

Chierchia, Gennaro. 2004. A semantics for unaccusatives and its syntactic consequences. In *The unaccusativity puzzle. Explorations of the syntax-lexicon interface*, ed. Artemis Alexiadou, Elena Anagnostopoulou, and Martin Everaert, 22–59. Oxford: Oxford University Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step*, ed. Roger Martin, Daniel Michaels, and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory. Essays in honor of Jean-Roger Vergnaud*, ed. Robert Freidin, Carlos P. Otero, and Maria L. Zubizarreta, 134–166. Cambridge, MA: MIT Press.

Citko, Barbara, Allison Germain, and Jacek Witkoś. 2018. If you cannot agree, move on! On Labels and non-nominative subjects. *Glossa* 3(1): 1–46.

Everaert, Martin, Marijana Marelj, and Tal Siloni. 2012. The Theta System: An introduction. In *The Theta System. Argument structure at the interface*, ed. Martin Everaert, Marijana Marelj, and Tal Siloni, 1–19. Oxford: Oxford University Press.

Everaert, Martin, Marijana Marelj, and Eric Reuland, eds. 2016. *Concepts, syntax and their interface. The Theta System.* Cambridge, MA: MIT Press.

Gogłoza, Aleksandra, and Paulina Łęska. 2018. Settling the unsettled – in search for the base-generated position of the Polish Experiencer dative. Paper presented at Berlin Dative Days, Humboldt University, Berlin.

Grimshaw, Jane. 1990. *Argument structure.* Cambridge, MA: MIT Press.

Haegeman, Liliane. 1986. The double object construction in West Flemish. *The Linguistic Review* 5(4): 281–299.

Haider, Hubert. 1985. The case of German. In *Studies in German grammar*, ed. Jindrich Toman, 65–101. Dordrecht: Foris.

Hoekstra, Teun. 1984. *Transitivity.* Dordrecht: Foris.

Jiménez-Fernández Ángel, and Bożena Rozwadowska. 2017. On subject properties of datives in psych verbs: A comparative approach. *Acta Linguistica Academica* 64(2): 233–256.

Jurth, Réka. 2017. On alternating experiencer verbs in Hungarian. In *Constraints on structure and derivation in syntax, phonology and morphology*, ed. Anna Bloch-Rozmej and Anna Bondaruk, 131–157. Frankfurt am Main: Peter Lang.

Jurth, Réka. 2018. On subject experiencer verbs in Hungarian. In *Studies in formal linguistics: Universal patterns and language specific parameters*, ed. Anna Bloch-Rozmej and Anna Bondaruk, 111–133. Berlin: Peter Lang.

Kibort, Anna. 2004. Passive and passive-like constructions in English and Polish. Doctoral dissertation, University of Cambridge.

Kibort, Anna. 2008. Impersonals in Polish: An LFG perspective. *Transactions of the Philological Society* 106(2): 246–289.

Landau, Idan. 2010. *The locative syntax of Experiencers.* Cambridge, MA: MIT Press.

Lavine, James, and Steven Franks. 2008. On accusative first. In *Formal approaches to Slavic linguistics 16*, ed. Andrei Antonenko, John F. Bailyn, Christina Y. Bethin, and Jindrich Toman, 231–247. Ann Arbor, MI: Michigan Slavic Publications.

Levin, Beth. 1993. *English verb classes and alternations.* Chicago: University of Chicago Press.

Levin, Beth, and Malka Rappaport Hovav. 1995. *Unaccusativity. At the syntax–lexical semantics interface.* Cambridge, MA: MIT Press.

Malicka-Kleparska, Anna. 2012. Decausatives in Polish: A non-reflexive analysis. *Studies in Polish Linguistics* 7(1): 83–105.

Marantz, Alec. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. *University of Pennsylvania Working Papers* 4(2): 201–225.

Marelj, Marijana. 2004. Middles and argument structure across languages. Doctoral dissertation, University of Utrecht. Utrecht: LOT Publications.

Marelj, Marijana. 2013. Experiencing linking. Psych verbs at the interface. In *Argument structure in flux. The Naples-Capri papers*, ed. Elly van Gelderen, Johanna Barðdal, and Michela Cennamo, 135–168. Amsterdam: John Benjamins.

Marelj, Marijana, and Eric Reuland. 2016. Clitics and reflexives: Reducing the lexicon-syntax parameter. In *Concepts, syntax, and their interface. The Theta System*, ed. Martin Everaert, Marjana Marelj, and Eric Reuland, 175–252. Cambridge, MA: MIT Press.

Marín, Rafael, and Louise McNally. 2011. Inchoativity, change of state, and telicity: Evidence from Spanish reflexive psychological verbs. *Natural Language and Linguistic Theory* 29(2): 467–502.

Medová, Lucie. 2009. Reflexive clitics in the Slavic and Romance languages. A comparative view from an antipassive perspective. Doctoral dissertation, Princeton University.

Miechowicz-Mathiasen, Katarzyna, and Paweł Scheffler. 2008. A corpus-based analysis of the peculiar behavior of the Polish verb *podobać się*. In *Elements of Slavic and Germanic grammars. A comparative view*, ed. Jacek Witkoś and Gisbert Fanselow, 89–111. Frankfurt am Main: Peter Lang.

Nikolaeva, Liudmila. 2014. The secret life of pronouns. Doctoral dissertation, Massachusetts Institute of Technology.

Perlmutter, David, and Paul Postal. 1984. The 1-Advancement Exclusiveness Law. In *Studies in Relational Grammar*, ed. David Perlmutter and Carol Rosen, 171–216. Chicago: Chicago University Press.

Pesetsky, David. 1982. Paths and categories. Doctoral dissertation, Massachusetts Institute of Technology.

Pesetsky, David. 1995. *Zero Syntax: Experiencers and cascades*. Cambridge, MA: MIT Press.

Pylkkänen, Line. 2000. On stativity and causation. In *Events as grammatical objects: The converging perspective of lexical semantics and syntax*, ed. Carol Tenny and James Pustejovsky, 417–444. Stanford, CA: CSLI Publications.

Rákosi, György. 2006. Dative Experiencer predicates in Hungarian. Doctoral dissertation, University of Utrecht. Utrecht: LOT Publications.

Reinders-Machowska, Ewa. 1991. Binding in Polish. In *Long-distance anaphora*, ed. Jan Koster and Eric Reuland, 137–150. Cambridge: Cambridge University Press.

Reinhart, Tanya. 1996. Syntactic effects of lexical operations: Reflexives and anticausatives. *UiL-OTS Working Papers*. Utrecht: University of Utrecht.

Reinhart, Tanya. 2000. The Theta System: Syntactic realization of verbal concepts. *UiL-OTS Working Papers*. Utrecht: University of Utrecht.

Reinhart, Tanya. 2001. Experiencing derivations. In *Proceedings of Semantics and Linguistic Theory 11*, ed. Rachel Hastings, Brendan Jackson, and Zsofia Zvolenszky, 417–444. Ithaca, NY: CSC Publications.

Reinhart, Tanya. 2002. The Theta System – An overview. *Theoretical Linguistics* 28(3): 229–290.

Reinhart, Tanya. 2016. The Theta System: Syntactic realization of verbal concepts. In *Concepts, syntax, and their interface. The Theta System*, ed. Martin Everaert, Marijana Marelj, and Eric Reuland, 1–113. Cambridge, MA: MIT Press.

Reinhart, Tanya, and Tal Siloni. 2005. The lexicon-syntax parameter: Reflexivisation and other arity operations. *Linguistic Inquiry* 36(3): 389–436.

Rizzi, Luigi. 1990. On the anaphor-agreement effect. *Rivista di Linguistica* 2: 27–42.

Rothmayr, Antonia. 2009. *The structure of stative verbs*. Amsterdam: John Benjamins.

Rozwadowska, Bożena. 2007. Various faces of the psych-phenomenon in Polish. In *Investigations into formal Slavic linguistics*, ed. Peter Kosta and Lila Schürcks, 557–575. Frankfurt am Main: Peter Lang.

Rozwadowska, Bożena. 2012. On the onset of psych eventualities. In *Sound, structure and sense. Studies in memory of Edmund Gussmann*, ed. Eugeniusz Cyran, Henryk Kardela, and Bogdan Szymanek, 533–554. Lublin: Wydawnictwo KUL.

Schoorlemmer, Maike. 1995. Participial passives and aspect in Russian. Doctoral dissertation, University of Utrecht.

Svenonius, Peter. 2010. Spatial P in English. In *Mapping special PPs: The cartography of syntactic structures*, ed. Guglielmo Cinque and Luigi Rizzi, 127–160. Oxford: Oxford University Press.

Tajsner, Przemysław. 2008. *Aspects of the grammar of focus*. Frankfurt am Main: Peter Lang.

Wiland, Bartosz. 2016. Le charme discret of remnant movement: Crossing and nesting in Polish OVS sentences. *Studies in Polish Linguistics* 11(3): 133–165.

Willim, Ewa. 1989. *On word order: A Government-binding study of English and Polish*. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.

Williams, Edwin. 1981. Argument structure and morphology. *The Linguistic Review* 1: 81–114.

Witkoś, Jacek. 1998. *The syntax of clitics. Steps towards a minimalist account*. Poznań: Motivex.

Witkoś, Jacek. 2008. On the correlation between A-type scrambling and lack of Weak Crossover effects. *Studia Anglica Posnaniensia* 44: 297–327.

Witkoś, Jacek, Dominika Dziubała-Szrejbrowska, and Paulina Łęska. 2018. Binding as Agree and Index Raising: The case of Polish accusative Object Experiencers. *Poznań Studies in Contemporary Linguistics* 54(4): 469–507.

Witkoś, Jacek, and Roland Meyer. 2018. Dative and accusative arguments as antecedents for reflexives in Polish. Paper presented at Berlin Dative Days, Humboldt University, Berlin.

Woolford, Ellen. 1993. Symmetric and asymmetric passives. *Natural Language and Linguistic Theory* 11(4): 679–728.

Woolford, Ellen. 1997. Four-way Case systems: Ergative, nominative, objective and accusative. *Natural Language and Linguistic Theory* 15(1): 181–227.