This paper aims to account for peculiar binding properties of dative arguments in Polish: objects and dative object experiencers. Polish reflexive pronouns are (nom- inative) subject oriented, they can be bound by dative experiencers (Miechowicz-Mathiasen & Scheffler 2008; Witkoś 2007). At the same time, object experiencers, unlike nominative subjects, are also proper antecedents for both reflexive and pronominal possessives. This mixed behaviour poses a puzzle for traditional and novel formulations of binding theory, which assume complementarity between anaphors and pronominals and plainly states that the subject is the privileged binder in Slavic. We base our analysis on the concept of index raising, where the undifferentiated anaphoric/pronominal element is (covertly) moved and adjoined to $v$ or $T$ (Safir 2014; Nikolaeva 2014). The distribution of the two spellout forms of the anaphoric or pronominal elements is determined by its landing site and the case position of the binder.

**Keywords:** binding, psych verbs, dative antecedents, dative object experiencers, Polish
1 Introduction

A-binding has been a chief area of research in comparative linguistics since the early 80s (Chomsky 1981; 1986; Manzini & Wexler 1987; Belletti & Rizzi 1988; Rappaport 1986; Willim 1989; Burzio 1996; Hellan 1988; Progovac 1992; 1993; Avrutin 1994; among others) when the foundations for modern theory of binding were laid. It very soon became transparent that binding phenomena were subject to parametric differences involving such notions as the size of the binding domain, the morphology of the anaphoric element and the choice of the privileged binder. This paper touches upon the last aspect of the parametric difference, namely the strict subject orientation of anaphors in Polish (and other Slavic languages) as well as certain conditions which dative arguments must meet to qualify for binders; it turns out that even when dative arguments happen to be supreme arguments in particular structures, they do not fully mimic the behaviour of nominative subjects as binders.

Polish is a subject-oriented binding language, and objects, either dative or accusative-marked ones, cannot bind anaphors in other object/adjunct positions (Willim 1989; Reinders-Machowska 1991; Rappaport 1986 for almost identical data in Russian), as presented in (1).

(1) a. Jan_1 pokazał Marii_2 [{swoje_1:*2 / jej_2 / *jego_1} zdjęcie].
   Jan.NOM showed Maria.DAT self.POSS her his picture.ACC
   ‘Jan showed Maria his/her picture.’

   b. Jan_1 zawierzył córkę_2 [{swojej_1:*2 / jej_2 / *jego_1} patronce].
   Jan.NOM entrusted daughter.ACC self.POSS her his patron.DAT
   ‘Jan entrusted his daughter to his/her patron.’

   c. Jan_1 opowiedział Marii_2 [o {sobie_1:*2 / ?niej_2} {samej} / *nim_1].
   Jan.NOM told Maria.DAT about self her alone him
   ‘Jan told Maria about himself/her.’

Both the reflexive pronoun and the reflexive possessive seem to be oriented towards the nominative subject, while dative and accusative objects are infelicitous binders in (1).

In certain constructions referring to psychological states, dative arguments bind anaphoric pronouns but allow for optionality with pronominal/reflexive possessives.
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(2) a. Marii₁ było żal {siebie₁ / *jej₁} (samej).
Maria.DAT was.3SG.N sorrow.3SG.M self.GEN her.GEN alone
‘Maria felt sorry for herself.’

b. Marii₁ było żal {swojej₁ / jej₁} koleżanki.
Maria.DAT was.3SG.N sorrow.3SG.M self.POSS her friend.GEN.F
‘Maria felt sorry for her female friend.’

The psychological predicate podobać się ‘appeal to’ shows variable behaviour: when bound, the possessive pronoun in the nominative argument is strongly preferred to the possessive reflexive, as in (3). However, Witkoś (2007; 2008) shows that a preverbal dative-marked argument can be involved in anaphoric binding into the nominative-marked constituent (cf. (4)):¹

(3) Marii₁ spodobała się {?*swoja₁ / jej₁} nowa sukienka.
Maria.DAT liked Refl self.POSS her new dress.NOM
‘Maria liked her new dress.’

(4) [Nowak₁₂] spodobała się [nowa książka (Kowalskic₁) o sobię₁₂] 
[Nowaks.DAT liked Refl new book.NOM Kowalskis.POSS about self]
‘The Nowaks liked the new book (by the Kowalskis) about themselves/them.’

We address these issues by developing and updating an approach to binding based on Nikolaeva’s (2014) INDEX RAISING (IR) and Despíc (2013; 2015). In the view of the data in (2) and (4), our goal is to explain why dative antecedents in constructions with psychological verbs, (2b), allow for the option of binding both reflexive and pronominal possessives, while the nominative antecedent allows only for the reflexive possessive variant.² We submit that these different binding properties are due to different positions occupied by nominative and dative antecedents, namely SpecTP and SpecvP, respectively. We also claim that data such

¹A detailed analysis of dative object experiencers of both verbal and non-verbal psychological predicates remains beyond the scope of this contribution. Recent analyses are presented in Jimenez-Fernandez & Rozwadowska (2016) and in Bondaruk (2017).

²We will not take into consideration reciprocal constructions in Polish, whose properties are markedly distinct from reflexives and identical to Russian reciprocals (Willim 1989; Reinders-Machowska 1991; Rappaport 1986 for Russian). For instance, in contrast to reflexives, reciprocals are not subject oriented and can be bound by the object as well. In terms of the IR-based analysis, reciprocal pronouns in Polish do not undergo IR.
as (3), though plentiful, are encumbered with an additional complicating factor in the form of the Anaphor Agreement Effect (AAE, Rizzi 1990; Progovac 1992; 1993; Woolford 1999; Reuland 2011) and they deserve a slightly different treatment. The most straightforward diagnostics for determining the binding potential of the dative argument involves cases when it binds (into) non-nominative elements (so (2) rather than (3)).

The paper is organized as follows. In §2, we present an outline of our theory of binding, with emphasis on our version of the IR theory articulated in Nikolaeva (2014), modified in line with Bošković (2005; 2012; 2013; 2014) and Despić (2011; 2013; 2015). §3 provides our account of binding in structures with dative arguments. We show why the dative argument of the ditransitive verb cannot bind reflexive elements, we analyse the position and binding option of the dative object EXPERIENCER (OE). §4 concludes the paper.

2 Components of the analysis

Our account of anaphoric binding in Polish follows from and draws from a triplet of sources: (A) approaches which stress the need for (covert) anaphor raising to some functional head position, usually Infl or T (Vikner 1985; Chomsky 1986; Pica 1987; 1991; Hestvik 1992; Avrutin 1994; Nikolaeva 2014), (B) approaches which stress the morphological impoverishment of the anaphoric elements (Burzio 1991; 1996; Safir 2014), and (C) approaches that recognize the notion of derived complementarity (Hellan 1988; Safir 2004; Boeckx et al. 2008).

(A) The most identity dependent form in (1), be it anaphoric, personal or possessive, is overlaid with lexical content late in the derivation, at Spell-Out. It is introduced into initial numeration as an undefined element, the most dependent form, called D-bound in Safir (2014), the index in Nikolaeva (2014), or root-pron in Heinat (2008). Safir (2014: 91–92) defines properties of D-bound/index in the following way:

(5) a. Always a variable: D-bound is the same object in sem (the syntactic input to semantic interpretation) in all cases; it is interpreted as a bound variable regardless of its φ-features.

b. Always A-bound: the binder of D-bound (its antecedent) must c-command it from an A-position; that is, the D-bound form is A-bound. (We further narrow down the definition of A-position to the position where the antecedent has its case valued).
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c. Always feature compatible: D-bound must be feature compatible with its antecedent (informally, this property may be termed antecedent agreement).

d. Spell-Out of the morphological shape of D-bound is potentially sensitive to whether A-binding is phase internal:
   - agreement compatible with morphological shape may be determined by phase internal factors locally distinct from antecedent agreement;
   - D-bound enters the derivation with $\varphi$-features arbitrarily assigned to it;
   - anywhere phase-internal shape is not required, D-bound receives default pronominal shape.

(B) The D-bound/index is impoverished in its feature composition, very much like the lexical anaphor in Polish, in that it has a $[\neg \text{var}]$ feature.\(^3\) The underspecification of this feature forces the index to move to a position where this interpretive impoverishment can be compensated for, in line with a similar procedure for semantically and morphologically deficient pronominal clitics in Béjar & Rezac (2003) and Franks (2017; Forthcoming).\(^4\)

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\(^3\)The Polish reflexive pronoun and the reflexive possessive inflects for case but not for person, number and gender. The reflexive pronoun *siebie* 'self' also has a weak/clitic form *się* but we leave this issue aside in this paper.

\(^4\)Franks (2017; Forthcoming) claims that clitics are deficient in three respects: prosodically, semantically and syntactically:

(i) The prosodic deficiency: Clitics cannot project prosodic feet. (Franks 2017: 147)

(ii) The semantic deficiency:
   a. Clitics cannot instantiate lexico-conceptual features.
   b. A clitic may not have [+person] features (either entirely or only subcomponents [Participant [Author]] of the 1st/2nd person).

(iii) The syntactic deficiency: Clitics cannot express syntactic complexity (they are heads).

In our analysis, the index does not show prosodic deficiency. Following Cardinaletti & Starke (1994) and Béjar & Rezac (2003), Franks (2017) proposes that [+person] must be licensed by entering into an agree relation with a functional category.
The index moves from its thematic/case position to the head v/T, but it is not phonologically impoverished the way clitics are. This is why its movement forms a chain in which the copy is pronounced. In short: we take the relation of binding to hold between the antecedent c-commanding D-bound/index from its case position. The spell-out form of D-bound/index is determined by its movement to v/T.

Nikolaeva (2014), building on Chomsky (1986); Vikner (1985); Pica (1987; 1991); Hestvik (1992) and Avrutin (1994), proposes that the lexicalisation of D-bound/index depends on IR. We modify her original proposal as in Figure 1.

The diagrams in Figure 1 and Figure 2 show the placement of arguments in both the construction with ditransitive verbs and psychological predicates. In Figure 1 the direct object is the complement to V0, the indirect object occupies SpecVP, from which it c-commands NP1. The position of the dative experiencer in SpecvP corresponds to the dative in (2)–(4) with psychological predicates. As the diagrams above show, we assume two distinct positions for dative goals, bene- and malefactives (NP2 in SpecVP) and dative OEs (SpecvP). We follow Larson (1988; 1990; 2014) for the placement of the former and Woolford (2006) for the placement of the latter. Two positions are reserved for the agentive subject: the

A similar idea of an element raising (to the edge of the vP phase) and having its copy pronounced as reflexive is applied in an analysis of binding in German in Safir (2004) and in Lee-Schoenfeld (2008: 291). According to the latter source the licensing of sich ‘self’ co-indexed with mother requires covert movement:

(i) Die Mutter lässt [vP die Kleine {sich?/i / ihr?/j} die Schokolade in den Mund stecken].
‘The mother lets the little girl stick the chocolate in her mouth.’

A reviewer for this volume expresses doubts as to whether a non-phonological clitic such as our D-bound/index should behave movement-wise like a clitic and pick the same landing site v0/T0. This reservation can be addressed in a number of ways. First, let us point out that in terms of their syntax non-clitic elements can be ambiguous between X0/XP status and participate in head movement irrespective of their phonological properties; after all, clitic movement constitutes a subset of head movement. Second, in one of its multiple functions the Polish clitic się ‘self’ serves as the clitic form replacement of the reflexive pronoun siebie ‘self’. Importantly, the distribution of this type of się ‘self’ fully overlaps with the distribution of clitic/weak pronouns and the span of the binding domain in Polish.

We claim that this overlap is not accidental but due to the same underlying operation: movement of D-bound/index and clitic/weak pronoun to the same functional head placed outside VP. Third, there are fruitful analyses of grammatical phenomena in Germanic (scrambling) and Romance languages, which link abstract (covert) clitic elements with overt non-clitic phenomena, such as Sportiche (1996) and the concept of “clitic voices”.

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bottom of its A-chain in SpecvP and the top of its A-chain in SpecTP. The gist of the lexicalisation procedure is as follows (Nikolaeva 2014: 68):

(6)  
   a. **Movement**: an index (marked as RFL/PRN in Figure 1–Figure 2) must undergo IR unless it is at a lexicalisation site or movement is no longer possible.
   b. **Lexicalisation site**: an index is a sister to a node with label D⁰/v⁰/T⁰ and is c-commanded by a specifier,
   c. **Co-argumental Lexicalisation**: if an index is at a reflexivization site and is coindexed with a specifier which is its co-argument, the index has to be realized as reflexive.
   d. **Lexicalisation at spell-out**: when the sentence is sent to spell-out, if an index is coindexed with a specifier of the projection to which it is adjoined, the index has to be realized as reflexive.
   e. **Pronominal is an elsewhere condition**: if an index has not been realized as reflexive, it is realized as pronominal.
As VP is not a lexicalisation site by definition, the overt position of the index (pronoun or anaphor) is mostly ignored in the calculation of its spell-out form. IR is closely linked to ideas concerning clitic movement, see Sportiche (1996); Kayne (1985; 1991); Roberts (1992; 1993) in the GB tradition. Clause in (6e) clearly corresponds to the competition-based approach to binding, see Safir (2004), and the movement-based approach, see (Hornstein 2001; Boeckx et al. 2008), where the pronoun is the default ‘elsewhere’ option wherever the reflexive cannot be licensed.

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Figure 2: Index positions: A psychological predicate with acc/dat experiencer

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Exceptions include clause (6c) and co-argumental reflexivisation, where pronouns show not only strong anti-subject orientation but also anti-object orientation:

(i) a. * Mama₂ pokazała Marii₁ ją₁/₂ (w lustrze).
    mother showed Mary.DAT her.ACC in mirror
    Intended: ‘Mother showed her to Maria (in the mirror).’

b. * Mama₂ pokazała Marię₁ jej₁/₂ (w lustrze).
    mother showed Mary.ACC her.DAT in mirror
    Intended: ‘Mother showed Maria to her (in the mirror).’

This issue remains beyond the scope of the current contribution but see Gogłoza et al. (Forthcoming) for a detailed analysis couched in the IR framework.
Let us sketch three derivations illustrating the mechanics of the system. Safir (2014) proposes the following derivation for an English example:

\[(7)\quad \begin{align*}
\text{a. } \text{John} & \text{ praised } \{ \text{himself}_1/\text{*him}_1/\text{him}_2 \}. \\
\text{b. } [_{\text{VP}} \text{John} [_{\text{v}} \text{v} [_{\text{VP}} \text{praise D-bound+3sg}]]] \\
\text{c. } [_{\text{TP}} \text{John} [_{\text{T}} \text{T} [_{\text{VP}} \text{John} [_{\text{v}} \text{v} [_{\text{VP}} \text{praise himself}]]]]]
\end{align*}\]

D-bound/index is merged in with unvalued φ-features assigned to it. John is the antecedent for D-bound/index and because John is the phase edge, the D-bound/index spells out in the shape indicating phase-internal dependency (the -self form in English). The major difference between Polish reflexive forms and the English ones is that the D-bound/index in Polish is impoverished in its feature composition, very much like the Polish lexical anaphor, in that it has an underspecified slot for [+φ] features. We take this underspecification to allow for the copying of the φ-features from the antecedent but not for their expression in situ. The expression of these features takes place only upon the movement of the D-bound/index to v and T (see Béjar & Rezac 2003 and Franks 2017 for a corresponding notion of clitic movement to a compensatory position for [+person] expression):

\[(8)\quad \begin{align*}
\text{a. } \text{Jan}_1 \text{ zobaczyl } \{ \text{siebie}_1/\text{*jego}_1 \}. \\
\quad \text{Jan noticed self.ACC him.ACC} \\
\quad \text{Jan noticed himself.} \\
\text{b. } \text{Binding} \\
\quad [_{\text{VP}} \text{Jan}_1 [_{\text{v}} \text{v +3sg}_1 - \text{v} [_{\text{VP}} \text{noticed D-bound[#φ]} ]]] \\
\quad \uparrow \\
\text{c. } \text{φ-expression} \\
\quad [_{\text{VP}} \text{Jan}_1 [_{\text{v}} \text{v} \text{okD-bound+3sg}_1 - \text{v} [_{\text{VP}} \text{noticed D-bound[#φ]} ]]] \\
\quad \uparrow \\
\text{d. } \text{Spell-Out} \\
\quad [_{\text{TP}} \text{Jan}_1 [_{\text{T}} \text{T} [_{\text{VP}} \text{Jan}_1 [_{\text{v}} \text{v} \text{okD-bound+3sg}_1 - \text{v} [_{\text{VP}} \text{noticed self}]]]]]] \\
\quad \uparrow \\
\end{align*}\]

In (8a) the D-bound/index is bound in its base position (it copies the φ-features of its antecedent). In Witkoś et al. (Forthcoming), we treat A-binding as upward agree for feature [+variable], following Hicks (2009) rather than plain phi-feature copying. Here, the index meets Safir’s (2014) condition of local antecedent agreement of (5c). The φ-features on D-bound/index cannot be expressed in its base
position and this morpho-syntactic deficiency forces the index to move to $v^0$ in (8b), forming a chain. At the point of spell-out of the vP D-bound/index is realized as the reflexive form siebie ‘self’ on the bottom copy of the chain in (8c).

The derivation of (1) follows a similar path. In (9c), D-bound/index is c-commanded by its antecedent and copies its $\phi$-features under local antecedent agreement, yet it cannot express them, so it moves to $v$ and forms a chain. The lexicalization of (covert) D-bound/index at $v$ is determined by Nikolaeva’s (6d) the NP content of the local SpecvP bears $\phi$-features different from D-bound/index, so it is lexicalized as a pronoun at the bottom of its chain in (9e):

(9) a. Jan pokazał Marii jej zdjęcie.
   ‘Jan showed Maria her picture.’

b. $[v_P \text{Jan}.\text{nom}_1 \text{[showed} [v_P \text{Maria}.\text{dat}_2 [v_1 \text{V} [\text{her}_2 \text{picture}]])]]$

c. $\text{Binding}$
   $[v_P J_1 [[v +3sg.f2-v] \text{showed} [v_P M_2 [v_1 \text{V} [\text{D-bound}[\#\phi]_2 [\text{pic}]]]]]$  

   

d. $\phi$-expression
   $[v_P J_1 [[v +3sg.f2-v] \text{showed} [v_P M_2 [v_1 \text{V} [\text{D-bound}[\#\phi]_2 [\text{pic}]]]]]$  

   

e. $\text{Spell-Out}$
   $[v_P J_1 [[v +3sg.f2-v] \text{showed} [v_P M_2 [v_1 \text{V} [\text{her}_2 [\text{pic}]]]])]$

Interpretation-wise, the dative goal of a ditransitive verb can function as antecedent for the possessive in the accusative object, see (9d), but its case position is placed too low in the structure (it is VPInternal in a broad sense) to serve as a local antecedent for the index at the lexicalization site, see (9e).8

One of the consequences of IR is that the index moved via head movement and adjoined to $v/T$ (positions [2] and [3]) should not c-command from the head adjoined position, as this would lead to undesirable principle C violations. While it is commonly believed that an adjunct to a maximal projection does c-command outside its adjunction host (see Kayne 1994 and subsequent work), there is less

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8 It seems that movement of the D-bound/index to a VP-external position is an inevitable step for any empirically adequate account of subject orientation, as it prevents one object from being antecedent of a possessive reflexive embedded in the other object. Even recent conceptually appealing accounts of binding (Reuland 2011; Zubkov 2018) take subject orientation for granted.
evidence for c-command following head adjunction. Nikolaeva (2014: 93–94): excludes this option by following the definition of c-command in Hestvik (1992: 574): “x c-commands y iff every node dominating x includes x and y, and x does not dominate y (where x includes y iff y is dominated by every segment of x, as proposed in May (1985)”. Such a definition leaves the c-command domain of the adjunct undefined, as the node dominating the adjunct at the adjunction site does not include it. Citko et al. (2018) invokes the “word interpretation” notion from Chomsky (1995: 322) to prevent such unwelcome c-command: “at LF, X⁰ is submitted to independent word interpretation processes WI, where WI ignores principles of the computational system within X⁰”. If c-command from within a complex head (a word) leading to a violation of binding principle C is such a “principle of the computational system” then it can be ignored. Furthermore, Roberts (2009) develops a minimalist analysis of clitic climbing, to which IR corresponds, and observes that if clitics are taken to minimally constitute only the bundle of φ-features, moving them via excorporation from one head to another is very close to agree for φ-features.

We propose a particular structure for NPs including possessives, which captures **anti-cataphora effects** (ACEs):

(10) * Jan₁ pokazał jej₂ dyplom koleżance Marii₂.
     Jan.NOM showed her.ACC diploma.ACC friend.DAT Maria’s.DAT
     Intended: ‘Jan showed her diploma to Marta’s friend.’

R-expressions in Polish cannot be placed in positions following co-indexed pronouns, even if these pronouns apparently do not c-command them in an obvious manner. The grammar of Polish (as well as other Slavic languages) does not tolerate cataphoric relations. Despić (2011; 2013; 2015) develops an account of binding in Serbo-Croatian (SC) which relies to a large degree on the idea that adjectival possessives are adjuncts and therefore c-command outside the NP they are part of. In SC, the possessive c-commands from its adjoined position, on a theory of adjunction as in Kayne (1994), and thus causes a principle B effect, (12b), and a principle C effect, (12a), which does not occur in English examples, e.g. (11). Significantly, Polish shares with SC the fact that possessive pronouns trigger off

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9Baker (1988) argues extensively that heads incorporated into other heads (where incorporation is a showcase example of head movement) cease to act upon elements they used to c-command before incorporation. So, head movement (incorporation) does not extend their c-domain, quite the contrary. For example, in Mohawk, the incorporated N no longer governs (under c/m-command) its possessor and does not license case on it, the verb as the incorporation host governs the possessor instead.
the ACEs (13a), although nominal possessives do not, see (13b), as discussed in Witkoś & Dziubała-Szrejbrowska (2015):

(11) a. His latest movie really disappointed Kusturica.
    b. Kusturica’s latest movie really disappointed him.

    Intended: ‘His new movie really disappointed Kusturica.’
    b. *Kusturicin najnoviji film ga je zaista razočarao.
    Kusturica’s latest movie him is really disappointed
    Intended: ‘Kusturica’s new movie really disappointed him.’

    his sister.NOM very comfort.PAST Janek.ACC
    Intended: ‘His sister comforted John very much.’
    b. Siostra Janka bardzo goi pocieszyła.
    sister.NOM Janek.gen very him.acc comfort.PAST
    ‘Janek’s sister comforted him very much.’

These authors conclude that Polish seems to employ two structures to represent nominal with possessives: the simpler bare NP-structure is used with pronominal and reflexive possessives, while the more complex structure involving possessive phrase and another functional projection (FP) on top of it is used with nominal possessives:

(14) a. \[[\text{NP } jego} \quad \text{[NP siostra]}\]
    his.gen sister.nom
    ‘his sister’

    b. \[[\text{FP [NP siostra]}[F^0 \text{PossP[NP Janka]}[\text{Poss } \text{Poss}^0 \text{[NP siostra]]}]][\text{sister.nom} \quad \text{Janek.gen} \quad \text{sister.nom}]
    ‘Janek’s sister’

Nominals with pronominal possessors appear to be smaller, truncated versions of structures with nominal possessors.\(^{10}\) The result is that only the pronominal

\(^{10}\)In his analysis of English possessive constructions, Despić (2015) proposes a similar solution in that the pronominal possessor is placed at a lower level of the DP structure than the nominal possessor or the reciprocal possessor:

(i) \[[\text{DP Mary/each other [D } \text{‘s}] \quad \text{[PossP my/their/her [Poss Poss [NP friends]]}]][\text{]]]]
possessives are expected to c-command outside the NP they modify, while nominal possessives do not. Significantly, the structure in (14a) has the following advantage: the pronominal c-commands outside its NP from its base position, the position where it has both its thematic role and case licensed, thus its A-position.\textsuperscript{11}

3 Index raising in action

This section serves as an illustration of an application of the notion of IR to constructions with datives in Polish.

3.1 The VP-internal dative antecedents

The study of ditransitive structures has gained a lot of prominence in Slavic linguistics and the discussion has typically involved two problem areas. Initially, the assumption was that there was one underlying structure for all ditransitive constructions and much of the debate centred around the issue of the basic order between the ACC and DAT objects: e.g. Willim (1989), Witkoś (1998; 2007; 2008), Tajsner (2008), and Citko (2011) for Polish, and Franks (1995), Dyakonova (2007; 2009) for Russian, claimed that the DAT–ACC was the basic order, while Bailyn (1995; 2010; 2012) and Antonyuk (2015) argued for ACC–DAT as the basic order. The argumentation was based on such tests as genitive of negation, distributive po constructions, binding of reciprocals, licensing of secondary predicates, idiom formation, focus propagation, and VP topicalization.\textsuperscript{12}

The second general approach was funded on the conviction that ditransitive verb constructions are derived from two basic underlying structures, one corresponding to English DOCs (V-/ACC), as in (15) and the other to the so called to-dative construction (V-ACC- (to) DAT), in ((16), after Dvořák (2010)):

(15) \[ vP \text{ Jan showed } [\text{ApplP} \text{ Maria.DAT Appl}^0 [vP V^0 \text{ her picture.ACC}] cl] \]

(16) \[ vP \text{ Jan subordinated } [vP \text{ a page.ACC } V^0 [\text{PP P}^0 \text{(to) his knight.DAT}] cl] \]

\textsuperscript{11}A reviewer raises the question of the origin of the thematic role and case for the possessor, an adjunct in syntax which functions like an argument in LF. We follow Bošković (2005; 2012) and Despić (2011; 2013; 2015) in this regard and assume that the thematic role for the possessive as adjunct is determined compositionally at LF upon the transfer of the nominal phase (NP). Its genitive case is inherent, determined straightforwardly by the thematic relation. A plausible alternative leading to identical consequences for c-command relations, which we do not consider here, would be to posit movement of the pronominal possessor from within an extended projection of NP and adjunction to its outer edge, cf. Cegłowski (2017) for a recent analysis of the internal composition of the Polish NP.

\textsuperscript{12}We refer the Reader to the above-mentioned sources for a detailed discussion of these tests.
In this regard, two positions can be outlined. One holds that particular verbs project only one of the two underlying structures and further alternative word order permutations operate on them (Dvořák 2010). Other authors argue that all benefactive/recipient verbs can appear with any underlying structures (Gračanin-Yuksek 2006; Marvin & Stegovec 2012). The criteria used in distinguishing between the two construction types involve the obligatory presence of the dative argument (17), causative reading (18), VP-topicalization, nominalisation, quantifier scope, and the two-goal construction. For lack of space, we illustrate only a few of these tests. Our Polish examples are based on the examples given in Gračanin-Yuksek (2006), Dvořák (2010), and Marvin & Stegovec (2012) for other languages.

(17) a. Jan wysłał (Marii) paczkę już wczoraj. 
    Jan sent Maria.DAT package.ACC already yesterday
    'Jan sent Maria a package yesterday.'

   b. Jan powierzył Marię *(jej patronowi) już wczoraj. 
    Jan entrusted Maria.ACC her patron.DAT already yesterday
    'Jan entrusted Maria to her patron yesterday.'

(18) a. Beethoven dał światu Czwartą Symfonię. 
    Beethoven gave world Fourth Symphony
    'Beethoven gave the world the Fourth Symphony.'

   b. # Beethoven dał Czwartą Symfonię światu. 
    Beethoven gave Fourth Symphony world
    'Beethoven gave the Fourth Symphony to the world.'

From our perspective, all the above mentioned ditransitive constructions show a crucial property, namely the superior object cannot function as an antecedent for the reflexive possessive in the other object; it can only antecede a pronominal possessive: 13

---

13 It must be noted that this conclusion does not hold for all Slavic languages. For example, Marvin & Stegovec (2012) show that in Slovenian, a quantifier in the higher dative object can bind a reflexive possessive in the lower object, as in (i).

(i) Tatış je vrnil [vsakemu oškodovancu]1 [svoj,2 avto].
  thiefj AUX return.PAST each.DAT victim.DAT his.ACC car.ACC
  'The thief returned every victim his car.' / 'The thief returned every victim his (the thief’s) car.'
15 Dative-marked arguments as binders in Polish

(19) a. Jan$_1$ pokazał Marii$_2$ {swoje$_1$ / jej$_2$} zdjęcie.
    Jan$_1$ showed Maria$_2$.DAT self.poss her picture.ACC
    'Jan showed Maria her picture.'

b. Jan$_1$ pokazał Marię$_2$ {swojej$_1$ / jej$_2$} przełożonej.
    Jan$_1$ showed Maria$_2$.ACC self.poss her supervisor$_2$.DAT
    'Jan showed Maria to her supervisor.'

c. Król$_1$ podporządkował giermka$_2$ {swojemu$_1$ / jego$_2$} rycerzowi.
    king$_1$ subordinated page$_2$.ACC self.poss his knight$_2$.DAT
    'The king subordinated the page to his knight.'

d. Król$_1$ podporządkował rycerzowi$_2$ {swojego$_1$ / jego$_2$} giermka.
    king$_1$ subordinated knight$_2$.DAT self.poss his page$_2$.ACC
    'The king subordinated his page to the knight.'

This leads us to propose that in both patterns singled out, the Spell-Out form of the index in both constructions is determined by the fact that VP is not a reflexivization domain/site. So, both the accusative and the dative object of a regular ditransitive verb is placed too low in the structure to serve as a co-indexed antecedent for the index at the reflexivization site, defined as vP or TP, but not VP, see positions [2] and [3] in Figure 1 and Figure 2. As soon as the pronoun is not a co-argument of the object, IR applies and carries the index to the domain of vP/TP, out of the c-domain of the object, so despite their coindexation, no Condition B violation occurs:

(20) [vP Maria$_1$.nom [index$_2$-v showed [vP Jan$_2$.DAT [v' V [index$_2$ [pictures]]]]]

Interestingly, the dative of possession seems to behave like a regular VP-internal dative object. Polish has a construction where the dative-marked nominal represents the thematic role of possessor, correctly captured in the English translation:

(21) a. Jan$_1$ złamał Tomkowi$_2$ {*swoją$_2$ / jego$_2$} ulubioną
    Jan$_1$.nom broke Tomek$_2$.DAT self.poss his favourite
    colour-pencil.ACC
    'Jan broke Tomek’s favourite colour pencil.'

b. Maria$_1$ wybila Tomkowi$_2$ {*swoją$_2$ / jego$_2$} nową złotą
    Maria$_1$.nom knocked out Tomek$_2$.DAT self.poss his new golden
    filling.ACC
    'Maria knocked out Tomek’s new golden filling.'
The fact that only the possessive pronoun is the correct co-indexed bound form indicates that dative of possession is placed only as high as SpecVP, as NP₂ in Figure 1, and the index is raised to attach to v/T, outside of its c-command domain:

\[
(22) \quad [v_P \text{Jan}_1 \text{index}_2-v \text{broke} \ [v_P \text{Tomek.DAT}_2 \ [v \text{V} \ [\text{favourite pen}]]]]
\]

In general, if accepted, our analysis can be used as a detector for the position in which a given antecedent is placed with respect to heads v/T; any antecedents placed below v, so within VP, are predicted not to be able to bind reflexive pronouns/reflexive possessives.

In this context, consider an example of the impersonal passive construction with a dative argument:

\[
(23) \quad \text{Marii pokazano} \ {^{\text{'*swoją / jej}}} \ \text{nową koleżankę.}
\]

\[
\text{Maria.DAT shown.IMPRS self.POSS her new friend.ACC}
\]

‘Maria was shown her new friend.’

Despite the fact that the dative argument is placed in the left peripheral position in the clause and on many analyses, it occupies SpecTP, it can only function as antecedent to a pronominal possessive. We take this fact to indicate that the case position of this argument is really low, probably SpecVP, as any ordinary dative object of a ditransitive construction and its movement to T does not extend its binding domain, see (5b). At the same time, the word order in (23) does not convey any information-structure related message and it can be used as an answer to a general ‘what has happened?’ question. So a position in SpecTopP or SpecFocP is not an option. We assume that the dative NP in (23) is either in SpecTP on account of checking only the [+EPP] property of T, which is not sufficient to extend its binding domain, or it is moved to a position that is technically an A-position but, crucially, not a case position, as proposed in Germain (2015) and Citko et al. (2018).

---

14The same conclusion is reached in Moore & Perlmutter (2000) for Russian impersonal passives.

15Germain (2015) proposes that conflicting characteristics of this position find a natural explanation if feature inheritance is split and the phase head C (Fin in her account where Rizzi’s (1997) split CP architecture is assumed (i)). The head Fin passes on only φ-features to T but retains the [+EPP] property. Hence the nominative case can be valued under agree on the postverbal DP, while the non-nominative DP can move up to SpecFinP to satisfy the EPP-property.

\[
(i) \quad [\text{ForceP Force} \ [\text{TopP Top} \ [\text{FocP Foc} \ [\text{FinP Fin}]]]]
\]

(Russian left periphery; Germain 2015: 428)
3.2 The medial domain: Dative OEs in SpecvP

In this section we investigate (both verbal and non-verbal) dative OEs which bind anaphoric pronouns as co-arguments and optionally possessive reflexives as non-co-arguments. The successful antecedents to anaphoric pronouns are all placed in a clausal position higher than VP.

Psychological predicates with dative experiencers fall into two classes: non-verbal predicates and verbal ones. The chief source of differences between them in terms of binding properties of their dative arguments stems from the fact that only the latter allow for nominative T/SM (Target/Subject Matter) arguments and binding into these shows considerable speaker variation.

3.2.1 OEs in non-verbal psychological predicates

We start with non-verbal psychological predicates such as było żal ‘was sorrow’ or było wstyd ‘was shame’. In (25), the anaphoric/pronominal object (the index) is the object of the predicate żal ‘pity’, so a co-argument of the dative experiencer. IR carries it to the v-adjoined position and no further, see (6c). This position is c-commanded by the dative NP:

    Maria.DAT was.3.SG.N sorrow.3.SG.M self her alone
    ‘Maria felt sorry for herself.’

b. [vP Maria.DAT [v index-v was [sorrow index]]]

In (26) the index is free to either head-adjoin to v or move on to head-adjoin to T, as it is not a co-argument to Maria. In the former case, clause (6d) forces lexicalisation as reflexive, in the latter, clause (6e) forces lexicalisation as pronominal:

(26) a. Marii₁ było żal {swojej₁ / jej₁} koleżanki.
    Maria.DAT was.3.SG.N sorrow.3.SG.M self.poss her friend.SG.F.GEN
    ‘Maria felt sorry for her female friend.’

b. [TP index-T [vP Maria.DAT [v index-v was [sorrow [index friend].GEN]]]]

The two derivations above markedly differ from equivalent constructions with nominative subjects and a corresponding verbal predicate żałować ‘feel pity’ in a predictable manner:
In (27a)–(27b), the subject occupies SpecTP, the highest A-position in the clause, so in both corresponding derivations the index must be spelled-out as a reflexive:

(28) a. [TP Maria.NOM index-T [vP Maria.NOM [v index-v [feels-pity index]]]]
   b. [TP Maria.NOM index-T [vP Maria.NOM [v index-v [feels-pity [index friend]]]]]

Furthermore, other verbs with dative OEs can function as antecedents to both reflexive pronouns and reflexive possessives, for instance in selected PPs:

(29) Marii nudziło się w {swoim / jej} domu.
   Maria.DAT bored.3.SG.NEUT Refl in self’s her home.LOC
   ‘Maria was bored at home.’

Additionally, other factors support the idea of a higher placement in the clausal structure of dative OEs in comparison with dative goals/benefactives, for instance the applicative characteristics that the predicates with dative OEs display. Cuervo (2003) argues that the dative argument of gustar, the Spanish equivalent to podobać się ‘appeal to’ seems to be licensed by a high applicative in the sense of Pylkkänen (2002). This is because the nominative argument is not involved with it in any relation of possession or location which are typical of ‘low’ applicatives in (30a)–(30b), where Maria’s habitual possession of the pen is implied, so (30b) can only mean that the pen was Mark’s and it was in Maria’s possession only temporarily. No possession or location is implied in (31), where the fancy of the pen (whosoever it is) has overcome Maria:

(30) a. Marii złamał się długopis.
   Maria.DAT broke Refl pen.NOM
   ‘Maria broke a pen.’
   b. # Marii złamał się długopis Marka.
   Maria.DAT broke Refl pen.NOM Mark.GEN
   ‘Maria broke Mark’s pen.’
In the context of the solution proposed here, the dative argument corresponding to the ‘high’ applicative is placed in Spec vP, while the one in the ‘low’ applicative in Spec VP. It appears that (31) stands apart from (30).

It is therefore more worrying that at first glance the binding capacity of verbal psychological predicates runs counter to what has been presented thus far.

3.2.2 Verbal psychological predicates and the idiosyncrasy of *podobać się* ‘appeal to’

The most frequently researched verbal psychological predicate in Polish is *podobać się* ‘appeal to’ (see Miechowicz-Mathiasen & Scheffler 2008; Bondaruk & Szymanek 2007; Żychliński 2013; Jimenez-Fernandez & Rozwadowska 2016; Bondaruk et al. 2017). Its distinctive property is the fact that it selects for the experiencer in dative and the cause/target of emotion in nominative. It has also been noticed that the binding potential of its dative-marked argument differs from the dative of non-verbal psych-predicates:16

> Maria₁ podobała się₁ sobie₁ w lustrze.
> Maria.NOM appealed REFL self.DAT in mirror
> ‘Maria appealed to herself in the mirror.’

---

16Franks (1995: 253) observes this contrast for Russian:

(i) Mne zal’ sebja.
    me.DAT sorry self.ACC
    Intended: ‘I feel sorry for myself.’

(ii) * Mne nadoedaet svoj ucebnik.
    me.DAT bore.3.SG self’s textbook.NOM
    Intended: ‘My textbook bores me.’

(iii) * Mne dosazdaet svoj brat.
    me.DAT vex.3.SG self’s brother
    ‘My brother vexes me.’
In general, if the dative Experiencer of a psychological verb is in Spec vP, we expect to see optionality with the pronominal vs reflexive possessive, similar to that with non-verbal psych-predicates, but this is not the case. The data pie can be partitioned into three uneven sections. Most native speakers asked for judgements on the data prefer for the dative Experiencer to bind pronominal possessives, see (35). Quite a few allow the dative Experiencer to bind a possessive reflexive but only in contexts where the reflexive is embedded deep in the nominative constituent and bears a different case.

Other similar verbs in Polish are dokuczać ‘tease, vex’, nudzić ‘bore’, and szkodzić ‘harm’:

(i) Mariii₁ spodobała się {*śwój₁ / jej₁} kolega z ławki.
Maria.DAT appealed refl self’s her friend.DAT from school.desk
‘Her school desk friend appealed to Maria.’

(ii) Janowii₁ spodobały się listy od {swoich₁ / jego₁} fanek.
Jan.DAT liked refl letters from self’s his fans
‘Letters from his fans appealed to Jan.’
These inconclusive data lead to conflicting views on the position of the dative OE and the position of the nominative argument. Jimenez-Fernandez & Rozwadowska (2016) assume that its A-position is in SpecVP (and the preverbal position is in an articulated CP area). Bondaruk & Szymanek (2007), Tajsner (2008), and Bondaruk et al. (2017) propose that the dative experiencer is in SpecvP, as its binding scope is different from dative goals. Miechowicz-Mathiasen & Scheffler (2008) claim that the dative Experiencer reaches as high as SpecTP:

For the sake of concreteness, we assume that the dative Experiencer occupies the position of SpecvP, though this view is not uncontroversial:

\[(38) \quad [\text{TP index}_{i}\text{-T} [\text{VP} \text{ DAT}_{i} [\text{v'} \text{ index}_{i}\text{-v} [\text{VP} \text{ V [NOM index}_{i} N_{k}]]]]]]\]

Let us tentatively assume that the structure in (38) is correct for the Polish podobać się ‘appeal to’, with the nominative theme argument optionally raised to its case position in SpecTP in overt syntax.\(^{19}\) The index is c-commanded by the dative OE in the v-adjoined position (corresponding to position [2] in Figure 2) but it is not so c-commanded when placed in the T-adjoined position (corresponding to position [3] in Figure 2).

With this general idea in mind, the derivations of (32)–(36) look as follows, with the dative experiencer fronted to an A-position in line with Germain (2015), see (35):

\[(39) \quad [\text{FinP}\text{ Maria.DAT}\text{ Fin} [\text{TP index}_{i}\text{-T} [\text{vp}\text{ Maria.DAT} [\text{v'} \text{ index}_{i}\text{-v} [\text{VP} \text{ appealed}\text{ REFL-V [even she.NOM/*self\text{-case (self/alone) in mirror]}]]]]]]]]\]

\[(40) \quad [\text{FinP}\text{ Maria.DAT}\text{ Fin} [\text{TP index}_{i}\text{-T} [\text{vp}\text{ Maria.DAT} [\text{v'} \text{ index}_{i}\text{-v} [\text{VP} \text{ appealed}\text{ REFL-V [?*self’s/her school friend]]]]]]]]\]

\[(41) \quad [\text{FinP}\text{ Jan.DAT}\text{ Fin} [\text{TP index}_{i}\text{-T} [\text{vp}\text{ Jan.DAT index}_{i}\text{-v} [\text{VP} \text{ appealed}\text{ REFL-V [NP [NP letters] [PP from [NP self’s/his fans]]]]]]]]\].

---

\(^{18}\)For instance, Cuervo (2003) argues strongly for the view that the dative OE is placed in a higher position, as the nominative Theme occupies SpecvP:

\[(i) \quad [\text{TP index}_{i}\text{-T} [\text{ApplP DAT} [\text{Appl'} \text{ Appl}^{0} [\text{vp} \text{ index}_{i}\text{-v}^{0} [\text{NOM index}_{i}[\text{v'} \text{ v-BE [VP PSYCH VERB]]]}]]]]]]\]

We cannot discuss this issue in full for lack of space.

\(^{19}\)An analogous structure is proposed in Klimek & Rozwadowska (2004).
(27) is easy to deal with, as Polish has no nominative reflexive pronouns. Due to lack of this form in the morphological paradigm, its closest equivalent is selected, in line with Safir’s (2004) FORM TO INTERPRETATION PRINCIPLE (FTIP).20

(40) seems to be a problem indeed, but an unacceptable status of the reflexive possessive can be credited to what Rizzi (1990: 26) calls the ANAPHOR AGREEMENT EFFECT (AAE):21

(42) Anaphors do not occur in syntactic positions construed with agreement.

Our discussion of Polish data reveals that consequences of the AAE are subject to considerable language variation: nominative reflexive possessives are typically avoided by most speakers, although they are construed with agreement only indirectly: they agree (in case and φ-features) with NP they modify and this NP agrees with the auxiliary/verb. Yet, the structure we propose for pronominal possessive NPs is shown in (43). It is only natural to extend it to cases of reflexive possessives:22

20FTIP, Safir (2004): If:

a. X c-commands position Y,

b. z is the lexical form or string that fills Y,

c. w is a single form more dependent than z,

d. both w and z could support the same identity-dependent interpretation if Y were exhaustively dependent on X, then (the referential value for) Y cannot be interpreted as identity dependent on X.

21Rizzi (1990: 32–33) reports the following contrast in Italian: a dative experiencer can bind an anaphor as long as it is not nominative, so since importare ‘matter’ takes a genitive theme, this theme can be bound, while a nominative argument of interessare ‘matter’ cannot:

(i) A loro importa solo di se stessi.

to them matters only of themselves
‘They matter only to themselves.’

(ii) * A loro interessano solo se stessi.

to them interest only of themselves
Intended: ‘They have interest only in themselves.’

Significantly, however, dative experiencers can function as binders once the AAE is controlled for, as in (i). The same picture obtains with Polish dative experiencers above.

22Note that the structure in (43) with a pronominal possessive is much less ambiguous than the one with the reflexive in (44) on account of the pronominal possessive bearing a different case (genitive) from the nominative of the NP it modifies.
15 Dative-marked arguments as binders in Polish

(43) \[\text{[NP jego} \quad \text{[NP siostra]]} \]
    \[
    \begin{array}{ll}
    \text{his.GEN} & \text{sister.NOM} \\
    \end{array}
    \]
    \[\text{‘his sister’}\]

(44) \[\text{[NP swoja} \quad \text{[NP siostra]]} \]
    \[
    \begin{array}{ll}
    \text{self.Poss} & \text{sister.NOM} \\
    \end{array}
    \]
    \[\text{‘self’s sister’}\]

This structure may be quite ambiguous when the AAE applies, as the possessive element is equidistant to T with the NP it modifies.

(45) Janow\(i\) nie spodobała się \{\text{*swoja} / jego\} siostra.
    \[
    \begin{array}{llllll}
    \text{Jan.DAT} & \text{not appeal} & \text{REFL} & \text{self.Poss} & \text{his} & \text{sister.NOM} \\
    \end{array}
    \]
    \[\text{‘His sister did not appeal to Jan.’}\]

(46) \[\text{T.agR}_{2/1} \ldots \text{Jan.DAT} \ldots [\text{NP self.NOM}_1 [\text{NP sister.NOM}_2]]\]

The equidistance relationship in question may cause confusion as to what really agrees with Infl/T here, the modified NP (with no consequence for the AAE) or the possessive reflexive (violating the AAE in (44) and (45) above). In the latter case, from the perspective of the Binding Principles, the possessive forces its referential subscript to represent the subscript of the entire NP.\(^{23}\) Now, this is quite similar to what Landau (2000: 109–111) observes for cases of Obligatory Control, where the controller (unexpectedly) does not c-command PRO but constitutes the specifier of a c-commanding DP:

(47) It would help Bill’s development [\text{PRO}_1 \text{to behave himself}_1 \text{in public}]

Landau proposes that a well-defined class of nouns denoting abstract notions reflecting the individuality of the controller ([X’s NP]) allows for what he calls the logophoric extension of X:

(48) For the purpose of control, a logophoric extension [X’s NP] is non-distinct from X: [X’s\(_1\) NP] \(\rightarrow\) [X’s NP]\(_1\).

Thus, logophoric extension is a selective process that affects only one module of grammar and one aspect of interpretation: Control Theory. We would like to submit that an analogous process of reanalysis affects the adjunct/specifier structure:

\(^{23}\)In languages where possessives are genuine specifiers rather than adjuncts, possessive reflexives are allowed, as shown in Woolford (1999: 273–274).
Extended AAE:
Anaphors do not occur in syntactic positions construed with agreement directly (a) or indirectly (b):

a. Nominative anaphors do not exist in languages showing subject/verb agreement;

b. For the purpose of binding, an indexical extension [X’s NP] is non-distinct from X:

\[
\left[ \text{NP}_2 \text{swój.NOM}_1 \left[ \text{NP}_2 \text{name.NOM}_2 \right] \right] \rightarrow \left[ \text{NP}_1 \text{swój.NOM}_1 \left[ \text{NP}_1 \text{name.NOM}_2 \right] \right]
\]

Our notion of indexical extension differs from Landau’s original on two counts: first, it is not limited by the semantic (sub)class of N and second, it depends on the structural position of X, which we have shown to act as an adjunct, following Despić (2011; 2013; 2015).

But this does not seem to be enough to cover the whole spectrum of the data. First, notice that index extension may be less local in the cases discussed by Landau. For instance, the controller for Obligatory Control PRO can also be placed in a position embedded in a measure NP selecting for the ‘logophoric NP’:

\[
\text{It considerably helped } \left[ \text{NP}^1 \text{first stages of } \left[ \text{NP}^2 \text{her}_{1 \text{music career}} \right] \right] \left[ \text{PRO}^1 \text{to have an uncle in a record company} \right]
\]

So, it seems that (at least for some speakers) X from (50) need not be very close to the edge of the NP to propagate its index to the maximal NP (here NP\(^1\)).

Once we allow for the less local propagation of the index in the cases of indexical extension in definition (49) above, we can account for (4) above on the assumption that the rule of the Extended AAE is subject to graded speaker variation:

\[
\text{antecedent}_{1 \ldots} \ldots \left[ \text{AgrP anaphor}_{1 \ldots} \text{agreement}_{1 \ldots} \right]
\]

\[
\text{For the purpose of binding, an indexical extension [X’s NP] is non-distinct from X:}
\]

\[
\left[ \text{NP}_2 \text{self.NOM}_1 \left[ \text{NP}_2 \text{name.NOM}_2 \right] \right] \rightarrow \left[ \text{NP}_1 \text{self.NOM}_1 \left[ \text{NP}_1 \text{name.NOM}_2 \right] \right]
\]

\[
\text{For the purpose of binding, an indexical extension [X’s NP] is non-distinct from X:}
\]

\[
\left[ \text{NP}_3 \text{N}_3 \ldots \left[ \text{NP}_2 \text{self.NOM}_1 \left[ \text{NP}_2 \text{name.NOM}_2 \right] \right] \right] \rightarrow \left[ \text{NP}_3 \text{N}_1 \ldots \left[ \text{NP}_{1/2} \text{swój.NOM}_1 \left[ \text{NP}_{1/2} \text{name.NOM}_2 \right] \right] \right]
\]
All speakers of Polish have (51) in their grammars, most speakers have (52) as a part of their grammars and exclude nominative reflexive possessives as a result of indexical extension, while the most conservative ones allow for non-local indexical extension and disallow reflexive possessives in cases other than nominative if they are embedded in nominative NPs, see (53).

## 4 Concluding remarks

In the process of our investigation, we have raised a number of questions with respect to the data in (1)–(4). We conclude that, universally, there is one D-bound/index which is the most dependent form bound locally and lexicalized in two different forms: reflexive and pronominal, determined by IR. When the co-agreeing NP locally c-commands D-bound/index in its landing site at v/T, it is spelled out as a reflexive form, otherwise it is spelled out as a pronoun. The chain of Index Raising exhibits copy pronunciation, i.e. the tail of the chain is pronounced. In Polish (Slavic), IR is driven by the need to compensate for impoverished [+person] feature on the D-bound/index. The subject orientation of reflexive pronouns and possessive reflexives comes out rather naturally in this account. As IR places the index in these positions, it is not surprising that pronouns and anaphors show complementary distribution only with respect to the subject but not the object. The picture becomes even more transparent when we take into account the distinction between co-argument and non-co-argument reflexivization, see (6c) vs. (6d)–(6e). The non-co-argument index covertly raised beyond the c-domain of the object is predicted to be spelled out as a pronominal possessive, although it is co-indexed with the object c-commanding it in overt syntax. We have shown that successful binders of reflexives and reflexive possessives in Polish need not occupy the position of SpecTP, which is reserved for nominative subjects only. Dative OEs occupy a lower position of SpecvP. In view of the scope and reach of IR, these elements can bind and be co-indexed

---

24 A similar effect arises for the ACE. Willim (1989: 82) reports that the following example is problematic, though many native speakers accept it as only mildly deviant:

(i) % Ta recenzja książki mojego brata completamente zalała.
   this review.nom of-book my brother’s acc completely devastated
   ‘This review of my brother’s book devastated him completely.’

A reviewer for this volume raises the issue of how the propagation of the index can be constrained. We presume that it is a matter of speaker variation but the extent of the propagation is difficult to gauge on account of processing difficulties. Certainly, this issue deserves further empirical study.

25 For arguments to this effect also see Citko et al. (2018).
with reflexives and reflexive possessives adjoined to \( v \) but they can also be co-indexed with pronominal possessives adjoined to \( T \). The optionality of possessive forms co-indexed with them is thus explained.\(^{26}\) We have also credited imperfect results of dative OEs binding into nominative themes to Extended AAE of Rizzi (1990) caused by a specific placement of possessives as adjuncts at the edge of the nominative NP. Such placement leads to ambiguity of representation and the probe/goal relations involving \( T \) and NP.NOM.

### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>1/2/3</td>
<td>first/second/third person</td>
</tr>
<tr>
<td>AAE</td>
<td>anaphor agreement effect</td>
</tr>
<tr>
<td>ACC</td>
<td>accusative</td>
</tr>
<tr>
<td>ACE</td>
<td>anti-cataphora effects</td>
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<tr>
<td>AUX</td>
<td>auxiliary</td>
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<td>CL</td>
<td>clitic</td>
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<td>copula</td>
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<td>DOC</td>
<td>double object construction</td>
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<td>F</td>
<td>feminine</td>
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<tr>
<td>FTIP</td>
<td>form to interpretation principle</td>
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<tr>
<td>GEN</td>
<td>genitive</td>
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<tr>
<td>IMPRS</td>
<td>impersonal</td>
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<td>INF</td>
<td>infinitive</td>
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<tr>
<td>IR</td>
<td>index raising</td>
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<td>locative</td>
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<td>NEUT</td>
<td>neuter</td>
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<tr>
<td>NOM</td>
<td>nominative</td>
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<tr>
<td>OE</td>
<td>object experiencer</td>
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<tr>
<td>PAST</td>
<td>past tense</td>
</tr>
<tr>
<td>POSS</td>
<td>possessive</td>
</tr>
<tr>
<td>PRES</td>
<td>present tense</td>
</tr>
<tr>
<td>REFL</td>
<td>reflexive clitic</td>
</tr>
<tr>
<td>SG</td>
<td>singular</td>
</tr>
<tr>
<td>SC</td>
<td>Serbo-Croatian</td>
</tr>
</tbody>
</table>

\(^{26}\)Introduction of more structural content which does not block IR, specifically PRO and infinitive \( T \) with raising and control constructions, multiplies reflexivization sites and provides for more spell-out options for the index:

\[\text{(i) } \text{Maria}_{1} \text{ kaz\'ała Piotrowi}_{2} \text{ patrze\'ć na } \{\text{siebie}_{1,2} / \text{*niego}_{2} / \text{nia}_{1}\}.\]

Maria.NOM told Piotr.DAT look.INF at self him/her

‘Maria told Piotr to look at himself/her.’

The infinitive complement in (i) constitutes a binding domain for a co-argument index of PRO. Hence the co-argument must stop moving at the \( vP \) level and is spelled-out as a reflexive (this is interpretation with index\(_2\), as PRO is controlled by the object). The pronoun co-indexed with PRO is clearly impossible here (‘niego\(_2\)’). However, a considerable number of cliticization sites implies that the index co-indexed with the subject of the control predicate has a few options and can be spelled out as either a reflexive (siebie\(_1\)’self) when it is raised to matrix \( v \) or \( T \), or as a pronoun (nia\(_1\)’her’) when it cliticizes to embedded \( v \) or embedded \( T \):

\[\text{(ii) } [\text{TP Maria}_{1} \text{ index}_{1}-T [vP index}_{1-v-told [vP Piotr.DAT}_{2} [vV [CP [TP PRO}_{2} \text{ index}_{1}-T [vP PRO index}_{1,2-v-look [vP V [pp at index]]]]]]]\n
For a more thorough discussion of the issues discussed in this contribution, see Witko\'ś et al. (Forthcoming).
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