

BINDING BY OBJECTS IN POLISH DOCs AND PLEASE-TYPE DOUBLE OBJECT UNACCUSATIVES: TESTING THEORETICAL ACCOUNTS

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ABSTRACT

Our paper focuses on binding relations in the Polish *piacere*-type psychological verb *podobać się* ‘to please’. In particular, we aim to test the make-up of the argument structure of this verb, which is taken in the literature to be of a double object unaccusative verb (Belletti and Rizzi 1988; Miechowicz-Mathiasen and Scheffler 2008; Jiménez-Fernández and Rozwadowska 2016; a.o.). To this end, we conduct an experimental study, which examines the ability of pre-verbally spelled-out NOM and DAT arguments of *podobać się* to bind possessive pronouns/reflexives. As a point of reference, we use the results of our previous study on binding relations in Polish double object constructions (DOCs). The study revealed that the higher object, in [Spec;VP], can bind only a possessive pronoun, and not a possessive reflexive embedded in the lower object. The results of our present study display analogous binding relations in *podobać się*, which provides an argument in favor of the double object unaccusative structure of this verb. Based on our results, we advance a theoretical account of binding in *podobać się*, which assumes the Index Theory of Binding (Hestvik 1992; Nikolaeva 2014) together with a slightly modified version of a recent analysis of *podobać się* put forward in Jiménez-Fernández and Rozwadowska (2016).

KEYWORDS: binding; *piacere*-type psychological verb; DOCs; Index Theory of Binding; Dative Experiencer.

1. Theoretical background: Binding relations in DOC and *podobać się* ‘to please’¹

This paper is a microstudy of the Polish *piacere*-type psychological verb *podobać się* ‘to please’, as illustrated in (1).

¹ We would like to thank the audience of the 47th Poznań Linguistic Meeting (PLM) conference for many helpful comments. This paper has also greatly benefited from the comments pro-

- (1a) Markowi spodobała się Warszawa. *
 Marek_{3SG.M.DAT} please_{3SG.F.PST} REFL Warszawa_{3SG.F.NOM}²
 ‘Warsaw appealed to Marek.’
- (1b) Warszawa spodobała się Markowi.
 Warszawa_{3SG.F.NOM} please_{3SG.F.PST} REFL Marek_{3SG.M.DAT}
 ‘Warsaw appealed to Marek.’

As shown in (1), *podobać się* ‘to please’ licenses two arguments, a Dative-marked Experiencer and a Nominative-marked Theme. Depending on the information structure, either of the arguments can be spelled-out verb-initially, providing at least two possible orders – Dative–verb–Nominative (DAT–NOM) and Nominative–verb–Dative (NOM–DAT).³ The verb agrees with the Nominative argument, regardless of the position of the Nominative, whether pre- or post-verbal. Also, just like any other Polish verb, *podobać się* ‘to please’ agrees with the Nominative-marked argument in Number and Person in the present tense, while in the past it additionally agrees in Gender.

Miechowicz-Mathiasen and Scheffler (MM&S) (2008) propose a double object unaccusative analysis of the verb, arguing that: (a) both of the arguments of *podobać się* ‘to please’ are internal arguments (IA); and that (b) the verb does not project an external argument (EA). The unaccusative analysis of *podobać się* ‘to please’ stems from a seminal work on psychological verbs by Belletti and Rizzi (1988) and their account of the *piacere*-type of such verbs. The unaccusative analysis of *podobać się* ‘to please’ assumes a simi-

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² The following abbreviations are used throughout the paper: ACC – Accusative, DAT – Dative, EA – external argument, Exp – Experiencer, F – feminine, IA – internal argument, IF – Information Focus, [iTop/Case/IF] – interpretable Topic/Case/Information Focus feature, M – masculine, NOM – Nominative, PST – past, REFL – reflexive clitic *się*, Th – Theme, Top – Topic, [uTop/Case/IF] – uninterpretable Topic/Case/Information Focus feature. In most glosses, only the most relevant grammatical information is indicated.

³ In fact, more argument orderings are possible in the construction in question, including e.g. Dat–REFL–verb–Nom, Dat–verb–REFL–Nom, Nom–REFL–verb–Dat, Nom–verb–REFL–Dat, and Nom–Dat–verb–REFL. A more detailed list of possible orderings of the elements licensed by *podobać się* ‘to please’, based on a corpus study, is provided in Miechowicz-Mathiasen and Sheffler (2008). Because this paper concentrates on the problem of binding from the pre-verbal position in *podobać się* ‘to please’, in what follows we focus only on the two possible orders illustrated in (1).

larity between: (a) double object unaccusatives and (b) double object agentive constructions. Therefore, the Dative-marked Experiencer (Exp_{DAT}) of the psychological verb is taken to be equivalent to the Dative-marked Indirect Object (IO_{DAT}) of DOCs. In turn, the Nominative-marked Theme (Th_{NOM}) of *podobać się* ‘to please’ is taken to be analogous to the Accusative-marked direct object (DO_{ACC}) of DOC. This is illustrated in (2).

(2)

	Subject position	External argument	Internal argument	Internal argument
	[Spec;TP]	[Spec;VP]	[Spec;VP]	[Complement of V]
DOC	EA_{AGENT}	$Agent_{NOM}$	IO_{DAT}	DO_{ACC}
DO unaccusative	$IA_{EXP/TH}$	not projected	Exp_{DAT}	Th_{NOM}

The crucial difference between the two contexts is: (a) a lack of the external argument projection in the unaccusative context, and (b) the assumed movement of one of the internal arguments of the unaccusative verb to the preverbal position.

Miechowicz-Mathiasen and Scheffler (2008) argue that the pre-verbal position to which one of the internal arguments is moved is the [Spec;TP] position. The movement is motivated by the EPP feature, which can attract either of the internal arguments, the Exp_{DAT} and Th_{NOM} alike. This proposal resembles Bailyn’s (2004) account of the EPP feature in terms of Generalised Inversion, advanced for Russian, applied later to Polish in Witkoś (2007). According to Bailyn (2004), not only Nominative-marked arguments move to [Spec;TP]; non-Nominatives such as, e.g. Dative/Accusative Experiencers, Locative PPs, Possessive PPs, can also do so. As argued, the inverted, i.e. moved to [Spec;TP], non-Nominative XPs demonstrate subject properties such as e.g. binding or control. Because of this movement to [Spec;TP], Russian/ Polish preverbal non-Nominative XPs can be taken to resemble (to some extent) the Icelandic non-Nominative subjects, often referred to as “quirky subjects” (e.g. Sigurðsson 1989, 1992, 2004; Boeckx 2000; Richards 2008).⁴

⁴ Note, however, that MM&S (2008) and Bailyn (2004) argue, for Polish and Russian respectively, that it is the internal argument that is moved to the preverbal, [Spec;TP], position. In this prototypical subject position, the inverted element acquires some of the subject properties, such

With regard to binding relations, such analysis predicts that the movement to the [Spec;TP] position, being of A-type, should improve the moved IA's binding potential, namely once in the subject position, the IA binder should be more acceptable as a binder for anaphors. With the use of the examples in (3), found on the World Wide Web, MM&S argue that this is indeed the case.

(3a) Mi_1 $się$ $swój_1$ $głos$ $podoba$.
 $Me_{1SG.DAT}$ REFL self $voice_{3SG.M.NOM}$ $please_{3SG}$
 'I like my voice.'

(3b) Ja_1 $się$ $sobie_1$ $też$ $bardzo$ $podobam$.
 $I_{1SG.NOM}$ REFL myself also very $please_{1SG}$
 'I like myself very much too.' (MM&S 2008: 19)

Because in (3) both the Nominative and the Dative-marked arguments are able to bind the reflexive, MM&S argue that in both orders, DAT–NOM and NOM–DAT, the internal argument moves to [Spec;TP]. Note, however, that the grammaticality of (3a) is in fact controversial, as many, including the authors and the anonymous reviewer, find it ungrammatical. MM&S take (3a), found on the Internet, to be an argument for the ability of the dative to bind anaphors. However, as we demonstrate later in the paper, this isolated reported use of the dative as a reflexive binder does not reflect the general tendencies among native speakers.

The matter as to which position the internal arguments of *podobać się* 'to please' move to is far from settled. Many analyses of *podobać się* 'to please' propose that one of the verb's arguments moves to a pre-verbal position; there is, however, no agreement as to what this position might be, [Spec;CP] or [Spec;TP]. This lack of agreement, as it seems, stems from differences in acceptability judgments reported in the literature. For example, Miechowicz-Mathiasen (2005) argues that Exp_{DAT} can bind both pronouns and anaphors, therefore the Experiencer moves to [Spec;TP]. Binding by Th_{NOM} is not commented on. Witkoś (2007) provides similar observations and analysis, i.e. movement of the Dative-marked Experiencer to [Spec;TP], motivated by the Exp_{DAT} 's ability to bind anaphors. The Nominative Theme is also not dis-

as e.g. an ability to bind anaphors. In contrast, Icelandic "quirky subjects" are argued to be true subjects (e.g. Andrews 1976, 1982a, 1982b; Thráinsson 1979; Maling 1990; Sigurðsson 1989, 2004; Zaenen 1980; Zaenen et al. 1990, a.o.), and therefore they are taken to be base-generated in [Spec;vP] (e.g. Richards 2008).

cussed. Tajsner (2008) argues that binding of anaphors by Dative Experiencers is limited to anaphors embedded within a PP; self-standing anaphors cannot be bound by Exp_{DAT} . This is explained by proposing that the Experiencer is fronted to the (outer) [Spec;TP], position which can have A-bar properties.⁵ Jiménez-Fernández and Rozwadowska (2016) argue that both arguments can move to a pre-verbal position; in both cases, the movement is to [Spec;CP]. The analysis does not discuss binding relations; however, since movement to [Spec;CP] can be taken to be of A-bar type, reconstruction is expected.⁶

Because of this lack of agreement as to the grammaticality judgments on binding relations in *podobać się* ‘to please’ and, therefore, often conflicting analyses of the data, we conducted an experimental study aiming to test the data and its accounts. Moreover, because most analyses focus only on the behavior of the pre-verbal Dative Experiencer, not accounting for the behavior of the pre-verbal Nominative-marked Theme, we test the behaviour of both arguments, the pre-verbal Exp_{DAT} and Th_{NOM} alike.

2. Experiment – binding relations in *podobać się* ‘to please’

2.1. Aims, research questions and predictions

The main aim of the experiment is to check which position the internal arguments of *podobać się* ‘to please’ move to when spelled out pre-verbally, [Spec;TP] or [Spec;CP]. If the moved argument extends its binding domain,

⁵ As kindly pointed out by an anonymous *PSiCL* reviewer, this idea resembles Branigan’s (1992) proposal that the EPP is not a feature of *I/T*, but a property of a higher functional head, referred to as π . The [Spec; π P] position is taken to be the EPP position, which attracts all types of XPs, Nominative and non-Nominative, as long as they satisfy the EPP feature. Thus, e.g. prototypical Nominative subjects that appear pre-verbally move through: first [Spec;*I/TP*], an A-position, where they check case- and phi-features as well as trigger verb agreement, and then to [Spec; π P], an A-bar position, where they satisfy the EPP feature.

⁶ Note that since Chomsky (2001b: 9, fn. 30) indicates that “A- and A’-movement have no status in the present framework, the terms are used only for convenience. It follows that no principles can be formulated in terms of the A-/A’-distinction [...]”. Therefore, the A- and A’-positions “are distinguished not by their structural status within a phrase-marker, but the manner in which they are derived” (2001b: 9, fn. 30). Informally, in what follows, we take A-movement to be related to φ -feature valuation, while A-bar movement to be movement attracted by an edge feature/discourse feature of a phase head (following Chomsky 2005: 16, with modifications due to Miyagawa 2010).

we take it to be spelled out in the [Spec;TP] position. If the pre-verbal argument reconstructs to its base position, it is taken to be moved to [Spec;CP].

Aiming to account for the binding potential of both arguments of *podobać się* ‘to please’, we focused on both argument orders of the verb, DAT–NOM and NOM–DAT, as illustrated in (4). As an additional variable, we used one-degree (4a–b) vs. two-degree embedding, illustrated in (4c) for Exp_{DAT} binder, in order to check if embedding improves binding of reflexive possessives, as argued e.g. in Witkoś (2007), Tajsner (2008), Wiland (2016). We used the same type of embedding as in our previous experiment on DOCs in order to make a direct comparison between the two structures possible.

- (4a) Markowi₁ podobają się swoje₁/jego₁ koleżanki.
 Marek_{3SG.M.DAT} please_{3PL} REFL self/his friends_{3PL.NOM}
 ‘Marek likes his (female) friends.’
- (4b) Marek₁ podoba się swoim₁/jego₁ koleżankom.
 Marek_{3SG.M.NOM} please_{3SG} REFL self/his friends_{3PL.DAT}
 ‘Marek’s (female) friends like him.’
- (4c) Markowi₁ podobają się koleżanki swojej₁/jego₁ siostry.
 Marek_{3SG.M.DAT} please_{3PL} REFL friends_{3PL.NOM} self/his sister_{GEN}
 ‘Marek likes the (female) friends of his sister.’
- (4d) Marek₁ podoba się koleżankom swojej₁/jego₁ siostry.
 Marek_{NOM} please_{3SG} REFL friends_{3PL.DAT} self/his sister_{GEN}
 ‘Marek’s sister (female) friends like him.’

Assuming that *podobać się* ‘to please’ is a double object unaccusative, where the Exp_{DAT} is equivalent to the IO_{DAT} of DOC and the Th_{NOM} is equivalent to DO_{ACC} of DOC, we expect that binding relations in *podobać się* ‘to please’ will be parallel to object coreference in DOCs.

We examined object coreference in DOC structures in our previous study. Just like in the present study, the experiment on DOCs compared contexts with: (a) the DAT object binding the ACC, in (5a), and (b) the ACC object binding the DAT, in (5b). Note, however, that in the experiment on binding by objects in DOCs, we focused only on binding in the post-verbal position, as in (5).

- (5a) Tomek pokazał Marii₁ ją₁/siebie₁ (w lustrze).
 Tomek_{NOM} show_{3SG.M} Maria_{DAT} her/self_{ACC} (in mirror)
 ‘Tomek showed Maria to herself in the mirror.’

- (5b) Tomek pokazał Marię₁ jej₁/sobie₁ (w lustrze).
 Tomek_{NOM} show_{3SG.M} Maria_{ACC} her/self_{DAT} (in the mirror)
 ‘Tomek showed Maria to herself in the mirror.’

Moreover, similarly to the experiment on *podobać się* ‘to please’, in our DOC study, we compared contexts with one-degree and two-degree embedding, represented by (6a) and (6b) respectively.

- (6a) Babcia pokazała wnukowi₁ swoją₁/jego₁ kuzynkę.
 granny_{3SG.F.NOM} showed_{3SG.F.PST} grandson_{DAT} self/his cousin_{ACC}
 ‘Grandmother showed her grandson his (female) cousin.’

- (6b) Babcia pokazała wnukowi₁ zdjęcie
 granny_{3SG.F.NOM} showed_{3SG.F.PST} grandson_{DAT} picture_{ACC}
 swojej₁/jego₁ kuzynki.
 self/his cousin_{GEN}
 ‘Grandmother showed her grandson a picture of his (female) cousin.’

In DOCs, it has been claimed that objects can locally bind pronouns only (Willim 1989; Reinders-Machowska 1991; Witkoś 2003, 2007; Bondaruk and Szymanek 2007; a.o), as in (7).

- (7a) Piotr₁ pokazał chłopca₂ sobie_{1/*2} /jemu_{1/2} (samemu) w lustrze.
 Piotr_{NOM} showed boy_{ACC} self_{DAT} (alone_{DAT}) in mirror
 ‘Piotr showed the boy himself in the mirror.’
 (Witkoś 2007: 458)
- (7b) Marta₁ opowiedziała Markowi₂ o swojej_{1/*2} /jego_{1/2} młodości.
 Marta_{NOM} told Marek_{DAT} about self’s youth
 ‘Marta told Marek about his youth.’
 (Bondaruk and Szymanek 2007)

Our experimental study on binding relations in DOC confirms the claims in the literature. In particular, the results revealed that the higher IO_{DAT} can bind only a possessive pronoun embedded in the lower DO_{ACC} but never a possessive reflexive. Thus, the coreference between two objects, as shown in (7), can be expressed only with the use of the pronoun *jego* ‘his’. As for embedding effects, our results did not yield any statistically significant difference

between one- (6a) and two-degree (6b) embedding, which means that the same binding possibilities hold regardless of pronoun/reflexive embedding.

Assuming that the underlying argument structure in the *podobać się* ‘to please’ construction is akin to the one in DOCs as far as the positions of internal arguments are concerned, we can make certain predictions with regard to binding in the former. Namely, should the moved argument of *podobać się* ‘to please’ reconstruct, we expect it to behave like the indirect object of DOC, namely to be able to bind pronouns only. Should the moved argument extend the binding domain, we expect it to become an acceptable anaphor binder. These predictions are reflected in our experiment’s hypothesis, in (8), which takes the analysis of MM&S as a point of departure for our testing of the accounts of binding in *podobać się* ‘to please’.

- (8) **Hypothesis:** Pre-verbal position EX_{DAT} and Th_{NOM} can bind anaphors alike

2.2. Participants, materials and procedure

Participants: 72 Polish students of higher education participated in the experiment (69 women and 3 men, $M_{age} = 23.15$, $SD = 2.82$). The participants were not aware of the linguistic purposes of the survey.

Materials and design: The questionnaire consisted of 16 experimental items and 16 unrelated fillers, 8 grammatical and 8 ungrammatical, presented in random order. Each target sentence was introduced by an adverbial which provided the context, as in (9), and was followed by the intended interpretation indicating the binding relation between the binder argument and the pronoun/reflexive.

- (9) **Context**

Po wielu godzinach wspólnej rozmowy na imprezie
After many hours shared talk at party,

Target sentence

Agnieszce spodobał się jej nowy współlokator.
Agnieszka_{DAT} please REFL her new roommate_{NOM}
(to współlokator Agnieszki)
(this roommate Agnieszka)

Filler grammatical

Kiedy powiedziano Kasi, że Tomek jest gitarzystą,
 when told Kasia_{DAT} that Tomek_{NOM} is guitar-player
 od razu jej się spodobał.
 since once her REFL pleased

‘When Kasia was told that Tomek was a guitar player, she liked him immediately.’

Filler ungrammatical

*Będąc robotnikiem drogowym, swoja praca
 being road mender self’s work
 nie spodobała się mojemu wujkowi.
 not pleased REFL my uncle

The experimental items were built around the variables listed in (10).

- (10a) **binder.case**: compares a Dative binder to a Nominative binder,
 (10b) **bindee.type**: compares reflexive possessives to possessive pronouns as bindees,
 (10c) **embedding**: compares contexts with possessive reflexive/pronoun in [Spec;DP]⁷ (one-degree embedding) to the ones in which DP containing the bindee is embedded under another DP (two-degree embedding).

The variables are illustrated in the examples in (4), above.

Procedure: The questionnaire was designed using an online tool (“Survey Builder”, currently Samplify.com) and was distributed on-line. There was no

⁷ For the sake of consistency, we will use DP through the paper to indicate nominal phrases in Polish. However, we do not commit ourselves to the DP hypothesis and our analysis of binding under the Index Theory could be adapted to NPs just as well. Our choice of DPs over NPs is motivated by the original proposal offered in Nikolaeva (2014) for Russian. Nevertheless, upon further investigation into the Index Theory framework, the choice between the two may turn out to be important, but we will leave it unresolved for now.

time limit for completing the survey and it took approximately 12 minutes. The participants were asked to rate the acceptability of sentences using a 7-point Likert scale, ranging from 1 – fully unacceptable to 7 – fully acceptable. The context, sentence and intended interpretation were presented together. The items were randomized for every participant. Each participant saw each condition twice (two items per condition).

2.3. Results and discussion: Possessive reflexive binding in *podobać się* ‘to please’

Descriptive results of the experiment are presented in the table below. In general, the only acceptable context involves a dative binder and a pronominal bindee, with or without bindee embedding. The rest of the contexts is subject to variation.

Table 1. Descriptive results of the experiment.

Condition	Mean	Standard Deviation
DAT binder, Anaphor, no Embedding	2.5694	1.42983
DAT binder, Anaphor, Embedding	3.8194	1.86008
DAT binder, Pronoun, no Embedding	5.3750	1.19786
DAT binder, Pronoun, Embedding	5.5347	1.07901
NOM binder, Anaphor, no Embedding	3.7014	1.20346
NOM binder, Anaphor, Embedding	3.9931	1.26851
NOM binder, Pronoun, no Embedding	3.2569	1.44377
NOM binder, Pronoun, Embedding	3.3889	1.37948

Data analysis. The data were evaluated in a repeated measures *ANOVA*⁸ ($2 \times 2 \times 2$ design) for which IBM SPSS Statistics was used. The data were collected from 75 participants, but the responses from 3 participants had to be

⁸ An anonymous *PSiCL* reviewer suggests that repeated measures *ANOVA* test is not appropriate for Likert scale data which are ordinal. However, according to Boone and Boone (2012), there is a difference between Likert-type data which are ordinal and Likert-scale data created by calculating a composite score (sum or mean) which are analyzed at the interval measurement scale and thus *ANOVA* is appropriate. Since our analysis was run on means computed for each condition, they fall under the interval Likert-scale data.

excluded based on failed accuracy (based on the ratings provided for grammatical and ungrammatical fillers). The z-scores were generated from the mean responses for each participant and no outliers were detected. Also, no item needed to be removed, based on Cronbach's alpha which was used to test the consistency of rating scores between participants for each condition (= 0.856). Since each variable had only two conditions, Mauchly's sphericity test does not apply and sphericity can be assumed (Baguley 2004). *ANOVA* was computed on the mean scores generated for each condition. The test yielded significant main effects of binder.case: $F(1,71) = 62.758$, $p < .001$, bindee.type: $F(1,71) = 86.812$, $p < .001$, and embedding: $F(1,71) = 28.975$, $p < .001$. We also found significant interactions between binder.case*bindee.type: $F(1,71) = 120.616$, $p < .001$, binder.case*embedding: $F(1,71) = 10.599$, $p = .002$, bindee*embedding: $F(1,71) = 18.597$, $p < .001$, and binder.case*bindee*embedding: $F(1,71) = 11.847$, $p = .001$. All two-way interactions were significant at each level of comparison ($p < .001$). As for the three way interaction, the effect of binder case was significant for anaphor bindees in non-embedded contexts and for pronominal bindees in both embedded and non-embedded contexts ($p < .001$). The effect of bindee was significant at all levels of binder case and embedding ($p < .001$, $p = .005$ for Nominative binders and no embedding contexts), while the effect of embedding was significant for Dative binders with anaphor bindees ($p < .001$) and for Nominative binders with anaphor bindees ($p = .028$).

Discussion. As for main effects, these results indicate that: (a) a Dative binder was rated significantly higher than a Nominative one (DAT: 4.32 > NOM: 3.59); (b) a pronominal bindee was rated higher than anaphor bindee (PRN: 4.39 > AN: 3.52); and (c) bindees embedded under another DP were rated higher than bindees embedded only in their containing DP (EMB: 4.18 > non-Emb: 3.73), though this effect did not influence their acceptability status – both contexts were judged as unacceptable. With regard to interactions, these results show that: (a) anaphors were rated higher when bound by nominative binders (3.85) than dative ones (3.19), pronominals were rated higher when bound by dative binders (5.45) than nominative ones (3.32); (b) non-embedded bindees were rated higher when bound by datives (3.97) than nominatives (3.48), and embedded bindees were rated higher when bound by datives (4.68) than nominatives (3.69); (c) non-embedded bindees were rated higher when pronominal (4.31) than anaphoric (3.14), likewise, embedded bindees were rated higher as pronominal (4.46) than anaphoric (3.91). As for the three-way interaction, (a) non-embedded anaphor bindees were rated

higher when bound by Nominative binders (3.70) than Dative ones (2.57), non-embedded and embedded pronominal bindees were rated higher when bound by Dative binder (non-emb 5.38, emb 5.54) than Nominative one (non-emb 3.26, emb 3.39); (b) Dative binders were rated higher when binding non-embedded or embedded pronominal bindees (non-emb 5.36, emb 5.54) than anaphor bindees (non-emb 2.57, emb 3.82), Nominative binders were rated higher when binding non-embedded or embedded anaphor bindees (non-emb 3.70, emb 3.99) than pronominal bindees (non-emb 3.26, emb 3.39); (c) anaphors bound by Datives were rated higher when embedded (3.82) than non-embedded (2.57) and the same for anaphors bound by Nominatives (emb: 3.99 > non-emb: 3.70).

The findings of our experiment can be illustrated with the examples listed in (11). (11a) and (11b) demonstrate that a pre-verbal Dative can bind only a pronoun, whereas a pre-verbal Nominative can bind only an anaphor. The embedding of bindees under another DP layer ameliorates the otherwise unacceptable binding relations, but it does not result in acceptability, as shown in (11c) and (11d).

- (11a) Tomkowi₁ podoba się *swoja₁/jego₁ koleżanka.
 Tomek_{3SG.M.DAT} please_{3SG} REFL self/his friend_{3SG.F.NOM}
 ‘Tomek likes his friend.’
- (11b) Tomek₁ podoba się swojej₁/*jego₁ koleżance.
 Tomek_{3SG.M.NOM} please_{3SG} REFL self/her friend_{3SG.F.DAT}
 ‘His friend likes Tomek.’
- (11c) Tomkowi₁ podoba się koleżanka
 Tomek_{3SG.M.DAT} please_{3SG} REFL friend_{3SG.F.NOM}
 *?swojej₁/jego₁ siostry.
 self/his sister_{3SG.GEN}
 ‘Tomek likes the friend of his sister.’
- (11d) Tomek₁ podoba się koleżance
 Tomek_{3SG.M.NOM} please_{3SG} REFL friend_{3SG.F.DAT}
 swojej₁/*?jego₁ siostry.
 self/her sister_{3SG.F.GEN}
 ‘The sister of his friend likes Tomek.’

These results prompt us to reject the hypothesis that pre-verbal position EX_{DAT} and Th_{NOM} can bind anaphors alike.

In what follows we account for the results of our experiment, combining the Index Theory of Nikolaeva (2014) with a recent analysis of Dative Experiencer verbs in Jiménez-Fernández and Rozwadowska (2016).

3. Theoretical analysis

3.1. Index Theory – Index Raising (Hestvik 1992; Nikolaeva 2014)

3.1.1. Pronominal Raising: first step of Index Raising

Languages such as Russian or Polish do not allow backward anaphora, or cataphora – a configuration in which a pronominal precedes an R-expression with which it is co-referential, as in the Polish examples in (12). Nikolaeva (2014) attributes these Anti Cataphora Effects (ACE) in Russian to Principle C violation. More precisely, she proposes that the pronominal undergoes a covert movement, called Pronominal Raising, to a position from which it c-commands into the clause, binding therefore the R-expression and causing Principle C violation.⁹

(12a) **[Jej_i córka] kocha Marię_i.*
 Her daughter_{3SG.F.NOM} loves_{3SG} Maria_{3SG.F.ACC}
 ‘Her daughter loves Maria.’

(12b) **Maria pokazała [jej_i pracę] [siostrze Ewy_i].*
 Maria_{3SG.F.NOM} showed_{3SG.F.PST} her work_{ACC} sister_{DAT} Ewa’s_{GEN}
 ‘Maria showed her work to Ewa’s sister.’

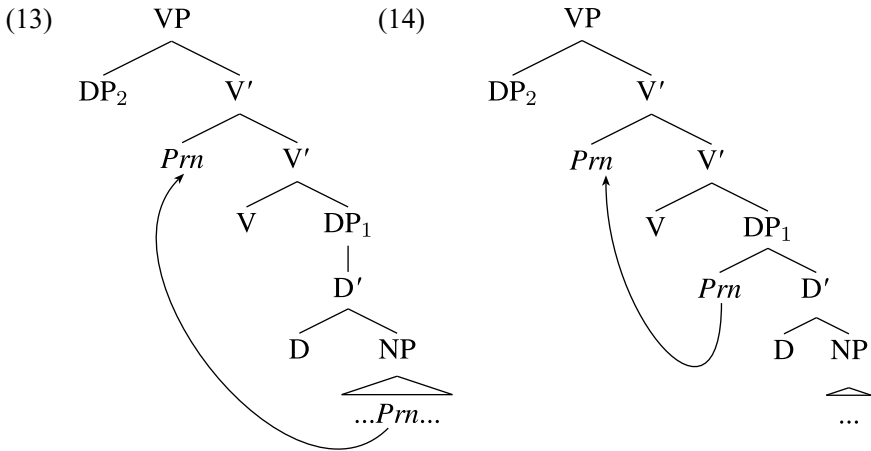
As argued, Pronominal Raising is typically implemented by a phrasal movement from a specifier-less DP to the first available specifier, tucking-in under

⁹ In contrast to, e.g. English, Cataphora (or Backward Anaphora) in Russian or Polish is bad regardless of intonation or information structure. In English cataphora is possible with non-focused R-expressions, as in (i) (Chomsky 1976; Williams 1997).

(i) His_i mother LOVES John_i.

(ii) *His_i mother loves JOHN_i.

the [Spec;XP], as e.g. in (13),¹⁰ or from the Spec position of a DP, as in (14). This movement is the first step of a more general movement – Index Raising.



3.1.2. Index Raising

It is assumed in Index Theory that anaphors and pronouns are merged into the structure as indices. An index has no phonological form and in order to be pronounced it has to be bound. Therefore, driven by a need to determine its phonological shape, an index undergoes movement in search for its binder – the so-called *Index Raising*. Index Raising is governed by five general principles of Index Theory, listed in (15).

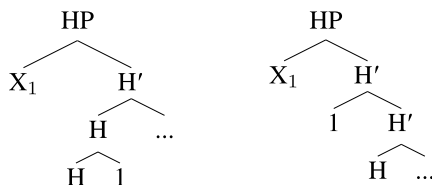
(15) **Principles of Index Theory** (Nikolaeva 2014: 68)

I. Movement: an index must undergo Index Raising unless it is at a Reflexivization site (or movement is no longer possible).

II. Reflexivization site: an index is sister to a node with label D/v/T and is c-commanded by a specifier, as in (16).

¹⁰ Pronominal complement of a DP with a specifier is blocked. This is due to locality restrictions on Pronominal Raising – pronominal Raising cannot raise over a c-commanding argument (Nikolaeva 2014: 28).

(16)



III. Coargumental Reflexivization: if an index is at a reflexivization site and is co-indexed with a specifier which is its co-argument, the index has to be realised as reflexive.

IV. Reflexivization at spell-out: when the sentence is sent to spell-out, if an index is co-indexed with the specifier of the projection to which it is adjoined, the index has to be realised as reflexive.

V. Pronominal is an elsewhere condition: if an index has not been realised as reflexive, it is realised as pronominal.

The positions to which indices move are shown in the diagram (17). Position 1 is a post-phrasal movement site (a result of Pronominal Raising) – a position from which the index c-commands into the clause causing a Principle C violation.¹¹ Positions 2 and 3 are reflexivization sites; these are positions reached by a head-adjunction movement; an index in position 2 or 3 does not c-command into the clause, therefore it does not cause Principle C

¹¹ This movement is proposed to account for cases of Anti Cataphora Effects (ACE), which Nikolaeva (2014, Chapter 2) argues to be cases of Principle C violation.

- (i) *Eë₁ [_{DP} Eë₁ učitel’] pohvalil Mašu₁
~~her~~ her teacher praised Maša
 ‘Her teacher praised Maša.’ (Nikolaeva 201: 12)

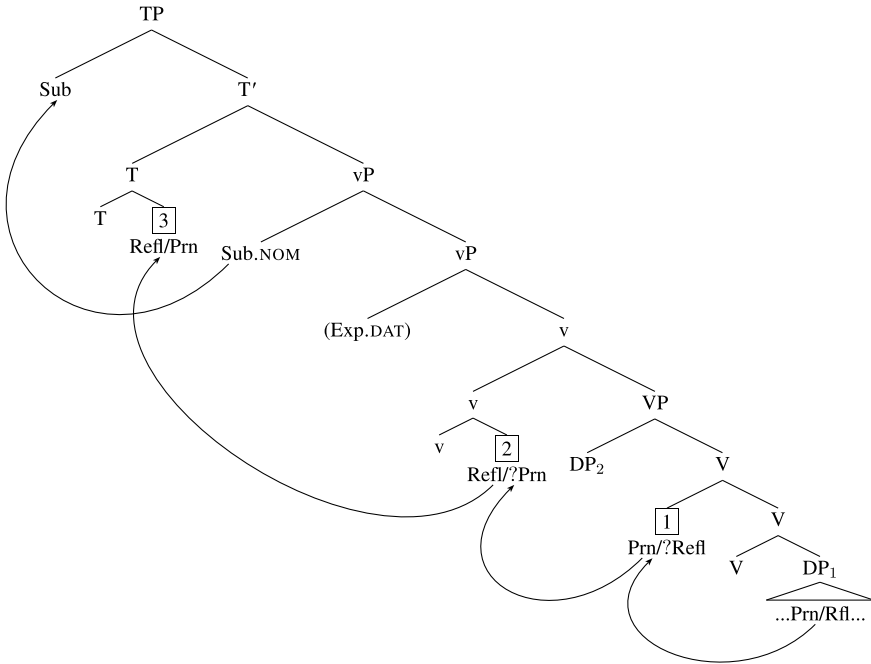
The index is taken to raise to a position from which it can c-command into the clause, being able to bind the R-expression *Maša*. Since ACE of the type illustrated in (i) is also present in Polish, we follow Nikolaeva in assuming two types of movement in Index Raising: (a) movement by tucking-in, to a position from which the index c-commands into the clause, as in (i); and (b) movement by head-adjunction, to a non-c-commanding position, as in (ii).

- (ii) Tomek₁ zobaczył siebie₁ w lustrze.
 Tomek saw himself in mirror

Note, however, that while in this paper, we follow Nikolaeva’s (2014) system with no changes to the proposed reflexivisation sites or types of movement, our more recent accounts slightly modify the theory of Nikolaeva, proposing head-adjunction as the only type of IR movement (cf. e.g. Witkoś et al., to appear).

violation. In general, in search for a binder, the index will move through all the intermediate positions, until it finds an appropriate reflexivization spot.

(17) Index Positions (Nikolaeva 2014: 57)



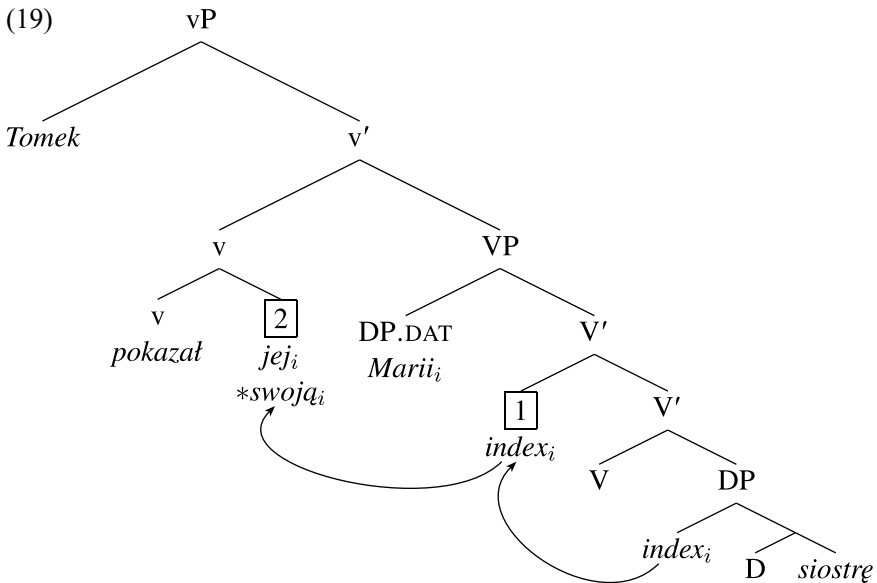
3.1.3. Index Raising in DOCs: Reflexive possessive binding

In this section, we turn to the application of the Index Raising to object co-reference in Polish double object constructions, i.e. the contexts in which the higher object (Dative indirect object) binds the lower object (Accusative direct object), as in (18). In such structures, only a pronoun can be bound locally by an indirect object.

- (18a) Tomek pokazał Marii jej koleżankę.
 Tomek_{3SG.M.NOM} show_{3SG.M.PST} Maria_{3SG.F.DAT} her friend_{3SG.F.ACC}
 ‘Tomek showed Maria her friend.’

- (18b) *Tomek pokazał Marii_i swoja_i koleżankę.
 Tomek_{3SG.M.NOM} show_{3SG.M.PST} Maria_{3SG.F.DAT} self friend_{3SG.F.ACC}
 ‘Tomek showed Maria self’s friend.’

The diagram below, in (19), represents the derivation for (18).



The index is merged as a [Spec;DP] of the direct object. Then, the index undergoes Pronominal Raising, a phrasal movement to a clause c-commanding position – the index tucks in under the first available specifier, namely [Spec;VP], *Marii* – position 1. Although the index and the argument in [Spec;VP], *Marii*, are co-indexed, the index does not have to be bound in this position because the two are not co-arguments. Moreover, position 1 is not a reflexivisation site since the index is not a sister to v/T/D, but V. Therefore, in search for a reflexivization site, the index moves higher and head-adjoints to v⁰ – position 2. Position 2 is a reflexivisation site, but the DP above the moved index, *Tomek* in [Spec;vP], is not co-indexed with the index, i.e. it cannot act as a binder. Therefore, the index comes out as a pronoun due to the elsewhere principle.

Note that the crossing of a c-commanding DP in [Spec;VP], i.e. the DP_{DAT} *Marii*, cannot be implemented by a phrasal movement (Pronominal Raising), as it would lead to the change in a c-command relation, thus violating a restriction on Pronominal Raising. Therefore, the movement from Position 1 to Position 2 is implemented by head-adjunction. Being head-adjoined to v^0 , the index is no longer c-commanded by its binder – hence there is no Principle B violation.¹² Also, in position 2, the index does not c-command into the clause, therefore there is no ACE/Principle C violation.

3.2. Possessive reflexive binding with *podobać się* ‘to please’

In this section, we propose an analysis of the binding relations in *podobać się* ‘to please’ within the Index Theory of Binding, showing similarities between Dative binders in *podobać się* ‘to please’ and Dative binders in DOCs. In our analysis we combine Index Theory with certain assumptions of a recent account of Dative Experiencers in Polish, proposed in Jiménez-Fernández and Rozwadowska (2016). Therefore, before we turn to our analysis a few words of introduction to JF&R’s account are in order.

3.2.1. Jiménez-Fernández and Rozwadowska’s (2016)

JF&R’s study focuses on information structure in contexts with Dative Experiencers in Polish, English and Spanish. Based on results of their experimental study, JF&R argue that the constituent order in Dative Experiencer verbs is not free, as proposed e.g. in MM&S (2008), rather it is restricted by information structure considerations. In general, if no intonation is taken into account, topics, i.e. what the sentence is about, typically occur in the initial position, whereas information focus, i.e. what is being said about the topic, appears in the final position of the sentence. This is illustrated in (20) and (21).

¹² As rightfully noted by an anonymous *PSiCL* reviewer, the status of head movement as a syntactic operation is a matter of debate. For example, Chomsky (2001a) relocates head-movement to PF, where syntactic principles such as c-command do not hold. At the same time, others, e.g. Müller (2004) reanalyse head-movement in terms of remnant movement, or phrasal movement, as in Matushansky (2006). For the index analysis to work, head movement must be taken to be a syntactic operation, and therefore it must be analyzed in traditional terms, i.e. as movement via head-adjunction.

(20) **Dative Experiencer as Aboutness Topic**

Co smakuje Ani?
 what tastes Ania_{DAT}
 ‘What does Ania like?’

- Ani smakuje makaron.
 Ania_{DAT} tastes pasta_{NOM}
- #Makaron smakuje Ani.
 Pasta_{NOM} tastes Ania_{DAT} (JF&R 2016: 106)

(21) **Dative Experiencer as Information Focus**

Komu smakuje makaron?
 Who_{DAT} tastes pasta_{NOM}?
 ‘Who likes pasta?’

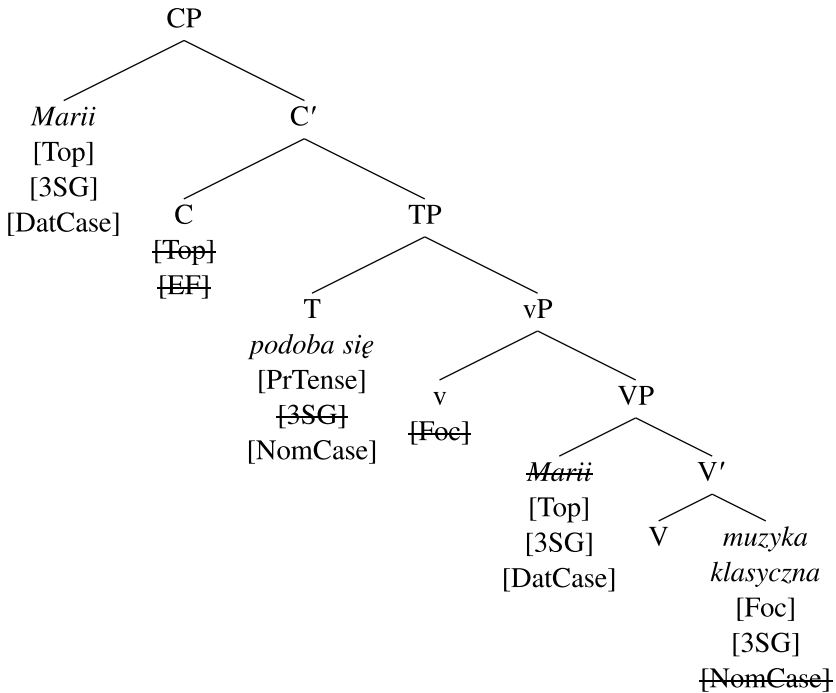
- #Ani smakuje makaron.
 Ania_{DAT} tastes pasta_{NOM}
- Makaron smakuje Ani.
 pasta_{NOM} tastes Ania_{DAT} (JF&R 2016: 106)

In their analysis, JF&R, following Miyagawa (2010), assume that in all languages grammatical features are divided into: (a) *agreement features*, ϕ -features, and (b) *discourse features*, δ -features. In general, valuation of both types of features is established under Spec-head relation; nevertheless, under some circumstances features valuation under Agree is also allowed. All features are initially, by default, on the C head. However, in agreement-prominent languages, ϕ -features are inherited by the T head, while in discourse-prominent languages, δ -features are inherited by the T head. JF&R argue that Polish is both agreement-prominent and discourse prominent, therefore both types of features are expected on the T head.

(22) illustrates JF&R’s analysis of pre-verbal Dative Experiencers, i.e. Experiencers as a Given Topic.

(22) **Exp_{DAT} (Topic)–verb–Th_{NOM} (Information Focus)**

Marii podoba się muzyka klasyczna.
 Maria_{DAT} please_{3SG} REFL music classical_{NOM}
 ‘Maria likes classical music.’



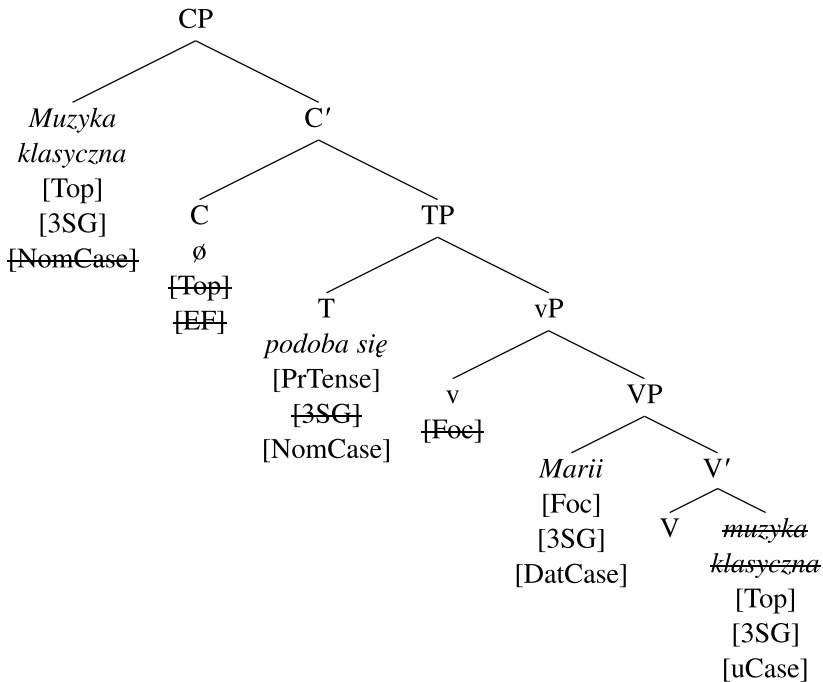
(Adapted from Jiménez-Fernández and Rozwadowska's 2016: 118.)

JF&R assume that the Experiencer is merged in [Spec;VP] and the Theme is projected as a complement of V. As proposed, in the DAT-NOM argument order, as in (21), the discourse feature, [Top], is not inherited by the T head; instead it remains on C. The [Top] feature together with the Edge Feature, [EF], on C attract the Dative Experiencer to move [Spec;CP]. The information focus feature, [Foc], is not inherited by V; it remains on v. The v head agrees with the [Foc]-marked Theme argument through Agree. The T agrees with the Nominative Theme under Long Distance Agree. JF&R do not discuss the details of Case valuation in the contexts in question. However, one might assume that the Dative-marked argument in (22) is marked with inherent Case, otherwise it would raise Defective Intervention effects, blocking the Agree relation between T and the Nominative Theme.

In the NOM-DAT argument order, a context where the Exp_{DAT} is marked with the information focus feature, while the Th_{NOM} is the Topic of the sentence is illustrated in (23).

(23) **Th_{NOM} (Topic) – verb Exp_{DAT} (Information Focus)**

Muzyka klasyczna podoba się Marii.
 music classical_{NOM} please_{3SG} REFL Maria_{DAT}
 ‘Maria likes classical music.’



(Adapted from Jiménez-Fernández and Rozwadowska’s 2016: 118.)

Just like in the NOM-DAT order, in DAT-NOM T does not inherit the discourse feature; [Top] remains on the C head. The information focus feature, [IF], is found on v. The v head agrees with the [IF]-marked Dative Experiencer under Agree. The T head agrees with the Theme argument in ϕ -features. Because the Theme is marked with the [Top]-feature, which appears also on the C head, the argument is attracted by the edge feature, [EF], to move to [Spec;CP].

The analysis of JF&R accounts for some of the problems found in the *podobać się* ‘to please’ construction including: (a) information structure considerations; (b) verb agreement; and (c) movement of either of the argument

to pre-verbal position. However, the account raises certain questions, which are left unanswered. It is not clear, for example, why in Polish, a language both agreement- and discourse-prominent, discourse features are to be found on the C head, not on T, as expected. It is also not clear how the system in JF&R decides between agreement under spec-head relation, Agree and Long Distance Agree. In the analysis of (22) and (23) all three types of feature valuation are exhibited; however, no explanation is provided as to how each is chosen.

Moreover, essentially for the results of our experiment, the account of JF&R is only partially accurate. JF&R argue that both the Exp_{DAT} and Th_{NOM} move to [Spec;CP] when they are spelled out pre-verbally. This predicts that both arguments should show reconstruction with regard to binding when projected before the verb. This, as our study shows, is not the case. The movement of Th_{NOM} extends the binding domain of Th_{NOM} , while the movement of Exp_{DAT} reconstructs. This suggests that that only Exp_{DAT} moves to [Spec;CP]; Th_{NOM} has to move to [Spec;TP].

In the light of the questions enlisted above as well as the results of our experiment, we propose slight modifications to JF&R's account. Essentially, we argue that: (a) Nominative-marked Theme is A-fronted to [Spec;TP], extending binding domain; (b) Dative Experiencer is A-bar moved to [Spec;CP], reconstructing to the Dative's base position; (c) both discourse and agreement features are on T only if there is one argument that could potentially value both types of the features; (d) in case where there is no one argument that could value all the features of T, in order to avoid a derivation crash, the discourse features remain in C (i.e. only agreement features are inherited by T); (e) in general, agreement with T and C is established under spec-head relation (spec-head relation preference). When the spec-head relation is not available, in order to avoid derivation crash, feature valuation under Agree is allowed. In case of *podobać się* 'to please', v cannot project [Spec;vP] due to the unaccusative nature of the verb; therefore feature valuation with v is allowed under Agree. In the section to follow, we illustrate our proposal with examples of derivations.

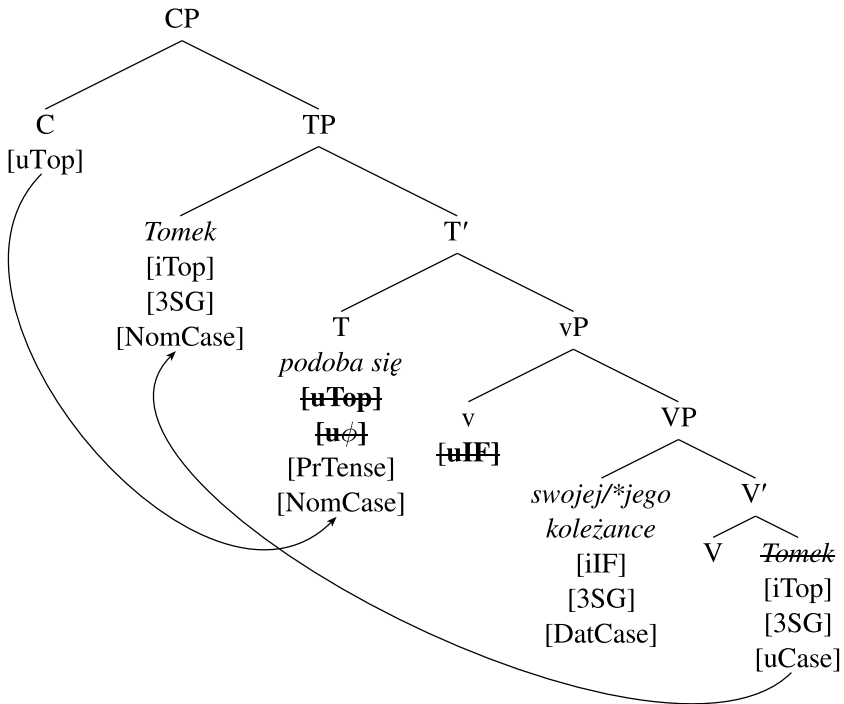
3.2.2. Index Raising and information structure in *podobać się* 'to please'

(24) illustrates the NOM-DAT argument order in *podobać się* 'to please' where the Th_{NOM} is marked with the Topic-feature and Exp_{DAT} with Information Focus. (24b) illustrates the derivation.

(24) **Th_{NOM} (Topic)–verb–Exp_{DAT} (Information Focus)**

(a) Tomek₁ podoba się swojej₁/*jego₁ koleżance
 Tomek_{NOM} please REFL self/his friend_{DAT}
 ‘His friend likes Tomek.’

(b) Th_{NOM}–verb–Exp_{DAT} – structure

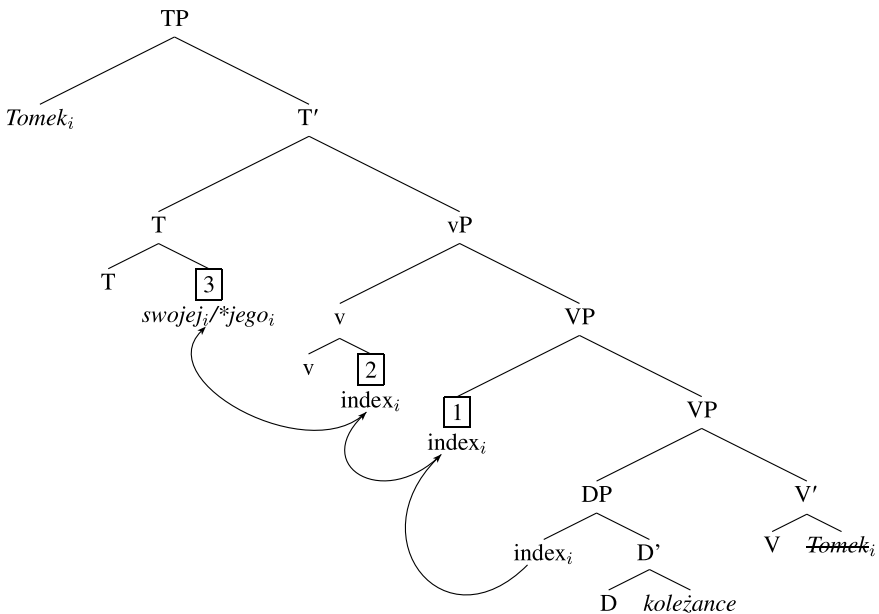


Based on the θ -hierarchy – Agent > Experiencer > Goal > Theme (Belletti and Rizzi 1988; Jackendoff 1990; Grimshaw 1990; a.o.) – Exp_{DAT} is merged higher in the structure than Th_{NOM}. Both DPs are merged as internal arguments, assuming an unaccusative structure of *podobać się* ‘to please’. The Exp_{DAT} is merged with an inherent Dative Case, hence its interpretable [DatCase] valuation; it is also marked for the [iIF] feature, i.e. information focus. The Theme carries an unvalued structural Case, [uCase] as well as an interpretable Topic feature, [iTop].

Because the T head is marked for [uTop], the Theme, with its [iTop] feature, is a good match for discourse features valuation. Moreover, because the Theme carries an [uCase] feature, it is visible to the T Probe for its agreement features valuation. We assume the Activity Condition (AC), which says that Goals must be activated to be visible to φ -Probes and the mechanism that typically activates Goals is structural Case (various versions of AC assumed also in, e.g.: Chomsky 2001a; Nevins 2004; Richards 2008; Miyagawa 2010). Because in (24) one argument, namely the Theme, can value both the discourse and agreement features, T inherits both types of features, just as expected in an agreement- and discourse-prominent language. The Theme is attracted by T to move to [Spec;TP], from where it values the [uTop] and [u φ] of T; as a by-product of this Agree relation, the Theme receives [Nom-Case].

Because the Theme argument moves to [Spec;TP], it is predicted that it should not reconstruct to its base position with regard to binding relations. Instead, the movement of Th_{NOM} extends the binding domain. As the results of our study show, this is indeed the case, as accounted for in (25).

(25) Binding relations in Th_{NOM}-verb-Exp_{DAT}

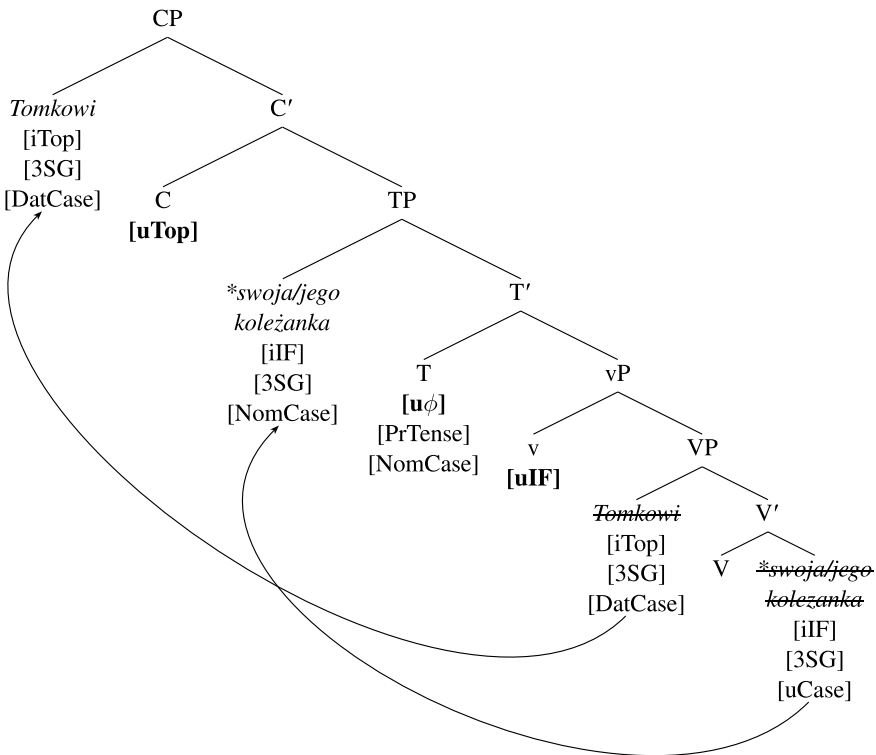


Assuming possessives are merged in a specifier position, the index is merged as [Spec;DP] of the Exp_{DAT} argument in [Spec;VP]. In search for its binder, the index raises through position 1 and 2, up to position 3. Position 3 is a reflexivisation site, as the index is a sister to T; therefore, the index, co-indexed with the nominal in [Spec:TP], is spelled out as an anaphor/reflexive possessive.

Different binding relations are reported in the DAT–NOM argument order in *podobać się* ‘to please’, where, as our results indicate, the pre-verbal argument moves to [Spec;CP], as represented in (26).

- (26a) Tomkowi podoba się *swoja/jego koleżanka
 Tomek_{3SG.M.DAT} please_{3SG} REFL self/his friend_{3SG.F.NOM}
 ‘Tomek likes his friend.’

(b) Exp_{DAT} (Topic)–verb– Th_{NOM} (Information Focus)



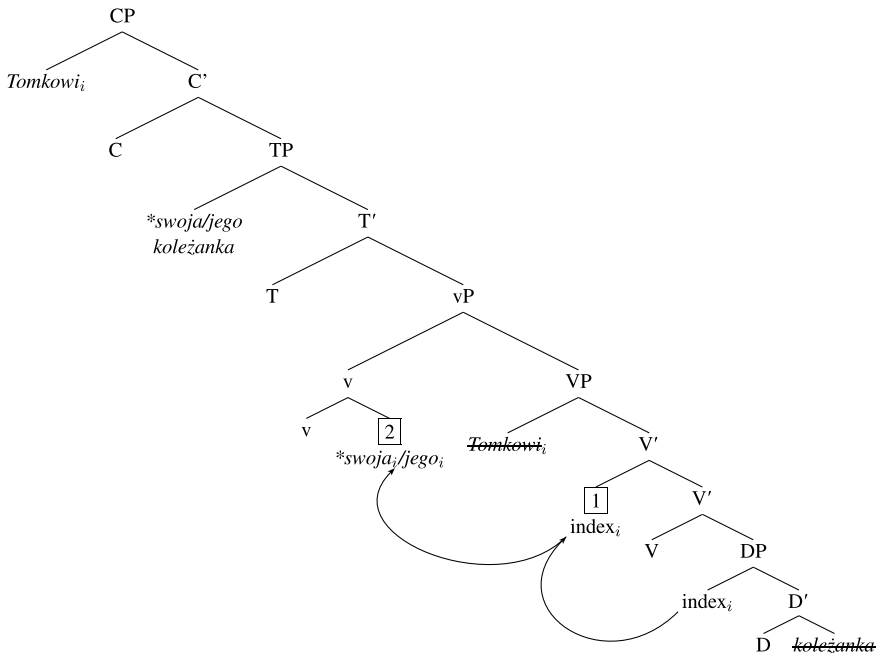
The Theme, base-generated as a complement of V, is merged with uninterpretable [uCase]. The Dative Experiencer, marked with inherent Dative Case, is merged with its Case feature specified, [DatCase], in [Spec;VP]. With regard to discourse features, the Experiencer is marked with a Topic feature, [iTop], while the Theme with Information Focus Feature, [iIF]. Note that in (26), there is no one argument, which could value both the agreement and the discourse features. As Polish is a discourse- and agreement-prominent language, both types of features are typically inherited by the T head; however not in (26). This is because the argument that bears the [iTop] feature is also marked with inherent Case, which, following the Activity Condition, makes the Goal unsuitable for ϕ -features valuation.¹³ Therefore, in order to avoid derivation crash, the discourse and agreement features are split between two Probes so that two different arguments could value the two types of features. Agreement features are inherited by the T head, while discourse features remain on C.

Because of the split of the discourse and agreement features between the C and T heads, respectively, one of the internal arguments is attracted to move to [Spec;TP] while the other to [Spec;CP]. The Theme, marked with [uCase] and therefore visible to the ϕ -Probe, is attracted by T to move to [Spec;TP]. The Theme values T's [u ϕ]-features and receives [NomCase]. The Dative argument, marked with the [iTop] feature, is attracted by C to move to [Spec;CP], from where it values the [uTop] feature of C. The split of the discourse and agreement features between the C and T heads accounts for the DAT-NOM order of the arguments in the construction in question.

With regard to binding, movement of the Dative Experiencer to [Spec;CP] position predicts the ability of Exp_{DAT} to reconstruct to its base-generated position. As our experimental study shows, this is indeed the case, as accounted for in (27). In (27), the index is merged as [Spec;DP] of the Theme argument *koleżanka* 'friend', in the complement to V position. In search for its binder, the index moves via phrasal movement and tucks-in under the first available specifier, which happens to be its binder. However, even though the index is just under its binder in position 1, it cannot be spelled out as an anaphor, because position 1 is not a reflexivisation site; the index is not a sister to v/T/D, but V. Therefore, the index is forced to continue raising – it head-adjoins to v, i.e. position 2. In this position, the index is

¹³ Recall that the Activity Condition is relevant only for agreement features valuation, not for discourse features Agree (Myagawa 2010). Therefore, an argument with interpretable Case features, e.g. [DatCase], is able to value discourse features, but is not able to value agreement features.

(27) Binding relations in Exp_{DAT}-verb-Th_{NOM}



no longer c-commanded by its binder, hence no Principle B violation occurs. In position 2, the index also does not c-command into the clause, therefore it causes no ACE/Principle C violation. The index is spelled out as a pronoun by the elsewhere condition.

It should be noted, however, that although the results of our study can be accounted for assuming the unaccusative structure of *podobać się* ‘to please’ constructions as proposed in MM&S (2008), it is possible that the unacceptability of Exp_{DAT} binding reflexive possessives in Th_{NOM} can be attributed to a different factor than the low [Spec;VP] position of Exp_{DAT}. In fact, Witkoś (2007, 2008) observes that in contexts where the anaphor is embedded in a PP, it can be bound by Exp_{DAT}, as in (28a). Similar observations were made in Tajsner (2008) and Wiland (2009, 2016) for accusative Object Experiencers binding into the Th_{NOM} (28b).

(28a) [Nowakom₂] spodobała się [nowa książka
 Nowaks_{DAT} liked REFL new book_{NOM}

(Kowalskich₁) o sobie_{1,2}]
 (Kowalskis') about self

'The Nowaks liked the new book (by the Kowalskis) about themselves/them.'

(Witkoś 2007: 467)

(29b) Marię₁ irytowały historie ze swojego₁ dzieciństwa.
 Maria_{ACC} irritated stories_{NOM} from self's childhood
 'Stories from her childhood irritated Maria.'

(Tajsner 2008: 423)

Since our study is limited to account for the contexts tested experimentally, i.e. examples in (11), we did not consider the broader range of data presented in the abovementioned works. However, if $\text{Exp}_{\text{DAT/ACC}}$ can bind anaphors as soon as these are embedded and, consequently, marked for case different than nominative, the unacceptability of examples in (11a–b) could be due to the Anaphor Agreement Effect (AAE) (Rizzi 1990; Woolford 1999). Rizzi (1990: 26) submits that “anaphors do not occur in syntactic positions construed with agreement”. Thus, because Th_{NOM} is the argument involved in Agree relation with T, the nominative reflexive possessive is illicit, i.e. irrespective of the binder type. Consequently, if the AAE proves a plausible explanation of the facts in (11a–b), nothing prevents us from considering a higher base position for Exp_{DAT} which would enable them to bind reflexives in other contexts, like (28), under the Index Theory framework. Such an analysis of binding by Object Experiencers is proposed by Witkoś et al. elsewhere in this volume. These authors attribute illicit binding into Th_{NOM} , as in (11a–b), to the AAE and extend its definition to account for the facts parallel to our embedded contexts in (11c–d). Notice that the AAE as defined in Rizzi (1990) would not explain why the Genitive marked reflexive embedded under Nominative NP in examples (11c–d) be infelicitously bound by Exp_{DAT} . For a full discussion of these facts, we refer the reader to Witkoś et al. (this volume).

4. Conclusions

In this paper, we have shown that the internal arguments of the Polish unaccusative psychological verb *podobać się* ‘to please’ move to two different positions when projected pre-verbally. Based on the results of our experiment, we have argued that the Dative Experiencer moves to [Spec;CP] while the Nominative Theme moves to [Spec;TP].

We have also suggested that movement to [Spec;TP] in Polish is restricted to those arguments that can value all uninterpretable features on T, namely both the discourse and agreement features. In cases where there is no one argument that could check all of the features of T, discourse features remain in C while agreement features are inherited by T, as expected in a discourse- and agreement-prominent language. Such grammatical features split between the heads T and C avoids derivation crash by allowing two different arguments to value the two different types of grammatical features, agreement and discourse.

As a consequence of the two possible positions for discourse features, C or T, the arguments of *podobać się* ‘to please’ move to different positions, Exp_{DAT} to [Spec;CP], Th_{NOM} to [Spec;TP]. Movement to [Spec;TP] extends the binding domain of Th_{NOM} , making it a licit binder for a possessive reflexive but not a pronoun. EX_{DAT} moved to [Spec;CP] must reconstruct to [Spec;VP] for binding, which is too low a position to bind reflexives, but low enough to bind pronouns.

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