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Numeral Subjects in Polish: Surface Morphology vs. Abstract Syntax^{1 2}

1. Introduction

Numeral subjects in Polish show a non-uniform agreement pattern with the verb, depending on the cardinality of the numeral (paucal vs. high) and the gender of the NP. Full agreement shows with paucal numerals (<5) on non-virile NPs in (1a), while high numerals (≥ 5) with non-virile NPs in ex. (1b) require default agreement (3 person, neuter, singular) on T_{fin} . Paucal numerals combined with virile NPs may show either full agreement or default agreement, (2a-b), while high numerals with virile NPs show default agreement, (2c). High numerals combined with virile NPs show a surface morphological form of accusative/genitive, whereas high numerals combined with non-virile NPs show a surface morphological form of accusative/nominative. This matter of numeral subject/verb (dis)agreement has been discussed extensively in the literature (Babby 1987; Pesetsky 1982, 2013; Franks 1994, 1995, 2002; Przepiórkowski 1999, 2001; Rappaport 2001; Bailyn 2004; Bošković 2006; Pereltsvaig 2006; Rutkowski 2002, 2007; Przepiórkowski/Patejuk 2012; Miechowicz-Mathiasen 2012; Willim 2015; Klockmann 2015, 2017; Matushansky/Ionin 2016, and Witkoś et al. 2018):

- (1) a. *Te trzy dziewczyny pracowały/*pracowało tam.*
these_{NOM} three_{NOM} girls_{FNOM.PL} worked_{3PL.NON-VIR/3SG.N} there
'These three girls worked there.'

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|--------|----------------------------------|--------------------------|---------------------------|--|-------------|
| b. | <i>Te</i> | <i>pięć</i> | <i>dziewczyn</i> | <i>*pracowały/pracowało</i> | <i>tam.</i> |
| | these _{ACC} | five _{ACC/NOM} | girls _{F,GEN.PL} | worked _{3PL.NON-VIR/3SG.N} ³ | there |
| | ‘These five girls worked there.’ | | | | |
| (2) a. | <i>Ci</i> | <i>trzej</i> | <i>chłopcy</i> | <i>pracowali/*pracowało</i> | <i>tam.</i> |
| | these _{NOM} | three _{NOM} | boys _{M,NOM.PL} | worked _{3PL.VIR/3SG.N} | there |
| | ‘These three boys worked there.’ | | | | |
| b. | <i>Tych</i> | <i>trzech</i> | <i>chłopców</i> | <i>*pracowali/pracowało</i> | <i>tam.</i> |
| | these _{ACC/GEN} | three _{ACC/GEN} | boys _{M,GEN.PL} | worked _{3PL.VIR/3SG.N} | there |
| | ‘These three boys worked there.’ | | | | |
| c. | <i>Tych</i> | <i>pięciu</i> | <i>chłopców</i> | <i>*pracowali/pracowało</i> | <i>tam.</i> |
| | these _{ACC/GEN} | three _{ACC/GEN} | boys _{M,GEN.PL} | worked _{3PL.VIR/3SG.N} | there |
| | ‘These three boys worked there.’ | | | | |

The outline of this brief contribution is as follows: section 2 presents a recent account of morphological patterns of verb (dis-)agreement with numeral subjects advocated in Matushansky/Ionin (2016). Section 3 provides a selection of arguments showing that despite its morphological idiosyncrasies, every type of numeral subject (paucal, with virile and non-virile complements) functions like a genuine nominative subject with respect to control, coordination with nominative NPs, and anaphoric binding. This implies a syntactic derivation in which T_{fin} accesses and attracts the numeral subject to [spec, TP], just as it attracts its morphologically better behaved nominative equivalent. Section 4 presents a blueprint for a syntactic derivation detailing relationships between the T_{fin} probe and relevant component parts of the numeral subject.

The derivation is set in an eclectic model of minimalist grammar, incorporating ingredients of nano-syntax (Starke 2001; Caha 2009) and two-tiered Agree (Agree Link and Agree Copy, see Bejar 2003; Benmamoun et al. 2009; Marusić et al. 2015). Both seem necessary to provide for a firm con-

³ According to the most common classifications of gender in Polish, 5 genders in reference to nouns in singular and plural are distinguished, i.e. masculine personal or virile (=M.VIR), masculine animate (=M.ANIM), masculine inanimate (M.INANIM), female (F) and neuter (N). Morphological marking on verbs in singular indicates division into masculine, feminine and neuter (due to the identity of forms in masculine personal/virile, animate and inanimate, they are subsumed under one paradigm, i.e. masculine), whereas in plural we have a bipartite division into virile (=VIR) for masculine personal referents and non-virile (=NON-VIR) which includes feminine, neuter, masculine animate and masculine inanimate all together (see Mańczak 1956; Laskowski 1998; Saloni/Świdziński 2012 but also Saloni 1976 for a more detailed division into 9 genders. For an overview of gender system in Polish cf. Wierzbicka 2014).

nection between the complex morphology of the numeral subject and its uneventful subject-like syntax. Nano-syntax renders ‘surface’ morphology visible to the narrow syntactic probe/goal relation, while the separate sub-component of Agree Copy allows me to capture the valuation of case and *phi*-features internal to T_{fin} .

2. The numeral subject and surface morphological (dis)agreement with the verb

The claim that the cardinal numeral of the numeral subject in (1b) and (2b-c) bears surface accusative case morphology rests on solid foundations. This proposal was voiced in classical Polish linguistic literature (see Małecky 1863; Krasnowolski 1897; Szober/Łoś 1928) as the explanation for the lack of subject-verb agreement with numeral subjects and the form of demonstratives agreeing with the cardinal numeral or the noun. An up-to-date version of this view, known as the Accusative Hypothesis, is proposed in Przepiórkowski (1999, 2001, 2004), Przepiórkowski/Patejuk (2012), Franks (1994, 1995, 2002), Miechowicz-Mathiasen (2012) and Matushansky/Ionin (2018). These authors argue that (higher) numeral phrases are marked for accusative in the subject position on the basis of the following comparison pertaining to the case form of the numeral and the demonstrative, assuming that the case of the cardinal numeral is common for both the virile and non-virile genders:

- (3) a. (*tych/te*)
 these_{GEN,NON-VIR} // these_{NOM?/ACC,NON-VIR} *pięć*
 five_{NOM?/ACC,NON-VIR} *kobiet*
 women_{F,GEN,PL} *stało.*
 stood_{3SG,N}
 ‘These five women were standing.’
- b. (*tych/*ci*)
 these_{ACC/GEN,VIR} // *these_{NOM,VIR} *pięciu*
 five_{NOM?/ACC/GEN,VIR} *mężczyzn*
 men_{M,VIR,GEN,PL} *stało.*
 stood_{3SG,N}
 ‘These five men were standing.’

There is considerable syncretism in the plural forms of the demonstrative but significantly, the nominative form of the demonstrative *ci* ‘these’ is ruled out for the masculine virile ‘men’. While the form *te* ‘these’ is syncretic between nominative and accusative for the non-virile referents, the form *tych* ‘these’ is syncretic between accusative and genitive for virile referents. These authors point out that the common morphological case form acceptable for both genders is accusative.⁴ Lack of nominative on

⁴ The complicating factor here comes from demonstrative raising: the genitive demonstrative in ex. (3) is placed in the domain of the NP-complement and subsequently raised to the domain of the numeral. This classical view dates back to

the cardinal numeral in (1b) and (2c) accounts for default agreement on the verb, assuming that only nominative subjects in Polish show all the attributes of subjecthood (Dziwirek 1994).

A comprehensive account of the full pattern of (dis)agreement between the numeral subject and the verb shown in (1-2) is presented in Matushansky/Ionin (2016). They make three key assumptions to account for the (dis) agreement pattern between the numeral subject and the verb in (1-2). First, they establish that virile paucal cardinals in nominative in (2a) are in fact cardinal adjectives, rather than cardinal numerals. Second, they propose that the *phi*-feature set on the Tense probe and the nominal goal includes a fourth relevant feature on top of [person] [number] and [gender], called [individuation], which distinguishes between sortal nouns on the one hand and measure nouns and numerals on the other. Third, they submit that whenever the *phi*-feature set of the goal is incomplete (like a numeral lacking the privative [individuation] feature), the probe is still active and needs to probe further to have its *phi*-feature set valued.

Matushansky/Ionin (2016) argue that virile paucal cardinals in nominative in (2a) are cardinal adjectives, rather than cardinal numerals, because they cannot appear in complex numerals:

- (4) a. **dwadzieścia/dwudziestu* *dwaj/trzej/cztery* *chłopcy*
 twenty_{NON-VIR}/twenty_{VIR} two/three/four_{VIR,NOM} boy_{M,NOM,PL}
- b. *dwudziestu dwóch/trzech/czterech* *chłopców* *przyszło*
 twenty_{VIR} two/three/four_{VIR,GEN} boy_{M,GEN,PL} came_{3SG,N}
- ‘Twenty-two/three/four boys came.’

The paucal numerals with non-virile NPs are genuine numerals. Thus apart from paucal cardinal adjectives in (2a), all numerals with virile NPs appear in a form of morphological accusative/genitive, while all numerals appearing with non-virile NPs appear in a form of morphological accusative/nominative.

Following Matushansky/Ruys (2015), Matushansky/Ionin (2016), I assume that the *phi*-feature set on T_{fin} includes the [individuation] feature alongside person, number and gender features. This privative feature reflects the semantic distinction between cardinal numerals, measure nouns and other sor-

Corbett (1979), who proposes a rule of adjective movement to capture a similar phenomenon in Russian:

- (i) [_{NP} [celyx
 whole_{GEN}
 ‘whole five hours’
- _{NP} [pjat’
 five_{NOM}
- [_{NP} t_A časov]]]
 hours_{GEN}

tal nouns. Matushansky/Ionin (2016) argue that measure nouns in general, including numerals, are functional elements, rather than lexical ones, and are close equivalents to classifiers. While sortal nouns do have the individuation feature, cardinal numerals do not. Matushansky/Ruys (2015) hypothesise that the [individuation] feature is a semantico-syntactic feature relevant for number agreement and in many languages measure nouns and numeral phrases show singular or default agreement with the verbal predicate either optionally or obligatorily. They observe that its lack on indefinite measure nouns in Dutch forces singular agreement with the predicate, but for some speakers the plural form may appear with a definite measure phrase:

- (5) a. *Er staat/*staan drie liter water op tafel.*
 there stand_{SG/PL} three liter_{SG} water on table
 ‘There are three liters of water on the table.’
- b. *Er werd/*warden vijf pond uitgegeven aan kleren.*
 there AUX_{SG/PL} five pound_{SG,N} spend_{PPP} on clothes
 ‘Ł5 were spent on clothes.’
- c. *Deze vijf pond bonen ligt/liggen me zwaar op de maag.*
 this_{PL} five pound beans lie_{SG/PL} me heavy on the stomach
 ‘These five pounds of beans are hard for me to stomach.’

While indefinite measure NPs obligatorily require singular agreement with the predicate in Russian, the plural form appears when the measure phrase is definite, specific, referential or partitive:

- (6) a. *Prošlo pjat’ let.*
 pass_{PAST.SG,N} five years_{GEN}
 ‘Five years passed.’
- b. *Prošli pjat’ let.*
 pass_{PAST.PL} five years_{GEN}
 ‘The five years passed.’

Also in English plural measure phrases trigger either singular or plural agreement:

- (7) a. *That five gallons of milk is/*are going to be handy.*
 b. *Those five gallons of milk are/*is going to be handy.*

Matushansky/Ionin (2016) propose that agreement for number is largely determined by the [individuation] feature both within the NP and between the NP and the predicate. The property of individuation, in turn, is involved in interaction with other features; in Dutch the individuation feature is concerned only with measure, as only measure nouns fail to agree. In Russian it is more complex and depends on two dimensions: individu-

ation and specificity. Significantly, Matushansky/Ruys (2015) propose that the features [individuation] and [number] are calculated differently for numeral phrase external and numeral phrase internal representations.⁵ It seems that while Polish follows Russian with respect to NP-internal spread of plural marking within numeral phrases, it does not include the [+/-specificity] component:

- (8) *wszystkie te siedem białych róż*
 all_{PL} this_{PL} seven white_{PL,GEN} roses_{PL,GEN}
 ‘all these seven white roses.’

When the plural number ([number_{PL}]) and [individuation] features are considered, it appears that their mismatch in value does not cause problems in Polish (and Russian) at the level of the maximal projection of the entire numeral phrase, but it does so at the level of TP, see (1b), (2b-c). Matushansky/Ionin (2016) insist that the entire bundle of features on T must be valued by the same goal and agreement on T fails when the goal does not bear the individuation feature. Sortal nouns include the [individuation] feature but numerals lack it and measure nouns in Polish can have it only optionally. They observe that (paucal) measure phrases optionally trigger full or default agreement:⁶

⁵ Dutch does not allow for plural marking within numeral phrases/measure phrases, while Russian does so:

- (i) *drie/vijf/dertig kilo/*kilos*
 three/five/thirty kilo_{SG/*PL}
 ‘three/five/thirty kilos’
- (ii) *vse eti calyx sem’ gnomov*
 all_{PL} this_{PL} whole_{PL,GEN} seven dwarves_{PL,GEN}
 ‘all these no fewer than seven dwarves.’

⁶ A similar optionality between default and full verbal agreement shows with higher Cardinal Numeral Subjects in Russian, as in (i-ii), but also with certain decimal numerals in Polish, such as *setki* ‘hundreds’, *tysiące* ‘thousands’ or *miliony* ‘millions’:

- (i) [_{QP} *Pjat’ ženščin*] *smotrelo na Ivana.* QP subject
 five women_{GEN,PL} looked_{3SG,N} at Ivan
 ‘Five women looked at Ivan.’
- (ii) [_{DP} (*eti*) *pjat’ ženščin*] *smotreli na Ivana.* DP subject
 (these) five women_{GEN,PL} looked_{PL} at Ivan
 ‘(These) five women looked at Ivan.’

In Polish the decimal numeral *tysiąc* ‘thousand’ allows for both the full agreement with the verb and its default equivalent:

- (iii) *Tysiące studentek przyszły na demonstrację*
 thousands_{NOM} students_{F,GEN,PL} came_{3PL,NON-VIR} on demonstration
 ‘Thousands of (female) students came to the demonstration.’

- (9) *Ubyły/ubyło* *cztery* *centymetry* *wody*.
 diminish_{PAST, NON-VIR, PL/3SG.N} four_{NON-VIR} centimeter_{M, PL} water_{GEN}
 ‘The water had gone down 4 cm.’
- (10) *Zostaly/zostalo* *nam* *dwie minuty*.
 remain_{PAST, NON-VIR, PL/3SG.N} us_{DAT} two_F minute_{F, NOM, PL}.
 ‘We had two minutes left.’

Let us continue with the account of morphological (dis)agreement pattern in (1-2). An incomplete set of *phi*-features (with the [individuation] feature missing) makes the cardinal numeral a defective goal. Matushansky/Ionin hypothesize that having encountered a defective goal, T_{fin} continues its search and reaches the NP the numeral modifies, see (11). Now, in line with Bobaljik (2008), when the case on the NP shows the surface morphology of nominative, T_{fin} values all of its *phi*-features against it and full agreement shows on the verb, but only in (1a).⁷ This relation is made more precise in section 4, where it is shown how the representation of surface morphology is made available to narrow syntax through the nano-syntactic notion of the case sequence.

Although Matushansky/Ionin do not commit themselves to any formal syntactic representation of the numeral subject, I propose the following in-

- (iv) *Tysiące* *studentek* *przyszło* *na demonstrację*
 thousands_{ACC} students_{F, GEN, PL} came_{3SG.N} on demonstration
 ‘Thousands of (female) students came to the demonstration.’

In an account compatible with Matushansky/Ionin’s (2016), this numeral may optionally bear the [individuation] feature in (iii) and fully agree with T, as its surface morphology is non-distinct from nominative. Alternatively, *tysiąc* ‘thousand’ may function as both: a cardinal noun (with a set of *phi*-features including [individuation]), as in (iii), and as a cardinal numeral with an incomplete set of *phi*-features lacking [individuation]. The latter option results in default agreement, as in (iv).

⁷ Analyses of the numeral subject involving T_{fin} probing the NP complement across the cardinal numeral itself (Klockmann 2015, 2017; Matushansky/Ionin 2016 or Przepiórkowski/Patejuk 2012) point to the fact that such probing is overtly manifested in:

- (i) *Pięć* *studentek* *było* *wybrane/wybranych*
 five_{ACC} students_{GEN} was_{3SG.N} selected_{3PL, NON-VIR, ACC/3PL, NON-VIR, GEN}
 ‘Five students were selected.’

Here the passive participle or the predicative adjective shows either accusative (non-distinct from nominative) or genitive. The latter is certainly probed for and reached across the cardinal numeral. While the accusative/nominative form is the expected one, as the cardinal numeral is closer to the adjectival/participial probe and c-commands the NP, the optional genitive form shows that Agree between the probe and the NP can take place across the cardinal numeral.

ternal structure for cardinal numerals, which accommodates their analysis and is consistent with current literature, specifically Bailyn (2004):⁸

$$(11) T_{\text{fin}[+phi]} \rightarrow [_{\text{QP}} \text{NumP}_{[+phi]} [_{\text{Q}} F_{\text{Q}[+/-c]} [_{\text{NP}} N_{[+phi]}]]]$$

The numeral subject is technically a QP, with the head F_{Q} , NumP is in specifier QP and NP is the complement to F_{Q} . The symbol $[+phi]$ implies that the cardinal numeral is an incomplete goal for T_{fin} , while the $[+phi]$ N is, with the [individuation] feature marking the difference. The $[+/-c]$ mark on F_{Q} means that it optionally assigns genitive to its NP complement. It does so in all the cases under scrutiny apart from (1a), so I assume that F_{Q} bears [-c] only when merged with a non-virile NP and a paucal numeral. The formation of the numeral phrase in (11) takes place before it is merged with any other elements of the structure and is driven by the semantic selection on the part of the NP and morphological conditions: the cardinal numeral appears in accusative, whose morphological form is conditioned by the gender of the NP: a virile NP imposes a morphological form where accusative=genitive, while a non-virile NP imposes a morphological form where accusative=nominative. Consequences for agreement follow: default agreement is expected throughout the paradigm in (1-2) when the cardinal numeral is the goal for Agree, because it always lacks the [individuation] feature and constitutes an incomplete goal. So when the T_{fin} probe reaches beyond the cardinal numeral, the NP in genitive is not a suitable target, because genitive is distinct from nominative in surface morphology, both with virile or non-virile NPs. Only a non-genitive assigning F_{Q} in (1a) is complemented by the NP in surface nominative, which allows for the expression of full agreement between the numeral subject (QP in 11) and the verb. For the record, (2a) does not have the structure of (11) but is a plain NP with a stack of adjuncts, where NP is the only complete goal:

$$(12) [_{\text{NP}} ci [_{\text{NP}} [_{\text{AP}} trzej] [_{\text{NP}} chłopcy]]] \\ \text{these}_{\text{NOM}} \quad \text{three}_{\text{NOM}} \quad \text{boys}_{\text{NOM}} \\ \text{'these three boys'}$$

⁸ Bailyn (2004) distinguishes between the context of the structural cases, where the F_{Q} head of QP in (i) assigns genitive to the NP and oblique case contexts, (ii), where the numeral itself occupies the head position of F_{Q} and the oblique case is assigned by an external governor. I adopt the structure in (i) for both contexts:

- (i) $[_{\text{QPacc}} pięć [_{\text{Q}} F_{\text{Q}} \emptyset [_{\text{NPgen}} [_{\text{N}'} języków]]]]$ the case independence pattern
 five_{ACC} languages_{GEN}
- (ii) $[_{\text{QPinstr}} [_{\text{Q}} F_{\text{Q}} pięcioma [_{\text{NPinstr}} [_{\text{N}'} językami]]]]$ the case matching pattern
 five_{INST} languages_{INST}

I take (11), taking almost every cardinal numeral to be the specifier of F_Q to be sufficiently flexible and thus providing for a wide empirical coverage subsuming many cases discussed in Danon (2012) under the guise of two different cardinal-as-head and cardinal-as-specifier representations.⁹

In the structural case scenario NumP in (11) is accessed by the T and v probes which value their features against it (more on this issue in section 4). In the oblique case scenario the case marking on (11) is overridden by oblique/quirky cases imposed by the head assigning the theta role (Bošković 2006; Willim 2015). Recently, it has been argued that a particular phrase can participate in a number of case relations against different case assigners, with the subsequent case relation overwriting the previous case. The most explicit argument for widespread case overwriting is made in Pesetsky (2013) for Russian and Klockmann (2015, 2017) for Polish. When this view is adopted, an inherent case overwrites the primary cases on (11).¹⁰

Yet, the account developed in Matushansky/Ionin (2016) addresses only the issue of (mostly default) morphological agreement between the numeral

⁹ The structure in (11) provides for the fact that the cardinal numeral can be modified with intensifiers independently of the NP it modifies:

- (i) [[*prawie* 350] *ludzi*]
 [[almost 350] people]
 (ii) *[[*prawie* [350 *ludzi*]]]
 *[almost [350 people]]

Willim (2015:325-329) also extensively argues for the phrasal nature of the numeral projection within the Polish QP by pointing out that in the following example the pre-modifier scopes over the numeral only, saying nothing about the amount of wine in the bottles:

- (iii) *Niepełne/niepełnych pięćdziesiąt butelek wina*
 almost_{A-ACC}/almost_{A-GEN} fifty_{ACC} bottles_{GEN} wine_{GEN}

My judgement of this example differs from hers in the sense that I admit ambiguity of scope here; specifically the genitive form can scope over the number of bottles or the amount of wine. But a possibility of a clear reading of numeral-only modification is beyond dispute.

¹⁰ A reviewer asks how case overwriting could be applied within nano-syntax. Two scenarios need to be considered here. The simpler one involves a hypothetical case, where a ‘larger’ case is overwritten with a ‘smaller’ one, see ex. (29) for the case sequence. Here the new case selector simply forces another step of the ‘peeling’ movement. The more complex case involves overwriting a ‘smaller’ case with a larger one. I assume that the new case selector, a verb/preposition assigning lexical case, forces ‘reconstruction’ (or cancellation) of the initial case-driven movement, so that the NP is placed back in its extended set of case projections enumerated in (29). Subsequently, the NP and a matching case projection are affected by the selection on the part of the verb/preposition.

subject and the verb, while it remains silent on how a subject-like bond is created between the numeral subject and T_{fin} , which I take to be the foundation of syntactic subjecthood. In Polish other nominal phrases (e.g. experiencer arguments marked for dative or accusative) which function like subjects but bear case distinct from nominative show default agreement as well, yet none of these shows as many subject-like properties as the numeral subject. Only this type of phrase shows all subjecthood diagnostics but for nominative case and agreement with the verb. Thus, ironically, lack of morphological agreement masks an abstract relationship holding between the numeral subject and T_{fin} . The modest objective of the second part of this presentation is to point to the nature of such an abstract bond.

3. The numeral subject and subjecthood diagnostics

The numeral subject in Polish shares all major subjecthood criteria with the regular nominative subject but for nominative case and the subject verb agreement. For lack of space I will consider four criteria here: nominal coordination, nominative to genitive shift in negated locative constructions, control into adjuncts and reflexive binding.¹¹ I focus on the last criterion as it indicates which syntactic position the numeral subject occupies. It is also relevant to the discussion in the following section. Another major non-agreeing NP argument functioning as the subject, the dative experiencer, does not show these properties.

Both the numerals subject and the nominative one can be coordinated. Any other combination of cases within coordinated nominal subjects is disallowed:

- (13) a. *Zosia* *i pięć* *harcerek* *poszły/ło* *na spacer.*
 Zosia_{F,NOM,SG} and five_{ACC} girl.scouts_{F,GEN,PL} went_{3PL,NON-VIR/3SG,N} for walk
 ‘Zosia and five girl-scouts went for a walk.’
- b. *Trzej* *harcerze* *i pięć* *harcerek* *wyszli.*
 three_{NOM} boy.scouts_{M,NOM,PL} and five_{ACC} girl.scouts_{F,GEN,PL} left_{3PL,VIR}
 ‘Three boy scouts and five girl scouts left.’

It seems that both conjuncts share the same, or compatible, cases.¹²

¹¹ Other criteria involve: participation in subject raising, licensing pro-drop in the subject position of the finite clause and absence of an otherwise required resumptive pronoun in relative clauses introduced by the uninflected complementizer *co* ‘what’. See Witkoś (2020) and Witkoś et al. (2018) for a review.

¹² Ex. (13a) shows two possibilities for the subject/verb agreement, typical of coordinate subjects: either full agreement in the plural (NON-VIR) or the close conjunct agreement, the default (3SG.N).

Both subject types change to genitive in the scope of clausal negation in the existential construction:

- (14) a. *Tancerki* *były* *na* *scenie.*
 dancers_{F,NOM,PL} were_{3PL,NON-VIR} on stage
 ‘Dancers were on the stage.’
- b. *Tancerek* *nie było* *na* *scenie.*
 dancers_{F,GEN,PL} not was_{3SG,N} on stage
 ‘Dancers were not on the stage.’
- (15) a. *Pięć* *tancerek* *było* *na* *scenie.*
 five_{ACC} dancers_{F,GEN,PL} was_{3SG,N} on stage
 ‘Five dancers were on the stage.’
- b. *Pięciu* *tancerek* *nie było* *na* *scenie.*
 five_{GEN} dancers_{F,GEN,PL} not was_{3SG,N} on stage
 ‘Five dancers were not on the stage.’

The shift from nominative to genitive under negation in the existential construction in ex. (14b) and (15b) is a test for the structural case status of a given nominal in Polish.¹³ Needless to say, a dative/accusative experimenter does not show this alteration:¹⁴

¹³ It must be duly noted that the accusative case on the cardinal numeral shares properties with the accusative object as well, for instance it shows Genitive of Negation in (ii) and can be coordinated with another accusative nominal object, (iii-iv). It can also be preceded by accusative-taking prepositions:

- (i) *Widzę* *pięć* *tancerek.*
 see_{1SG} five_{ACC} dancers_{F,GEN,PL}
 ‘I see five dancers.’
- (ii) *Nie widzę* *pięciu*/**pięć* *tancerek.*
 not see_{1SG} five_{GEN}/five_{ACC} dancers_{F,GEN,PL}
 ‘I don’t see five dancers.’
- (iii) *Widzę* *Marię* *i* *pięć* *tancerek.*
 see_{1SG} Maria_{ACC} and five_{ACC} dancers_{F,GEN,PL}
 ‘I see Maria and five (female) dancers.’
- (iv) *Widzę* *Marię* *i* *pięciu* *tancerzy.*
 see_{1SG} Maria_{ACC} and five_{ACC} dancers_{M,GEN,PL}
 ‘I see Maria and five (male) dancers.’

So the structure in (11), with F_0 set to [+c], NumP in accusative and NP in genitive fits equally well into the subject and object positions.

¹⁴ A less reliable argument involves the prepositions *niż* ‘than’ and *jak* ‘as’. When used in comparative structures, they typically force their complements to appear in nominative (cf. Kallas 1995), but the numeral subject can also follow them in identical contexts:

- (i) *Zaanektowano* *krainę* *większą* *niż* *Wielka* *Brytania.* (Kallas 1995:99)
 was.annexed_{3SG,N} country_{ACC} larger than Great Britain_{NOM}
 ‘A country larger than Great Britain was annexed.’

- (16) *Chłopcom* *było/nie było* *zimno* *na lekcji.*
 boys_{DAT} was_{3SG.N}/not was_{3SG.N} cold_{ADV} on lesson

‘The boys were/were not cold on the lesson.’

Nominative subjects show control into adjuncts (cf. Dziwirek 1994; Citko 2014:122-123), and with certain adjunct types any relevant argument in the subject position performs well, including the numeral subject and the dative argument in the subject position:

- (17) a. *Studentki*₁ *napisały* *listy do dziekana* [*po* PRO₁ *pijanemu*]
 students_{F,NOM.PL} wrote_{3PL,NON-VIR} letters to dean [when drunk]

‘Female students wrote letters to the dean when they were drunk.’

- b. *Pięć* *studentek*₁ *napisało* *listy do dziekana* [*po* PRO₁ *pijanemu*]
 five_{ACC} students_{F,GEN.PL} wrote_{3SG.N} letters to dean [when drunk]

‘Five female students wrote letters to the dean when they were drunk.’

- c. *?Studentkom*₁ *było* *zimno* [*po* PRO₁ *pijanemu*].
 students_{F,DAT.PL} was_{3SG.N} cold when drunk

‘When drunk, female students were cold.’

However, on closer inspection it turns out that the numeral subject and the nominative one make more acceptable controllers than the dative argument in other adjunct control contexts, namely control into participial clauses:

- (18) a. PRO₁ *wracając do domu*, *studentki*₁ *weszły* *do sklepu.*
 returning to home students_{F,NOM.PL} dropped.in_{3PL,NON-VIR} to store

‘Returning home, (female) students dropped in to the store.’

- b. PRO₁ *wracając do domu*, *siedem* *studentek*₁
 returning to home seven_{ACC} students_{F,GEN.PL}

*weszło/*weszły* *do sklepu.*
 dropped.in_{3SG,NEUT/3PL,NON-VIR} to store

‘Returning home, seven (female) students dropped in to the store.’

- c. ??PRO₁ *wracając do domu*, *studentkom*₁ *zachciało* *się* *pić.*
 returning to home students_{F,DAT.PL} wanted_{3SG.N} REFL drink_{INF}

‘Returning home, (female) students felt the urge to have a drink.’

- (ii) *Jan zjadł* *więcej* *jablek* *niż* *tych* *sześć* *studentek.*
 Jan ate more apples than these_{GEN} six_{ACC} students_{F,ACC.PL}
 ‘Jan ate more apples than these six students (did).’

This test may not be the strongest test for subjecthood but, again, both nominative and the numeral subject behave the same in this context. I hasten to add that the prepositional nature of *niż* ‘than’ is not entirely obvious from the set of examples reviewed in Kallas (1995), as all could be accounted for if *niż* ‘than’ were uniformly treated as a complementiser followed by an elided clause or VP.

Whereas both (18a-b) are perfectly well-formed, with the main clause subject controlling PRO in the participle, (18c) is perceptibly less acceptable, and in fact similar cases are severely discredited in prescriptive grammars of Polish as ‘dangling participles’.

Ultimately, anaphoric binding offers a clear diagnostics. Polish has two types of anaphoric expressions: anaphoric (and reciprocal) pronoun *siebie* ‘self’ and a reflexive possessive *swój* ‘self’s’. Anaphoric binding in Polish is subject oriented to a large degree but orientation towards the nominative subject shows specifically with the possessive reflexive:¹⁵

- (19) a. *(Trzy) dziewczynki₁ zobaczyły swoich/ich_{*1,2} braci.*
 (three) girls_{F,NOM,PL} saw_{3PL,NON-VIR} selves’/their brothers_{M,ACC,PL}
 ‘(Three) girls saw their brothers.’
- b. *Pięć dziewczynek₁ zobaczyło swoich/ich_{*1,2} braci.*
 five girls_{F,GEN,PL} saw_{3SG,N} selves’/their brothers_{M,ACC,PL}
 ‘Five girls saw their brothers.’
- (20) a. *Chłopcy₁ zobaczyli swoich/ich_{*1,2} braci.*
 boys_{M,NOM,PL} saw_{3PL,VIR} selves’/their brothers_{M,ACC,PL}
 ‘Boys saw their brothers.’

¹⁵ It must be stressed that the tests rely on reflexive relations, which are (nominative) subject oriented, not on reciprocal relations, which tolerate objects as antecedents (Willim 1989; Witkoś et al. 2020; Rapport 2001 on equivalent Russian constructions). I must make two caveats: (a) the construction involving the expression *swoje miejsce* ‘its/their place’ may produce the illusion that the object may serve as an antecedent in reflexive binding in Polish:

- (i) *Jan₁ odłożył książki₂ na swoje_{1/2} miejsce.*
 Jan_{NOM} put back books_{ACC} on self’s place
 ‘Jan put back the books on their place.’

However, this construction is to be treated as a fixed/idiomatic expression that shows very little productivity, if any:

- (ii) *Jan₁ odłożył książkę₂ do swojej_{1/*?2} szuflady.*
 Jan_{NOM} put back book_{ACC} in self’s drawer
 ‘Jan put back the book in his drawer.’
- (iii) *Jan₁ odwiózł Marię₂ do swojego_{1/*2} mieszkania.*
 Jan_{NOM} brought back Maria_{ACC} to self’s flat
 ‘Jan brought back Maria to his flat.’

(b) I also abstract away from the adjectival non-reflexive use of *swój* ‘self’s’ meaning ‘well-known, familiar’, which does not require any lexical antecedent:

- (iv) *Jan to swój człowiek.*
 Jan_{NOM} is familiar person
 ‘Jan is one of our own.’
- (v) *Swój człowiek przewiózł pieniądze przez granicę.*
 self’s man brought money_{ACC} across the border
 ‘One of our own brought the money across the border.’

b. *Pięciu chłopców₁ zobaczyło swoich/ich_{*1,2} braci.*
 five_{ACC} boys_{M,GEN,PL} saw_{3SG,N} selves'/their brothers_{M,ACC,PL}

'Five boys saw their brothers.'

(21) a. *Chłopcom₁ było żal swoich_r/ich_{1,2} kolegów.*
 boys_{M,DAT,PL} was_{3SG,N} sorrow selves'/their friends_{M,GEN,PL}

'The boys felt sorry for their friends.'

b. *Chłopcom₁ było zimno w swoich_r/ich_{1,2} nowych kurtkach.*
 boys_{M,DAT,PL} was_{3SG,N} cold in selves'/their new jackets

'The boys were cold in their new jackets.'

(22) a. *Dziewczynkom₁ było żal swoich_r/ich_{1,2} kolegów.*
 girls_{F,DAT,PL} was_{3SG,N} sorrow selves'/their friends_{M,GEN,PL}

'The girls felt sorry for their friends.'

b. *Dziewczynkom₁ było zimno w swoich_r/ich_{1,2} nowych kurtkach.*
 girls_{F,DAT,PL} was_{3SG,N} cold in selves'/their new jackets

'The girls were cold in their new jackets.'

Both the numeral subject and the nominative one require rigorous binding of the reflexive possessive, so a co-indexation between them and the pronominal possessive is either ungrammatical or strongly disfavored as a violation of Binding Condition B, see (19-20), whose subjects correspond to (1-2). For comparison, the dative argument in the subject position, both virile and non-virile, does not agree with the verb either but it functions as an appropriate antecedent to both a co-indexed reflexive possessive and a co-indexed pronominal possessive, see (21-22). This is a clear distinguishing factor which can be explored further. Let me pursue an approach to the differences between (19-20) and (21-22) resting on a version of the binding theory where T_{fin} is implicated as a target for anaphor (α) raising, a line of research stemming from Chomsky (1986) and Pica (1991).

A recent fine-grained theory of pronominal and anaphoric binding based on LF-movement appears in Witkoś et al. (2020) and Witkoś/Łęska (2020), building on Nikolaeva (2014), Hestvik (1992) and Avrutin (1994), among others. It identifies a correlation between the ultimate landing site of the pronominal/anaphor in covert syntax and relations with its potential antecedent. This theory searches for a principled explanation for the fact that languages such as Polish (and others, e.g. Norwegian) show subject oriented reflexives and anti-subject oriented pronouns, unlike English:¹⁶

¹⁶ Objects in Norwegian cannot bind each other either and the reflexive is subject-oriented, so in this respect this grammar is similar to Polish (and Slavic in general), at least for 3rd person reflexives:

- (23) a. *Jan*₁ *pokazal Marii*₂ [*swoje*_{1,*2} /*jej*₂ /**jego*₁ *zdjęcie*].
 Jan_{NOM} showed Maria_{DAT} self/her/his picture_{ACC}
 ‘Jan showed Maria his/her picture.’
- b. *Jan*₁ *pokazal Marię*₂ [*swoje*_{1,*2} /*jej*₂ /**jego*₁ *cioci*].
 Jan_{NOM} showed Maria_{ACC} self/her/his aunt_{DAT}
 ‘Jan showed Maria to his/her aunt.’
- (24) a. *John*₁ *showed Mary*₂ *herself*₂ *in the mirror*.
 b. *John*₁ *showed Mary*₂ *to herself*₂ *in the mirror*.

Thus it seems that in Polish a reflexive seeks its antecedent outside the VP, where it is overtly present. Witkoś et al. (2020) implement the concept of Index Raising (IR), adopted from Nikolaeva (2014), where the anaphoric/pronominal element (henceforth the index) is (covertly) moved and adjoined to *v* or T. The search for an antecedent is driven on the part of the index by an unvalued feature [_{var}(iable)], involved in upwards Agree (Hicks 2009; Zeijlstra 2012), whereas the index’s need for movement is related to its set of *phi*-features, impoverished in a way similar to clitics/weak pronouns (akin to such elements in Polish grammar as *się* ‘REFL’, *ci* ‘you_{DAT.CL}’, *mu* ‘him_{ACC.CL}’, *go* ‘him_{ACC.CL}’).

The domain of clitic/weak pronoun distribution and the domain of anaphoric binding (tensed S) overlap in Polish. Franks (2017) and Stegovac (2016) propose that only the [number] and [gender] features of the clitic/weak pronoun are both interpretable and valued but the [person] feature is interpretable but unvalued. This fact forces the clitic/weak pronoun to express its *phi*-features in the position of *v* (and T) where the valuation of the [person] feature takes place against the valued [person] feature of *v*.¹⁷ The head *v* is equipped with the [-int, +val] person feature and some form of the [+EPP], either as an independent property or a sub-feature of the [person] feature, as in Pesetsky/Torrego (2001), to generate displacement. The clitic/weak pronoun moves to this head position to become *phi*-complete. Its further movement to T and onwards to a higher clause receives an account equivalent to clitic climbing. I submit that the index follows a similar derivational path, but unlike the clitic/weak pronoun, it carries no valued *phi*-features at all, because its

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- (i) *John*₁ *ga* *Per*₂ [*sin*_{1,*2} *jakke*] (Norwegian, Hestvik 1992)
 John gave Peter his_{REFL} jacket
- (ii) *John*₁ *fortalte* *Per*₂ *om* *hans*_{1/2} *kone*.
 John told Peter about his wife

¹⁷ Person as Probe: an interpretable person feature must be licensed by entering into an Agree relation with a functional category *v* (modelled on Franks 2017:274).

phi-feature valuation ‘piggy-backs’ on the valuation of the [var:] feature (bound elements end up carrying *phi*-features of their antecedents). I assume that in constructions with the index, *v* carries an unvalued person feature ([-int,-val]) which is nevertheless equipped with the [+EPP] property and it attracts the index just like it attracts clitics/weak pronouns.¹⁸ Analogously, the index is able to move further to *v*/T within the domain determined by the Tensed S-Condition of Chomsky (1981). One respect in which the index differs from the clitic/weak pronoun is that the former has the tail of its movement chain pronounced (covert movement), while the latter has the head of their chains pronounced (overt movement).¹⁹

Let us consider relevant examples, where [_{NP} index N] stands for [_{NP} *swój* ‘self’s N]:

- (25) a. [_{TP} Sub_{NOM,[var1]} (**index**_[var1])-T [_{VP} Sub_{NOM,[var1]} (**index**_[var1])-*v* [_{VP} Obj_{DAT/ACC,[var2]} ditransitive VP (subject antecedent)
[V [_{NP} index_{DAT/ACC,[var_]} N]]]]]
- b. [_{TP} Sub_{NOM,[var1]} (**index**_[var2])-T [_{VP} Sub_{NOM,[var1]} (**index**_[var2])-*v* [_{VP} Obj_{DAT/ACC,[var2]} ditransitive VP (object antecedent)
[V [_{NP} index_{DAT/ACC,[var2]} N]]]]]
- (26) [_{TP} #OE_{DAT/ACC,[var1]} ... [_{TP} ... (**index**_[var1])-T [_{VP} OE_{DAT/ACC,[var1]} (**index**_[var1])-*v* [_{VP} V [_{NP} index_[var1] N]]]]] psych predicate VP (experiencer antecedent)

In a nutshell, the distribution of anaphoric and pronominal elements is determined by two main factors: the landing site of the index and the (case) position of the antecedent.²⁰ The featural composition of the index places it under derivational pressure: while its unvalued [_{var}] feature forces it into Agree with a relevant goal (a c-commanding NP with the [+var] feature), its clitic-like properties (an unvalued [person] feature) require it to move out

¹⁸ Pesetsky/Torrego (2004, 2007) allow for Agree (and movement relations) involving probes/goals sharing unvalued features which later obtain a value at a further stage of the derivation. The unvalued [person] feature on *v* later receives the value of the [person] feature of the antecedent to the index.

¹⁹ This assumption that the reflexive must covertly leave VP to be bound accounts for the fact that one object is never a proper antecedent for the other anaphoric object or a reflexive embedded in the other object. As the structures in (25-26) show the dative goal object has its case licensed inside VP, possibly the specifier of the lower VP-shell. The dative experiencer argument has its case licensed in a clause-medial position by *v* (Woolford 1999, 2006) or a high Applicative head (cf. Pyłkkänen 2008; Cuervo 2003; Preminger 2009, 2011; Citko 2014; Stegovec 2016).

²⁰ See Witkoś et al. (2020) and Witkoś/Łęska (2020) for a full presentation of this account of A-binding, including a detailed discussion of related accounts.

of the VP and adjoin to *v* or T.²¹ The tension between Agree and Move can be resolved either way during the derivation. Let us assume the structure of a double object construction in (25), corresponding to the examples in (23). When Move to *v*/T takes place first and Agree for the [*_var*] feature happens next, the (unvalued) index moves out of the VP, and only then has

²¹ A reviewer for this volume points out that while my account requires the index to adjoin to the heads *v*/T, the parallel between the index movement and the clitic movement is not complete, as the Polish clitic/weak pronoun is commonly believed to move rather like a maximal projection than a head. As index movement is covert, I have picked clitic/weak pronoun movement as its closest overt equivalent, because they share a locality constraint: both are tensed S bounded (seeking such parallels is common practice: Safir (2004) equates the covert movement of *sich* ‘self’ in German to Romance-style cliticization and the covert movement of the reflexive in Russian to topicalization, while Avrutin (1994) falls back on A’ operator movement in the same vein). Now, XP movement in Polish (both *wh*-movement and scrambling) can leave the domain of the subjunctive clause in (i) but the clitic/weak pronoun cannot do so in (ii), so it does not show a clear XP-status:

- (i) *Którą książkę chcesz [żeby [studenci czytali t samodzielnie?]]*
 which book want.2sg so-that students read.3pl.past independently
 ‘Which book would you like the students to read independently?’
- (ii) **Jan go chce [żeby [studenci pozdrawiali t]]*
 Jan him wants so-that students greeted
 Intended: ‘John would like the students to greet him.’

Yet, it is true that the clitic weak pronoun in Polish does not always attach to the *v*/T head in overt syntax:

- (iii) *Ja bym przecież go wtedy rozpoznał.*
 I aux_{COND} thus him_{3SG.M.ACC} then recognised_{PRTC}
 ‘But I would recognise him then.’

The clitic/weak pronoun cannot occupy the position of *v*/T, as it is separated from both the conditional auxiliary (assuming it occupies T) and the main verb (at *v*) by adverbs. It is plausible that overt stage of movement of the clitic/weak pronoun is followed by a covert stage, where T is targeted. Thus for want of a better term, I contend myself with the term: clitic/weak pronoun. Significantly, both the index and the clitic/weak pronoun move left- and upwards out of the VP and they can (but do not have to) move out of infinitive complements. These two properties of their landing site options suffice to provide for complex anaphoric binding facts in Polish, as discussed at length in Witkoś et al. (2020). Furthermore, Franks (2017) amasses data from Slavic languages showing that the neat division into the X⁰/XP status of pronominal categories and the classification in Cardinaletti and Starke (1994) need to be reconsidered. Additionally, analyses presented in Cetnarowska (2003) and Migdalski (2016) indicate that the set of Polish clitics/weak pronouns need not be homogenous; the X-bar status of *mi*_{1.SG.DAT} and *ci*_{2.SG.DAT} may be different from the X-bar status of *mu*_{3SG.M.DAT} and *go*_{3SG.M.ACC}.

its feature valued against the nearest c-commanding NP, which happens to be the subject. Its feature becomes valued as [var1] in (25a) and the index is coindexed with the subject. When the order of operations is reversed, Agree happens first, and then the nearest c-commanding NP is the other object (25b), the index obtains [var2], and only then moves out of the VP to v/T. It ends up being coindexed with the object. Now, when the sentence is sent to spell-out, if the index is co-indexed with the specifier of a head to which it is adjoined (v/T), the index has to be lexicalized as reflexive. This situation holds of (25a). If an index has not been realized as reflexive, it is realized as pronominal. This situation holds of (25b).²² Thus when the index moves to v in (21-22) and (26), it is c-commanded in its landing site by the object experiencer (OE) in [spec, vP] (its case position) and is spelled out as a reflexive possessive. When the index moves to T in (21-22) and (26), it is not c-commanded by OE in its case position and is spelled out as a pronominal possessive. These two options are not available to the nominative antecedent, or more broadly, to the antecedent whose case position is [spec, TP]. In this case either the nominative subject or its copy c-commands the index attached to both v and T in (25), so the index is always lexicalized as reflexive. This account, if correct, predicts that the numeral subject in ex. (19b) and (20b) is placed in the same case position as the nominal subject in ex. (19a) and (20a). How is this technically possible? I take this to mean that T_{fin} probes for the cardinal numeral as a goal and becomes involved with it in a relation of Agree which is maximally similar, if not identical, to a relation between T_{fin} and a nominal NP goal.²³ Whereas Matushansky/Ionin (2016)

²² To be exact, the Lexicalisation Rule in Witkoś et al. (2020) and Witkos/Łęska (2020) reads:

The (bottom copy in the chain of the) D-bound/Index contributes to its lexicalisation as reflexive when

- (i) $[_{[Q]}[_{var}]] D$ is adjoined to v/T and (ii) the [var:_] feature of $[_{[Q]}[_{var}]] D$ is involved in Agree with the [var:x] feature of the NP in [spec, vP/TP]. The antecedent must occupy its case position. Otherwise the D-bound/Index is lexicalised as a pronoun.

²³ It appears that this relation satisfies the needs of the probe (T_{fin}) but not the goal, which is already case marked at birth, see the discussion around (11). So it is an inactive goal in the sense of the Activity condition of Chomsky (2000, 2001, 2008): Agree holds if the probe and the goal are active, where being active means having uninterpretable/unvalued features (Chomsky 2000:122-123; Citko 2014:20-21). If the numeral phrase (my QP) is already case marked at the moment of its conception, it is not derivationally 'active' and T_{fin} enters into Agree with it only for its own benefit. I leave this issue for further research but the Activity Condition is sometimes called into question.

take [individuation] to be a crucial feature to account for surface morphology, I take [case] to be a key component in forming the syntactic bond between T_{fin} and the numeral subject.

At the same time I submit that the position of $\#OE_{\text{DAT/ACC}}$ in (26) is not its case position (which is crucial w.r.t. the definition in the note 22). This preverbal position of the dative/accusative experiencer may receive three different treatments. First, it can be said to be a plain A-position but not a case position for the $OE_{\text{DAT/ACC}}$, forced by the EPP property on T_{fin} . In the spirit of Chomsky's (2001) analysis of Icelandic constructions with nominative objects, T_{fin} first attracts the dative-marked DP and only then accesses the object DP to value nominative, see Citko (2014) for a similar account of Polish *podobać się* 'appeal to'. Second, it may be said to be an A-bar topic position, adjoined to TP, or a position in an articulated left periphery, as suggested for similar cases in Russian in Ionin (2001) or in Jimenez-Fernandez and Rozwadowska (2016) for Polish. Third, this element may be placed in an A-specifier position of the lowest head in the extended left periphery on an analysis assuming feature sharing (Chomsky 2008) in Germain (2014) and Citko et al. (2018). If phase heads can selectively keep, share or hand down some of their features ($[phi]$ and [EPP]) to complement heads, the head of Finite Phrase, Fin, can retain its [EPP] property but hand down its $[phi]$ features to T_{fin} ($[\dots \text{Fin}_{\text{EPP}} > T_{\text{uphi}} > \dots]$). This way the $OE_{\text{DAT/ACC}}$ is attracted to [spec, FinP], while the nominative is valued on the lower argument. None of the three possibilities require that the licensing of dative case on the OE take place in a position above [spec,vP].

4. Tense checks structural case (accusative) on the numeral subject

Witkoś (2020) and Witkoś et al. (2018) propose that the head T_{fin} bears a dual two-pronged probe: one for phi -features and the other one for case. The case feature on T_{fin} is interpretable,²⁴ although unvalued (cf. Pesetsky/Torrego 2007) and it reads [case: structural]:

- (27) T_{fin} [_person, _number, _gender, _individuation]
 [case: structural]

The presence of an independent case feature on T_{fin} is to be expected, following Pesetsky/Torrego's (2001) proposal that nominative case is in fact the feature Tense. The case feature on the nominal goal is not a simple

²⁴ The system internal interpretation of this feature is [the subject of the finite clause].

construct but it is internally structured in a sequential manner, so that a less detailed element includes the more detailed one:²⁵

(28) a. nominative case: structural > nominative

b. accusative case: structural

The case feature on the nominal reflects its morphological paradigm, so it basically indicates whether or not this paradigm includes nominative. This is technically achieved via a sequence of case projections dominating NP and visible to the syntactic component, following Caha (2009, 2010). Caha develops an account of nominal case inflection in Czech within nano-syntax. On the basis of a careful examination of case suffixes and their syncretisms, he submits that cases are ordered in line with the Universal Case Contiguity of Blake (1994):

(29) comitative > instrumental > dative > genitive > accusative > nominative > [noun]

Morphological markers of the ‘smaller’ cases represented in lower positions constitute building blocks of the morphological markers of the ‘larger’ cases. The cases are present in the syntax as a sequence of case projections dominating the NP. The spell-out of the case marker as a suffix results from the movement of the nominal stem to the specifier position of a given case projection. This movement is triggered by a given syntactic probe, selecting for a NP in a given case.

So searching for nominative, T_{fin} typically forces movement of the NP embedded in the Nominative Phrase out of the case sequence (a ‘peeling’ movement, leaving the detritus of the shed case projections behind (shown in grey), to be spelled out as \emptyset), see (30b):²⁶

²⁵ This is how Bejar (2003:65-66) analyzes *phi*-features in Complex Subject Agreement languages and articulated features:

[F] Probe	[F'] Goal	Value
[đ [PART]]	[đ]	No
[đ [PART]]	[đ [PART]]	Yes
[đ [PART]]	[đ[PART[ADDRESSEE]]]	Yes

²⁶ I take the nano-syntactic licensing of case to be based on two-pronged movement: (a) the NP enters the derivation in the bottom position of its case sequence; the case selector accesses a given case projection in the case sequence of the NP and forces the projection’s movement to the vicinity (the specifier position of the selector, e.g. [spec, TP]; the remaining case projections are peeled off, remain in situ and are frequently spelled out as \emptyset , see ex. (30); (b) the NP is moved to the specifier of the case projection required by the selector and the complement domain of the given case projection is lexicalised as the case suffix.

- (30) a. $T_{\text{fin}}^{[+\text{structural case}]} \rightarrow [_{\text{GenP}} \text{Gen} [_{\text{AccP}} \text{Acc} [_{\text{NomP}} \text{Nom} [_{\text{NP}} \text{N}]]]]$
 b. $[_{\text{TP}} [_{\text{NomP}} \text{Nom} [_{\text{NP}} \text{N}]]] T_{\text{fin}} > [_{\text{GenP}} \text{Gen} [_{\text{AccP}} \text{Acc} [_{\text{NomP}} \text{Nom} [_{\text{NP}} \text{N}]]]]]$

As a result of the earlier discussion on the construction of the representation of the numeral subject in (11), I assume that the accusative case of the numeral forced by the semantic selection on the part of both the virile and non-virile NPs, translates in nano-syntax into a defective status of the Nominative Projection above the numeral (marked as *NomP). This projection is defective, the numeral cannot move into its specifier and it cannot appear in nominative. This is also a signal to syntax that the only structural case projection available to T_{fin} is Accusative Phrase:

- (31) $T_{\text{fin}}^{[+\text{structural case}]} \rightarrow [_{\text{OP}} [_{\text{AccP}} \text{Acc} [_{\text{NomP}} \text{*Nom} [\text{Num}(\text{P})]]]] [F_Q [_{\text{GenP}} \text{Gen} [_{\text{AccP}} \text{Acc} [_{\text{NomP}} \text{Nom} [\text{NP}]]]]]]]$

The feature internal composition in (28) implies that nominative requires a more narrow licensing than accusative. As for the feature checking/valuation procedure, Witkoś et al. (2018) follow (Bejar 2003; Benmamoun et al. 2009; Marusić et al. 2015) and assume that Agree is divided into two sub-operations: Agree-link and Agree-copy. Agree-link corresponds to Chomsky's (2000, 2001) Match. During the step of Agree-copy both the *phi*-features and the case feature are copied from the nominal onto the T_{fin} probe. This implies that in the standard case of the nominative subject T_{fin} becomes involved in relation Agree with a regular NP in the following manner:

- (32) *Dziewczynki* *przyszły* *do szkoły.*
 girls_{NOM.F.PL} came_{NON.VIR} to school
 'Girls came to school.'

- (33) $T_{\{\text{phi}: [\text{case: structural}]\}} \dots \leftrightarrow \dots [_{\text{VP}} \dots [_{\text{NomP}} \text{NP}_{\{\text{phi-features}\}[\text{case}: \dots \text{structural} > \text{nom}]}]]]$

The ensuing feature valuation involves copying of the value (content) of *phi*-features and the case feature onto T_{fin} :

- (34) $T_{\{\text{phi}: \text{phi-features}\}[\text{case: structural} > \text{nom}]} \dots \leftrightarrow \dots [_{\text{VP}} \dots [_{\text{NomP}} \text{NP}_{\{\text{phi-features}\}[\text{case}: \dots \text{structural} > \text{nom}]}]]]$

At this point, internally to head T_{fin} , the sub-components of the two-pronged probe are compared for the maximal effect of matching and valu-

So there is a further step to the nano-syntactic derivations in (30-31), whereby the nominal and the numeral move up to the specifier of a given case projection, which produces (i) and (ii), respectively:

- (i) $[_{\text{NomP}} \text{N} [_{\text{NP}} \text{N}]]]$
 (ii) $[_{\text{OP}} [_{\text{AccP}} \text{Num}(\text{P}) [_{\text{Acc}} [_{\text{NomP}} \text{*Nom} [_{\text{Num}} \text{Num}(\text{P})]]]]] [F_Q [_{\text{GenP}} \text{NP} [_{\text{Gen}} [_{\text{AccP}} \text{Acc} [_{\text{NomP}} \text{Nom} [\text{NP}]]]]]]]]]$

The case projections placed between the moved category (N/Num) and its copy/trace (N/Num) are spelled out as case suffixes.

ation, in line with a principle of derivational economy I call Maximize Matching, modelled on the Economy principle Maximize (Chomsky 2000, 2001):²⁷

(35) Maximize the matching effect, in that $[_T \{[phi + val] \leftrightarrow [case: structural > nom] \}]$

The formula in (35) is to be read as a positive correlation between full exposition of *phi*-features on T_{fin} only when its case probe sub-component bears the value [structural > nom].²⁸ This nanosyntax-inspired proposal provides a particular justification for the correlation in (35): as *phi*-features are located on NP dominated by the set of case projections, access to these features and their copying onto T_{fin} is easiest when NP is dominated only by NomP, which acts as if it were transparent to *phi*-feature copying. Nominative itself is sometimes termed ‘no case’ or ‘the bare caseless form’.²⁹ Other case projections that dominate NP are less accessible to *phi*-feature copying, if ever. So an accusative, dative or genitive NP argument in the subject position is too deeply embedded below other non-nominative layers of case projections to let its *phi*-features show on T_{fin} , see (30).³⁰

²⁷ Maximize (Chomsky 2001:15) If, local (P,G) match and are active, their interpretable features must be eliminated at once, as fully as possible; partial elimination of features under Match, followed by the elimination of the residue under Match, is not an option.

²⁸ I assume that (35) applies in narrow syntax and this correlation between subject/verb agreement and the nominative case on the subject corresponds to the interplay between Agr projections and substantive case checking heads (T, V) placed in narrow syntax in earlier versions of minimalism in Chomsky (1992, 1995). The postulate in (35) implies that the case probe of *v* does not value nominative. Whenever nominative objects are allowed in the grammar of a given language, this state of affairs is licensed by a different mechanism (cf. Chomsky 2000, 2001 on nominative objects Icelandic/Citko (2014) on nominative objects in Polish).

²⁹ Jakobson (1936), Babby (1980) and Andrews (1982) take nominative nominals to be without a case value. Also Bittner/Hale (1996) consider nominative and absolutive caseless forms. For a more recent approach to nominative as no case see Kornfilt/Preminger (2015).

³⁰ A reviewer for this volume raises the issue of the complexity of the account proposed in this paper and the role of the nano-syntactic perspective on case as a component part of this account. I agree with the comment on the complexity but I believe that the complexity of the account is required by the complexity of the data in (1-2), defying a simple and straightforward analysis. I have added the nano-syntactic perspective on case to the analysis for three reasons. First, nanosyntacticians recognise a universal case sequence in (29) and point out that morphological syncretism typically affects neighbouring case cells in this sequence. In the account in section 4, I propose that accusative and nominative show syntactic

The numeral subject violates Maximize Matching in (35), as I assume that its case sequence is defective in that the bottom-most projection (Nominative Phrase) is inactive ($[_{AccP} \text{Acc} (*[_{NomP} \text{Nom}] [_{QP} \text{Num(P)}]) \dots]$), so in this case the valuation of the features of the probe returns a different result:

- (36) *Siedem dziewczynek przyszło do szkoły.*
 seven_{ACC.NON-VIR} girls_{GEN.F.PL} came_{3SG.N} to school
 ‘Seven girls came to school.’

- (37) $T_{\{[phi]: \text{[case: structural]}\}} \dots \leftrightarrow [_{QP} [_{AccP} \text{NumP}_{\{[+phi][\text{case: structural}]\}}] F_Q [_{GenP} \text{NP}_{\{[+phi, \text{individuation}]\}}]]$

The probe faces a choice between two inconvenient goals. The numeral (NumP) is the closer one but it is incomplete in that it bears no [individuation] feature. Because it is incomplete, it can be bypassed by the probe but the NP, which is next in line, bears genitive case and none of its features are accessible to the probe (Bobaljik 2008). So the probe accesses the numeral as the closer incomplete goal on the assumption that full match must be attempted but when it fails, incomplete match is forced (Preminger 2009, 2011).³¹ The case feature of the numeral goal is compatible with the one on the probe and copied onto it:

- (38) $T_{\{[phi]: \text{-val}[\text{case: structural}]\}} \dots \leftrightarrow \dots [\text{NumP}_{\{[phi][\text{case: structural}]\}}]$

When the sub-components of the probe are now compared internally to head T_{fin} , the Economy principle Maximize Matching in (35) is not met, as the case feature is only [case: structural] rather than [case: structural>nom]. This means that although the case features copied are compatible (so the derivation converges), the *phi*-features of T_{fin} come out as default ([-val]).

The special status of the accusative numeral subject is obtained through the fact that the T_{fin} head has a case probe marked as [case: structural]. Witkoś et al. (2018) submit that this partial non-distinctness of struc-

syncretism in the sense that only NPs bearing these two ‘smallest’ cases adjacent in the sequence (29) can function as fully fledged clausal subjects. They share a property that I simplistically call ‘structural’. Second, nano-syntax nicely captures the observation in Bobaljik (2008) that non-nominative case on DP/NP renders it opaque w.r.t external access to its ϕ -features. This access is blocked, as every case, but nominative, implies that the DP/NP is literally buried under layers of functional structure. Third, the nano-syntactic view implies that the morphological paradigm of case is visible and accessible to narrow syntax. This allows the case probe on T_{fin} to access $[_{AccP} [_{*NomP} [\text{NumP}]]]$ (with $*NomP$ defective) as the second best option to accessing $[_{NomP} [\text{NP}]]$ on regular NPs.

³¹ Thus whenever nominative form is an option within the case paradigm of a given nominal element, it is always preferred over other case forms in the subject position

tural cases lies behind the binding pattern in (19b) and (20b) and all the properties discussed in section 3 above. In short: T_{fin} tolerates as its goal a cardinal numeral bearing a structural case different from nominative (i.e. accusative) only if the given numeral has a defective paradigm and does not have an active Nominative Phrase projection in its functional sequence. However, the properties reviewed in section 3 justify the claim that the numeral subject moves to [spec, T_{fin} P]; this type of subject is second best to the nominative one, although T_{fin} defaults to $3_{SG,NEUT}$. Witkoś et al. (2018) argue for a procedure of case feature valuation which is not uniform in that T_{fin} involved in Agree with its goal always values nominative, but for a procedure closer to case matching, whereby the case probe on T_{fin} offers structural case (which typically becomes nominative), but its exact paradigmatic form also depends on the properties of the nominal goal.

The case valuation procedure is different for paucal numerals with non-virile nouns:

- (39) *Trzy dziewczynki przyszły do szkoły.*
 three_{ACC.NON-VIR} girls_{ACC=NOM.F.PL} came_{3PL.F} to school
 ‘Three girls came to school.’

- (40) $T_{[phi:] [case: structural]} \dots \leftrightarrow [_{QP} [_{AccP} NumP_{\{[+phi] [case: structural] \}}] F_Q [_{Acc/NomP} NP_{[+phi, individuation]}]]$

Here the T_{fin} probe first accesses the numeral (NumP) as the closer goal but it is incomplete on two counts, first, it bears no [individuation] feature and second, it has a defective case sequence. For this reason, it can be bypassed by the probe and the NP, which is next in line, bears accusative case syncretic with nominative. I assume that the T_{fin} probe can detect this syncretism which is marked on the functional sequence of case projections. It accesses the NP with its *phi* (and individuation) features and copies them as if the NP were a nominative subject, in line with Maximize Matching in (35):

- (41) $T_{[phi: phi-features] [case: structural-nom]} \dots \leftrightarrow [_{QP} [_{AccP} NumP] F_Q [_{Acc/NomP} NP_{\{[+phi, individuation] \}}]]$

As a result, the numeral subject composed of the paucal numeral and its non-virile complement moves to [spec, TP] and the verb shows full agreement. The derivations that have been tracked above and the examples in (19–20) show that both the nominative subject, the numeral subject composed of the paucal numeral and non-virile NP, as well as the numeral subject composed of the higher numeral with virile/non-virile NPs occupy the same subject position in syntax and show typical subject properties, although the last type of subject shows default agreement.

This account of numeral subjects does not over-generate, as no other argument but the highest one in the thematic hierarchy can function as goal for T_{fin} :

- (42) a. **Basię* *czytało* *książkę*.
 *Basia*_{ACC.F.SG} read_{3SG.N} book_{ACC.F.SG}
- b. *Basia* *czytała* **książka*.
 *Basia*_{NOM.F.SG} read_{3SG.F} book_{NOM.F.SG}
- c. *Basia* *czytała* *książkę*.
 *Basia*_{NOM.F.SG} read_{3SG.F} book_{ACC.F.SG}
- ‘*Basia* read a book.’

In (42a) the TNP *Basia* and *książka* ‘book’ have the projection of Nominative Phrase at the bottom of their functional sequences, so the economy principle of Maximize in (35) forces the copying of the [case: structural>nom] feature onto the [case: structural] probe of T_{fin} and thus yields nominative and full agreement. At the same time, the NP *Basia* is closer to T_{fin} than *książka* ‘book’, as the former NP c-commands the latter in the vP. Both are complete goals ([+phi, individuation]). Example (42b) is excluded due to the Superset Condition of Starke (2009):

- (43) A lexical entry is inserted into a node if it contains that node.

Condition (43) prevents the nominative form (NomP) from representing a functional sequence (here AccP) which it does not contain, see (31), as the domain of Nominative Phrase is only a subset of the domain of Accusative Phrase.³²

As for the dative argument in the subject position with psychological predicates, it meets only certain subjecthood criteria of our comparison set in section 3 but not all. Witkoś et al. (2018) conclude that [spec, T_{fin}] is not its case position and it has its case features licensed in [spec, vP] lower in the structure.

5. Conclusions

Despite many similarities with the nominative subject discussed above, the numeral subject shares one property with constructions with the da-

³² A reviewer observes that my analysis draws on both Agree Link/Agree Copy, case features and nano-syntax, which may seem to be at a clash. I believe, however, that they all combine to derive (38). Here the copying of the case features (reflecting the defective case sequence of the numeral) from the NumP onto T_{fin} facilitates a local T_{fin} internal procedure of valuation of its case feature, as well as default subject/verb agreement. Such procedure excludes valuation of the case feature of T_{fin} by a dative argument, for example.

tive argument in the subject position: it does not agree with the verb. A clause with the numeral subject typically shows the default 3SG.N agreement, while it has more options with the dative argument, it either resorts to the same default form or agrees with another available argument in the nominative (specifically in the psych-predicate constructions with such verbs as *podobać się* ‘appeal to’-type). As for the dative argument in the subject position with psychological predicates, it meets only certain subjecthood criteria of our comparison set. I conclude that [spec,TP] is not its case position, as it has its case feature licensed in a lower position in the structure. Specifically, the binding diagnostics in ex. (19-20) and (21-22), seen from the perspective of the version of Binding Theory in Witkoś et al. (2020) testify to the lower case position for the dative object experiencer.

The numeral subject shares all properties with the nominative subject but for the case and full *phi*-agreement with T_{fin} . Only these two subject types require felicitous and rigorous binding of reflexive possessives, only these two subject types can be expressed through nominal coordination, control of PRO in adjunct clauses and they both participate in the Nom(Acc)/Gen alternation in the existential construction. I propose that the properties shared by both regular nominative subjects and the numeral subject are not accidental and stem from the fact that they are both involved in an Agree relation with T_{fin} concerned with case, which is more than just satisfaction of its [+EPP] property. Thus while surface morphological case determines the agreement pattern with the numeral subject and the [individuation] feature in the *phi*-set plays a crucial role here under the proposal in Matushansky/Ionin (2016), the relation Agree for abstract case between T_{fin} and the numeral subject drives its movement to [spec, TP]. Abstract syntax complements the picture painted by overt morphology.

References

- Andrews Avery D, 1982, The Representation of Case in Modern Icelandic, in: Bresnan J. (ed.), *The Mental Representation of Grammatical Relations*, Cambridge, MA, pp. 427-503.
- Avrutin Sergey, 1994, The structural position of bound variables in Russian, in: *Linguistic Inquiry* 25(4), pp. 709-727.
- Babby Leonard H., 1980, The syntax of surface case marking, in: Wayne H./Herschensohn J. (eds.), *Cornell Working Papers in Linguistics*, vol. 1, pp. 1-32.

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- Babby Leonard H., 1987, Case, prequantifiers, and discontinuous agreement in Russian, in: *Natural Language and Linguistic Theory* 5, pp. 91-138.
- Bailyn John F., 2004, The case of Q, in: Arnaudova O. (ed.), *Proceedings of Formal Approaches to Slavic Linguistics: The Ottawa Meeting 2003*, Ann Arbor, MI, pp. 1-36.
- Bejar Suzana, 2003, *Phi-syntax. A theory of agreement*. Doctoral dissertation, University of Toronto.
- Benmamoun Abbas / Bhatia Archana / Polinsky Maria, 2009, Closest conjunct agreement in head final languages, in: *Linguistic Variation Yearbook* 9, pp. 67-88.
- Bittner Maria / Ken Hale, 1996, The structural determination of Case and agreement, in: *Linguistic Inquiry* 27, pp. 1-68.
- Blake Barry, 1994, *Case*, Cambridge.
- Bobaljik Jonathan David, 2008, Where's phi? Agreement as a postsyntactic operation, in: Daniel H./Adger D./Béjar S. (eds.), *Phi-theory: Phi-features across modules and interfaces*, Oxford, pp. 295-328.
- Bošković Željko, 2006, Case and agreement with genitive of quantification in Russian, in: Boeckx C. (ed.), *Agreement Systems*, Amsterdam, pp. 99-120.
- Caha Pavel, 2009, *Nanosyntax of case*. Doctoral dissertation, University of Tromsø.
- Caha Pavel, 2010, The parameters of case marking and Spell-Out driven movement. <http://ling.auf.net/lingbuzz/001026> (accessed 15 Feb 2011).
- Cardinaletti Anna / Starke Michal, 1994, The typology of structural deficiency: On the three grammatical classes, in: *University of Venice Working Papers in Linguistics* 4, pp. 41-109.
- Cetnarowska Bożena, 2003, On pronominal clusters in Polish, in: Costa P./Błaszczak J./Frasc J./Geist L./Żygis M. (eds.), *Investigations into formal Slavic linguistics*. Vol. 1, Frankfurt am Main, pp. 13-30.
- Chomsky Noam, 1986, *Knowledge of language: Its nature, origin and use*, New York.
- Chomsky Noam, 1993, A Minimalist Program for Linguistic Theory, in: Hale K./Keyser J. (eds.), *The View from Building 20: Essays in Linguistics in Honor of Silvain Bromberger*, Cambridge, MA, pp. 1-52.
- Chomsky Noam, 1995, *The Minimalist Program*, Cambridge, MA.
- Chomsky Noam, 2000, Minimalist inquiries, in: Martin R./Michaels D./Uriagereka J./Keyser S. J. (eds.), *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, Cambridge, MA, pp. 89-156.
- Chomsky Noam, 2001, Derivation by phase, in: Kenstowicz M. (ed.), *Ken Hale: A life in language*, Cambridge, MA, pp. 1-52.

- Chomsky Noam, 2008, On Phases, in: Freidin R./Peregrín C./Otero M./Zubizarreta M. (eds.), *Issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, Cambridge, MA, pp. 133-166.
- Citko Barbara, 2014, *Phase theory: An introduction*, Cambridge, MA.
- Citko Barbara / Germain Allison / Witkoś Jacek, 2018, If you can't agree, move on! On labels and non-nominative subjects, in: *Glossa: A Journal of Generative Linguistics* 3(1), pp. 28-68.
- Corbett Greville G, 1979, Adjective movement, in: *Nottingham Linguistic Circular* 8(1), pp 1-10.
- Cuervo Maria Cristina, 2003, *Datives at large*, Doctoral dissertation, MIT, Cambridge, MA.
- Danon Gabi, 2012, Two structures for numeral-noun constructions, in: *Lingua* 122, pp. 1282-1307.
- Dziwirek Katarzyna, 1994, *Polish subjects*, New York
- Franks Steven, 1994, Parametric properties of numeral phrases in Slavic, in: *Natural Language and Linguistic Theory* 12, pp. 597-674.
- Franks Steven, 1995, *Parameters of Slavic morphosyntax*, New York.
- Franks Steven, 2002, A Jakobsonian feature based analysis of the Slavic Numeric Quantifier Genitive, in: *Journal of Slavic Linguistics* 10, pp. 141-181.
- Franks Steven, 2017, *Syntax and spell-out in Slavic*, Bloomington, IND.
- Germain Allison, 2014, Nullifying null expletives: Accounting for EPP in Russian Impersonal and nominative in situ constructions, in: *Proceedings of Formal Approaches to Slavic Linguistics* 23, pp. 418-438.
- Hestvik Arild, 1992, LF movement of pronouns and antisubject orientation, in: *Linguistic Inquiry* 23(4), pp. 557-594.
- Hicks Glyn, 2009, *The derivation of anaphoric relations*, Amsterdam.
- Ionin Tania, 2001, *Scope in Russian: Quantifier Movement and Discourse Function*, Ms. MIT.
- Jakobson Roman, 1936, Beitrag zur allgemeinen Kasuslehre: Gesamtbedeutungen der russischen Kasus, in: *Selected writings vol. 2*, The Hague, pp. 23-71.
- Jimenez-Fernandez / Ángel Luis / Rozwadowska Bożena, 2016, The information structure of Dative Experiencer psych-verbs, in: *Cetnarowska B./Kuczok M./Zabawa M. (eds.), Various dimensions of contrastive studies*, Katowice, pp. 100-121.
- Kallas Krystyna, 1995, O konstrukcjach z przyimkiem niż [On constructions with preposition niż], in: *Grochowski M. (ed.), Wyrażenia funkcyjne w systemie i tekście [Functional expressions in a system and text]*, Toruń, pp. 99-110.

- Klockmann Heidi, 2015, What are categories? Adjective-like and noun-like semi-lexical numerals in Polish, in: Błaszczak J./Klimek-Jankowska D./Migdalski K. (eds.), *How categorical are categories? New approaches to the old questions of Noun, Verb and Adjective*, Boston, pp. 236-271.
- Klockmann Heidi, 2017, *The design of semi-lexicity: Evidence from case and agreement in the nominal domain*, Doctoral dissertation, Utrecht University.
- Kornfilt Jakilin / Omer Preminger, 2015, *Nominative as no case at all: an argument from raising-to-accusative in Sakha*. Ms., Syracuse University.
- Krasnowolski Antoni, 1897, *Systematyczna składnia języka polskiego* [Systematic syntax of Polish], Warszawa.
- Laskowski Roman, 1998, *Kategorie morfologiczne języka polskiego: Charakterystyka funkcjonalna* [Morphological categories in Polish: The functional description], in: Grzegorzczkova R./Laskowski R./Wróbel H. (eds.), *Gramatyka współczesnego języka polskiego: Morfologia* [Grammar of contemporary Polish: Morphology], Warszawa, pp. 151-224.
- Małecki Antoni, 1863, *Gramatyka języka polskiego większa* [A greater grammar of Polish], Lwów.
- Mańczak Witold, 1956, *Ile rodzajów jest w polskim?* [How many genders are there in Polish], in: *Język Polski XXXVI*, pp. 116-121.
- Marušič Franc Lanko, 2009, *Non simultaneous spell-out in the clausal and nominal domain*, in: Grohmann K. (ed.), *InterPhases: Phase-theoretic investigations of linguistic interfaces*, Oxford, pp. 151-181.
- Marušič Franc Lanko / Nevins Andrew / Badecker William, 2015, *The grammar of conjunction agreement in Slovenian*, in: *Syntax 18*, pp. 39-77.
- Matushansky Ora / Ruys Eddy G., 2015, *Measure for measure*, in: Zybatow G./Biskup, P./Guhl M./Hurtig C./Mueller-Reichau O./Yastrebova M. (eds.), *Slavic Grammar from a Formal Perspective: The 10th Anniversary FDSL Conference*, Frankfurt, pp. 72-89.
- Matushansky Ora / Ionin Tania, 2016, *Polish Numeral NP Agreement as a Function of Surface Morphology*, in: *Formal Approaches to Slavic Linguistics 25*, Ann Arbor, pp. 72-89.
- Miechowicz-Mathiasen Katarzyna, 2012, *Licensing Polish higher numerals: An account of the Accusative Hypothesis*, in: Błaszczak J./Rozwadowska B./Witkowski W. (eds.), *Current Issues in Generative Linguistics: Syntax, Semantics and Phonology*. *Generative linguistics in Wrocław 2*, Wrocław, pp. 58-75.
- Migdalski Krzysztof, 2016, *Second Position Effects in the Syntax of Germanic and Slavic Languages*, Wrocław.
- Nikolaeva Liudmila, 2014, *The secret life of pronouns*, Doctoral dissertation, MIT, Cambridge, MA.

- Pereltsvaig Asya, 2006, Small nominals, in: *Natural Language and Linguistic Theory* 24, pp. 433-500.
- Pesetsky David, 1982, *Paths and categories*, Doctoral dissertation, MIT, Cambridge, MA.
- Pesetsky David, 2013, *Russian case morphology and the syntactic categories*, Cambridge, MA.
- Pesetsky David / Torrego Esther, 2001, T-to-C movement: Causes and consequences, in: Kenstowicz M. (ed.), *Ken Hale: A life in language*, Cambridge, MA, pp. 355-426.
- Pesetsky David / Torrego Esther, 2007, The Syntax of Valuation and the Interpretability of Features, in: Karimi S./Samiian V./Wilkins W. (eds.), *Phasal and Clausal Architecture: Syntactic Derivation and Interpretation*, Amsterdam, pp. 262-294.
- Pica Pierre, 1991, On the interpretation between antecedent-Government and Binding: The case of long-distance reflexivization, in: Koster J./Reuland E. (eds.), *Long-Distance Anaphora*, Cambridge, pp. 119-136.
- Preminger Omer, 2009, *Failure to Agree is not a failure: phi-Agreement with post-verbal subjects in Hebrew*, Ms., MIT/ Harvard University.
- Preminger Omer, 2011, *Agreement as a Fallible Operation*, Doctoral dissertation, MIT, Cambridge, MA.
- Przepiórkowski Adam, 1999, *Case Assignment and the complement-adjunct dichotomy: A non-configurational constraint-based approach*, Doctoral dissertation, Universität Tübingen.
- Przepiórkowski Adam, 2001, Predicative case agreement with Quantifier Phrases in Polish, in: Przepiórkowski A./Bański P. (eds.), *Generative Linguistics in Poland: Syntax and Morphosyntax*, Warsaw, pp. 159-169.
- Przepiórkowski Adam, 2004, O wartości przypadku podmiotów liczebnikowych, in: *Bulletin De La Société Polonaise De Linguistique*, fasc. LX, pp. 133-143.
- Przepiórkowski Adam / Patejuk Agnieszka, 2012, The puzzle of case agreement between numeral phrases and predicative adjectives in Polish, in: Butt M./ King T.H. (eds.), *The Proceedings of the LFG'12 Conference*, Stanford, CA: CSLI Publications, pp. 490-502.
- Pylkkänen Liina, 2008, *Introducing Arguments*, Cambridge, MA.
- Rappaport Gilbert, 2001, Extraction from nominal phrases in Polish and theory of Determiners, in: *Journal of Slavic Linguistics* 8, pp. 159-98.
- Rutkowski Paweł, 2002, The syntax of quantifier phrases and the inherent vs. structural case distinction, in: *Linguistic Research* 7, pp. 43-74.
- Rutkowski Paweł, 2007, Hipoteza frazy przedimkowej jako narzędzie opisu składniowego polskich grup imiennych [The Determiner Phrase hypothesis as

- a tool of syntactic analysis of Polish nominal phrases], Doctoral dissertation, Uniwersytet Warszawski.
- Safir Kenneth, 2004, *The syntax of anaphora*, Oxford.
- Saloni Zygmunt, 1976, *Kategoria rodzaju we współczesnym języku polskim* [The category of gender in contemporary Polish], in: *Kategorie gramatyczne grup imiennych w języku polskim. Materiały konferencji w Zawoi, 13–15 XII 1974* [Grammatical categories of nominal phrases in Polish. Proceedings of the conference in Zawoja, 13–15 XII 1974], pp. 41-76.
- Saloni Zygmunt / Świdziński Marek, 1985, *Składnia współczesnego języka polskiego* [Syntax of contemporary Polish], Warszawa.
- Starke Michal, 2009, *Nanosyntax: A short primer to a new approach to language*, in: *Nordlyd* 36 (1), pp. 1-6.
- Stegovec Adrian, 2016, *What we aren't given: selection and ditransitive passives in Slovenian*, paper presented at the Formal Approaches to Slavic Linguistics, Cornell University, May 13th 2016.
- Szober Stanisław / Łoś Jan, 1928, *Trzy piękne córki było nas u matki: Formy podmiotu i orzeczenia w zdaniach z podmiotem logicznym, określonym przydawką liczebnikową* [There was three beautiful daughters at their mother's: Forms of the subject and the predicate in sentences with a logical subject determined by the numeral modifier], in: *Język Polski*, vol. XIII.4, pp. 97-112.
- Wierzbicka Aleksandra, 2014, *Rodzaj gramatyczny w języku polskim: Przegląd koncepcji* [Grammatical gender in Polish: A review of different concepts], in: *Polonica* XXXIV, pp. 155-166.
- Willim Ewa, 1989, *On word order: A government-binding study of English and Polish*, Kraków.
- Willim Ewa, 2015, *Case distribution and phi-agreement with Polish Genitive of Quantification in the feature sharing theory of Agree*, in: *Poznań Studies in Contemporary Linguistics* 51(2), pp. 315-57.
- Witkoś Jacek / Dziubała-Szrejbrowska Dominika / Łęska Paulina, 2018, *The Syntax of Numeral Noun Constructions*, Berlin.
- Witkoś Jacek, 2020, *On Accusative Numeral Subjects in Polish*, in: Radeva-Bork T./Kosta P. (eds.), *Current Developments in Slavic Linguistics. Twenty years After* (based on selected papers from FDSL 11), Berlin, pp. 259-272.
- Witkoś Jacek / Łęska Paulina / Dziubała-Szrejbrowska Dominika / Gogłóża Aleksandra, 2020, *Bind me tender, bind me do! Dative and accusative arguments as antecedents for reflexives in Polish*, Berlin.
- Witkoś Jacek / Łęska Paulina, 2020, *Dative Antecedents for Reflexives and Pronouns*, in: *Acta Linguistica Academica*, DOI: ALING-2020.00014.

- Woolford Ellen, 1999, More on the anaphor agreement effect, in: *Linguistic Inquiry* 30, pp. 257-287.
- Woolford Ellen, 2006, Lexical Case, Inherent Case, and Argument Structure, in: *Linguistic Inquiry* 37, pp. 111-130.
- Zeijlstra Hedde, 2012, There is only one way to agree, in: *The Linguistic Review* 29, pp. 491-539.

Numeral Subjects in Polish: Surface Morphology vs. Abstract Syntax

Numeral subjects in Polish show a non-uniform agreement pattern with the verb depending on the cardinality of the numeral (paucal vs. high) and the gender of the NP. Full agreement shows with paucal numerals (<5) on non-virile NPs, while high numerals (≥ 5) require default agreement (3 person, neuter, singular) on the verb. Paucal numerals combined with virile NPs may show either full agreement or default agreement, while high numerals with virile NPs show default agreement. Furthermore, high numerals combined with virile NPs show a surface morphological form of accusative/genitive, whereas high numerals combined with non-virile NPs show a surface morphological form of accusative/nominative. At the same time all the subtypes of the numeral subject share crucial syntactic properties with the standard nominative subject (e.g. coordination, anaphoric binding, control). This contribution reports on a plausible account of the morphological aspect of the overt (dis-)agreement between the numeral subject and the verb and proposes an account of an abstract syntactic relation between the numeral subject and Tense which resembles the standard procedure of nominative case marking.

Keywords: the numeral subject, default agreement, subjecthood properties, case theory.