

THE SCALE OF PRONOMINAL STRENGTH IN POLISH: AN OT ANALYSIS OF UNSTRESSED AND WEAK PRONOUNS*

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ABSTRACT

The present paper considers syntactic distinctions that can be postulated within the system of object pronouns in Polish. Reference is made to the cross-linguistic tripartite division of pronouns outlined in Cardinaletti and Starke (1999), and to the scale of the pronominal strength proposed for German in Müller (2002). The focus of the analysis falls on pronouns which occur in unstressed positions, including atonic variants of “double duty pronouns”, e.g. *nas* ‘us-GEN/ACC’, *wam* ‘you_{PL}.DAT’. It is argued that atonic 1st and 2nd person object pronouns exhibit some symptoms of syntactic strength, e.g. they allow for topicalization and coordination with lexical noun phrases. It is demonstrated that the Animacy Hierarchy is relevant to the interpretation of strong pronouns, and to coordination of pronouns and lexical DPs.

1. Introduction

The present paper investigates syntactic properties of personal pronouns in Polish, focusing on pronouns which appear in unstressed positions, are commonly referred to as “clitics” (cf. Spencer 1991, Franks and King 2000), but are not reduced morphologically (e.g. *was* ‘you_{PL}.ACC/GEN’). The discussion will be limited to object pronouns.¹ Table 1, modelled on similar tables in Spencer (1991), Witkoś (1998), or Franks and King (2000), lists tonic and atonic forms of object pronouns.

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¹ Observe that subject pronouns are typically dropped when they carry no prominence.

Table 1. Polish object pronouns (cf. Spencer 1991, Witkoś 1998, Franks and King 2000)

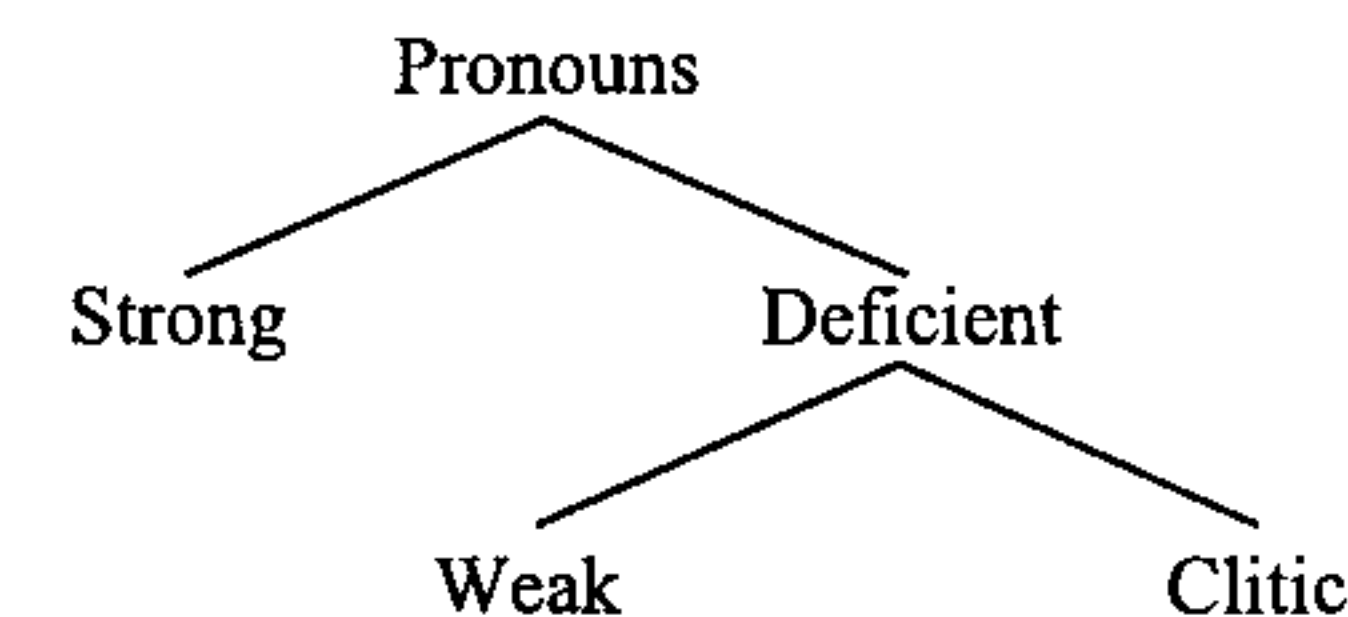
	Accusative		Genitive		Dative	
	Full	Clitic	Full	Clitic	Full	Clitic
1sg	mnie	?mię (<i>rare</i>)	mnie	?mię (<i>rare</i>)	mnie	mi
2sg	ciebie	cię	ciebie	cię	tobie	ci
3sg M	jego	go	jego	go	jemu	mu
3sg N	je	je	jego	go	jemu	mu
3sg F	ją	ją	jej	jej	jej	jej
1pl	nas	nas	nas	nas	nam	nam
2pl	was	was	was	was	wam	wam
3pl M	ich	ich	ich	ich	im	im
3pl N/F	je	je	ich	ich	im	im
Refl	siebie	się	siebie	się	sobie	---

In the course of the discussion of the status of atonic pronouns in Polish, frequent reference will be made to the tri-partite division of pronouns, proposed in Cardinaletti and Starke (1999). This typology is presented briefly in section 2 below. In section 3 the evidence is summarized for the recognition of the split between strong and deficient pronouns in Polish. Sections 4 and 5 analyze the atonic variants of “double duty” pronouns. The hypothesis is outlined for treating them as syntactically non-deficient elements, i.e. unstressed strong pronouns. Section 6 considers the validity of the claim that strong pronouns in Polish require the fixed [+human] interpretation. Section 7 examines the relevance of animacy for coordination possibilities of object pronouns in Polish. Conclusions are offered in section 8.

2. The typology of structural deficiency in Cardinaletti and Starke (1999)

Cardinaletti and Starke (1999) develop a typology of pronouns, which takes into account phonological, morphological, syntactic and semantic properties of pronominal elements. As is shown in (1), they divide pronouns into strong and deficient. The class of deficient pronouns is further split into weak and clitic pronouns. This division is claimed to be cross-linguistically valid, though the bulk of the evidence for it comes from Romance languages.

(1) Tripartite division of pronouns proposed in Cardinaletti and Starke (1999):



The differences between the properties of the three pronominal classes, identified in Cardinaletti and Starke (1999), are summarized in (2) below:

- (2a) Clitic forms are morphologically deficient (cf. *jemu* ‘him_{DAT}’ and *mu* ‘him_{DAT.CL}’ in Slovak).
- (2b) Deficient (i.e. weak or clitic) pronouns cannot be used in isolation.
- (2c) Only strong pronouns can be topicalized, and can appear in extraposed positions.
- (2d) Only strong pronouns can carry focal stress.
- (2e) Only strong pronouns can appear in coordinate structures.
- (2f) Only strong pronouns undergo adverbial modification and constituent negation.
- (2g) Deficient pronouns can freely refer to inanimate objects, while strong pronouns have fixed [+human] specification.

Cardinaletti and Starke (1999: 223) associate each type of pronouns with a distinct syntactic configuration. They propose that “[t]he more a pronoun is deficient, the less syntactic structure it has”. Strong pronouns are analyzed as complete maximal projections, i.e. CPs² (Complementizer Phrases), with the Case morpheme located in the head Comp. The other functional projections, dominated by CP in strong pronouns, include the “intermediate” level of Σ P and the lower-most IP.³ IP takes the projection of a lexical category LP (which corresponds here to NP), as its complement. Deficient pronouns, i.e. weak and clitic pronouns, lack Case, hence they have no CP layer and lack the feature specifications associated with it. This is why they are forced to move to special structural positions (where case is licensed). Weak pronouns correspond to Σ Ps, i.e. to impoverished maximal projections, without the topmost CP level. Clitic pronouns are represented as IPs which take LPs as their complements.⁴

² Since Cardinaletti and Starke intend the internal structure of noun phrases to be parallel to the structure of clauses, they refer to strong pronouns as CPs rather than as DPs.

³ Cardinaletti and Starke (1999) explain that the label IP is used as a cover term for a set of functional projections between Σ P and LP. The head of the Σ P is the locus of prosody-related features and contains polarity features.

⁴ For other proposals concerning the association of strong and deficient pronouns with distinct syntactic structure see, for instance, Dobrovie-Sorin (1999).

The relevance of Cardinaletti and Starke's typology for the classification of Polish pronouns has been discussed in, among others, Witkoś (1998). His observations will be summarized and commented on briefly in the next section.

3. Strong vs. deficient pronouns in Polish

Witkoś (1998) finds support for dividing Polish pronouns into two classes: full forms (such as *jemu* 'him_{DAT}', *ciebie* 'you_{SG.ACC/GEN}') and their deficient counterparts (e.g. *mu* 'him_{DAT.CL.}', *cię* 'you_{SG.ACC/GEN.CL.}'). This coincides with the traditional division of pronominal elements into two types (as shown in Table 1). Witkoś (1998) demonstrates that deficient pronouns in Polish cannot be topicalized, or coordinated with lexical DPs (in 3a, 3c). They cannot undergo constituent negation (as in 3d).

- (3a) *Wczoraj cię i Annę widzieliśmy w kinie.
yesterday you_{SG.ACC.CL.} and Ann_{ACC} saw_{1PL.M} in cinema
- (3b) Wczoraj ciebie i Annę widzieliśmy w kinie.
yesterday you_{SG.ACC.STRONG} and Ann_{ACC} saw_{1PL.M} in cinema
'Yesterday we saw you (Sg.) and Ann in the cinema.'
- (3c) Ciebie/*cię spotkaliśmy w kinie.
you_{SG.ACC-STRONG/CL.} met_{1SG.M} in cinema.
'It's you (Sg.) that we met in the cinema.'
- (3d) Spotkaliśmy w kinie nie ciebie/*cię, ale Marka.
met_{1PL.M} in cinema not you_{SG.ACC.STRONG/CL.} but Mark_{ACC}
'We didn't meet you but Mark in the cinema.'

The presence of morphological reduction implies that the Polish pronoun *mu* 'him_{DAT.CL.}' is a clitic in the typology in (1), analogously to the Slovak pronominal clitic *mu* 'him_{DAT}'. However, Franks and King (2000: 149ff.) point out that object pronouns in Polish do not show the same syntactic behaviour as pronominal object clitics in other Slavic languages. Pronominal object clitics in Czech or Slovak behave like functional heads. They form clitic clusters and cling to the second position in a clause. Reduced object pronouns in Polish, in contrast, act like phrasal constituents (i.e. like DPs). They exhibit considerable mobility in a clause.⁵

⁵ Reduced object pronouns in Polish differ from lexical DPs, and from strong pronouns, in being unable to occur sentence-initially. When occurring in post-verbal position, reduced pronouns must be adjacent to the verb (cf. Witkoś 1998).

- (4a) Piotr go dziś widział w supermarkecie
Peter him_{ACC} today saw_{3SG.M} in supermarket
- (4b) Piotr dziś go widział w supermarkecie.
Peter today him_{ACC} saw_{3SG.M} in supermarket
- (4c) Piotr dziś widział go w supermarkecie.
Peter today saw_{3SG.M} him_{ACC} in supermarket
- (4d) *Piotr dziś widział w supermarkecie go.
Peter today saw_{3SG.M} in supermarket him_{ACC}
- (4e) *Go Piotr dziś widział w supermarkecie.
him_{ACC} Peter today saw_{3SG.M} in supermarket

They are also able to support auxiliary clitics (i.e. verbal person-number markers, e.g. *-śmy*), as is shown in (5b)⁶ (see Franks and King 2000, or Franks and Bański 1999).

- (5a) Wczoraj spotkali=śmy go na ulicy.
yesterday met_{M+1PL} him_{ACC} on street
- (5b) Wczoraj go=śmy spotkali na ulicy.
yesterday him_{DAT+1PL} met_M on street
'We (masc) met him in the street yesterday.'

Consequently, it seems plausible that Polish deficient pronouns, such as *mu* 'him_{DAT}' or *go* 'him_{ACC/GEN}', should be included in the class of weak pronouns⁷ in (2).

4. Double duty pronouns and the destressing hypothesis

If morphologically reduced object pronouns in Polish are treated as weak pronouns, the question arises as to the syntactic status of atonic non-reduced pronouns, such as *was* 'you_{PL.GEN/ACC}', or *nas* 'us_{GEN/ACC}'.

Some researchers (e.g. Rappaport 1988, Fried 1999) assume that the distinction between stressed and unstressed variants of Slavic "double duty pronouns" has no

⁶ The anonymous reviewer suggests that the presence of a pause after the lexical word *wczoraj* 'yesterday' decreases the acceptability of (5b). This implies that the pronoun *go* 'him' does not host but merely precedes the clitic *-śmy*. I personally find (5b) acceptable even when a short pause is inserted after *wczoraj* 'yesterday'. It needs to be clarified in further research what sort of syntactic relationship obtains between *go* and *-śmy* in (5). It can be added that *go* 'him' does act here as a phonological host since it is the head of the disyllabic foot which contains *-śmy* as its unstressed syllable.

⁷ Witkoś (1998) and Dornisch (2000) adopt an alternative position (i.e. they treat Polish reduced object pronouns as heads).

syntactic relevance. It is a matter of *phonology*. When comparing inherent clitics and words disposed to clitic-like behaviour in Czech, Fried (1999) suggests that certain nonclitics, which have lexically assigned stress, are subject to a postlexical process of destressing. The destressing process is triggered by the desire to remove rhythmic clashes (which result from the occurrence of adjacent stresses).⁸ A similar position is taken in Rappaport (1988) and Sawicka (1995), who analyze data from Polish. Rappaport (1988) excludes unstressed pronouns *was* 'you_{PL.ACC}' or *nam* 'we_{DAT}' in Polish from the group of pronominal clitics. He regards them as instances of destressed non-clitic pronouns, analogous to the form *ego* 'him_{ACC}' in Russian. Sawicka (1995) suggests that any monosyllabic orthotonic word in Polish can lose its lexical stress⁹ and form a single phonological word with its host (cf. 6).

- (6) ['σ σ]_{Pwđ} ['σ σ]_{Pwđ} [Note the unstressed *was* 'you.PL.ACC']
 Jan was widział
 John you_{PL.ACC} saw_{3SG.M}
 'John saw you (Pl).'

Alternatively, the 2nd person pronoun can retain its lexical stress¹⁰ and carry contrastive focus, as in (7).

- (7) ['σ]_{Pwđ} ['σ]_{Pwđ} ['σ σ]_{Pwđ}
 Jan WAS widział
 John you_{PL.ACC} saw_{3SG.M}
 'It is you (Pl) that John saw.'

Within the standard non-derivational Optimality-Theoretic approach (cf. McCarthy and Prince 1993), there is no distinction between the lexical and postlexical level of constraint evaluation. Consequently, if the phonological framework adopted here is that of the Optimality Theory, the destressing of pronouns must be viewed as a lexical process.¹¹ The lexicon should include two coexisting homonymous lexical items (or two allomorphs), which differ with respect to their clitic or non-clitic status.

⁸ When a monosyllabic orthotonic (i.e. nonclitic) word is followed by another monosyllabic or polysyllabic orthotonic word, two adjacent syllables bear lexical stress (since in the polysyllabic words in Czech the stress is fixed on the first syllable). In order to avoid the rhythmic clash, one of the adjacent lexical stresses is removed (or reduced to a secondary stress).

⁹ Yet another account is offered in Rubach and Booij (1985). They treat all monosyllabic words in Polish as potentially atonic items, which do not receive lexical stress by virtue of the Main Stress Rule. Monosyllabic words get rhythmic stress when they form a rhythmic unit with another monosyllabic word.

¹⁰ There is no stress clash in (7), since the adjacent syllables which bear the lexical stresses belong to separate Phonological Words (see the discussion of clashes in Nespov and Vogel 1986).

¹¹ Franks and King (2000) notice that the deletion of the prosodic word structure (and the creation of derived clitics) in the case of pronominal elements in Slavic can be regarded either as a postlexical or a lexical process.

A common assumption, made in, among others, Spencer (1991), and Witkoś (1998), is to posit homonymous forms for atonic and tonic pronouns, e.g. atonic *wam₁* 'you_{PL.DAT}' in (8a) and tonic *wam₂* in (8b).

- (8a) Powiedziałam wam prawdę. (unstressed *wam*)
 told_{1SG.F} you_{PL.DAT} truth_{ACC}
 'I told you_{PL} (the) truth.'
 (8b) Powiedziałam o tym tylko WAM. (stressed *wam*)
 told_{1SG.F} about this_{LOC} only you_{PL.DAT}
 'I told only you_{PL} about it.'

Given the split of pronominal forms in Polish into two groups, i.e. strong vs. deficient adopted in Witkoś (1998), it could be assumed that the atonic *wam₁* (homonymous to the tonic forms *wam₂*) should be included in the class of deficient pronouns, together with the morphologically reduced forms *go* 'him_{ACC/GEN.CL.}' and *mu* 'him_{DAT.CL.}'.¹²

There is, however, some counterevidence against such a view, which will be examined in the next section.

5. Strong unstressed pronouns in Polish

Atonic 1st and 2nd person pronouns in Polish do not exhibit all the diagnostics of syntactic deficiency given in (2). For instance, they allow for topicalization, or coordination.

While the fronted pronoun in (9a) is tonic, and bears a contrastive stress, the topicalized pronoun in (9b) carries no lexical stress. It can bear a secondary (rhythmic) stress.¹³ The focal (nuclear) stress in (9b) falls on the negative particle.

- (9a) WAS nie da się zapomnieć.
 YOU_{PL.GEN} not manage_{FUT.3SG} r.cl. forget
 'It's YOU (Pl) that one cannot forget.'
(ContrFocus, stressed *was*)

¹² This would be compatible with the assumption, made by Cardinaletti and Starke (1999), that the distinction between strong pronouns and deficient pronouns is abstract and grammatical, hence often covert. Cardinaletti and Starke allow for the homonymy of pronouns belonging to distinct classes. For instance, they identify the English object pronoun *him* both as a strong pronoun and a homonymous weak pronoun.

¹³ Observe that morphologically deficient atonic pronouns are not barred from carrying secondary stress either, e.g. *ci* 'you_{SG.CL.}' in 'Ja bym 'ci się tam 'zgodził' 'I would agree to that'.

- (9b) Was NIE da się zapomnieć.
 (topicalized unstressed *was*)
 YOU_{PL.GEN} not manage_{FUT.3SG} r.cl. forget
 'One CANNOT forget you (Pl).'

The data in (10) show that either stressed or unstressed variants of the double duty pronoun *was* 'YOU_{PL.GEN}' can occur in coordinate structures.

- (10a) Widziałem WAS i moją narzeczoną w kinie.
 (stressed *was*)
 saw_{1SG.M} YOU_{PL.ACC} and my fiancée in cinema
- (10b) Widziałem was i moją narzeczoną w kinie.
 (unstressed *was*)
 saw_{1SG.M} YOU_{PL.ACC} and my fiancée in cinema
 'I saw you and my fiancée in the cinema.'

The use of an atonic or tonic form of the pronoun in (10) depends on the phonological phrasing adopted for the syntactic string in question.

The universal phonological phrase formation algorithms postulated in, among others, Nespor and Vogel (1986), predict that a branching complement (e.g. *was i moją narzeczoną* 'you and my fiancée' in 10) should constitute a single phonological phrase (abbreviated as Φ)¹⁴, as shown in (11). If this is the case, the strong (i.e. stressed) form of the pronoun is used.

- (11) (widziałem) _{Φ} (was i moją narzeczoną) _{Φ} (w kinie) _{Φ}

There is, however, another possibility of prosodizing the sentence in (10). The unstressed object pronoun can encliticize upon the preceding orthotonic word and constitute a single phonological phrase with it. The second conjunct (i.e. the lexical DP *moją narzeczoną* 'my fiancée') forms then a single phonological phrase with the immediately preceding conjunction *i* 'and'. Observe that a pause can be potentially inserted at the boundaries of phonological phrases.¹⁵

¹⁴ There are further complications of the phonological phrase formation algorithm which arise from the presence of contrastive focus. The right edge of a focus constituent should coincide with the right edge of a phonological phrase (cf. Truckenbrodt 1995, Selkirk 1997 for English, Kraska-Szlenk 1995 for Polish). Consequently, if the strong pronoun were contrastively stressed, it should be followed by a phonological phrase boundary.

¹⁵ The presence of a pause, or the possibility of inserting a pause, is mentioned as indicative of the edge of a phonological phrase in, among others, Sawicka (1995), and Szpyra-Kozłowska (2002). Kraska-Szlenk (1995), Sawicka (1995), and Szpyra-Kozłowska (2002: 171 ff.) discuss processes of segmental phonology which take place domain-internally in phonological phrases in Polish. These include, among

- (12) (widziałem was) _{Φ} (i moją narzeczoną) _{Φ} (w kinie) _{Φ}

The plausibility of the phonological phrasing in (13) is enhanced by the fact that a pronoun preferably cliticizes upon a phonological host which is also its syntactic head, i.e. a verb (see Kraska-Szlenk 1995¹⁶). If the orthotonic word preceding the pronoun is not its syntactic head, the encliticization of the pronoun becomes less likely, as is illustrated in (13).

- (13) Wczoraj was i moją narzeczoną widziałem w kinie.
 yesterday YOU_{PL.GEN} and my fiancée saw_{1SG.M} in cinema
- (a) ??(wczoraj was_{unstr}) _{Φ} (i moją narzeczoną) _{Φ} (widziałem) _{Φ} (w kinie) _{Φ}
- (b) (wczoraj) _{Φ} (was_{str} i moją narzeczoną) _{Φ} (widziałem) _{Φ} (w kinie) _{Φ}
 'Yesterday I saw you (Pl) and my fiancée in the cinema.'

The lack of selected symptoms of syntactic deficiency in unstressed variants of "double duty pronouns" in Polish resembles the behaviour of unstressed animate pronouns in German. Müller (2002) observes that unstressed animate pronouns in German, e.g. *ihm* 'him', undergo scrambling to Wackernagel positions, unlike their stressed counterparts. However, in contrast to inanimate pronouns, unstressed strong pronouns can be coordinated and topicalized. Müller suggests that strong pronouns in German should be split into two subgroups: strong stressed and strong unstressed pronouns.¹⁷

others, palatal assimilation of spirants, assimilation of voice, and surface palatalization. When the pronoun *was* 'YOU_{PL.ACC}' belongs to the same phonological phrase as the following preposition *i* 'and', the consonant /s/ undergoes surface palatalization. The lack of the surface palatalization indicates that the pronoun *was* and the preposition *i* belong to separate phonological phrases. It needs to be borne in mind, though, that researchers vary as to the number and labels of prosodic domains which they recognize for Polish. For instance, for Rubach and Booij (1985) the domain of the phonological phrase contains only one orthotonic word and a number of optional clitics, e.g. *kiedyśmy* 'when+1Pl'. In Kraska-Szlenk (1995) the same string is treated as a Punit (Phonological Unit), and in Sawicka (1995) as a Phonological Word.

¹⁶ Kraska-Szlenk (1995) notes that the second best choice for a pronominal clitic to attach to is the object DP, e.g. *Janek mu=książkę kupił* 'John him_{DAT} book_{ACC} bought_{3SG.M}', with *mu* 'him_{DAT}' procliticizing onto the direct object DP. The subject DP is the worst choice for a host.

¹⁷ The position taken in Müller (2002) contrasts with the views expressed by Cardinaletti and Starke, who state clearly that there is no need for finer distinctions within pronoun classes. They conclude: "Out of all possible combinations of strong and deficient (personal) pronouns inside a tripartite paradigm, only one is attested: one strong and two deficient. It is never the case that a tripartition stems from there being two strong and one deficient pronoun, etc. Similarly, it is never the case (to our knowledge) that there is more than three classes, with two types of strong and two types of deficient pronouns, etc." (Cardinaletti and Starke 1999: 167).

(14) Personal Pronoun Scale in German (Müller 2002):

strong pron(oun) > unstressed pron > weak pron > reduced pron > clitic pron
IHN [+stress] *ihn* [+anim] *ihn* [-anim] *es* 's

Let us recall that in a derivational framework, such as the Principles and Parameters Model, or the Minimalist Program, differences in the syntactic behaviour of pronoun classes stem from their movement to different projections, as proposed in Cardinaletti and Starke (1999). Müller (2002), in contrast, does not assume that unstressed and stressed variants of *ihm* 'him' in German are associated with distinct syntactic configurations. He proposes that two subclasses of strong pronouns should be distinguished by means of a phonological feature [+/-stress], and by their rank in the Personal Pronoun Scale (which reflects the relative strength of pronouns). In the syntactic framework of Optimality Theory, adopted in Müller (2002), differences in the syntactic distribution of strong and weak pronouns result from the harmonic alignment¹⁸ of prominence scales, e.g. the Pronoun Scale in (14) and the Position Scale (ie. $vP_{\text{internal}} > vP_{\text{external}}$).¹⁹

If we follow Müller (2002) and split Cardinaletti and Starke class of strong pronouns into two subgroups, then atonic forms of "double duty pronouns" in Polish, e.g. *was* 'YOU_{PL.ACC/GEN}' or *nam* 'US_{DAT}', could be regarded as unstressed (strong) pronouns.

(15) Proposal of a pronoun scale for Polish

strong (stressed) pronouns > unstressed pron > deficient (=weak) pron
WAS [+stress] *was* [-stress] *go* 'him_{ACC/GEN}'

Unstressed (strong) pronouns differ slightly in their syntactic distribution from unambiguous strong forms.²⁰ For instance, they can occur inside clitic combinations (16a). Unambiguous strong forms, e.g. *tobie* 'YOU_{SG.DAT}', preferably follow clitic-like elements (see 16d). Moreover, unstressed *wam* 'YOU_{PL.DAT}' or *nas* 'US_{ACC/GEN}' sound awkward in post-verbal position when non-adjacent to the verb (17b). Such a position would normally require a focussed (hence stressed) element.²¹

¹⁸ The mechanism of harmonic alignment of prominence scales in phonology is developed in Prince and Smolensky (1993). It is applied to the analysis of syntactic phenomena in, among others, Aissen (1999) and Legendre (2000).

¹⁹ It follows from the harmonic alignment of these two scales that deficient pronouns in German preferably occur in dislocated positions (i.e. vP -external positions).

²⁰ It needs to be established in further research how these distributional facts can be accounted for in Optimality-theoretic terms, by aligning the Pronoun Scale with other prominence scales. See Cetnarowska (2003) for more discussion of pronominal clusters in Polish.

²¹ For the same reason, unstressed strong pronouns cannot occur in isolation.

- (16a) Ja bym wam się tam nie sprzeciwił.
 I Cond.+1Sg YOU_{PL.DAT} r.cl. there not opposed_M
 'I would not oppose you (Pl.).'
- (16b) Ja bym ci się tam nie sprzeciwił.
 I would+1Sg YOU_{SG.DAT.CL} r.cl. there not opposed_M
 'I would not oppose you (Sg.).'
- (16c) ?Ja bym tobie się tam nie sprzeciwił.
 I would+1Sg YOU_{SG.DAT} r.cl. there not opposed_M
- (16d) Ja bym się tam tobie nie sprzeciwił.
 I would+1Sg r.cl. there YOU_{SG.DAT} not opposed_M
- (17a) Widziałam was_{unstr} wczoraj w parku.
 saw_{1SG.F} YOU_{PL.ACC} yesterday in park
 'I saw you in the park yesterday.'
- (17b) ?Widziałam w parku wczoraj was_{unstr}.
 saw_{1SG.F} in park yesterday YOU_{PL.ACC}
- (17c) Widziałam w parku wczoraj WAS.
 saw_{1SG.F} in park yesterday YOU_{PL.ACC}
 'It is you (Pl) I saw in the park yesterday.'

There may be a need for extending the scale of pronominal strength given in (15). Cetnarowska (2003) observes that there is a split within morphologically reduced pronouns in Polish. While the reduced pronoun *go* 'him_{ACC/GEN}' can act as a host for auxiliary clitics, such as *-śmy* or *-ś* (as was shown in (6) above), the reflexive clitic *się* or the reduced pronoun *cię* 'YOU_{SG.ACC/GEN}' cannot support them.²²

- (18a) Bardzo się zmęczyłeś.
 very r.cl. grew-tired_{2SG.M}
 'You (Sg) grew very tired.'
- (18b) *Bardzo się=ś zmęczył.
 very r.cl+2Sg grew-tired_M
- (18c) Bardzo=ś się zmęczył.
 very+2Sg r.cl. grew-tired_M

²² The anonymous reviewer suggests that the difference between the syntactic behaviour of the pronouns *go* 'him' and *cię* 'YOU_{SG.ACC}' in Polish concerns constraints on the clitic cluster internal ordering, which are familiar from the discussion of French or Serbo-Croatian clitics. (See also the reviewer's remarks on the potential of the pronoun *go* to host auxiliary clitics in footnote 6.)

(19a) Wczoraj cię widzieliśmy w kinie.
 yesterday you_{SG.ACC} saw_{IPL.M} in cinema_{LOC}
 'We (masc.) saw you in the cinema yesterday.'

(19b) *Wczoraj cię=śmy widzieli w kinie.
 yesterday you_{SG.ACC+IPL} saw_M in cinema_{LOC}

If the pronominal elements *cię* 'you_{SG.ACC/GEN}' and *się* 'reflexive cl.' are treated as more deficient syntactically than *go* 'him_{ACC/GEN}' or *mu* 'him_{DAT}', the former should be assigned a lower position on the Pronoun Scale. For instance, they can be regarded as exemplifying the class of clitics proper.²³

(20) Proposal of a pronoun scale for Polish (revised version)

strong (stressed) pronouns > unstressed pron > weak pron > clitic pron
WAS [+stress] *was* [-stress] *go* 'him_{ACC/GEN}' *się* 'refl.cl.'

The next section will consider the relevance of the human vs. inanimate interpretation of Polish pronouns for their position on the Pronoun Scale.

6. Strong pronouns and [+human] interpretation

A question arises whether the group of unstressed strong pronouns, mentioned in (15) or (20), contains atonic forms of "double duty" 3rd person pronouns, e.g. *jej* 'her_{DAT/GEN}', *ją* 'her_{ACC}', *ich* 'them_{ACC/GEN}'. These pronouns, in contrast to 1st or 2nd person pronouns, can refer either to human beings or to inanimate objects, e.g. *Widziałam ją*. 'I saw her' or 'I saw it (e.g. book)'.

Both Cardinaletti and Starke (1999) and Müller (2002) argue that pronouns with obligatory human reference should be set aside from pronouns which allow inanimate reference. Müller (2002) regards the pronoun *ihm* in German as strong or unstressed when it occurs with the [+animate] reference. He posits the homonymous weak pronoun with the [-inanimate] reference. He postulates that the formation of R-pronouns in German (e.g. *darauf* 'of it') is impossible with strong and unstressed pronouns, possible with weak pronouns and obligatory with reduced pronouns.

The relevant diagnostic process (i.e. the formation of R-pronouns in German) is absent in Polish.²⁴ Doubts arise concerning the validity in Polish of other evidence in

²³ Note, however, that both these pronouns are as mobile as *mu* 'him_{DAT}' or *go* 'him_{ACC}'. Neither of them is restricted to the postverbal or 2nd position in a clause.

²⁴ In literary or archaic Polish one can use contracted forms, consisting of a preposition and the morpheme *-ń* which stands for the genitive or accusative form of the masculine or feminine pronoun, e.g.

favour of isolating human pronouns from nonhuman ones (adduced in Cardinaletti and Starke 1999). Cardinaletti and Starke claim that strong pronouns always denote human entities while deficient pronouns can refer to inanimate objects. If pronouns occurring in topicalized or extraposed positions are treated as strong (either "strong stressed" or "strong unstressed"), it follows that they should have an obligatory [+human] specification. This prediction is not clearly supported by the Polish data. While topicalized pronouns are usually interpreted as referring to human participants (cf. 21), this preference may be overridden by the context (as in 22-23).

(21) JEGO widzieliśmy wczoraj w „Apollo”.
 (Witkoś 1998:153)

him_{ACC.STRONG} saw_{IPL} yesterday in Apollo
 (21a) *% 'We saw it (=the film) yesterday in the Apollo cinema.'

(21b) 'We saw him (=a friend of ours) yesterday in the Apollo cinema.'

(22) [Proszę zapakować dla mnie tę zieloną bluzeczkę, i odłożyć z powrotem na półkę ten biały sweterek. 'Wrap up for me, please, this green blouse (Fem.), and put this white sweater (Masc.) back on the shelf.']

JEGO na pewno nie kupię, bo jest poplamiony.
 him_{GEN.STRONG} on sure not buy_{FUT.ISG} because is_{3SG} stained
 'Certainly I won't buy it (*him), because it is stained.'

(23) [Przeczytałam wszystkie książki na tej półce, oprócz tej powieści Goldinga. 'I've read all the books on the shelf, except for this novel by Golding.']

JEJ już nie zdążę przeczytać.
 her_{GEN} already not manage_{FUT.ISG} read
 'I won't manage to read it (*her).'

The preference for the [+human] use of strong pronouns may be predicted in the Optimality-theoretic model by means of aligning the Pronoun Scale with the Animacy Hierarchy (quoted below from Comrie 1989).

(24) The Animacy Hierarchy (Comrie 1989)

human nouns > nonhuman animate nouns > inanimate nouns

doń (=do niego/ do niej) 'to him/her', *nań* (=na niego/na nią) 'on him/her' (see Franks and King 2000: 152). Interestingly, these contracted pronouns require human interpretation.

Since one of the prominence hierarchies needs to be binary (cf. Prince and Smolensky 1993, Aissen 1999), a simplified version of the Pronoun Scale will be used below, i.e. Strong Pronoun > Deficient Pronoun. The harmony scales H_x and H_y in (25) indicate that it is harmonic to align elements from the top of one prominence scale with elements from the top of another hierarchy, e.g. Strong (Pronoun)/Human. The constraint *Strong/Inanimate (i.e. 'Do not have strong pronouns with inanimate reference'), which penalizes a disharmonic association of values from two scales, is ranked higher cross-linguistically than the constraint *Strong/Human (which prohibits optimal associations of pronoun strength and animacy).

(25) Hierarchies:

D_1 : Strong (Pronoun) > Deficient (Pronoun)

D_2 : Human > (Nonhuman) Animate > Inanimate

Harmony Scales (where '>' means 'more harmonic'):

H_x : Strong/Human > Strong/Animate > Strong/Inanimate

H_y : Deficient/Inanimate > Deficient/Animate > Deficient/Human

Constraint Subhierarchies (where '>>' means 'is ranked higher than')

C_x : *Strong/Inanimate >> *Strong/Animate >> *Strong/Human

C_y : *Deficient/Human >> *Deficient/Animate >> *Deficient/Inanimate

The sentences in (26) below demonstrate further that stressed pronouns with inanimate reference can be modified by adverbs (contrary to the predictions of Cardinaletti and Starke's theory)²⁵:

(26a) Tylko one (=te sukienki) mi się podobają.
only they (these dresses) me refl.cl please_{3PL}
'I like only them (those dresses).'

(26b) Właśnie jego (=tego artykułu) szukałam przez cały tydzień.
just it_{ACC} (this paper) looked-for_{1SGF} for whole week
'It is for it (this paper) that I've been looking (for) the whole week.'

The data in (22), (23) and (26) suggest that there is no need for a covert distinction in Polish between weak pronouns (which allow for inanimate reference) and homonymous strong (stressed or unstressed) pronouns with obligatory human reference.

²⁵ The anonymous reviewer finds example (26b) fully acceptable only if the article is perceived as a personified object which appears to be hiding away intentionally.

Such a position is taken in Testelefs (2003) in his study of Russian. He argues that there is only one syntactic class of personal pronouns in Russian.²⁶ He distinguishes between "weak" positions and "strong" positions available for pronouns. Strong positions require the pronoun to be human and phonologically non-reduced. They include the positions of arguments, dative benefactives, complements of some prepositions, e.g. *dlja* 'for', *iz-za* 'because', *posle* 'after'. Weak positions require discourse prominence and allow phonological reduction. Such positions include many NP adjuncts (e.g. measure accusative adjuncts, *odnu minutu/*ee*) and PP adjuncts, e.g. complements of the "weak" preposition *v* 'in', *na* 'on' (in spatial meanings), *iz* 'from'.

7. The Animacy Scale and coordination of pronouns

Testelefs (2003) points out the relevance of the distinction between pronouns with human and inanimate reference for the possibility of coordination in Russian. He shows that nonhuman personal pronouns in Russian can occur under some circumstances as leftmost conjuncts, but are impossible as non-leftmost ones. Human personal pronouns, in contrast, can occur in either part of the coordinated phrase.

(27a) Ja prepodaju ne fiziku (ee), a matematiku.
I teach_{1SG} not physics (it) but mathematics

(27b) V posledstvii i ona i neskolko drugix kartin propali.
afterwards both it and several other pictures disappeared

(27c) *V posledstvii i neskolko drugix kartin i ona propali.
afterwards both several other pictures and it disappeared

(28a) I ona, i neskolko drugix devušek skazali...
both she and several other girls said

(28b) I neskolko drugix devušek i ona skazali...
both several other girls and she said

A similar restriction on rightmost conjuncts appears to hold in Polish (see 29b).

(29a) Podaj mi i jego (długopis) i tę czarną kredkę.
give_{IMPER} me both it (ballpen) and this black crayon

(29b) *Podaj mi i tę czarną kredkę i jego.
give_{IMPER} me both this black crayon and it.

²⁶ Notice that there are no morphologically reduced pronouns in Russian (Rappaport 1988, Franks and King 2000).

- (30a) Spotkałam i jego (dyrektora) i tę nową sekretarkę w kawiarni.
 met_{1SG.F} both him (manager) and this new secretary in café
- (30b) Spotkałam i tę nową sekretarkę i jego (dyrektora) w kawiarni
 met_{1SG.F} both this new secretary and him (manager) in café
 'I met both him (=the manager) and (the) new secretary in the café.'

Testelefs (2003) concludes that the ill-formedness of (27c) is not linked to the split between strong and weak pronouns but follows from a pragmatic principle on coordination in Russian. This principle demands that coordination of nonhuman pronouns (especially as rightmost conjuncts) should be avoided.

If resort were taken to a similar pragmatic restriction on coordination in Polish to account for the difference in the acceptability of (29b) and (30b), there would be no need for introducing a covert distinction between pronouns with human (animate) and inanimate reference in Polish, e.g. *jego*₁ 'him_{ACC/GEN}' and *jego*₂ 'it_{ACC/GEN}'.

Alternatively, the insights from Testelefs' study can be translated into Optimality-theoretic terms. It is tentatively postulated in (31) that the position of the rightmost conjunct is more prominent than the position of the leftmost conjunct.

- (31) Conjunct Prominence Scale:
 Rightmost conjunct (RConj) > Leftmost conjunct (LConj)

The Conjunct Prominence Scale in (31) can be aligned with the Animacy Hierarchy, given in (24), as shown in (32).

- (32) Hierarchies:
 D₁: Rightmost conjunct (RConj) > Leftmost conjunct (LConj)
 D₂: Human > (Nonhuman) Animate > Inanimate

Harmony Scales (where '>' means 'more harmonic'):
 H_x: RConj/Human > RConj/Animate > RConj/Inanimate
 H_y: LConj/Inanimate > LConj/Animate > LConj/Human

Constraint Subhierarchies (where '>>' means 'is ranked higher than'):
 C_x: *RConj/Inanimate >> *RConj/Animate >> *RConj/Human
 C_y: *LConj/Human >> *LConj/Animate >> *LConj/Inanimate

Additionally, the Animacy Hierarchy can be aligned with the NP-type Hierarchy, quoted in (33) from Croft (1990).

- (33) The NP-type Hierarchy: pronouns > common nouns

- (34) Hierarchies:
 D₁: Pro(noun) > Common (noun)
 D₂: Human > (Nonhuman) Animate > Inanimate

Harmony Scales (where '>' means 'more harmonic'):

H_x: Pronoun/Human > Pronoun/Animate > Pronoun/Inanimate

H_y: Common/Inanimate > Common/Animate > Common/Human

Constraint Subhierarchies (where '>>' means 'is ranked higher than')

C_x: *Pronoun/Inanimate >> *Pronoun/Animate >> *Pronoun/Human

C_y: *Common/Human >> *Common/Animate >> *Common/Inanimate

The harmony scales in (32) and (34), derived by the alignment of the relevant scales, indicate that the combination of rightmost conjuncts with inanimate nouns is disharmonic, and so is the association of pronouns with inanimate reference.

Most of the universal (i.e. cross-linguistically valid) constraints generated in (32) and (34) must be dominated by some other constraints in Polish, hence their effect is barely noticeable. The occurrence of pronouns with inanimate reference, or common nouns denoting humans, testifies to the weakness of the constraints *Pronoun/Inanimate and *Common/Human. Observe, moreover, that the constraint *RConj/Inanimate is low-ranked, hence inanimate common nouns are allowed as rightmost constituents in coordinated phrases (as shown in 29a).

However, the local conjunction²⁷ of the constraint *RConj/Inanimate and the constraint *Pro(noun)/Inanimate is ranked high in Polish, hence the occurrence of inanimate pronouns as the rightmost conjuncts is ungrammatical.

8. Conclusions

The present paper discussed the syntactic behaviour of object pronouns in Polish, with a view to identifying distinct grammatical classes, corresponding to degrees of syntactic deficiency or syntactic strength. Special attention was paid to pronouns which occur in unstressed position. Instead of associating pronoun classes with distinct syntactic configurations (as proposed in the typology of pronouns offered in Cardinaletti and Starke 1999), differences in the syntactic properties of pronouns were derived from their position on the Pronoun Scale, which indicates their relative strength. Following the analysis of the pronominal elements in German outlined in Müller (2002), I analyzed atonic variants of „double duty” pronouns in Polish as belonging to the class of unstressed strong pronouns, which can be topicalized and coordinated with lexical DPs. It was shown that the coordination test, employed in

²⁷ See Legendre (2000) and Aissen (1999) for the use of locally conjoined constraints.

classifying pronouns, is not watertight. Firstly, its results depend on phonological factors (i.e. the division of syntactic strings into phonological phrases). Secondly, there are additional semantic (or semantico-pragmatic) restrictions on coordinate structures which are related to animacy. I argued against introducing a covert distinction in Polish between strong pronouns with fixed [+human] specification and deficient pronouns with unrestricted [+/-human, +/-animate] interpretation. The tendency to associate strong pronouns with [+human] reading in Polish can be stated as resulting from the harmonic alignment of the Animacy Scale and the Pronoun Scale. It was also proposed that the Animacy Scale can be aligned with the Conjunct Prominence scale and the NP-type Hierarchy in order to derive the prediction that inanimate pronouns are infelicitous as the more prominent (i.e. the rightmost) constituents in coordinate structures.

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