

Dephrasal adjectives in Polish

– A case of syntax-inside-morphology

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Abstract

The present paper is part of a larger project which investigates the issue of “syntax-inside-morphology” in the domain of Polish word-formation. In what follows, we explore the thus far unstudied territory of dephrasal adjectives, such as *tużpopołudniowy* ‘right-after-noon’ and *ponadstustronicowy* ‘over-one-hundred-page’ built on phrasal bases subjected to suffixation.

It is generally acknowledged that the Polish word-formation system is not designed to comprise phrasal compounding – a word-formation type which has come to be considered a flagship representative of the morphology-syntax interface (see Szymanek 2017 and Pafel 2017). Nevertheless, one may come across a number of Polish word-formation patterns, such as the class of nouns derived from PPs (e.g. *nausznyk* ‘earmuff’ $[[na_{PP} uszny]_{PP} -nik]_N$) or synthetic compound words (e.g. *bydłobójnia* ‘abattoir’ $[[bydł_{N-o-bójv}]_{VP} -nia]_N$) which should clearly be considered legitimate members of the global “syntax-inside-morphology” community (see Kolbusz-Buda 2019a).

In what follows, we want to argue that Polish dephrasal adjectives should be recognised as a case of morphology-syntax interplay on a par with the already attested cross-linguistic material. The phrasal character of the Polish data to be discussed in this study is so strong that researching this *sui generis* type of derivation seems not only a valid linguistic undertaking but also one with important implications. The study may have far-reaching consequences for the descriptive adequacy of the Polish word-formation system and point to new directions in the discussion on the morphology-syntax interface. The morphological structure of the adjectives to be discussed will be juxtaposed with the class of Polish compounds proper, in particular, synthetic compounds – a word-formation type which can be considered the closest in its morphological make-up to the presented material. Offering such a comparative perspective seems necessary as the adjectives to which we choose to refer as products of dephrasal suffixation are casually classified as compounds. Moreover, although Polish does not note any cases of phrasal compounding, the morphological structure of the adjectives in question will be additionally examined to discover potential parallels between the two word-formation types. The reason behind this undertaking is two-fold. Firstly, as has already been mentioned, dephrasal adjectives are classified as compounds; secondly, they contain a phrasal unit.

In our analysis, we draw on a revised version of the Lexical Integrity Hypothesis, i.e. Lieber and Scalise’s (2007) Firewall Theory, which belongs to the current of the so-called mixed models of word-formation advanced in the recent years by, for instance, Ackema and Neeleman 2004 and Pafel 2017, allowing for a limited intermodular interaction between morphological and syntactic domains.

Keywords: phrasal derivation, dephrasal adjectives, phrasal compounding, morphology-syntax interface

1. Introduction

The issue of phrasal word-formation *sensu lato*, examined mainly in the context of the Lexical Integrity Hypothesis (henceforth LIH), does not seem to be easily settled as it is dependent upon several interrelated parameters, often hard to reconcile. A matter of paramount importance is to position the phenomenon on the map of grammar. Therefore, a critical condition for optimising the accuracy of description of these word-formation types which constitute a bridge between morphology and syntax is the choice of the most pertinent theoretical framework for the job. If phrasal word-formation were to be researched within a strictly morphologically oriented model of grammar, i.e. as the output of the morphological domain, it is only natural that the problem of competition between morphological and syntactic components would not be easily resolved due to the controversy surrounding the principle of Lexical Integrity (which states that syntactic transformations cannot apply to subparts of words¹) and the No-Phrase Constraint (which states that only words, not syntactic constructs, may undergo word-formation²), being two powerful constraints on the syntax-morphology cooperation in the domain of word-formation (see e.g. Bresnan 2001 and Spencer 2010; cf. Ackema and Neeleman 2004). If, however, the output of the morphology-syntax interface were to be assigned solely to the syntactic component, the problem of “syntax-inside-morphology” would no longer be a moot point. Naturally, the third alternative would be to meet halfway. Such balanced theories of merit, allowing for a certain degree of the reciprocal influence of both grammatical domains, have been advanced in recent years and are neither to be overlooked nor to be underrated.³

The present paper is part of a larger project which investigates the issue of “syntax-inside-morphology” in the domain of Polish word-formation. In what follows, we explore the thus far unstudied territory of dephrasal adjectives, such as *tużpopołudniowy* ‘right-after-noon’ and *ponadstustronicowy* ‘over-one-hundred-page’ built on phrasal bases subjected to suffixation.

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¹ “The syntax neither manipulates nor has access to the internal structure of words” (Anderson 1992: 84).

² “Lexical rules do not apply to syntactic phrases to form morphologically complex words” (Botha 1984: 137).

³ See Ackema and Neeleman’s (2004) theory of *Generalised Insertion*, Ralli’s (2013) *Nominal Formations Continuum* and the de-syntacticisation theory, Pafel’s (2017) theory of *Conversion*, Lieber and Scalise’s (2007) *Limited Access Principle* put forward to account for cases of morphology-syntax interface in word-formation.

descriptive adequacy of the Polish word-formation system and point to new directions in the discussion on the morphology-syntax interface.

The morphological structure of the adjectives to be discussed will be juxtaposed with the class of Polish compounds proper, in particular synthetic compounds – a word-formation type which can be considered the closest in its morphological make-up to the presented material. Offering such a comparative perspective seems necessary as the adjectives to which we choose to refer as products of phrasal suffixation are casually classified as compounds. Moreover, although Polish does not note any cases of phrasal compounding, the morphological structure of the adjectives in question will be additionally examined to discover potential parallels between the two word-formation types. The reason behind this undertaking is two-fold. Firstly, as has already been mentioned, phrasal adjectives are classified as compounds; secondly, they contain a phrasal unit.

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2. Handling the syntax-inside-morphology crisis

We shall now turn to the issue of how a syntactic phrase can constitute a base for a lexical unit, and how this problem has been accommodated in the theory of modern linguistics.

In the early days of phrasal derivation research, the non-canonical products of word-formation used to evoke strong scholarly emotions. It is a matter of debate whether this linguistic scepticism was genuinely well-founded. After all, in the abundant cross-linguistic reservoir of language material, one could always find syntactic structures collaborating with the domain of morphology. Due to an uncompromising approach of the Strong Lexicalist Hypothesis to the morphology-syntax interface, the theory, despite the existence of apparently irrefutable language facts, was often unable to account for the phenomena which revealed a degree of the reciprocal influence of both modules of grammar, such as the attachment of the Saxon genitive to noun phrases or the structure of phrasal compounds. Although language material *per se* often confirmed the validity of the complementary relationship holding between morphology and syntax, the strict separatist rules made linguists look away and search for roundabout theoretical solutions.

The fact that lexical units can be built on a phrase does not seem to call for validation in today's linguistic theoretical universe. The wealth of cross-linguistically data speaks volumes about the non-marginal character of the syntax-inside-morphology phenomenon. Bisetto and Scalise (1999), Lieber and Scalise (2007), Booij (2009), Trips (2012), Kolbusz-Buda (2015, 2019b) among others, show unequivocally that certain word-formation types may accept phrasal bases to build complex words.⁴ In what follows, we wish to present selected examples of

⁴ See Booij (2009) for a discussion of the Lexical Integrity Principle in the context of the syntax-inside-morphology phenomenon.

dephrasal word-formation from languages such as English, Dutch, Italian, Spanish, and Polish, collected or quoted by the authors mentioned above.

2.1. Cases of “syntax-inside-morphology”

A flagship example of the morphology-syntax cooperation in the field of word-formation is phrasal compounding in Germanic languages, in particular, the English language:

- (1) [[*we know best*]_S *philosophy*]_N
 [[*shall we go to the pub?*]_S *variety*]_N
 [[*gentle rain from heaven*]_{NP} *process*]_N
 [[*slept all day*]_{VP} *look*]_N
 [[*out-of-the-way*]_{PP} *pub*]_N
 [[*ready for action*]_{AP} *look*]_N

Trips (2012: 324–328), Lieber and Scalise (2007: 4)

The canonical phrasal compound, such as a *what-the-heck-is-wrong-with-you look* or an *over-the-fence gossip* can be defined as a two-constituent unit, whose left-hand modifier is a maximal projection or a clause.⁵ This extremely productive word-formation type, considered controversial in the era of the Strong Lexicalism dominion, has gradually come to represent the phenomenon of the morphology-syntax interface.

Special attention needs to be paid to phrasal compounding with internal inflection in Dutch where the left-hand modifying noun phrase is inflected for number:

- (2) [[*kleine kinderen*]_{N,PL} *gedrag*]_N
 [[*little children*] *behaviour*]
 ‘little children’s behaviour’

Booij (1997, qtd. in Bisetto and Scalise 1999: 32)

A significantly less productive word-formation type that runs parallel to phrasal compounding is phrasal derivation (which may also be encountered in the modifier position of phrasal compounds in English) where a syntactic construct, be it a clause or a phrase, constitutes a base subjected to suffixation:

- (3) [[*why-does-it-have-to-be-me*]_S *-ish*]_A *expression*
 [[*Don’s long-awaited photo tutorial*]_{NP} *-ish*]_A *thing*
 [[*I-don’t-care*]_S *-ism*]_N⁶

Spencer (2005: 83), Lieber and Scalise (2007: 9)

A similar mechanism can be seen in Italian, and to some extent in Polish. The suffixes that operate on phrasal bases in (4) are *-ismo* (also *-ista*) for Italian and *-izm* for Polish:

⁵ See Trips’ (2012) corpus-based study of phrasal compounds in English for a wide array of syntactic structures employed in the modifier position.

⁶ The example is the result of author’s cursory internet search carried out for the purpose of this paper.

- (4) *menefreghismo* ‘I don’t care-ism’
 [[*me ne frego*]_S -ism]_N
 [[*I rub myself (with it)*]_S -Af]_N⁷ Bisetto and Scalise (1999: 32)
- tumiwisizm* ‘I don’t care-ism’
 [[*tu mi wisi*]_S -izm]_N
 [[*here it hangs*] -Af] Kolbusz-Buda (2019a: 27)
- dodupizm* ‘utter uselessness’
 [[*do dupy*]_{PP} -izm]_N
 [[*to ass*] -Af] Doroszewski (1958–1962)

The noun *dodupizm* represents a highly productive word-formation type of phrasal suffixation in Polish. The syntactic input is predominantly a prepositional phrase appended a nominalisation suffix. The derivational morpheme can be realised either by an overtly expressed suffix or by a morphological zero – a marker of paradigmatic conversion.⁸ One can easily draw a structural analogy between phrasal compounds in English (and other Germanic languages) and dephrasal nouns in Polish. “In both cases, the left side [...] is heavier and involves input in the shape of a phrasal component” (Kolbusz-Buda 2015: 75):

- | | |
|--|---|
| (5) <i>przedpoście</i> ‘time prior to Lent’
[[<i>przed postem</i>] _{PP} -Ø] _N
[[<i>before Lent</i>] -Af] | <i>bezdeń</i> ‘abyss’
[[<i>bez dna</i>] _{PP} -Ø] _N
[[<i>without bottom</i>] -Af] |
| <i>odludek</i> ‘a recluse’
[[<i>od ludzi</i>] _{PP} -ek] _N
[[<i>away from people</i>] -Af] | <i>dorzecze</i> ‘a river basin’
[[<i>do rzeki</i>] _{PP} -Ø] _N
[[<i>to river</i>] -Af] |
| <i>podkoszulek</i> ‘a T-shirt’
[[<i>pod koszulą</i>] _{PP} -ka] _N
[[<i>under shirt</i>] -Af] | <i>nabrzeże</i> ‘a wharf’
[[<i>na brzegu</i>] _{PP} -Ø] _N
[[<i>on bank</i>] -Af] |
| <i>naskórek</i> ‘epidermis’
[[<i>na skórze</i>] _{PP} -ek] _N
[[<i>on skin</i>] -Af] | <i>międzywojnie</i> ‘interwar’
[[<i>między wojną</i>] _{PP} -Ø] _N
[[<i>between war</i>] -Af] |
- Kolbusz-Buda (2015: 75–76, 2019a: 40)

⁷ Author’s translation. Please note that *me ne frego* ought not to be confused with *me ne frega*. “Both “me ne frega” and “me ne frego” have finally the same connotation, but they are gramatically different. The analogy with “bother” should shed some light: “me ne frega” = “It bothers me” / “me ne frego” = “I bother myself with it” (reflexive). Obviously, the two forms are completely interchangeable except the following nuance: because “fregare” means “rubbing”, and “rubbing oneself” is derisive for not caring, the reflexive form is almost always used in a negative form and has a default negative meaning: “me ne frega” = it bothers me / “me ne frego” = it doesn’t bother me (literally, “I rub myself (with it)”).” The above explanation was provided by an anonymous author at <https://forum.wordreference.com/threads/me-ne-frego.47787/post-9159706> (accessed 2 July 2019).

⁸ In Polish linguistic literature, the term *paradigmatic conversion* is used to refer to a suffixless word-formation process in which the difference between the input and output forms boils down to the difference in their inflectional paradigms. Paradigmatic conversion may take the shape of an unmarked change of the word-class in which case the input and the output share the same stem: *piorun-o-chron-Ø* ‘lightning conductor’ < *chronić*_V ‘to protect’ (*chron*_N ‘protection’), *kamieni-o-łom-Ø* ‘quarry’ < *łamać*_V ‘to break’ (*łam*_N ‘a break’). For a detailed account of paradigmatic conversion in Polish, see Kolbusz-Buda (2014, 2019a).

A unique type of phrasal suffixation is the Saxon genitive in English which may take a syntactic construction as its base, including an NP with an embedded relative clause:

- (6) [[*our teacher of biology*]_{NP}'s]_{NP} *car*
 [[*the woman I live next door to*]_{NP}'s]_{NP} *husband*
 [[*the fellow that washes the windows*]_{NP}'s]_{NP} *brother*
 [[*an hour or two*]_{NP}'s]_{NP} *time*
 [[*Kenyon and Knott*]_{NP}'s]_{NP} *Pronouncing Dictionary*

Algeo and Butcher (2013: 177)

Although 's is phonologically attached to the right-hand non-head constituent of the phrase, it has scope over the entire NP. "The group-genitive construction [...] is a development of the early Modern English period. [The] genitive 's is added, not to the noun to which it relates most closely, but rather to whatever word ends a phrase including such a noun" (Algeo and Butcher 2013: 176). The fact that the possessive construction may feed on phrases proves that a syntax-inside-morphology phenomenon is not exclusively derivation-oriented.

In English, both derivation and compounding may involve conjunction. In such cases, conjoined expressions can be interpreted as phrases within words (Lieber and Scalise 2007: 5–6). Conjunctions may also be encountered in phrasal compounding. Trips (2012: 324) quotes examples such as *peace and goodwill to all men attitude* being a complex NP whose both nominal constituents are conjoined. Additionally, the head noun can be post-modified by a PP. Interestingly, not only words but also prefixes may undergo conjunction and subsequent suffixation:

- (7) [[*pre- and [even to some extent] post-war*] *economics*]_N
 [[*car and truck*] *driver*]_N
 [[*peace and goodwill [to all men]*] *attitude*]_N

Trips (2012: 324), Lieber and Scalise (2007: 5–6)

A case of the morphology-syntax interface can be the scope of prefixation. "[A]lthough phonologically prefixation takes place on the N head of an NP, semantically the prefix affects the whole NP" (Lieber and Scalise 2007: 11). As an illustration, consider examples from Spanish and English:

- (8) [*ex- [futbolista del Barça]*]_{NP}_N
 the ex-footballer of Barça
 'the former Barça footballer'
 [[*post- [digestive disorder]*]_{NP}] *complications*]_N
 [*my ex-[car]*]_N_{NP}

Lieber and Scalise (2007: 11)

Although, phonologically, the prefix *ex-* in *ex-futbolista del Barça* is attached to the head noun *futbolista*, semantically it takes scope over the whole noun phrase. The same may be observed for *my ex-car* in English where the prefix *ex-* exhibits scopal properties. At first glance, *ex-* modifies the head of the noun phrase (both phonologically and semantically). However, scrutiny shows that the prefix is linked with the noun *car* merely phonologically. Semantically,

it takes scope over the possessive adjective *my* to mean “my ex” as *car* in *my ex-car* is no longer my property, though, in terms of substance, it remains the same entity.

Similarly, it can be argued that the prefix *post-* serves the function of the modifier of the entire noun phrase *digestive disorder* in which case the formation would be understood as *complications after a digestive disorder*. If, however, *post-* were to be interpreted as the pre-modifier of the adjective *digestive*, the unit would receive the following obscure reading: *?complications of a disorder which is post-digestive*.

The examples of the morphology-syntax interface quoted above are merely a small fraction of the material accumulated by language researchers. According to the theoretical tenets of Strong Lexicalism, the cases of syntax-inside-morphology presented above should be impossible. Paradoxically, not only are they irrefutable language facts but they are often deeply rooted in the word-formation system of a given tongue.

2.2. A formal approach to morphology-syntax interface

In contrast to the Strong Lexicalist Hypothesis, the issue of the division of labour between morphology and syntax in the production of certain word-formation types is no longer uncompromisingly questioned by contemporary linguistic theories. According to Booij (2009), the Principle of Lexical Integrity – one of the key tenets of LIH – requires a redefinition in that codification improvements need to allow for different modules of grammar, such as syntax, semantics or phonology, to have access to the word-internal structure. As for the No-Phrase Constraint, such corrections have already been proposed in Lieber and Scalise (2007). One of the theories to account for syntax-inside-morphology cases is Lieber and Scalise’s (2007) revised version of LIH – the Firewall Theory (after Sato 2010), which belongs to the current of the so-called mixed models of word-formation advanced in the recent years by, for instance, Ackema and Neeleman (2004) and Pafel (2017). The Firewall Theory allows for a limited intermodular interaction of morphological and syntactic domains. Such a balanced perspective is adopted in this paper. Accepting the fact that the syntactic module by its very nature cannot look into morphology (and *vice versa*), Lieber and Scalise (2007: 21) put forth that the so-called “Morphological Merge can select on a language-specific basis to merge with a phrasal/sentential unit.” This phrasal unit is subsequently downgraded to the category of a word via the process of grammaticalisation. Morphological Merge is further defined as follows:

- Let there be items α , β , such that α is a base and β a base or affix. MM takes α , β (order irrelevant) and yields structures of the form $\langle \alpha, \beta \rangle \gamma$
- a. where γ is an x^0 , categorically equivalent to α or β , and
 - b. α or β can be null.

Booij (2009: 84) explains that in such constructs “[it] is the morphological module that defines which kind of phrases can appear within complex words. The syntactic module in its turn defines the well-formedness of those word-internal phrases.” As a result, in the same way that syntax builds on morphology, morphology may build on syntactic constructions, though the interplay is highly constrained as “[s]yntax and morphology are firewalled from each other in the default case [...]” (Sato 2010: 402).

3. Dephrasal adjectives in Polish

When investigating important language phenomena which add to the understanding of the morphology-syntax interface, one cannot ignore a unique cross-domain word-formation type in Polish which generates complex adjectives out of syntactic structures subjected to suffixation, such as [[VP] Af] *naprzemianległy* ‘alternating’ and [[PP] Af] *ponaddziewięciusetdziesięćdziesięcioćwierćprocentowy* ‘over-999-and-a-quarter-percent.’

To a certain extent, Polish dephrasal adjectives, despite belonging to a distinct word-formation type, bear a structural resemblance to the English phrasal compounds. Firstly, the base which is subjected to suffixation to derive an adjective is a syntactic construct in the same way that the left-hand modifying lexeme of a phrasal compound in English can be expressed by a syntactic phrase or a clause. Furthermore, both structures employ the head constituent in the right-hand position. Note, however, that in the case of phrasal compounds, the superordinate element is a lexeme while in the case of dephrasal adjectives the head is a derivational suffix (see section 3.1). Additionally, both word-formation types are spontaneous, on-the-spot creations, rarely listed in the Lexicon. They are a productive tool employed to satisfy the speaker's language needs in the here-and-now situations through enclosing maximum expressiveness of a syntactic construct in a single morphological unit.

In what follows, we wish to concentrate on building up a morphological profile of a dephrasal adjective in Polish. However, in doing so, it is necessary that our discussion encroach upon the territory of Polish compound words, in particular a productive subclass of synthetic compounds whose structure rests on an internal phrase subjected to derivation (suffixation): [[*łam_V-i-głów_N*]_{VP} -ka]_N ‘a puzzle’ < *łamać głowę* ‘to break the head’, [[*kart_N-o-graj_V*]_{VP} -stwo]_N ‘playing cards’ < *grać w karty* ‘play cards’, [[*bos_A-o-nóż_N*]_{NP} -ka]_N ‘bare-foot dancer’ < *bosa noga* ‘bare foot.’⁹ The necessity stems from the fact that the complex adjectives to be discussed, which we refer to as dephrasal adjectives and interpret as an instance of derivation, are casually classified as compound words and subsumed under the category of compound adjectives, such as [*jasn_A-o-niebieski_A*]_A ‘light blue’ despite the fact that the former do not meet formal requirements for compoundhood.¹⁰ We begin our discussion with the juxtaposition of dephrasal adjectives and two other word-formation types, namely phrasal compounds and Polish (synthetic) compound adjectives to establish if the examined language material can be subsumed under either of the two morphological labels or should be considered a distinct word-formation mechanism.

⁹ Please note that under the left-branching interpretation of structure, synthetic compounds, in both Polish and English, take a syntactic unit as its input (see Kolbusz-Buda 2014, 2015, 2019a, 2019b).

¹⁰ See the section in SJP dictionary of the Polish language devoted to compound adjectives where both constructs are discussed under a common label: <https://sjp.pwn.pl/zasady/136-26-Pisownia-przymiotnikow-zlozonych-typu-jasnoniebieski;629465.html>

3.1. *Dephrasal adjectives, phrasal compounds or synthetic compounds?*

At first glance, Polish dephrasal adjectives resemble phrasal compounds in that the right-hand adjective could be considered the head of the entire expression (i.e. the source of morphosyntactic feature percolation) whereas the left-hand constituent is reminiscent of a syntactic construct serving as input to a word-formation process, occupying the modifier position – a component indispensable for classifying a lexical unit as a phrasal compound: *bezwłasnowolny* ‘deprived of his will’ $[[be_{zP} \text{własn-}_A]_{XP-O} - [wolny]_A]_A < [be_{zP} \text{własna}_A]_{XP} + [wola_N + -ny_{Af}]_A$, *ponoworoczny* ‘taking place after New Year’s Day’ $[[po_P \text{now-}_A]_{XP-O} - [roczny]_A]_A < [po_P \text{nowy}_A]_{XP} + [rok_N + -ny_{Af}]_A$. On the other hand, the structure of the word-formation type in question often contains a connecting morpheme – the interfix “o” – most typically employed to combine the two roots of both a root and synthetic compound word in Polish (e.g. *sokowyczymaczka* $[[sok_N - o - \text{wyczymacz}_V] - ka]_N$ ‘juice extractor’, *parostatek* $[par_N - o - \text{statek}_N]_N$ ‘steam boat’). The component, if present, can be found to the left of the right-hand root. Naturally, such a property could also point to potential compoundhood of the quoted adjectives. This time, however, they would not be interpreted as phrasal compounds but rather as synthetic compounds proper.

We will demonstrate that assigning the complex adjectives under analysis to the class of phrasal compounds is not possible on formal grounds since the unit remaining after the right-hand adjective (i.e. the head) has been abstracted from the entire morphological string is a headless syntactic construct (see examples in (9)). Similarly, if the analysed adjectives were to be classified as synthetic compounds (whose structure rests on the internal root compound,¹¹ subjected to suffixation, where the formal exponent of composition – the derivational affix – serves the function of the superordinate element), it would become apparent that the unit located to the left of the derivational suffix does not meet the criteria for compoundhood in Polish. It is generally acknowledged that Polish compounds proper are composed of two roots bound by the interfix. This rule holds for both root and synthetic compounds in Polish: *bajkoterapia* $[bajk_N - o - \text{terapia}_N]_N$ ‘fairytale therapy’,¹² *gryzipiórek* $[[gryz_V - i - \text{piór}_N]_{VP} - ek]_N$ ‘pen-pusher’, *bosonóżka* $[[bos_A - o - \text{noż}_N]_{NP} - ka]_N$ ‘bare-foot dancer.’

The problem with the morphological interpretation of the presented data lies in the status of the leftmost modifying component which in order to be classified as a full-value syntactic constituent (and consequently as a phrasal modifier) needs to be a maximal projection. None of the examples discussed in this paper would satisfy this condition under the right-branching interpretation of structure as their left-most modifier is invariably an incomplete syntactic unit. The missing constituent is predominantly the head of NP. NPs are either syntactic bases of dephrasal adjectives (see the examples in (11) and in Table 1) or complements of prepositional phrases (see the examples in (10) and (11)). It is important to note that if the adjectives were to be categorised as phrasal compounds, the head of the noun phrase would become detached from the main structure, rendering it ill-formed. As a result, the noun, which rightly belongs to

¹¹ In the case of Polish synthetic compounds, the internal root compound can be turned into a syntactic unit via paraphrasing: *sokowyczymaczka* $[[sok_N - o - \text{wyczymacz}_V] - ka]_N$ ‘juice extractor’ – $[wycymacz_V \text{ sok}_N]_{VP}$ ‘to extract juice.’

¹² A type of therapy which involves reading fairytales

the phrasal modifier, would merge with the derivational suffix (cf. the analyses in (9) and (10)). As for the synthetic compound interpretation, the right-branching structure is not indicative of synthetic compounding for the constituent to the left of the interfix is a disintegrated syntactic phrase rather than a root (see the examples in (9)). By the same token, under the left-branching interpretation of structure, (see the examples in (10) and (11)), the adjectives cannot be ascribed to the class of synthetic compounds, either for, in Polish, the entire unit to the left of the derivational suffix is invariably a root compound composed of two roots bound by the interfix. Here, however, it is a multiunit syntactic phrase comprising functional words in addition to major lexical categories. Note, however, that under the left-branching structure interpretation (which we are proclaiming), not only does the adjectiviser attach to a full-fledged syntactic constituent but it also fulfils the function of the morphosyntactic head. As a result, the left-branching structure is not only the necessary choice but also a clear indication that the complex adjectives under discussion are products of derivation, not compounding. Consider the two morphological analyses of *bezwłasnowolny*, *ponoworoczny* and *tużpowojenny*:¹³

(9) **the right-branching structure interpretation**

- a. [[*bez*_P [*własn*_{Adj} ___]_N]*_{NP}]*_{PP} -o- [*wol*_N -*ny*_{Af}]_A]*_A ‘*free without own’
- b. [[*po*_P [*now*_{Adj} ___]_N]*_{NP}]*_{PP} -o- [*roczn*_N -*ny*_{Af}]_A]*_A ‘*yearly after new’
- c. [[*tuż*_{Adv} *po*_P ___]_N]*_{NP}]*_{PP} [*wojen*_N -*ny*_{Af}]_A]*_A ‘*war right after’

(10) **the left-branching structure interpretation**

- a. [[*bez*_P [*własn*_{Adj} -o- *wol*_N]_{NP}]_{PP} -*ny*]_A ‘being without own will’
[[without [own will]_{NP}]_{PP} -Af]_A
- b. [[*po*_P [*now*_{Adj} -o- *roczn*_N]_{NP}]_{PP} -*ny*]_A ‘happening after New Year’
[[after [New Year]_{NP}]_{PP} -Af]_A
- c. [[*tuż*_{Adv} *po*_P [*wojen*_N]_{NP}]_{PP} -*ny*]_A ‘happening right after the war’
[[right after [war]_{NP}]_{PP} -Af]_A

It needs to be stressed that a (right-branching) compound interpretation of dephrasal adjectives would strongly disturb the semantic layer, changing meaningful units into nonsense words. Such effect would be brought about by the disintegration of the left-hand syntactic unit giving rise to an enforced adjectivisation of the noun and, consequently, an unpredictable reading of the thereby created right-hand adjective (e.g. *ponoworoczny* ‘happening after New Year’ ≠ ?*roczny po nowo* ‘yearly after new’). Thus, under the right-branching structure interpretation, there would be no correlation between the morphological and the semantic structures. The paraphrases **wolny bez własnej*, **roczny po nowo*, **wojenny tuż po* would not only be incongruent with the semantics of the adjective but they would also be grammatically ill-formed in that the syntactic construct (i.e. the modifier of the right-hand adjective) would comprise a headless NP – a defective complement of the macro-PP (see the examples in (9)). In contrast, if the above examples were to be considered instances of dephrasal affixation (under the left-branching interpretation to which we adhere in this study), the morphological and semantic structures would fully overlap.

¹³ Please note that Polish falls into the class of synthetic tongues. As a result, it is roots rather than fully-fledged words that constitute derivational bases in Polish, e.g. *prac*_N-o-*daw*_V-*ca*_{Af} ‘employer’ < *prac*_N ‘work’ + *daw*_V ‘give’ + -*ca*_{Af}. The lexical morphemes in the brackets are thus represented as roots.

It is worth noting that the presence of an interfix in the structure of a complex word in Polish should not constitute the sole basis for classifying such a unit as a compound. The natural habitat of an interfix is the position between two lexemes which is why the morpheme is so closely associated with compound words (see Grzegorzczkowska 1963; Kurzowa 1976; Grzegorzczkowska and Puzynina 1999). Nevertheless, when a lexeme merges with a combining form or a functional morpheme, the Polish language does not reach for a connecting affix (cf. *współ-działanie* ‘co-operation’, *pół-nuta* ‘minim, lit. half note’, *przed-wiośnie* ‘early spring, lit. before spring’ vs *sok-o-wyżymacz-ka* ‘juice extractor, lit. juice extract + Af’, *gór-o-laz-Ø* ‘speleologist, lit. mountains walk + Af’, *baw-i-dam-ek* ‘ladies’ man, lit. entertain ladies + Af’).¹⁴ Interestingly, dephrasal adjectives may possess not one but two interfixes in the modifier position (see section 3.2). Therefore, the function of the interfix is primarily technical and not necessarily indicative of compounding.

In Polish linguistic literature, compound words (be it root or synthetic) are defined as combinations of *two* lexical morphemes taking the form of roots.¹⁵ Thus, the lexical components need to belong to the four major lexical categories, namely nouns, verbs, adverbs and adjectives.¹⁶ For this and the above-explained reasons, a sequence of more than two roots, accompanied by function words and subjected to suffixation cannot be subsumed under the category of a canonical compound word. Thus, *trzygodzinny* ‘three-hour-long’ should be regarded as a synthetic compound in contrast to its extended dephrasal adjective versions *ponadtrzygodzinny* ‘over-three-hour-long’, *trzyipółgodzinny* ‘three-and-a-half-hour-long’ and *ponadtrzyipółgodzinny* ‘over-three-hour-long’ whose underlying structures have lost their two-root status (see the examples in Table 1):

Table 1: Morphological discrepancies between (synthetic) compounds and dephrasal adjectives

Synthetic compound adjective	Dephrasal adjective
<i>trzygodzinny</i> ‘three-hour-long’ [[trzy _{Num} godzin _N] _{NP} -ny] _A [[three _{Num} hour _N] _{NP} -Af] _A	<i>ponadtrzygodzinny</i> ‘over-three-hour-long’ [[ponad _P [trzy _{Num} godzin _N] _{NP}] _{PP} -ny] _A [[over _P [three _{Num} hour _N] _{NP}] _{PP} -Af] _A
	<i>trzyipółgodzinny</i> ‘three-and-a-half-hour-long’ [[trzy _{Num} i _{Conj} pół _{Det} godzin _N] _{NP} -ny] _A [[three _{Num} and _{Conj} half _{Det} hour _N] _{NP} -Af] _A
	<i>ponadtrzyipółgodzinny</i> ‘over-three-and-a-half-hour-long’ [[ponad _P [trzy _{Num} i _{Conj} pół _{Det} godzin _N] _{NP}] _{PP} -ny] _A [[over _P [three _{Num} and _{Conj} half _{Det} hour _N] _{NP}] _{PP} -Af] _A

¹⁴ For the reader’s convenience, the provided examples are represented with hyphens separating individual morphemes.

¹⁵ Except for coordinated compound adjectives, such as *białoczerwoczarny* [biał_A-o-czerwon_A-o-czarny_A]_A ‘white-and-red-and-black’, “[Polish] nominal composition is characterized by [almost] a complete lack of recursion (with the exception of a few isolated cases of literary creativity, such as *zwierzoczłekopotwór* [zwierz_N-o-człek_N-o-potwór_N]_N ‘animal_N-human_N-monster_N’) (Kolbusz-Buda 2014: 42).

¹⁶ “A contemporary approach [to Polish compounding] is fairly homogeneous [...] and does not assign formations, such as *podbródek* ‘chin’, *bezdroże* ‘unbeaten track’ or *antywlamaniowy* ‘anti-breaking’ to the family of compounds proper on the assumption that a compound word is built on two or more roots, which prefixes and prepositions are not” (Kolbusz-Buda 2014: 23-24).

Even though synthetic compounds and dephrasal adjectives fall into two distinct word-formation types, they share a common structural denominator in that their right-most root, though phonologically combined with the word-external adjectiviser, is part of the left-hand syntactic construct. Thus, their morphological make-up can only be expressed through the left-branching structure.¹⁷ Note that under the right-branching interpretation, the synthetic compound *trzygodzinny* ‘three-hour-long’ would lose its original meaning: $[[trzy_{Num}godzin_{N}]_{NP} -ny]_A$ ‘three-hour-long’ vs $[trzy_{Num} [[godzin_{N}] -ny]_A]_A$ ‘*three hourly.’

From the above, it is concluded that the complex adjectives, such as *bezwłasnowolny* ‘incapacitated; being without own will’ or *ponadtrzyipółgodzinny* ‘over-three-hour-long’ are products of derivation, and due to syntactic, semantic and morphological reasons should not be subsumed under the category of compounds, neither phrasal nor synthetic.

3.2. A morphological profile of dephrasal adjectives in Polish

Morphologically, the structure of dephrasal adjectives rests on two constituents: the base and the suffix. The base is a syntactic unit which may take the shape of (a) a noun phrase, (b) a conjuncted noun phrase, (c) a prepositional phrase, (d) a prepositional phrase with a conjuncted NP complement, (e) a DP, or (f) a DP with a conjuncted noun phrase:¹⁸

- (11) a. *tysiącczteryściepięćdziesięcioletni* ‘1453-year-old’
 $[[tysiąc_{Num} cztery_{Num} -u- pięćdziesiąt_{Num} -o- trzy_{Num} lata_{N}]_{NP} -ni]_A$
 $[[thousand\ four-hundred\ fifty\ three\ years]_{NP} -Af]_A$
- b. *ośmioipółhektarowy* ‘8-hectare’
 $[[osiem_{Num} -o- i_{Conj} pół_{Det} hektara_{N}]_{NP} -ny]_A$
 $[[eight\ and\ half\ hectare]_{NP} -Af]_A$
- c. *tużpowojenny* ‘happening right after the war’¹⁹
 $[[tuż_{Adv} po_{P} [wojnie_{N}]_{NP}]_{PP} -ny]_A$
 $[[right\ after\ [war]_{NP}]_{PP} -Af]_A$
- d. *ponoworoczny* ‘happening after New Year’
 $[[po_{P} [nowym_{Adj} -o- roku_{N}]_{NP}]_{PP} -ny]_A$
 $[[after\ [New\ Year]_{NP}]_{PP} -Af]_A$
- e. *bezwłasnowolny* ‘being without/devoid of own will’
 $[[bez_{P} [własne]_{Adj} -o- woli_{N}]_{NP}]_{PP} -ny]_A$
 $[[without\ [own\ will]_{NP}]_{PP} -Af]_A$

¹⁷ For a detailed account of the morphosemantic structure of synthetic adjectives in Polish and the relation between the compound-external head affix and the right-hand root, see Kolbusz-Buda (2019b).

¹⁸ The examples shown in the brackets are represented as fully-fledged words to bring out the phrasal character of the bases.

¹⁹ Consider also *tużprzedwojenny* ‘happening right before the war’ and *tużprzedśmiertny* ‘happening right before sb’s death’: $[[tuż_{Adv} przed_{P} [wojną_{N}]_{NP}]_{PP} -ny]_A$ ($[[right\ before\ [war]_{NP}]_{PP} -Af]_A$), $[[tuż_{Adv} przed_{P} [śmiercią_{N}]_{NP}]_{PP} -ny]_A$ ($[[right\ before\ [death]_{NP}]_{PP} -Af]_A$).

- f. *ponaddwudziestoparoliterowy* ‘over-twenty-something-letter’²⁰
 [[ponad_P [[dwadzieścia_{Num} -o- parę_{Num}]_{NumP} -o- liter_N]_{NP}]_{PP} -owy]_A
 [[over [[twenty something]_{NumP} letter]_{NP}]_{PP} -Af]_A
- g. *ponadczterdziestopięcioipółstronicowy* ‘over-fourty-five-and-a-half-page’
 [[ponad_P [[czterdzieści_{Num} -o- pięć_{Num} -o- i_{Conj} pół_{Det}]_{NumP} stronicy_N]_{NP}]_{PP} -owy]_A
 [[over [[twenty something]_{NumP} letter]_{NP}]_{PP} -Af]_A
- h. *co trzydziestoczwierogodzinny* ‘which happens every thirty four hours’
 [[co_D [[trzydzieści_{Num} -o- cztery_{Num}]_{NumP} -o- godziny_N]_{NP}]_{DP} -ny]_A
 [[every [[thirty four]_{NumP} hour]_{NP}]_{DP} -Af]_A
- i. *co trzydziestoczwieroićwierćgodzinny* ‘which happens every thirty-four and a quarter hours’
 [[co_D [[trzydzieści_{Num} -o- cztery_{Num} -o- i_{Conj} ćwierć_{Num}]_{NumP} godziny_N]_{NP}]_{DP} -ny]_A
 [[every [[thirty-four and quarter]_{NumP} hour]_{NP}]_{DP} -Af]_A

From the examples presented above, it becomes clear that when the structure of the left-hand phrasal modifier is a cluster of lexical morphemes, the roots must be separated by one or even two interfixes. The connective morpheme is employed even when the post-interfix root is preceded by an embedded conjuncted phrase: *pięć_{Num} -o- i_{Conj} pół_{Det} stronicy_N* ‘five and a half page’, *cztery_{Num} -o- i_{Conj} ćwierć_{Num} godziny_N* ‘four and a quarter hour.’ However, the interfix will not be employed if either of the two free morphemes is grammatical: *ponad_Pdwudziest_{Num}...* ‘over twenty...’, *bez_Pwłas_{Adj}...* ‘without own...’

In Polish, the most productively created dephrasal adjectives are based on numeral groups. The phrasal modifier may additionally contain a conjuncted NP. Such lexical units are on-the-spot creations, tailored to specific language contexts. Hence, they will not be listed in the lexicon.

The morphosyntactic head of a dephrasal adjective is the word-external adjectiviser. The affix is the source of the morphosyntactic feature percolation. In Polish, dephrasal adjectives are inflected for case, number, and gender. These properties are contained in the inflectional ending of the derivational suffix.

4. Conclusions

In the present paper, we have argued for the left-branching interpretation of structure of such complex adjectives as *bezwłasnowolny* ‘incapacitated’ or *ponaddwudziestoparoliterowy* ‘over-twenty-something-letter’ being combinations of a syntactic phrase and an adjectiviser. We have shown that postulating the right-branching structure interpretation of the presented material brings about the violation of one of the basic syntactic principles, namely that every phrase must be headed. Under the right-branching interpretation of structure, the head of the modifying syntactic constituent located to the left of the derivational suffix (alternatively, the head of the NP serving as the complement of the preposition in the subordinate PP) gets detached from the whole rendering the phrase headless. Also, positing the right-branching morphological structure is not possible on semantic grounds as the meaning of the adjective emerging from

²⁰ As in, for instance, *ponaddwudziestoparoliterowe nazwisko* ‘over-twenty-something-letter surname.’

the right-branching structure would clearly be incongruent with the attested reading of the entire lexical unit. For these two reasons the presented material cannot be subsumed under the label “phrasal compound.”

As for a synthetic compound interpretation, the right-branching structure would be excluded for the same semantic reasons explained above, i.e. the lack of congruence between the morphological and semantic structures: $[[trzy_{Num} \textit{godzin}_N]_{NP} -ny]_A$ ‘three-hour-long’ vs $[trzy_{Num} [[\textit{godzin}_N] -ny]_A]_A$ ‘*three hourly.’ It is worthy of note that under the left-branching interpretation of structure the discussed complex adjectives would not meet the formal criteria for compoundhood, either. It is because, in Polish, a canonical compound word is a combination of two roots bound by the interfix (root compounds), optionally subjected to suffixation (synthetic compounds). As regards the data collected for the purpose of this study, the morphological structure of the presented complex adjectives not only rests on a regular syntactic phrase but also comprises function words, such as, for instance, prepositions, determiners and conjunctions: *co*trzydziestoczeroićwierćgodzinny $[[co_D [[trzydzieści_{Num} -o-cztery_{Num} -o- i_{Conj} \acute{c}wierć_{Num}]_{NumP} \textit{godziny}_N]_{NP}]_{DP} -ny]_A$ ‘which happens every thirty-four and a quarter hours.’ In effect, properties, such as the syntactic nature of the base (acquiring the shape of an NP, DP and PP), its multi-word character (being a string of more than two words) as well as the functional status of some of these words stand in clear opposition to the formal requirements which need to be satisfied in order to classify a given morphological construct as either a root or synthetic compound in Polish.

As already mentioned, the dephrasal formations examined in this paper are casually classified as compounds, most likely, due to the presence of the interfix in their morphological structure. It needs to be stressed that the occurrence of the morpheme, though frequent, is not obligatory. The fact that, in Polish, the connecting morpheme is strongly associated with compounding flows from its distribution for it is almost exclusively confined to root and synthetic compounds. However, it is worth noting that the presence of the interfix in the structure of a complex word in Polish should not constitute the sole basis for classifying such a unit as a compound word. As illustrated in section 3.2, its function is merely technical and not necessarily indicative of compounding. The interfix is employed to phonologically combine the neighbouring roots of a morphological construct. However, when a lexeme merges with a combining form or a functional morpheme, the Polish language does not reach for the connecting affix. Paradoxically, the aspect which should have no bearing on the proper classification of the material presented in this paper, i.e. the presence of the interfix, has so far been considered the deciding factor in determining the morphological status of the adjectives in question.

We are of the opinion that it is only the morphological analysis which takes into account both syntactic and semantic variables that may help to identify the key aspects of the morphological structure critical for the proper classification of what we refer to as dephrasal adjectives. Hence, basing on the presented syntactic and semantic criteria, we subsume the complex adjectives under the broad category of dephrasal suffixation, arguing against their compoundhood. We hope that the study will help to enhance the descriptive adequacy of the Polish word-formation system and point to new directions in the discussion on the morphology-syntax interface.

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