

EWELINA MOKROSZ

THREE READINGS OF FREQUENCY ADJECTIVES IN POLISH

Abstract. In this paper the Author describes a group of frequency adjectives in Polish. Polish frequency adjectives may be divided with regard to different readings, namely an adverbial reading, an internal reading and a generic reading as well as a type of a modified noun. The three readings were analysed in English, e.g. by Stump (1981) and Gehrke and McNally (2013). The adverbial reading occurs with frequency adjectives modifying event nouns. In contrast to English, Polish frequency adjectives inducing an adverbial reading admit all sorts of determiners and allow coordination with a specific group of adjectives. Frequency adjectives giving rise to an internal reading require a participant noun. The group of frequency adjectives compatible with a generic reading turns out to be the most varied one.

Key words: frequency adjectives; adverbial reading; internal reading generic reading.

1. INTRODUCTION

Frequency adjectives (henceforth FAs) are adjectives that describe the frequency of some event. The first observation about the unique interpretation of those adjectives was made by Bolinger (1967). One of the frequency adjectives is the adjective *occasional*, which despite its position inside a nominal phrase as in [1], receives an interpretation of an adverbial scoping over the whole sentence, as illustrated in [2].

[1] The/An occasional sailor strolled by.

[2] Occasionally, a sailor strolled by.

(Zimmermann 2003, 249)

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The aim of this paper is to identify a group of frequency adjectives in Polish. On the basis of examples from English we will check whether Polish frequency adjectives form a uniform group. Secondly, we will see whether the division of FAs into temporal and nontemporal FAs, proposed by Gehrke and McNally (2013), is applicable to Polish FAs.

2. THREE READINGS OF FREQUENCY ADJECTIVES

In this section, we will outline three readings induced by FAs in English as presented in Stump (1981). Each reading will be additionally confronted with alternative observations on FAs made by Gehrke and McNally (2013). Eventually we will examine Polish frequency adjectives in order to see whether they form a unique group of adjectives with the three readings.

2.1. ENGLISH FREQUENCY ADJECTIVES

The group of frequency adjectives is not uniform, hence the use of different names. Stump (1981, 222) makes a distinction between *variant frequency adjectives* like *frequent*, *periodic* and *occasional*, and *fixed frequency adjectives* like *daily*, *weekly* and *yearly*. The latter in contrast to the former describe frequencies with invariant periods. There also exists a division with regard to frequency, namely *frequency adjectives* like *frequent* and *regular* and *infrequency adjectives* like *occasional* or *sporadic* (see Zimmermann 2003, 253).¹ The subdivision among frequency adjectives is also connected with their different *readings* (or *usages* (Stump 1981, 222)): (i) external/adverbial reading, (ii) internal/attributive reading and (iii) generic reading.

As presented in [1], the adjective *occasional* gives rise to a reading called an external/adverbial reading. On this reading, the adjective has an adverbial counterpart that scopes over the whole sentence. Other adjectives that allow an adverbial reading are *(in)frequent*, *odd*, *periodic*, *sporadic* (Stump 1981; Zimmermann 2003). Morzycki (2014) adds to the list also adjectives like *average*, *unknown*, *whole*, *entire*, *rare*, or one that cannot be paraphrased with an adverbial, i.e., *wrong*, hence the other name of those adjectives, namely *external*.² Examples of FAs inducing an adverbial reading are presented in [3–10].

¹ If not indicated otherwise, in this work we will use the term frequency adjectives to describe the whole group of adjectives expressing frequency.

² According to Stump (1981), fixed frequency adjectives like *daily*, *weekly* and *yearly* have two readings, namely adverbial and generic.

- [3] a. John got his message across to an *infrequent* student, but such successes were few and far between.
 b. *Infrequently*, John got his message across to a student, but such successes were few and far between.
- [4] a. A *periodic* investigation would turn up a few new leads, but solid evidence was never found.
 b. *Periodically*, an investigation would turn up a few new leads, but solid evidence was never found.
- [5] a. The storm was punctuated by a *sporadic* crash of thunder.
 b. *Sporadically*, the storm was punctuated by a crash of thunder
- [6] a. Mary paid her friend a *frequent* visit.
 b. *Frequently*, Mary paid her friend a visit.
 (Stump 1981, 222–3)
- [7] a. The *average* American has 2.3 children.
 b. On *average*, an American has 2.3 children.
- [8] a. Solange stayed in an *unknown* hotel.
 b. It's not *known* which hotel Solange stayed in.
- [9] a. The *whole/entire* ferret was submerged.
 b. The ferret was *wholly/entirely* submerged.
 (Morzycki 2014, 58)
- [10] They arrested the *wrong* person.
 (Morzycki 2014, 76)

There is a debate over the number of FAs that have an adverbial reading. Zimmermann (2003) limits them to infrequency adjectives.³ Gehrke and McNally (2013), on the other hand, argue that the adverbial reading is available for adjectives like *occasional*, *odd* and *rare*. Other FAs have an adverbial reading only when they modify an event noun.⁴

³ Zimmermann (2003), in fact, argues that frequency adjectives like *frequent* do not have an adverbial reading.

[i] [A frequent sailor] strolled by.

≠ Frequently, a sailor strolled by.

[ii] Barbara saw [a regular customer].

≠ Regularly, Barbara saw a customer. (Zimmermann 2003, 253)

Zimmermann suggests that the contrast between (i), (ii) and (6) is linked to the noun modified by a frequency adjective. Namely, the nouns modified by FAs in (i) and (ii), in contrast to the event noun in (6), i.e. *visit*, cannot share the frequency of the event with the verb.

⁴ Gehrke and McNally (2013) distinguish three classes of nouns, i.e., *participant* (-denoting) nouns (e.g. recipient, sailor, employee), *event* (uality-denoting) nouns (e.g., visit, swimming,

Certain conditions need to be met for an adverbial reading to be possible. First, there exists a correlation between the adverbial reading and the interpretation of the determiner (Stump 1981, Larson 1999, Zimmerman 2003). Specifically, the determiner preceding the frequency adjective with an adverbial reading has to be either the definite/indefinite article *the/a* or the second person pronoun *your* but cannot be a cardinal quantifier, a strong quantifier or a demonstrative.

[11] The/an/your/*this/*every/*any *occasional* sailor strolled by.

(Morzycki 2014, 61)

Gehrke and McNally (2013) observe that FAs like *odd* and *rare* have an adverbial reading only when they occur with a definite determiner. Most importantly, they show that FAs other than *occasional* (e.g., *(in)frequent*, *sporadic*, *periodic*, *daily*, *weekly*, *monthly*) lack adverbial reading with nouns like *sailor*, regardless of the definiteness of an article, as shown in [12].

[12] An/the (in)frequent/sporadic/periodic sailor strolled by.

≠ (In)frequently/Sporadically/Periodically, a sailor strolled by.

(Gehrke and McNally 2013, 13)

Secondly, an adverbial reading concerns only adjectives in high positions very close to determiners as presented in (13).

[13] *A well-dressed *occasional* sailor strolled by.

(Stump 1981, 248)

The infrequency adjectives also cannot be coordinated with other adjectives.

[14] *An *occasional* and well-dressed sailor strolled by.

(Stump 1981, 249)

Both observations, i.e., the one concerning the order of FAs and the other coordination, are undermined by Gehrke and McNally (2013) with the following two examples.

[15] *Two well-dressed *other* sailors strolled by.

[16] [...] an *occasional* and *brief* down draft will occur [...]

(Gehrke and McNally 2011, 187)

discussion) and *sortal* (all other) *nouns* (e.g. beer, car, chair). Nouns that belong to the last class cannot be derived from verbs, do not name or participate in events.

The adjective *other* is not a FA but has to precede other adjectives. The co-ordination in [16] is possible when the modified noun is an event noun.

It should be possible for a regular, attributive adjective and a noun to be replaced with a proform. Stump (1981), however, shows that a frequency adjective and a noun cannot be replaced with a single proform. The proform *one* below in [17] refers here only to *a sailor* and not to the whole nominal phrase *an occasional sailor*.

[17] John saw an *occasional* sailor, and Bill saw one, too.

(Stump 1981, 248)

An internal reading arises when the adjective is interpreted within the clause modifying the relevant nominal. No scope-syntactic positioning mismatches are observed. Apart from *occasional*, such a reading accompanies adjectives like *frequent* or *daily* as presented in [18–20].

[18] a. An *occasional* sailor strolled by.

b. Someone who sails *occasionally* strolled by.

(Zimmermann 2003, 251)

[19] a. Floyd is a *frequent* contributor.

b. Floyd is someone who contributes *frequently*.

[20] a. Floyd spoke to his *daily* visitor.

b. Floyd spoke to someone who visits him *daily*.

(Morzycki 2014, 59)

[21] a. frequent letter \neq a particular letter that V's/is V'd frequently

(Gehrke and McNally 2013, 6)

Gehrke and McNally observe that the noun modified by an internal FA has to be a participant noun like *sailor*, *contributor* or *visitor* in [18–20] but not *letter* as in [21]. The internal reading is ungrammatical with event and sortal nouns but also with FAs such as *odd* (an odd user/visitor/reader \neq one who uses/visits/reads on odd occasions) or *rare* (a rare writer \neq one who writes rarely). They also note that FAs on the internal reading admit all kinds of determiners.

[22]) A/Some/One/The/That/Each frequent sailor I know owns his own boat.

(Gehrke and McNally 2013, 7)

The third reading, i.e., generic reading, is a reading in which a noun phrase has a generic interpretation (see Stump 1981, 223).⁵

- [23] An *occasional* cup of coffee helps keep John awake.
 a. A cup of coffee *now and then* helps keep John awake
 b. *Drinking* a cup of coffee *frequently* helps keep John awake.
 c. **Occasionally*, a cup of coffee helps keep John awake.
- [24] A *periodic* checkup never hurts.
 a. A checkup *from time to time* never hurts.
 b. **Periodically*, a checkup never hurts.'

(Stump 1981, 223)

The paraphrases of FAs with a generic reading contain postnominal modifiers as presented in [23ab] and [24a].⁶ As for the nouns that can be modified by FAs inducing generic reading, Gehrke and McNally (2013) maintain that these are event nouns, as in [24], and some sortal nouns, as in [23], which require an event description in the form of the participle, e.g. *drinking* in [23b].

Gehrke and McNally (2013) maintain that nominal phrases that give rise to a generic reading, except for those modified by *odd* and *rare*, either take an indefinite article or surface as bare plurals. The adjectives *odd* and *rare*, on the other hand, have a generic reading with definite articles and the possessive pronoun *your*. The only adjective that admits definite, indefinite and 2nd person possessive pronoun is the adjective *occasional*. Stump (1981), on the other hand, argues that generic reading may occur with indefinite and definite singular noun phrases. Indefinite DPs with generic reading impose restrictions on the predicates they occur with. Specifically, they allow only kind-level/individual level predicates (see Carlson 1979). Thus, indefinite noun phrases with adjectives like *occasional*, *periodic*, *daily* and *semiannual* in [25] may appear with the predicates in [26].

⁵ Gehrke and McNally (2013), following Stump (1981), argue that FAs do not contribute to the generic reading, which means that a sentence should retain a generic reading even when they are dropped (except for *odd* and *rare* (Gehrke and McNally 2013, 10).

⁶ Gehrke and McNally provide other examples of FAs with a generic reading and their adverbial paraphrases.

- [i] a. A(n) *yearly/infrequent/rare* visitor is not a problem.
 b. A visitor *on a yearly/infrequent basis* is not a problem.
- [ii] a. A *daily/sporadic* cup of coffee is harmless.
 b. A cup of coffee *on a daily/sporadic basis* is harmless.

(Gehrke and McNally 2013, 8)

- [25] a. An *occasional* cup of coffee helps keep John awake.
 b. A *periodic* checkup never hurts.
 c. A *daily* cup of coffee helps keep some people awake.
 d. A *semiannual* checkup never hurts.

- [26] ... is his only lunch.
 ... breaks up his otherwise dull routine.
 ... tastes good when it's cold out.
 ... is invigorating
 ... helps him stay awake

(Stump 1981, 231)

Definite noun phrases with frequency adjectives like in [27] co-occur only with stage level predicates like the ones in [28].

- [27] a. John's *occasional* cup of coffee helps keep him awake.
 b. The *periodic* inspection of the plant turned up a number of fire hazards.
 c. John's *daily* cup of coffee helps him stay awake.
 d. The *yearly* inspection of the plant turned up a number of fire hazards.

- [28] ... had left circular stains on the tablecloth.
 ... is on the counter.
 ... is being made for him.
 ... fell on the floor.
 ... is ready.

(Stump 1981, 232)

To conclude, Stump (1981) and Zimmermann (2003) follow the division of frequency adjectives with regard to their readings. Each reading is linked to a different structure and has often a different class of compatible determiners or predicates. Although Gehrke and McNally (2013) contribute with their observations to each reading, they argue that the division with regard to readings is inadequate and less insightful. They maintain that FAs should be divided into temporal (*occasional, frequent, infrequent, periodic, sporadic, daily*) and nontemporal (*occasional, rare, odd*) FAs. Temporal FAs constitute a much bigger and fairly uniform group of adjectives. This division shows, among other things, that FAs that could have two readings, e.g. *frequent*, now belong to the same group of FAs (*occasional* being an exception). Temporally interpreted FAs function as intersective predicates while nontemporal FAs are predicate modifiers. This is how Gehrke and McNally define the use of nontemporal adjectives: ‘On the nontemporal use, [...], the individuals in question can be temporally co-located as long as they are properly distributed over some other sort of contextually-identified do-

main (typically space)’ (Gehrke and McNally 2013, 4). Examples of non-temporal FAs are in [29] below.

- [29] a. [...] a plain filled with nothing but the *occasional* hill [...]
 b. It’s in a room crowded with gauges and microscopes, along with the *odd* bicycle and Congo drum [...]
 c. In 1959 and 1960 it was a different world than it is now. There was the *rare* female engineer [...]

(Gehrke and McNally 2013, 4)

All FAs so far described would turn out ungrammatical in the sentences above. In each example in [29], property distribution (a limited number of given tokens) concerns spatial domain.

In the next section we will see which classification, Stump’s (1981) or Gehrke and McNally’s (2013), is more adequate for Polish frequency adjectives.

2.2. POLISH FREQUENCY ADJECTIVES

Polish frequency adjectives could be also divided into three groups in accordance with the reading they induce. It has to be underlined though that they constitute a rather limited group of adjectives.

An adverbial reading will accompany adjectives such as *okazjonalny/okolicznościowy* ‘occasional,’ *okresowy/cykliczny* ‘periodic,’ *sporadyczny* ‘sporadic.’⁷ The nouns modified by these FAs are event nouns.

⁷ Frequency adjectives like *average*, *unknown* and *whole* are not analysed by Stump (1981). Below we show that they have their equivalents in Polish but for reasons of space we will not examine them any further.

- [i] *Przeciętnie/Przeciętna* Polka rodzi dwójkę dzieci.
 ‘On average/an average Polish woman gives birth to two children.’
- [ii] a. *Śpi* w *niewiadomym* hotelu
 he-sleeps in unknown hotel
 ‘He is staying in an unknown hotel.’
 b. *Nie jest wiadomo* w jakim hotelu *śpi*.
 not is known in which hotel he-sleeps
 ‘It is unknown in which hotel he is staying.’
- [iii] a. *Cala* *fretka* zanurzyła się.
 whole ferret submerged
 ‘The whole ferret submerged.’
 b. *Fretka* zanurzyła się *całkowicie*.
 ‘The ferret submerged completely.’

- [30] a. Jan organizował *okazjonalne/cykliczne* spotkania.⁸
 John used-to-organize occasional/periodic meetings
 b. Jan organizował spotkania *okazjonalnie/cyklicznie*.
 John used-to-organize meetings occasionally/periodically
 c. Jan zorganizował *okazjonalne/cykliczne* spotkania.
 John organized occasional/periodic meetings
- [31] a. Budowłańcy dokonywali *okresowego* remontu budynku.
 builders used-to-do periodic repair building
 ‘Builders used to do a periodic repair of the building.’
 b. Budowłańcy dokonywali remontu budynku *okresowo*.
 builders used-to-do repair building periodically
 ‘Periodically, builders used to do a repair of the building.’
 c. Budowłańcy dokonali *okresowego* remontu budynku.
 builders did periodic repair building
 ‘Builders did a periodic repair of the building.’
- [32] a. Wystąpienie przerywały *sporadyczne* pytania.
 performance were-interrupting sporadic questions
 ‘Sporadic questions were interrupting the performance.’
 b. *Sporadycznie* wystąpienie przerywały pytania.
 sporadically performance were-interrupting questions
 ‘Sporadically, questions were interrupting the performance.’
 c. ??Wystąpienie przerwały *sporadyczne* pytania.
 performance interrupted sporadic questions
 ?‘Sporadic questions interrupted the performance.’
- [33] a. Jan składał nam *częste /rzadkie* wizyty.
 John used-to-pay us frequent/rare visits
 ‘John used to pay us frequent/rare visits.’
 b. *Często/rzadko* Jan składał nam wizyty.
 frequently/rarely John used-to-pay us visits.’

⁸ The adjectives *okolicznościowy* and *okazjonalny* ‘occasional’ have two meanings. One meaning is connected with a frequency of a given event, which we illustrated in [30], while the other expresses a connection to a particular occasion. The example in [i] below illustrates that a frequency reading is infelicitous when one of the adjectives in question refers to an occasion.

[i] Jan dostał urlop *okolicznościowy*.
 John got leave special
 ‘John was granted a special leave.’

[ii] **Okolicznościowo* Jan dostał urlop.
 Occasionally John got leave

The two meanings carried by *okolicznościowy* and *okazjonalny* can make their interpretation as FAs less obvious.

c. *Jan złożył nam *częste/rzadkie* wizyty.
 John paid us frequent/rare visits

Stump (1981) in his examples presented in [3–6] uses singular event nouns. In Polish FAs that induce an adverbial reading usually modify plural nouns although they may appear with singular nouns. Importantly, Gehrke and McNally (2013) argue that temporal FAs can modify singular nouns describing event kinds or plural nominals describing sets of event tokens. That does not include singular nominals characterising a token event. Some nouns naturally are not kind descriptions like **daily parties* and yet their acceptability increases when they are interpreted as ‘a description of a subkind.’ This seems to explain why some singular nouns are more compatible with FAs. For example, the noun *remont* could be interpreted as an event kind. Together with the FA *okresowy*, a subkind (a type of repair kind) is produced. The noun *pytanie* does not describe a kind of event, hence its highly marked modification by a frequency adjective.

[34] ??Wystąpienie przerywało sporadyczne pytanie.
 performance was-interrupting sporadic question
 ?‘A sporadic question was interrupting the performance.’

The frequency expressed by adjectives is also reflected by the fact the FAs seem to prefer habitual verbs. Each [c] sentence in examples [30–33] contains a non-habitual verb to show the contrast with habitual verbs in [a] sentences in the same examples. As can be observed, non-habitual verbs, in contrast to habitual verbs, are less felicitous with FAs in the same proposition.

According to Stump (1981), true frequency adjectives with an adverbial reading show the four properties described in section 2.1, namely [i] co-occurrence only with definite/indefinite articles and a 2nd person possessive pronoun but not with cardinal quantifiers, strong quantifiers (*every*, *all*) or demonstratives [ii] adjacency to the determiner and [iii] ungrammatical coordination with other adjectives (Stump 1981; Zimmermann 2003) and (iv) no partaking in an antecedent relation.

Since there are no articles in Polish we will only look at the possibility of demonstratives, cardinal and strong quantifiers accompanying frequency adjectives with an adverbial reading.⁹

⁹ We assume after Kearns (2000) and Zimmermann (2003) that the group of strong quantifiers contain universal quantifiers like *all* and *every* while the group of cardinal quantifiers also called weak quantifiers comprises quantifiers such as *no*, *a(n)*, *some*, *many*, *several* and *(a) few*.

[35] *Demonstratives and frequency adjectives*

te okazjonalne spotkania/ten okresowy remont/ te sporadyczne pytania/te częste wizyty
 ‘those occasional meetings/this periodic repair/those sporadic questions/ those frequent visits’

[36] *Cardinal quantifiers and frequency adjectives*

dużo okazjonalnych spotkań/dużo okresowych remontów/ dużo sporadycznych pytań/dużo częstych wizyt
 ‘many occasional meetings/many periodic repairs/many sporadic questions/ many frequent visits’

[37] *Strong quantifiers and frequency adjectives*

wszystkie okazjonalne spotkania/ wszystkie okresowe remonty/ wszystkie sporadyczne pytania/ wszystkie częste wizyty
 ‘all occasional meetings/all periodic repairs/all sporadic questions/all frequent visits’

Polish differs from English with regard to a co-occurrence of frequency adjectives with demonstrative pronouns, cardinal quantifiers and strong quantifiers. All of them are acceptable with frequency adjectives that have an adverbial reading in Polish. Yet, in Polish it seems that the FAs modified by a demonstrative do not have an adverbial reading.

- [38] Jan organizował te okazjonalne spotkania.
 John used-to-organize those occasional meetings
 ≠ Okazjonalnie Jan organizował te spotkania.
 Occasionally John used-to-organize those meetings

A similar observation is made by Gehrke and McNally (2013, 12) in relation to English.

As for stacking, Polish FAs inducing an adverbial reading do not have to be on the very left edge of the nominal phrase. Thus, the prenominal order among adjectives is not that strict in the presence of a frequency adjective as is the case in English.

[39] *Stacking*

- a. Jan organizował uroczyste, okazjonalne/sporadyczne spotkania.
 John used-to-organize formal occasional sporadic meetings
 ‘John used to organize formal, occasional/sporadic meetings.’
 b. Budowłańcy dokonywali kosztownego, okresowego remontu.
 builders used-to-do expensive occasional repair
 ‘Builders used to do some expensive, periodic repairs.’

- c. Wystąpienie przerywały krótkie, sporadyczne pytania.
 performance were-interrupting short sporadic questions
 ‘Short, sporadic questions were interrupting the performance.’
- d. Jan składał nam długie, częste wizyty.
 John used-to-pay us long frequent visits.

The only point at which two languages discussed here could overlap concerns coordination. It seems that none of the Polish frequency adjectives can be coordinated with another adjective in Polish as presented in [40] with the exception of *częsty* ‘frequent’ and *rzadki* ‘rare’ as in [40d].

[40] *Coordination*

- a. *Jan organizował uroczyste i okazjonalne spotkania.
 John used-to-organize formal and occasional meetings
- b. *Budowlańcy dokonywali kosztownego i okresowego remontu.
 builders used-to-do an expensive and periodic repair
- c. *Wystąpienie przerywały krótkie i sporadyczne pytania.
 performance was-interrupted-by short and sporadic questions
- d. ?Jan składał nam długie i częste/ krótkie i rzadkie wizyty.
 John used-to-pay us long and frequent/ short and rare visits

What is more, the The National Corpus of Polish (Przepiórkowski et al. 2012) produced the following grammatical examples of coordination with *okazjonalny* and *sporadyczny*.

- [41] *okazjonalne* i *wyrywkowe* badania
 occasional and random testing
- [42] kontakty *sporadyczne* i *incydentalne*
 contacts sporadic and incidental

Coordination appears to be grammatical when the adjective with which the FA is coordinated also indicates distribution over time. The only adjective that does not show this possibility is the adjective *okresowy*. Gehrke and McNally (2013, 25), who argue for the intersective semantics of temporal FAs, claim that as intersective modifiers FAs should be able to coordinate and appear in any order with other intersective modifiers of the same sort.

The last argument against attributive nature of FAs concerns proforms. In the example below the pronoun *je* ‘them’ refers to the whole nominal phrase including the frequency adjective *sporadyczny*.

- [43] ?Słyszałam, że najpierw Jan organizował sporadyczne
 I-heard that first John used-to-organize sporadic

spotkania a potem organizował je Wojtek.
 meetings and then used-to-organize them Wojtek
 ‘I heard that first it was John who organized sporadic meetings and then it was
 Wojtek who organized them.’

We can see that Polish FAs give rise to an adverbial reading but their features do not overlap with the feature of FAs inducing the same reading in English.

In Polish frequency adjectives also show an internal and generic reading. An internal reading can be observed with adjectives such as *często* ‘frequent’ in [44].

- [44] a. Jan jest częstym gościem.
 ‘John is a frequent guest.’
 b. Jan jest kimś, kto często u nas gości.
 John is someone who frequently in us stays
 ‘John is someone who visits us frequently.’
 b'. *Często Jan jest gościem.
 frequently John is guest

We agree with Gehrke and McNally (2013) that the noun modified by a frequency adjective with an internal reading has to be a participant noun like *gość* ‘guest’ in [44] but not *uwaga* ‘remark’ or *wizyta* ‘visit’ as in [45].

- [45] częsta uwaga/wizyta ≠ uwaga/wizyta, która często V
 frequent remark/visit remark/visit, which frequently V

They also observe some limitations with regard to the FAs that may modify participant nouns. Frequency adjectives like *odd* (an odd user) or *rare* (a rare writer) are incompatible with an internal reading in English. As can be seen in (46) below, in Polish the only frequency adjective infelicitous with participant nouns is *okresowy*.

- [46] okazjonalny /cykliczny /sporadyczny/rzadki/*okresowy gość
 occasional /periodic /sporadic /rare /periodic guest

A generic reading may be also observed among frequency adjectives in Polish. Generic reading in English is produced by adjectives such as *occasional*, *rare*, *periodic*, and *sporadic*. In Polish equivalent adjectives, namely *okazjonalny* ‘occasional,’ *rzadki* ‘infrequent’ and *okresowy* ‘periodic’ behave in a similar way. Namely, the sentence in [47] may receive three paraphrases as presented in [48a, b, c].

- [47] *Okazjonalna* kawa pomaga Janowi nie zasnąć.
occasional coffee helps John not fall asleep
'An occasional cup of coffee helps John stay awake.'
- [48] a. ≠ *Okazjonalnie* filiżanka kawy pomaga Janowi nie zasnąć.
'Occasionally, a cup of coffee helps John stay awake.'
b. Picie filiżanki kawy *okazjonalnie* pomaga Janowi nie zasnąć.
'Drinking a cup of coffee occasionally helps John stay awake.'
c. Filiżanka kawy *od czasu do czasu* pomaga Janowi nie zasnąć.
'A cup of coffee now and then/every day help John stay awake.'

All the three sentences in [48] mean that John drinks a cup of coffee occasionally. Yet the sentence in [48a] means that John drinks a cup of coffee all the time but only occasionally it helps him to stay awake. The gerund in [48b] is retrieved from the nominal modified by the FA. The FA *codzienny* 'daily,' on the other hand, may have both generic and adverbial reading. The same observation has been made for English fixed FAs by Stump (1981). The adjective *codzienny* 'daily' in [49] admits a paraphrase with a sentential adverb as in [50a] and a paraphrase with adverbial modifiers in [50b] and [50c].

- [49] *Codzienna* kawa pomaga Janowi nie zasnąć.
'A daily cup of coffee helps John stay awake.'
- [50] a. *Codziennie* kawa pomaga Janowi nie zasnąć.
'Every day a cup of coffee helps John stay awake.'
b. Kawy pita *codziennie* pomaga Janowi nie zasnąć.
'A cup of coffee drunk daily helps John stay awake.'
c. Kawa pita *każdego dnia* pomaga Janowi nie zasnąć.
'A cup of coffee drunk every day helps John stay awake.'

We would also like to observe that, in contrast to English, not all definite and indefinite noun phrases show variation with regard to predicates as described by Stump (1981). The difference between [51] and [52] concerns predicates. Sets [a] and [b] in both [51] and [52] differ with regard to definiteness of a noun phrase.¹⁰

¹⁰ Following Stump (1981), the examples in [51] and [52] contain a representative of fixed frequency adjectives.

(51) *A fixed frequency adjective and a kind/individual level predicate*

- a. *Codzienna* filiżanka kawy jest pobudzająca.
daily cup coffee is stimulating
'A daily cup of coffee is stimulating.'
- b. *Moja codzienna* filiżanka kawy jest pobudzająca.
'My daily cup of coffee is stimulating.'

(52) *A fixed frequency adjective and a stage level predicate*

- a. *Codzienna* filiżanka kawy *zostawiła plamy.
daily cup coffee left stains
- b. *Moja codzienna* filiżanka kawy *zostawiła plamy.
my daily cup coffee left stains

No interplay may be observed between definiteness of the noun phrase containing a fixed frequency adjective and type of a predicate. As for the variant frequency adjectives studied in this paper, i.e., *okazjonalny*, *okresowy*, *cykliczny* and *sporadyczny*, a slight variation can be noted. Below we show that only *okazjonalny* and *sporadyczny* behave like their English equivalents.

[53] *Indefinite noun phrases and kind/individual level predicates*

- a. *Okazjonalny* drink dobrze smakuje.
'An occasional drink tastes good.'
- b. *Okresowa* inspekcja jest ważna.
'A periodic inspection is important.'
- c. Wydarzenie *cykliczne* ściąga wielu gości.
'A periodic event attracts many guests.'
- d. *Sporadyczne* spotkania dużo kosztują.
'Sporadic meetings cost a lot.'

[54] *Definite noun phrases and stage level predicates*

- a. **Okazjonalny* drink Jana spadł na podłogę.
Occasional drink John fell on floor
- b. *Okresowa* inspekcja hotelu Grand jest właśnie przeprowadzana.
'A periodic inspection of the hotel Grand is being carried out.'
- c. Warszawskie wydarzenie *cykliczne* zakończyło się skandalem.
'The Warsaw periodic event ended in a scandal.'
- d. **Sporadyczne* spotkania klubu właśnie się odbywają.
'Sporadic meetings of the club have just ended.'

What can be observed is that in the case of *codzienny*, *okazjonalny* and *sporadyczny*, there is an interdependence between definiteness and type of a predicate. The adjectives *okresowy* and *cykliczny* are grammatical regardless of the type of predicate.

Many observations made by Gehrke and McNally (2013) turn out to be valid for Polish frequency adjectives. It is likely that we should abandon the three readings division for Polish FAs and adopt Gehrke and McNally's classification of FAs into temporal and nontemporal FAs. That, however, also remains problematic. It seems that there is only one Polish FA that shows nontemporal use, namely *sporadyczny* 'occasional.' Our Google search returned the following result in [55].

- [55] Jan przeszlifował sporadyczne wzniesienia.
 John sanded-down sporadic bumps
 'John sanded down sporadic bumps.'

As observed by Gehrke and McNally (2013), nontemporal FAs do not have a predicate use and cannot be coordinated with other intersective modifiers. Yet, as shown in [56] and [57], *sporadyczny* does not behave like a nontemporal FA. Example [56] shows that it may be used predicatively while in example [57] we see that *sporadyczny* may be coordinated with an adjective.

- (56) Teren był równy. Wzniesienia były sporadyczne.
 terrain was even hills were sporadic
 'The terrain was flat. There were sporadic hills.'
- (57) ?sporadyczne i niskie pagórki
 sporadic and low hills

Polish lacks equivalent uses of the English adjectives like *odd* or *rare*. The adjective *rare* may be paraphrased in Polish with a deverbal adjective modified by a temporal adverb, i.e., *rzadko spotykany/występujący* 'rarely observed/met.'¹¹ Polish would not be an isolated case of a language lacking nontemporal FAs. As noted by Gehrke and McNally (2013), German and the Romance languages lack nontemporal FAs as well.

¹¹ Cetnarowska (2000, 69) explains why adverbials are obligatory with deverbal adjectives. Following Grimshaw and Vikner (1993), she assumes that the subevents of a given verb (the process and the state) must be identified by some items in a clause. If only one subevent is identified (e.g. by a head noun), the other has to be identified by a temporal or manner adverbial.

3. FREQUENCY ADJECTIVES INSIDE DPs

There are a few ways in which the unexpected scope of the adjectives producing an adverbial reading can be explained. Zimmermann (2003) mentions three. Firstly, what can be suggested is that an adjective moves outside its hosting nominal expression. The movement, however, is very problematic from the point of view of semantics as well as syntax and is, in fact, un-animously rejected. Secondly, the adjective could undergo a movement to the Spec, DP (along Kayne 1994). Both suggestions concern movement at LF and are in fact the least popular ones. Alternatively, there is an analysis based on the idea that an adverbial reading is possible as a result of a merge between a frequency adjective and a determiner. The three options are presented in [58] (see Stump 1981; Larson 1999; Zimmermann 2003; Morzycki 2014).¹²

- (58) a. [_{IP} occasional₁ [_{IP} [_{DP} the/an t₁ sailor] [_{VP} ev(ent) strolled by]]].
 b. [_{IP} [_{QP} [_Q the/an+occasional₁] [_{NP} t₁ sailor]] [_{VP} ev(ent) strolled by]].
 c. [_{IP} [_{DP} occasional₁ [the/an t₁ sailor]] [_{VP} ev(ent) strolled by]].

(Zimmermann 2003, 254)

The complex determiner functions as a quantificational expression, hence its sentential scope (Larson 1999; Zimmermann 2003, 259).¹³ The merge between a determiner and an adjective explains a lack of coordination of FAs producing an adverbial reading with other adjectives as presented in [14] (*Coordinate Structure Constraint* — Ross 1967). Also, the same merge accounts for the fact that adjectives in question have to be adjacent to the determiner (see [13]). Such an analysis, however, could not be transferred to Polish. We have shown that coordination of FAs adjectives is possible under certain conditions (see [41] and [42]). Additionally, we provided many examples in [39] that the FAs do not have to precede all other adjectives in a nominal phrase. Most importantly, Polish does not have articles so we would have to assume an unmotivated merge between an empty head and an adjective. All in all, we have to argue that the adverbial reading in the context of Polish FAs is not a result of a merge between a determiner and a frequency adjective.

¹² Stump (1981) even suggests that at the semantic level frequency adjectives with an adverbial reading are determiners while frequency adjectives with the generic reading are attributive adjectives.

¹³ According to Stump (1981, 225), the complex consisting of an adjective and a determiner in generic and adverbial readings is a frequency operator.

4. CONCLUSION

We have shown that Polish frequency adjectives do exhibit three readings, namely an adverbial, internal and generic reading, described by Stump (1981) in English. Many additional observations we made about FAs in each group overlap with the ones provided by Gehrke and McNally (2013), which direct Polish FAs towards a more insightful classification into temporal and nontemporal FAs. Since Polish lacks nontemporal nouns, we have to assume that all Polish FAs are temporal and can have the three readings listed above.

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TRZY INTERPRETACJE PRZYMIOTNIKÓW CZĘSTOTLIWOŚCI
W JĘZYKU POLSKIM

Streszczenie

Przedmiotem badań niniejszej pracy są przymiotniki wyrażające częstotliwość w języku polskim. Na podstawie przykładów z języka angielskiego Autorka pokazuje, że grupa tych przymiotników może zostać podzielona pod kątem różnych interpretacji związanych z poszczególnymi przymiotnikami częstotliwości, jak i rodzajem modyfikowanego rzeczownika. Wspomniane interpretacje to interpretacja przysłóvkowa, interpretacja wewnętrzna oraz interpretacja generyczna. Interpretacja przysłóvkowa związana jest ściśle z rzeczownikami denotującymi zdarzenia (*event nouns*). W porównaniu z językiem angielskim polskie przymiotniki z interpretacją przysłóvkową wykazują większą tolerancję pod kątem modyfikacji przez przedimek. Najbardziej zróżnicowaną grupę stanowią przymiotniki z interpretacją generyczną.

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Słowa kluczowe: przymiotniki częstotliwości; interpretacja wewnętrzna; interpretacja przysłóvkowa; interpretacja generyczna.