Linguistica Silesiana 37, 2016
ISSN 0208-4228

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OUTBOUND ANAPHORA, ENGLISH COMPOUND NOUNS AND POLISH RELATIONAL ADJECTIVES*

The present paper investigates the phenomenon of outbound anaphora on the basis of morphologically complex words in English and Polish. The discussion focuses on English noun+noun compounds and on Polish relational adjectives. Examples are provided when the nominal modifier in an English compound can function as an antecedent for anaphoric expressions, such as possessive pronouns and personal pronouns. It is also shown that nouns which underlie Polish relational adjectives can become visible (as potential antecedents) to anaphoric expressions. It is further argued that the contextual accessibility of the underlying nouns "hidden" inside compounds or inside relational adjectives depends on the semantic transparency of the morphologically complex forms (i.e. compounds or suffixal derivatives).

1. Introductory: anaphoric islands, outbound and inbound anaphora

An anaphoric island is a sentence part which cannot contain the antecedent structure for anaphoric elements[1] lying outside. Postal (1969) formulates his Anaphoric Island Constraint on the basis of data from English. He points out that anaphoric reference is not available to elements which are either parts of the semantic interpretation of non-derived words or which are constituents of morphologically complex words. As is shown in (1b), the noun *parents* is not visible as a potential antecedent for the personal pronoun *them*, altough it forms a part of the semantic paraphrase of the noun *orphan*. Similarly, the word *pig* is

* A preliminary version of this paper was presented at the LingBaW 2014 conference in Lublin, 6-7 November 2014. I would like to thank the participants of the conference, as well as the anonymous *Linguistica Silesiana* reviewer, for their comments and suggestions.

[1] Anaphoric elements include anaphors proper (i.e. reflexives and reciprocals) and pronominals, such as pronouns, adverbial pro-forms, verbal pro-forms and the pro-form *one*.

not referentially visible to the anaphor *one* in (2), although the noun *pork* can be paraphrased as 'meat from pigs'.

(1) a. Max's *parents*$_i$ are dead and he deeply misses *them*$_i$.
(Schäfer 2013, ex. 1)
b. *Max is an *orphan* and he deeply misses *them*.
(orphan = 'a child whose parents are dead') (Postal 1969: 206)
(2) *The best pork comes from young ones. (Postal 1969: 226)

The sentences in (3-7), quoted from Postal (1969), show that morphologically complex words in English behave like anaphoric islands. Modifiers of compound nouns, such as *wombat* in (3) and *animal* in (6a) cannot act as antecedents for the anaphor *one* or the pronoun *them*. The verbal base of the suffixal derivative *smoker* in (4) and the nominal base of the derivative *McCarthyite* in (5) or of the relational adjective *American* in (7) are not visible to anaphoric elements in the rest of the sentence.

(3) *The best wombat$_i$meat comes from young ones$_i$. (Postal 1969: 226)
(4) *Smokers shouldn't really do so. (cf. *smoker* 'one who smokes') (Postal 1969: 217)
(5) a. *McCarthy$_j$ites are now puzzled by his$_j$ intentions.
b. Followers of McCarthy$_j$ are now puzzled by his$_j$ intentions. (Postal 1969: 213)
(6) a. *Animal$_k$ hunters tend to like them$_k$.
b. Hunters of animals$_k$ tend to like them$_k$. (Postal 1969: 230)
(7) *Her$_i$ enemies were pleased by the American$_i$ invasion of Vietnam.
(Postal 1969: 223)

The sentences in (1-7) illustrate ill-formed cases of what Postal (1969) calls "outbound anaphora". Postal's constraint against "inbound anaphora", on the other hand, predicts that anaphoric elements themselves cannot occur as parts of the sense of a word, nor may they be morphologically incorporated into a word, as is indicated in (8-10) below.

(8) *McCarthy$_i$ was glad that him$_i$ites were the majority in the room. (Postal 1969: 214)
(9) *People who smoke like other do soers. (Postal 1969: 217)
(10) *The grolf wanted to visit Max. (where *grolf* means 'one who has written the biography of X') (Postal 1969: 206)

Researchers have tried to provide various principled explanations for the inability of parts of complex words to act as antecedents for anaphors.[2]

[2] Postal (1969) regarded the Anaphoric Island Constraint as evidence for Generative Semantics.

The proponents of lexicalist approaches to word-formation regard the anaphoric islandhood of morphologically complex lexemes as evidence supporting the Lexicalist Hypothesis in its strong version, as quoted in (11):

(11) "The syntax neither manipulates nor has access to the internal form of words."
(Anderson 1992: 84)

Giegerich (2005) adopts the lexicalist hypothesis and employs the pro-form test to distinguish between English adjective+noun combinations which are phrasal constructions and those which can be regarded as compounds. Consequently, the possibility of replacing the head constituent in the A+N combinations in (12) by *one* is taken by Giegerich (2005) as evidence for their phrasal status. The unacceptability of substituting the head by *one* in (13) is treated as the indication that such A+N units are compounds (since the usage of the pro-form would constitute an anaphoric island violation).

(12) a. Do you have a medical appointment or a dental one?
b. Is this the general hospital or the mental one?
c. Is he a legal advisor or a financial one? (Giegerich 2005: 588)
(13) a. *Is this the Home Office or the Foreign one?
b. *Is he a constitutional lawyer or a criminal one?
c. *Is he a theatrical critic or a musical one?
d. *Is he an electrical engineer or an electronic one?
(Giegerich 2005: 580)

Advocates of syntactic approaches to word-formation, including Harley (2009), who espouses the framework of Distributed Morphology, assume that compounds as well as affixal formations are derived in syntax. However, they propose that morphologically complex lexemes (such as the compound *truck-driver*) constitute syntactically closed domains. Consequently, constituents of morphologically complex words are predicted to be syntactically inactive (and invisible to binding).

Within the framework of minimalist syntax, Baker (2003: 198) argues that although nouns carry referential indices, the referential index of a nominal base of a suffixal derivative (or the index of a modifier noun in a compound) is "unable to enter into a binding relation with anything else, because it does not c-command anything else but the head noun". Thus, although a referential index is carried both by the noun *Albania* occurring as a Saxon genitive in the phrase *Albania's destruction* in (14a) and the same noun functioning as the base of the adjective *Albanian* in (14b), the index of the nominal base is "trapped" inside the relational adjective, hence it is invisible to anaphoric expressions.

(14) a. *Albania*$_j$'s destruction of *itself*$_j$ grieved the expatriate community.
b. *The *Albanian*$_j$ destruction of *itself*$_j$ grieved the expatriate community.
(cf. The Albanian self-destruction ...) (Baker 2003: 98, his ex. 5)

The immediately following section of this paper will present counterexamples that have been adduced against the Anaphoric Island Constraint since Postal's (1969) seminal article. Factors which facilitate the occurrence of outbound anaphora will be mentioned. Sections 3 and 4 will emphasize one of those factors, namely semantic transparency of morphologically complex words whose constituents function as antecedents for anaphors or pronominals. Section 3 will discuss instances of outbound anaphora involving English noun+noun compounds, as provided by Ward et al. (1991). Section 4 will present examples when nominal bases of Polish relational adjectives (which occur as parts of noun+adjective combinations) are accessible to pronouns as their antecedents (for binding).

2. Factors which increase the felicity of outbound anaphora

It has been pointed out in the literature that sentences involving binding below word level may sometimes be judged as acceptable. Lieber (1992) observes differences between native speakers of what she calls "permissive" dialects and "nonpermissive dialects" of English. She herself, as a speaker of a "permissive dialect", evaluates the sentences in (15) as being well-formed (except for 15b).

(15) a. Reagan$_i$ites think that he$_{i,j}$ should have faith.
b. *He$_i$ thinks that Reagan$_i$ites should have faith.
c. Reagan$_i$ites respect his$_{i,j}$ mother.
d. His$_{i,j}$ mother respects Reagan$_i$ites. (Lieber 1992: 122, her exx. 2a-d)

The ill-formedness of (15b) points to another factor relevant to the felicity of outbound anaphora, namely c-command.[3] Lakoff and Ross (1972) propose that examples of outbound anaphora (with word-internal elements co-indexed with personal pronouns) improve, and are judged as 'ok' or '?', if the morphologically complex word containing the antecedent does not c-command the pronoun[4]. This is shown in (16) for the nominal base *guitar* acting as an antecedent for the pronoun *it*.

[3] Coreference relations, bound anaphora and the notion of c-command have been elaborated upon by Reinhart in her 1983 monograph and a series of her articles. Reinhart (1983b: 50) defines c-command as follows: "A node A c(onstituent)commands node B iff the first branching node α that dominates A either dominates B, or is immediately dominated by a node α' which dominates B, where α and α' are of the same category type (…)". A slightly simplified definition of c-command is given by Haegeman (1994: 147): "A c-commands B if and only if A does not dominate B and every X that dominates A also dominates B."

[4] This goes against the principles of Binding Theory which states that that bound anaphora is possible only when the antecedent c-commands the anaphoric expression (cf. Reinhart 1983ab, Haegeman 1994).

(16) a. ?*The guitarist thought that it was a beautiful instrument.
b. ?John became a guitarist because he thought that it was a beautiful instrument. (Ward et al. 1991: 444)

Ward et al. (1991) argue that outbound anaphora is not determined by purely syntactic restrictions but is a gradient phenomenon which is sensitive to pragmatic and semantic factors. They postulate that "the degree to which outbound anaphora is felicitous is determined by the relative accessibility of the discourse entities evoked by word-internal elements, and not by any principles of syntax or morphology" (Ward et al. 1991: 449). Pragmatic factors which determine the felicity of such cases involve contrast and topicality. A discourse entity is more accessible (as an antecedent) when it is contrasted with some other discourse entity. This is shown in (17), where the entity evoked by the noun *Bush* is in opposition to the entity corresponding to the noun *Reagan*.

(17) Well, action is still needed. If we're to finish the job, Reagan's Regiments will have to become the BUSH Brigades. Soon, he'll be the chief, and he'll need you every bit as much as I did. (Ward et al. 1991: 456)

Moreover, topicality of discourse entities increases their accessibility and facilitates outbound anaphora in sentences such as (18). The modifier *ambulance* is topical since the whole text is about crime-related injuries.

(18) In the distance, we heard the sound of an *ambulance* siren. Within a minute or so *it* arrived and stretcher bearers took the boy away.
(Ward et al. 1991: 456)

A crucial morphosemantic factor which influences the accessibility of a discourse entity is the semantic transparency of morphologically complex words containing the antecedent for the anaphor. Their lack of transparency, i.e. semantic opacity, diminishes the accessibility of word-internal constituents for outbound anaphora. The semantic relatedness between *Caesarean* and its nominal base is not straightforward, thus the noun *Caesar* is not available for outbound anaphora in (19a). The adjective *elephantine* in (19b) is not fully transparent semantically either since it does not mean 'pertaining to elephants' (as would be predicted on the basis of its internal structure) but 'huge and bulky'. Consequently, the nominal base of the adjective, i.e. the noun *elephant*, does not evoke an entity which would be visible (and accessible) to the anaphoric element *one*.

(19) a. #Ironically, Paula had a *Caesarean* while writing a book on *his* rise to power in early Rome.
b. Dom's clothes are absolutely *elephantin*e. #Indeed you could almost lose *one* in them. (Ward et al. 1991: 454)

When investigating anaphoric reference into German adjective+noun compounds, Schäfer (2013) reports that no examples of outbound anaphora were found in the corpus[5] in the case of exocentric compounds as well as endocentric compounds which exhibit semantic opacity.

Semantic transparency is the factor responsible for the instances of binding below the word level in English noun+noun compounds, as discussed in the next section.

3. Outbound anaphora: noun+noun compounds in English

Constituents of noun+noun compounds in English occasionally function as antecedents for anaphors. This is demonstrated at length by Ward et al. (1991), who provide a fairly long list of naturally occurring instances of outbound anaphora. Some of their examples are given in (20) below. Let us add that the pronominals in (20) are not c-commanded by compounds whose modifiers function as antecedents, which facilitates anaphoric reference (as observed by Lakoff and Ross 1972).

(20) a. For a *syntax* slot I'd rather see someone with more extensive coursework in *it*. (Ward et al. 1991: 456, ex. 25b)
b. Patty is a definite *Kal Kat cat*. Every day she waits for *it*. (Ward et al. 1991: 451, ex. 20b)
c. Although casual *cocaine* use is down, the number of people using *it* routinely has increased. (Ward et al. 1991: 454, ex. 22a)
d. Officials in the Danish capital believe that they've found a way to stop *bicycle* thefts – let people use *them* for free. (Ward et al. 1991: 452, ex. 20k)
e. We went up to *Constable* country; we stayed in the village *he* was born in. (Ward et al. 1991: 451, ex. 20d)
f. The *Paris* idea holds a lot of charm. 'cuz I used to live *there*, y'know. (Ward et al. 1991: 469, ex. 25)
g. 'So what's your *child* situation?' '*He*'s 4.' (Ward et al. 1991: 469, ex. 29)

The synthetic compounds *cocaine use* and *bicycle thefts* in (20c) and (20d) have the same meaning as the corresponding syntactic phrases: *the use of cocaine* and *thefts of bicycles*. The root compounds, such as *syntax slot* and *Kat Kal cat*, do not exhibit any idiosyncratic semantic reading either. They can be

[5] Schäfer (2013) investigates data from the Deutsche Referenz Korpus. He notes that instances of outbound anaphora are difficult to find in the corpus. He suggests (2014: 157) that an additional factor which is responsible for the occurrence of outbound anaphora in his study, apart from contrastive topicality and semantic transparency, is "the entrenchment of the phrasal variant relative to the compound variant."

roughly paraphrased as ‘a slot concerning teaching syntax’ and ‘a cat which has some connection with a brand of cat food (known as Kal Kat)’. The noun+noun combinations in (20f) and (20g) appear to be nonce-words, resulting from occasional word-formation. They exhibit the vague meaning ‘some idea pertaining to Paris’ and ‘your situation pertaining to a/the child’. The linguistic or situational context allows the interlocutor to interpret them correctly. Since the nominal compounds in (20) are transparent semantically, their constituents can become accessible for outbound anaphora.

This is not possible when the compound noun is semantically opaque. The noun *cowboy* does not mean ‘a boy who is connected in some way with cows’. It exhibits semantic opacity since it is lexicalized in the sense of ‘a hired man who herds and tends cattle, usually on horseback’ (cf. http://www.thefreedictionary.com). Consequently, the modifier *cow* is not accessible as an antecedent to the pronoun *them* in (21).

(21) Fritz is a *cowboy*. #He says *they* can be difficult to look after. (Ward et al. 1991: 454, their ex. 23a)

The next section will present novel data concerning felicity of outbound anaphora in Polish adjective+noun or noun+adjective combinations which contain a denominal relational adjective. The accessibility of nominal bases to anaphoric elements will be shown to depend on the semantic transparency of such adjectives (or the noun+adjective expressions). The choice of relational adjectives as the focus of section 4 is not accidental. Their derivation is very productive in Polish. Furthermore, noun+adjective (or adjective+noun) combinations are argued to be at the border or syntax and word formations (see Cetnarowska and Trugman 2012, Cetnarowska, Pysz and Trugman 2011). They can be formed in a regular fashion (like syntactic phrases), yet they function as naming units and therefore can also develop idiosyncratic readings.

It is worth juxtaposing data involving English noun+noun compounds with data concerning Polish combinations containing a relational adjective and a noun. Slavonic languages, such as Polish or Russian, lack Germanic noun+noun compounding pattern, therefore English compound nouns are usually translated in Slavonic languages into units consisting of a noun and a relational adjective (see Mezhevich 2002 for Russian). Moreno (2015: 24) argues (on the basis of data from Romance and Germanic languages) that incorporation (i.e. the formation of noun+noun compounds in English), the usage of denominal adjectives and the use of genitive phrases are alternative strategies of building endocentric compounds.

4. Outbound anaphora: relational adjectives in Polish

Let us consider the sentences in (22-24). The nominal bases of the relational adjectives in (22-24) can be accessed by pronouns as their potential antecedents[6].

(22) *Które* *preparaty* *magnezowe*$_i$ *zawierają*
which preparations.NOM magnesium.ADJ contain.3PL
najwyższą *jego*$_i$ *dawkę?*
highest his/its dose.ACC
'Which magnesium$_i$ supplements contain its$_i$ highest dose?'

(23) *Dla* *mnie* *ryż* *bez* *sosu* *krewetkowego*$_j$,
for me rice.NOM without sauce.GEN prawn.ADJ
jestem *na nie*$_j$ *uczulona*.
be.1SG on them.ACC allergic
'Rice without any prawn$_j$ sauce for me, I'm allergic to them$_j$ (i.e. to prawns).'

(24) *Kompot* *śliwkowy*$_k$ *to* *prawdziwa* *poezja.*
compote.NOM plum.ADJ it real poetry.NOM
Uwielbiam *ich*$_k$ *słodki* *dymny* *smak*
adore.1SG their sweet smoky taste.ACC
'The plum$_k$ compote is real poetry. I adore their$_k$ (= plums) sweet smoky taste.'

The combinations consisting of attributive relational adjectives and head nouns in (22-24) can be regarded as lexical units since the relational adjectives follow their head nouns, as is typical of naming units in Polish. The compound-like N+A expressions in (22-24) (referred to as "tight units" by Cetnarowska, Pysz and Trugman 2011) are fully transparent semantically. This is confirmed by the possibility of replacing them by syntactic phrases, consisting of head nouns followed by prepositional phrases.

(25) *Które* *preparaty* *z* *magnezem*$_i$ *zawierają*
which preparations.NOM with magnesium.INS contain.3PL
najwyższą *jego*$_i$ *dawkę?*
highest his/its dose.ACC
'Which magnesium$_i$ supplements contain its$_i$ highest dose?'

[6] As in the sentences involving English noun+noun compounds in (20), in the Polish examples given in section 4 there is no c-command relation between morphologically complex words and anaphoric elements.

(26) *Dla* *mnie* *ryż* *bez* *sosu* *z* *krewetek$_j$,*
for me.GEN rice.NOM without sauce.GEN from prawns.GEN
ponieważ *jestem* *na nie$_j$* *uczulona*.
because be.1SG on them.ACC allergic
'Rice without any prawn$_j$ sauce for me, because I'm allergic to them$_j$ (i.e. to prawns).

(27) *Kompot* *ze* *śliwek$_k$* *to* *prawdziwa* *poezja.*
compote.NOM from plums.GEN it real poetry.NOM
Uwielbiam *ich$_k$* *słodki* *dymny smak*
adore.1SG their sweet smoky taste.ACC
'The plum$_k$ compote is real poetry. I adore their$_k$ (= plums) sweet smoky taste.'

The synonymy between N+A expressions employed in (22-24) and syntactic phrases in (25-27) is indicated by the form of the pronouns which select the nominal bases of the relational adjectives as their antecedents. The N+A unit *preparaty magnezowe* 'magnesium supplements' in (22) corresponds to the syntactic phrase *preparaty z magnezem* 'supplements with magnesium', hence the nominal base of the modifier *magnezowe* 'magnesium.adj' functions as the antecedent for the singular third person possessive pronoun *jego* 'his/its'. In contrast, the N+A expression *sos krewetkowy* 'prawn sauce' is synonymous to the phrase *sos z krewetek* 'sauce from prawns'. Consequently, the nominal base of the relational adjective *krewetkowy* 'prawn.adj' is an antecedent for the plural non-virile pronoun *nie* 'them.acc' in (23). The usage of the singular feminine pronoun *nią* 'her/it.acc' would result in an unacceptable sentence, as is indicated in (28).

(28) ?**Dla* *mnie* *ryż* *bez* *sosu* *krewetkowego$_l$,*
for me.GEN rice.NOM without sauce.GEN prawn.ADJ
ponieważ *jestem* *na nią$_l$* *uczulona*.
because be.1SG on her/it.ACC allergic
'?Rice without any prawn$_l$ sauce for me, because I'm allergic to it$_l$ (i.e. to a prawn).'

The semantic transparency of the N+A combinations discussed above follows both from the transparency of the head constituents and from the semantic predictability of the modifying relational adjectives *magnezowy* 'magniesium.adj', *krewetkowy* 'prawn.adj' and śliwkowy 'plum.adj'. In the N+A expressions in (22-24), such relational adjectives exhibit the ablative function (denoting the origin of a substance or its basic/characteristic ingredient), e.g. *kompot śliwkowy* 'a compote whose main ingredient are plums' (see Kallas 1999, Szymanek 2010: 90). Relational adjectives with this semantic function are derived fairly regularly from nouns denoting food items. Moreover, the adjectives

magnezowy 'magnesium.adj', *krewetkowy* 'prawn.adj' and *śliwkowy* 'plum.adj' show morphological and phonological transparency (cf. Dressler 1985). They exhibit no stem or affix allomorphy and they contain the highly productive suffix *–ow*(y).

Ward et al. (1991: 466) suggest that the felicity of outbound anaphora is sensitive to the productivity of "the relationship between an anaphor's antecedent and the lexical item containing that antecedent". It comes as no surprise that Polish relational adjectives with the ablative meaning can evoke the discourse entities denoted by their nominal bases (which will be visible to anaphoric elements). Similarly, the nominal bases of provenance (i.e. toponymic) adjectives are predicted to be accessible for outbound anaphora, since such adjectives are derived productively. This is confirmed by the sentences given in (29) and (30).

(29) *Podobają mi* *się* *buty* *hiszpańskie*$_m$,
like.3PL me.DAT R.CL. shoes.NOM Spanish$_k$
oni$_m$ *mają* *dobrych* *projektantów*.
they$_m$ have.3PL good designers.AC
'I like Spanish$_m$ shoes because they$_m$ (= the Spaniards) have good designers.'

(30) *Makarony* *włoskie*$_n$ *są* *zdrowsze* *niż* *polskie, ponieważ*
pastas.NOM Italian$_n$ be.3PL healthier than Polish because
producenci *używają* *tam*$_n$ *innego* *rodzaju* *mąki.*
producers.NOM use.3PL there$_n$ another type.GEN flour.GEN
'Italian$_n$ pastas are healthier than Polish ones, because producers there$_n$ (i.e. in Italy) use a different type of flour.'

Szymanek (2010: 89) remarks that toponymic adjectives are doubly motivated: by a toponymic name and its ethnic counterpart. The adjectives *włoski* 'Italian' and *hiszpański* 'Spanish' are motivated both by the names of the corresponding countries, i.e. *Włochy* 'Italy' and *Hiszpania* 'Spain', as well as by the names of their inhabitants, i.e. *Włosi* 'Italians' and *Hiszpanie* 'the Spaniards'. Consequently, both types of nouns will be available for outbound anaphora. The pronoun *they* takes *Hiszpanie* 'Spaniards' as its antecedent in (29), whereas the pro-form *tam* 'there' can be linked to the noun *Włochy* 'Italy' in (30).

When discussing English noun+noun compounds in section 3, it was observed that semantic opacity prevents compounds from evoking discourse entities denoted by their constituents. In this section, examples will be provided below (in 31-32) of Polish N+A combinations which are not semantically transparent. *Stół szwedzki* (lit. table Swedish) 'Swedish Smörgåsbord' is not a table made in Sweden but a type of Scandinavian meal, served buffet-style with various hot and cold dishes placed on a table. *Pieczeń huzarska* (lit. roast Hussar.ADJ) 'Hussar-style beef roast' shows little semantic relatedness to the noun *Huzar* 'Hussar'. Consequently, outbound anaphora is not felicitous in (31-32). The pronoun *nich* 'them' in (31) cannot access the nominal base *Szwedzi*

'Swedes' and the possessive *ich* 'their' in (32) cannot take the noun *Huzarzy* 'Hussars' as its antecedent.

(31) ?**Śniadanie* *w formie* *stołu* *szwedzkiego*$_i$
breakfast.NOM in form table.GEN Swedish.ADJ
nie *jest* *u nich*$_i$ *popularne.*
not be.3SG at them.GEN popular
'Buffet breakfast (lit. Swedish-table breakfast) is not popular among them. (*them* = not Swedes).

(32) ?**Nie lubię* *pieczeni* *huzarskiej*$_j$, *choć* *ich*$_j$ *historia*
not like.1SG roast.GEN Hussar.ADJ though their history.NOM
bardzo *mnie* *interesuje.*
very me.ACC interest.3SG
'I don't like the stuffed Hussar beef roast though their (i.e. Hussar's) history interests me a lot.'

Semantic opacity is a gradient phenomenon (cf. Ward et al. 1991, Dressler 2005).[7] The noun+adjective combination occurring in (33), i.e. *barszcz ukraiński* 'Ukrainian borscht' exhibits partial semantic transparency.[8] It can be paraphrased as 'a kind of red beet borscht soup popular in Ukraine' or 'a beet borscht according to the Ukrainian recipe'. However, the complete dictionary definition of this N+A unit includes some idiosyncratic information which is not signalled by the internal morphological structure, i.e. 'a beet borscht soup which contains more ingredients (such as beans and mushrooms) than the plain beet borscht'.

(33) ?*Nie* *smakuje* *mi* *barszcz* *ukraiński*$_n$,
not taste.3SG me.DAT borscht.NOM Ukrainian.NOM
bo *oni*$_{n/m}$ *dodają* *za* *dużo śmietany* *do zup*.
because they.NOM add.3PL too much cream.GEN to soups.GEN
'I don't like the Ukrainian borscht soup because they add to much cream to soups.'
(*they* can be but need not be coreferential with Ukrainians)

[7] Dressler (2005) distinguishes four degrees of semantic transparency for English compounds.
[8] The semantic transparency of this N+A combination, though not complete, is fairly high due to the transparency of the head constituent (since *barszcz ukraiński* 'Ukrainian bortsch' denotes a kind of bortsch). Dressler (2005) regards the semantic transparency of the head constituent in compounds as being more important than the transparency of the modifier.

The nominal base of the adjective *ukraiński* 'Ukrainian' is available for outbound anaphora in (33) but this seems possible given a transparent reading of the N+A combination (i.e. 'a beet borscht soup cooked by Ukrainians')[9].

5. Conclusions

Constituents of morphologically complex words are generally invisible to anaphoric elements, as is observed by Postal (1969). This phenomenon has been mentioned as support for the Strong Lexicalist Hypothesis (by researchers who adopt lexicalist approaches) or the evidence for morphologically complex words to be syntactically closed domains (according to proponents of syntactic approaches to word-formation). However, numerous counterexamples have been mentioned in the literature to the assumption that derived words are always anaphoric islands. Ward et al. (1991) postulate that the Anaphoric Island Constraint is not a purely syntactic restriction but it should be viewed as a gradient phenomenon which is sensitive to morphosyntactic and pragmatic factors. Pragmatic factors involve the presence of contrast and topicality of discourse entities evoked by constituents of morphologically complex words. The morphosyntactic factor which facilitates outbound anaphora is semantic transparency of derived words whose constituents can be visible to anaphoric elements. Section 3 of this paper discussed data from English (provided by Ward et al. 1991), which show that modifier constituents of English compound nouns can be antecedents for pro-forms. In section 4 novel data from Polish were presented to support the observations made by Ward et al. (1993) on the acceptability of outbound anaphora. It was argued that anaphoric reference is possible to nominal bases of Polish relational adjectives. The felicity of such cases of outbound anaphora is made possible by the semantic transparency of relational adjectives. What is more important, it is determined by semantic transparency of noun+adjective combinations, which can be regarded as compounds or compound-like expressions in Polish. It was shown that semantic opacity of such N+A units prevents nominal bases of relational adjectives from serving as antecedents to anaphoric elements.

[9] The anonymous reviewer suggests that the acceptability of outbound anaphora in (33) increases if the sentence is modified as follows: *Nie smakuje mi oryginalny barszcz ukraiński$_n$, bo oni$_n$ tam$_n$ dodają za dużo śmietany.* 'I don't like the original Ukrainian borscht soup because they add too much cream there.' This example highlights further the gradience of semantic transparency of N+A complexes in Polish. I also think that the greater felicity of outbound anaphora in the modified version of (33) may be due to the occurrence of the more specific anaphor *tam* 'there' (see Ward et al. 1991: 445 on the degree to which the anaphor may be specific to its antecedent).

References

Anderson, S.R. 1992. *A-morphous morphology*. Cambridge: Cambridge University Press.

Baker, M. 2003. *Lexical categories: Verbs, nouns and adjectives*. Cambridge: Cambridge University Press.

Cetnarowska, B., A. Pysz, and H. Trugman 2011. Accounting for some flexibility in a rigid construction. In P. Bański, B. Łukaszewicz, M. Opalińska, and J. Zaleska (eds.), *Generative investigations: Syntax, morphology and phonology*, 24-47. Newcastle upon Tyne: Cambridge Scholars Publishing.

Cetnarowska, B. and H. Trugman 2012. Falling between the chairs: Are classifying adjective+noun complexes lexical or syntactic formations? In J. Błaszczak, B. Rozwadowska, and W. Witkowski (eds.), *Current issues in generative linguistics: Syntax, semantics and phonology*, 138-54. Wrocław: CGLiW. [available online http://www.ifa.uni.wroc.pl/linguistics/GLiW-CIGL2012.pdf/].

Dressler, W. 1985. On the predictiveness of natural morphology. *Journal of Linguistics* 21: 321-337.

Dressler, W. 2005. Word-formation in natural morphology. In P. Štekauer and R. Lieber (eds.), *Handbook of word-formation*, 267-284. Dordrecht: Springer.

Giegerich, H.J. 2005. Associative adjectives in English and the lexicon-syntax interface. *Journal of Linguistics* 41: 571-591.

Haegeman, L. 1994. *Introduction to Government and Binding Theory*. 2nd edn. Oxford/ Cambridge, MA: Blackwell.

Harley, H. 2009. Compounding in Distributed Morphology. In R. Lieber and P. Štekauer (eds.), *The Oxford handbook of compounding,* 129-144. Oxford: Oxford University Press.

Kallas, K. 1999. Przymiotnik. In R. Grzegorczykowa, R. Laskowski and H. Wróbel (eds.), *Gramatyka współczesnego języka polskiego. Morfologia* (3rd edn.), 469-523. Warszawa: Wydawnictwo Naukowe PWN.

Lakoff, G. and J. Ross 1972. A note on anaphoric islands and causatives. *Linguistic Inquiry* 3: 121-125.

Lieber, R. 1992. *Deconstructing morphology: Word formation in syntactic theory*. Chicago: Chicago University Press.

Mezhevich, I. 2002. English compounds and Russian relational adjectives. In G.S. Morrison, and L. Zsoldos (eds.), *Proceedings of the North West Linguistics Conference 2002*, 95-114. Burnaby, BC, Canada: Simon Fraser University, Linguistics Graduate Student Association [available online http://edocs.lib.sfu.ca/ projects/NWLC2002].

Moreno, M.M. 2015. Relational adjectives at interfaces. *Studia Linguistica* 69 (3): 304-332.

Postal, P. 1969. Anaphoric islands. In R.I. Binnick, A. Davison, G.M. Green, and J.L. Morgan (eds.), *CLS 5: Papers from the Fifth Meeting of the Chicago Linguistic Society*, 205-239. Chicago: Chicago Linguistic Society.

Reinhart, T. 1983a. *Anaphora and semantic interpretation*. London: Croom Helm.
Reinhart, T. 1983b. Coreference and bound anaphora: A restatement of the anaphora questions. *Linguistics and Philosophy* 6: 47-88.
Schäfer, M. 2013. Semantic transparency and anaphoric islands. In P. ten Hacken and C. Thomas (eds.), *The semantics of word formation and lexicalization*, 140-160. Edinburgh: Edinburgh University Press.
Szymanek, B. 2010. *A panorama of Polish word-formation*. Lublin: Wyd. KUL.
Ward, G., R. Sproat, and G. McKoon 1991. A pragmatic analysis of so-called anaphoric islands. *Language* 67(3): 439-474.