

On the Relative Readings with NP Internal Focus of Superlatives

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This paper proposes an account for the cross-linguistic distribution of relative readings in different types of superlative constructions. Pancheva and Tomaszewicz (2012) (hereinafter P&T) observe that a relative reading with NP internal focus is available in superlative expressions in some Slavic languages but not English. We look into this reading in greater details and provide a syntactic account for its distribution based on standard locality constraints and semantic assumptions of superlatives.

1. Background

Before going into the proposal, this section will layout the three readings of superlatives, the assumptions about the syntax and semantics of superlative, and previous accounts of the readings.

1.1. Three Readings of Superlatives

It has been long observed that superlative expressions involve two kinds of readings: an absolute reading (ABS) and a relative (comparative) reading with NP external focus (REX) (Heim 1999, Szabolcsi 1986). Pancheva and Tomaszewicz (2012) report a third reading: a relative reading with NP internal focus (RIN) in certain Slavic languages like Polish and Bulgarian.

Although the absolute reading and the relative reading with NP external focus are available across languages, the relative reading with NP internal focus is only available in some Slavic languages and not in English. The interpretations of each reading and the distribution are shown in Table 1.

- (1) a. John has the best albums by U2. (English)
 b. Iwan ima naj-lepsze albumy U2. (Polish)
 Ivan has naj-better.ACC albums.ACC U2.

Table 1

	English (1a)	Polish (1b)
Absolute Reading (ABS) (The albums by U2 that John has are better than other albums by U2)	√	√
Relative Reading with NP External Focus (REX) (John has better albums by U2 than anyone else does.)	√	√
Relative Reading with NP Internal Focus (RIN) (The albums by U2 that John has are better than the albums by other bands that John has.)	*	√

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In the ABS reading, the comparison class is the contextually salient set of albums by U2. In the REX reading, the comparison class is the U2 albums that are owned by a contextually salient set of people. Finally, in the RIN reading, the comparison class consists of John's albums by U2 and other bands. This paper will provide an account for the availability of the RIN reading in Slavic languages and its unavailability in English which relates the distribution to independent properties of these languages.

1.2. Syntax and Semantics of Superlative

In this section, I layout the syntax and semantics of superlative expressions assumed in this article. Following Corver (1992), Bošković (2005) among others, adjectives are the head of an AP which is adjoined to NP. Following Bošković and Gajewski (2011), degree phrases are generated in Spec,AP. The superlative morpheme is located in the degree phrase along with a contextual variable C. Hence the syntactic structure of *the best albums by U2* in English is shown in (2).

- (2) the best albums by U2
 [DP the [NP [AP [DegP EST C] good] [NP [NP albums] [PP by U2]]]]

Following Heim (1999), the denotation of the superlative morpheme is as follows. The EST takes a contextual variable C of type $\langle e, t \rangle$ which constrains the class of comparison to a contextual relevant/salient set. The EST further takes the adjective, i.e. the degree predicate. Lastly, an individual of type $\langle e \rangle$ combines with EST, yielding a truth value.

- (3) EST: $\langle \langle e, t \rangle, \langle \langle d, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle$
 $[[EST]] = \lambda C_{\langle e, t \rangle} . \lambda D_{\langle d, \langle e, t \rangle \rangle} . \lambda x_{\langle e \rangle} . \exists d . [x \in C \ \& \ D(d)(x) = 1 \ \& \ \forall y . [y \in C \ \rightarrow [D(d)(y) = 1 \ \text{if } x = y.]]]$ ¹
 $[[best]]$
 $= [[EST]](C)([[good]])$
 $= \lambda x . \exists d . \text{s.t. } x \in C \ \& \ x \text{ is } d \text{ good} \ \& \ \forall y . y \in C \ \rightarrow y \text{ is } d \text{ good if } x = y.$
 “There is a degree that x in the context is good to the degree of d and all other individual in the C that is also d good must be the same as x.”

1.3. Previous Accounts of the Relative Readings

A satisfying account for superlatives must account for both of the relative readings. This section reviews two influential accounts of the relative reading with NP external focus.

1.3.1. Scope Accounts

Szabolcsi (1986) and Heim (1999) propose accounts in which the relative reading is derived by movement of the EST morpheme; absolute and relative readings thus involve different scope relations. In (4b), the DegP is interpreted in situ. In (4c), DegP is moved to just below the focused subject. For space reasons, I refer the reader to Heim (1999) for the detailed calculations.

- (4) a. John has the best albums by U2.
 b. John has the [AP [DegP EST C] good] albums by U2. (ABS)
 “John has a U2 album x such that there is a degree d s.t. x is d-good and no other U2 albums are d-good.”
 c. John [DegP EST C] has the [AP tDegP good] albums by U2. (RIN)
 “John is x such that there is a degree d, such that x has the d-good U2 albums and no one else has a d-good U2 album.”

¹ Here I assume that the type of EST is flexible, i.e. can be shifted to $\langle \langle e, t \rangle, t \rangle, \langle \langle d, \langle \langle e, t \rangle, t \rangle \rangle, \langle \langle e, t \rangle, t \rangle \rangle$ and possibly higher types (J. Gajewski p.c.).

A crucial aspect of the scope account, which will be relevant for the analysis in this article, is that to generate REX, only the DegP is required to move out of the DP. Such movement is assumed to be allowed.

1.3.2. Pragmatic Accounts

Heim (1999) also considered a pragmatic account which is elaborated in detail in Farkas & Kiss (2000), and Sharvit & Stateva (2002). In this type of theory, the DegP is interpreted in situ, thus scope has no effect on the derivation of the different interpretations. The difference between (5b) and (5c) is derived from different values of the contextual variable C. When the contextual variable denotes a set of U2 albums as in (5b), the absolute reading emerges. When it denotes a set of U2 albums that a salient group of people have as in (5c), the relative reading emerges.

- (5) a. John has the best albums by U2.
 b. ABS: John has the best albums by U2 among all the U2 albums.
 C = {Boy; October; War; No Line on the Horizon;...}
 c. REX: John has better U2 albums than others do.
 C = {the U2 albums that Bill has, the U2 albums that Mary has, ...}

The pragmatic account and the scope account have both received independent motivation. Since the pragmatic mechanism has been widely accepted for phenomena other than superlatives, the focus of the debate often lies in the question whether the scope account can be eliminated. Heim (1999), Aihara (2009), Bošković and Gajewski (2011), and P&T (2012), however provide arguments for the necessity of a scope account by presenting readings that can only be derived if the scope account is available. This paper will assume that both mechanisms are available cross-linguistically. In the next section, I will turn to the RIN reading that was reported in P&T. Before proposing my account, P&T's analysis will be summarized and briefly discussed.

2. Pancheva and Tomaszewicz (2012)

Pancheva and Tomaszewicz (2012) present new data from Polish and Bulgarian of a new type of relative reading: relative reading with NP internal focus (RIN).

- (6) a. Iwan ima naj-lepsze albumy U2. (Polish)
 Ivan has EST-better-ACC albums-ACC U2.
 b. Ivan ima naj-dobri albumi ot U2. (Bulgarian)
 Ivan has EST-good albums by U2
 √RIN: "The U2 albums that Ivan has are better than the albums by other artists."
 c. John has the best albums by U2. (English)
 *RIN: "The U2 albums that Ivan has are better than his albums by other artists."

Two questions arise: First, which account fares better in deriving the RIN reading? Second, how can the cross-linguistic variation be accounted for?

In answering these two questions, P&T showed in detail that none of the LFs generated by the pragmatic account can have the NP internal focus reading. Since the RIN reading cannot be derived by a pragmatic account, a scope account is necessary. For the discussion on why the pragmatic account fails to generate the RIN reading, please refer to P&T. P&T's structure proposed for the RIN reading is given in (7).²

- (7) [_{TP1} U2 [_{TP2} [*naj- C*] [_{TP3} [*~ S*] [_{TP4} Ivan has [_{DP} *d-good albums by/of x_F*]]]]] (23a in P&T)

² The details in the formula are not important. What is crucial is that both the focus *U2* and the DegP *naj-C* move to the sentence level.

As for the cross-linguistic variation, P&T attribute the availability of the RIN to the presence vs. absence of a definite determiner. They assume that movement of DegP (which is necessary to derive the RIN) is blocked by the presence of the definite determiner. Thus the correct LF for RIN cannot be established in languages where the definite article is required in superlative constructions, i.e. English type languages. Unlike in English, superlatives in Polish and Bulgarian do not require the presence of the definite determiner. Movement of DegP is then possible, and thus the RIN is available. As a necessary result of this account, the scope mechanism in English is ruled out not only for RIN but also for REX. REX is made available in English by the pragmatic account.

P&T acknowledge that this blocking effect of the definite article is mysterious. It seems that only the degree expressions are prevented from moving out of DP. Sentences like “Which band did John buy the best album of?” is perfectly acceptable despite the presence of a definite determiner. Moreover, the origin of the blocking effect itself is not clear especially since the definite article in superlative constructions has been shown to behave like an indefinite rather than a definite article (Szabolcsi 1986).

Despite these open questions, P&T’s account successfully derives the RIN in the languages where it is available. I therefore follow P&T’s account that scope is the crucial mechanism for generating the RIN. However, in the following section, I propose a slightly different LF representation of the RIN and a syntactic account of the distribution of DegP movement using standard locality constraints.

3. Proposal

The current proposal adopts P&T’s assumption that the RIN reading can only be derived via a scope account, i.e. movement of the DegP to a position below the focus. Since the comparison class for this reading is *the albums by U2* and *the albums by other artists*, the focus is the PP that modifies the head noun: *by U2*. The PP thus also must move out of the NP to a focus projection in the clausal domain. This movement is followed by movement of DegP *EST-C* out of the DP to a position just below the landing site of the PP.

- (8) a. Ivan has [NP [AP [DegP EST C] good] [NP albums [PP by U2]]].
 b. [PP by U2] Ivan has [NP [AP [DegP EST C] good] [NP albums t_{PP}]].
 c. [PP by U2] [DegP EST C] Ivan has [NP [AP t_{DegP} good] [NP albums t_{PP}]].³

To answer the question why the LF in (8c) is available in Polish but not in English, we need to consider the syntactic properties of noun phrases in these languages. I assume following Bošković (2005) that Polish and other Slavic languages have no Determiner projection (they are NP languages), whereas languages with articles, such as English and German, project an additional projection—DP—on top of NP. This additional projection has a crucial effect on locality. Following a dynamic phasehood approach (see Wurmbbrand 2011, t.a. and Bošković 2005), I assume that the highest projection of a cyclic domain is a phase. For the nominal domain, this means that in NP languages, NP is a phase, whereas in DP-languages, DP is a phase.

Syntactic movement has been shown to proceed in a successive cyclic manner rather than in one fell swoop (Chomsky 1973). A phase is a phrase that defines a cycle for syntactic movement. Crossing a phase boundary is regulated by the Phase Impenetrability Condition (PIC): movement out of a phase must proceed through the edge of the phase (Chomsky 2000). The edge of the phase includes specifier of the phase head and phase-adjoined positions.

The structure for English is given in (9). Being the highest projection in the nominal domain, DP serves as a phase. According to the PIC, movement of the PP needs to pass through Spec,DP, leaving a trace/copy (9b). Movement of DegP also needs to pass through Spec,DP. However this movement step is blocked since Spec,DP can only hold one element. There is no way for two elements to move out of a single DP, and hence (9c) is ruled out. The unavailability of RIN is thus derived from locality constraints on movement.

³ Note that the LF in (8c) is slightly different from the one in (7). The differences are not relevant for the current purpose.

(9) English:

- a. John has [_{DP=PHASE} the [_{AP} [_{DegP} EST C] good] [_{NP}albums [_{PP} by U2]]].
 b. [_{PP} by U2] John has [_{DP=PHASE} t_{PP} the [_{AP} [_{DegP} EST C] good] [_{NP} [_{NP} albums] t_{NP}]].
 c*. [_{PP} by U2] [_{DegP} EST C] John has [_{DP=PHASE} *t_{PP}/t_{DegP} the [_{AP} t_{DegP} good] [_{NP} [_{NP} albums] t_{NP}]].

What about Polish? Since Polish is an NP-language, it lacks a DP. According to the dynamic approach to phasehood, since there is no DP, NP is the highest projection in the nominal domain, hence NP is a phase in Polish as shown in (10a). According to the PIC, movement out of a phase must go through the edge of the phase. To escape a phase, an XP has to either be in (or move to) the specifier of the phase head or in phase-adjoined position, where ‘edge’ is defined recursively (i.e., an element at the edge of the edge of the phase is capable of moving out of the phase). Since the PP is adjoined to the NP phase, and the DegP is adjoined to an adjunct (the AP) of the NP phase, both PP and DegP can move out of the NP phase as shown in (10b-c).

(10) Polish:

- a. Ivan has [_{NP=PHASE}[_{AP}[_{DegP} EST C] good]][_{NP}[_{NP} albums][_{PP}by U2]]].
 b. [_{PP} by U2] Ivan has [_{NP=PHASE} [_{AP} [_{DegP} EST C] good] [_{NP} [_{NP} albums] t_{NP}]].
 c. [_{PP} by U2] [_{DegP} EST C] Ivan has [_{NP=PHASE} [_{AP} t_{DegP} good] [_{NP} [_{NP} albums] t_{NP}]].

This account differs from P&T’s account in some important ways: it is not the movement of DegP that is blocked by the definite article, but a more general ban on moving two elements out of a DP. The blocking effect is not mysterious anymore. The combination of a dynamic phasehood approach, the PIC, and the DP/NP parameter can straightforwardly account for the cross-linguistic variation regarding the availability of the RIN. In the following section, three pieces of evidence will be provided in support of this account.

4. Evidence

4.1. Complement/Adjunct Asymmetry

The account laid out in the previous section makes some immediate predictions. The most obvious one is an asymmetry between cases where the focused element is a complement vs. an adjunct in Polish type languages. Recall that the RIN reading in (9) is available in Polish because both the DegP and the PP are base-generated at the edge of the NP phase, thus moveable. On the other hand, a RIN reading is predicted to be impossible when one of the two elements is immobile.

An important finding of works which assume that determinerless languages lack a DP-projection is the observation that complements of the N head cannot be extracted. Bošković (2012), among others, proposes that this follows from a DP-less structure (which, given dynamic phasehood, makes the NP in those languages a phase) in combination with Anti-locality (Bobaljik 1995, Abels 2003, Bošković 2005, Grohmann 2000). Anti-locality is in general a locality constraint that rules out movements that are “too short”. Here I will assume the formulation in Bošković (2012): movement must cross at least one maximal projection.

To extract a complement of N in Polish, the complement must move through the edge of the NP to escape the NP phase. However, Anti-locality forbids this movement since it does not cross a maximal projection. The ban on complement extraction is illustrated in (11).

- (11) a.* Jakiego kierunku Jan spotkał studentów? (Polish)
 Which major-GEN John meet students?
 “Of which major did John meet students?”
 b. Of which city did you witness the destruction? (English)

Since the complement of N is immobile but the RIN requires movement of the focused XP, the current account predicts that the RIN should become unavailable in Polish when the NP internal focus is a complement of N (while it should be available when the NP internal focus is an adjunct of NP). This prediction is borne out as shown in (12). In (12a), *Linguistics-GEN* is a complement of *students*, thus cannot move out of NP, and hence the RIN reading is unavailable. In (12b), the PP *from*

department linguistics-GEN is adjoined to NP, which allows it to move out of the NP, and the RIN is a possible interpretation.

- (12) a. Iwan poznal [_{NP=PHASE} naj-młodszych [_{NP} studentów lingwistyki]]. (Polish)
 Ivan met [_{NP=PHASE} EST-young [_{NP} students Linguistics-GEN]].
 Lit.: “John met the youngest students of Linguistics.”
 *RIN: “Among the students that Jan met, the youngest are of Linguistics.”
- b. Iwan poznal [_{NP=PHASE} naj-młodszych [_{NP} [_{NP} studentów] [_{PP} z wydziału lingwistyki]]].
 Ivan met [_{NP=PHASE} EST-youngest [_{NP} students from department linguistics-GEN]].
 Lit.: “John met the youngest students from linguistics departments.”
 √ RIN: “Among the students that Jan met, the youngest are from the linguistics departments.”

The complement/adjunct asymmetry in Polish type NP-languages shows that the availability of the RIN is closely related to the syntactic structure. Since movement and locality constraints are sensitive to structural configurations, the above differences in the availability of the RIN strongly support a movement-based (scope) account of the RIN. Note that since the RIN in English is ruled out (for both adjuncts and complements) by the competition between two elements for one position, there is no asymmetry between the complement and the adjunct in English.

4.2. Adjective/Quantifier Asymmetry

A further observation regarding NP-languages is that movement of complements becomes possible when there is a projection above the NP in the nominal domain. Movement from the complement position of N to a specifier of an XP above NP would not yield an Anti-locality violation. It is thus predicted that the RIN should become available for complements as well when there is motivation for assuming an XP above NP. One possible higher projection in the nominal domain is a quantifier phrase (QP). Despić (2011) and Bošković (2012) have argued that quantifiers in NP languages are not adjoined to NP but take NP as a complement. The evidence includes case, binding, and extraction facts. Accordingly QP will become the highest projection in the nominal domain, hence a phase, and the NP will stop being a phase. As a result, movement out of QP does not have to pass through Spec, NP but only through the edge of QP. The complement of N, the PP focus in a RIN context, can move to the edge of QP followed by movement out of the QP. Anti-locality allows such movement since it crosses a maximal projection, the NP. A relevant context for our purpose involves quantificational adjectives such as *few*. I propose that *few* is a Q head which takes NP as a complement and DegP as a specifier. Since DegP is also at the edge of QP, there is no problem for DegP to move out of QP. As illustrated in (13), the LF required for the RIN reading can be derived, and an example illustrating this derivation is given in (14).

- (13) a. Ivan met [_{QP} [_{DegP} EST C] few [_{NP} students [_{PP} of Linguistics]]]
 b. [_{PP} Of Linguistics] Ivan met [_{QP} t_{PP} [_{QP} [_{DegP} EST C] few [_{NP} students t_{PP}]].⁴
 c. [_{PP} Of Linguistics] [_{DegP} EST C] Ivan met [_{QP} t_{PP} [_{QP} t_{DegP} few [_{NP} students t_{PP}]]].

The prediction is that quantifier superlative expressions in Polish allow RIN no matter whether the NP internal focus is a complement or an adjunct. This prediction is indeed borne out:

- (14) Jan spotkał [_{QP=PHASE} naj-mniej [_{NP} studentów Kowalskiego/biologii]]. (Polish)
 Jan met [_{QP=PHASE} EST-few [_{NP} students Kowalski.GEN/biology.GEN]].
 √ REX: “Jan met fewer students of Biology than others did”
 √ RIN: “Jan met fewer students of Biology than he did students of other majors”
 (Tomaszewicz, p.c.)

⁴ Movement of the PP out of QP requires the assumption that adjunction to QP is possible in Polish while adjunction to DP in English is banned. I will leave the detailed account for this to further research.

4.3. Prenominal Possessor in DP Languages

The examples presented in the previous section show that the availability of the RIN in Polish type NP-languages is not absolute, but is highly sensitive to the syntactic structure and locality constraints defined over syntactic structure. If the proposed account is on the right track, the REX should also be sensitive to the syntactic environment. It has been noted that the REX is not available when possessive determiners are used in English (Schwarz 2005).

- (15) a. JOHN read Mary's longest article. (REX: *)
 b. JOHN read the longest article of Mary's. (REX: ✓)

(15) straightforwardly follows from the scope account: the possessor blocks movement of DegP, thus the absolute reading is the only possible interpretation of (15a) (see (16a)). Despite various differences in details, most accounts assume that the possessor in (15) occurs in Spec,DP (Abney 1987, Barker 1995 among others). According to the scope account, the LF of the REX reading requires movement of the DegP out of DP. Following the PIC, movement of DegP must pass through the Spec,DP position. Since Spec,DP is occupied by the possessor, the LF required for deriving the REX reading cannot be created, yielding the unavailability of this interpretation (see (16b)). (17) shows that once Spec,DP is available, the REX is available as well. P&T's account has difficulties capturing (15) since DegP cannot move out of any DP in English under their analysis. The current account, on the other hand, correctly derives these differences.

- (16) a. John read [DP Mary's D [NP [AP [DegP EST C] long] [NP article]]].
 b.* John read [DP [DegP EST C]/Mary's D [NP [AP t_{DegP} long][NP article]].
 (*Movement of DegP)
- (17) a. John read [DP the [NP [AP [DegP EST C] long] [NP article of Mary's]]]
 b. John [DegP EST C] read [DP t_{DegP} the [NP [AP t_{DegP} long] [NP article of Mary's]]]

Note that the same effects are not observed in Polish, which is also predicted. Possessive NPs in Polish type NP-languages have been argued to be generated in NP-adjoined position (which is at the edge of the NP phase. The DegPs are base-generated at the edge of the (edge of the) NP phase as well. Movement is not blocked, making the REX available even in the presence of a possessor NP.

- (18) a. John przeczytaj Marii Naj-djuzszy artykuj. (REX ✓)
 John read Mary-GEN EST-long article.
 'John read Mary's longest article.'
- b. John przeczytaj Naj-djuzszy artykuj Marii. (REX ✓)
 John read EST-long article Mary-GEN.
 'John read the longest article of Mary.'

In sum, the three pieces of evidence above show that the RIN and REX readings are subject to syntactic constraints, which is correctly predicted by the proposed account. The RIN is generated by movement and the cross-linguistic variation can be derived from independent syntactic properties of the languages under consideration.

5. Some Open Questions

5.1. Optional RIN in Bulgarian

P&T observe that in Bulgarian the availability of RIN depends on the presence of the overt determiner. The RIN is available when the overt determiner is absent and unavailable when the overt

determiner is present. In 19a, the finite determiner *te* is present, and the RIN is not available. On the other hand in 19b, *te* is absent and the RIN is available⁵.

- (19) a. Ivan ima naj-dobri-te albumi na/ot U2. (Bulgarian)
 Ivan has EST-good-the albums of/by U2.
 REX √: ‘Ivan has better albums by U2 than anyone else does.’
 RIN*: ‘Ivan has better albums by U2 than by any other band.’
- b. Ivan ima naj-dobri albumi na/ot U2. (Bulgarian)
 Ivan has EST-good albums of/by U2.
 REX √: ‘Ivan has better albums by U2 than anyone else does.’
 RIN √: ‘Ivan has better albums by U2 than by any other band.’

The variation does not follow immediately from the DP/NP parameter and the current proposal, since Bulgarian has been shown to pattern with DP-languages regarding the extraction facts. However it is not entirely unexpected that the definite article in superlative constructions behaves differently from the garden variety definite article. The definite article in superlative constructions is often argued to be semantically vacuous or pattern with the indefinite article (Szabolcsi 1986; also see Szabolcsi 2012 and Krasikova 2012 for recent accounts of the definite article in superlative contexts). One possibility is that the definite article in superlative constructions in Bulgarian behaves like a demonstrative. One direction to pursue is to investigate whether *te* behaves like *the most* vs. *most* in quantifier superlatives.

5.2. No RIN in Chinese/Japanese/Korean

Slavic languages (save for Bulgarian and Macedonian) are not the only language family that has been argued to involve NP-languages. Eastern Asian languages like Chinese, Japanese, and Korean have also been shown to have the properties of NP-languages (see Cheng 2013 for Chinese, Kang in preparation for Korean, M. Takahashi 2011 and Bošković 2010 for Japanese). Yet none of the three languages allows the RIN reading. Since the prenominal modifier *yuyanxuexi de* has been argued to be adjoined to NP, movement of the modifier should be allowed, which along with movement of the DegP should yield the RIN reading, contrary to the fact in (20).

- (20) Zhangsan jiandaole zuigao de yuyanxuexi de xuesheng. (Chinese)
 Zhangsan met EST-tall linguistics department students.
 RIN*: ‘Among the students that ZS met, the tallest ones are from the Linguistics department.’

One relevant difference between Chinese type NP-languages and Polish type NP-languages involves left branch extraction (LBE). Prenominal modifiers cannot move on their own in Chinese while this is possible in Polish and other Slavic NP-languages, for instance Serbo-Croatian (Bošković 2005). Since only NP-languages allow LBE, there might be a correlation between LBE and the availability of the RIN, the RIN reading might be unavailable in Chinese/Japanese/Korean for the same reason that LBE is unavailable.

5.3. RIN in English

The RIN reading is not ruled out in English across the board. The RIN is not only available but even preferred in the following scenario involving a *wh*-question and a corresponding fragment answer.

Scenario: A group of amateur photo collectors (John, Bill and Peter) each bought one photo of Fred, Mary, and Ann. The quality of each photo is indicated by the number:

⁵ P&T do not make a distinction between complements and adjuncts as discussed above. Whether this asymmetry holds in Bulgarian is yet to be checked in further research.

John: Fred - 8	Bill: Mary - 6	Peter: Fred - 9
Mary - 7	Fred - 5	Ann - 3
Ann - 2	Ann - 4	Mary - 2

- (21) a. -Who did John buy the best picture of ?
 b. -Fred.
 c. - #John bought the best picture of FRED.

(21b), the answer to the question in (21a), indicates that (21a) can be interpreted with a RIN reading. The emergence of RIN in *wh*-questions is not expected under the current analysis. The *wh*-element moves out of DP through the Spec,DP (see (22a-b)). Furthermore, to derive the RIN reading, movement of DegP out of DP via Spec,DP is required (cf. (22c)). This derivation, however, should be prohibited in the same way as the RIN reading in (21c) or in “John met the tallest student of Linguistics” is prohibited. The difference is that in (21a), the focus XP undergoes overt movement out of the DP, whereas in (21c) both PP-movement and DegP movement would be covert. While this difference is likely to be relevant, I leave the exact interaction between relative readings and overt vs. covert movement to future research.

- (22) a. did John buy [DP the [NP [AP [DegP EST C] good] [NP picture [PP of who]]]]
 b. Who did John buy [DPT_{who} the [NP [AP [DegP EST C] good] [NP picture [PP of t_{who}]]]]
 c. *Who [DegP EST C] did John buy [DP *t_{who}/t_{DegP} the [NP [AP t_{DegP} good] [NP picture [PP of t_{who}]]]]

The fragment answer in (21b) also has RIN. Note that the full sentence (21c) is not available in the same scenario. The availability of RIN in this particular environment can be captured by Rescue by PF deletion mechanism of the same nature as the amelioration of island effects in sluicing (Bošković 2013). The structure in (23c) is ruled out by a conspiracy of PIC and the single specifier of DP. *Fred* must pass through the specifier of DP due to the PIC. According to Bošković (2013), if the moved element failed to move through the edge of a phase, the phase head will be star-marked. If the star survives to the end of derivation, the sentence is ungrammatical. However, if the star-bearing element is deleted by ellipsis, the sentence is star-free, thus grammatical. This might be what happened in (21b) illustrated in (23). (23a) shows the canonical LF for the answer. In (23b), the focus *Fred* moves to the clausal domain without passing by the Spec,DP, thus a star is marked on the phase head D. In (23c), the DegP moves via the Spec,DP. The LF can generate the RIN, but the sentence is grammatical due to the star on D. In (23d) the sentence is elided from below *Fred*. Since the star bearing D is elided as well, the sentence is grammatical with RIN.

- (23) a. John bought [DP the [NP [AP [DegP EST C] good] [NP picture of Fred]]].
 b. [DP Fred] John bought [DP *the [NP [AP [DegP EST C] good] [NP picture of t_{Fred}]]].
 c. [DP Fred] [DegP EST C] John bought [DP t_{DegP} *the [NP [AP t_{DegP} good] [NP picture of t_{Fred}]]]
 d. [DP Fred] [DegP EST C] John bought [DP t_{DegP} the [NP [AP t_{DegP} good] [NP picture of t_{Fred}]]].

6. Conclusion

In this paper, I have provided a syntactic account for the distribution of relative readings of superlatives across languages and different types of constructions. I have argued that the availability of the relative reading with NP internal focus is a consequence of covert movement of DegP and the focused phrase, which is constrained by syntactic locality constraints. A dynamic approach to phasehood, the PIC, Anti-locality, and the DP/NP parameter correctly derive the presence of the RIN reading in Polish type NP-languages, and its absence in English type DP-languages.

The proposed analysis further correctly predicts a complement/adjunct asymmetry and an adjective/quantifier asymmetry in NP-languages, which I have shown to be borne out. Lastly, the account explains the impossibility of relative readings in English DPs with prenominal possessors.

The paper also provides several potential research directions regarding the possibility of RIN readings in DP-languages where the focused phrase has undergone overt movement, as well as the absence of RIN readings in East Asian type NP-languages.

References

- Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. Doctoral dissertation. University of Connecticut. Storrs.
- Abney, Steven. 1987. The English noun phrase in its sentential aspect. Doctoral dissertation. MIT.
- Aihara, Masahiko. 2009. The scope of -est: evidence from Japanese. *Natural Language Semantics* 17.4:341-367.
- Barker, Chris. 1995. *Possessive Descriptions*. CSLI Publications, Stanford.
- Bobaljik, Jonathan David. 1995. Morphosyntax: The syntax of verbal inflection. Doctoral dissertation, MIT, Cambridge, MA.
- Bošković, Željko. 2005. On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59.1:1-45.
- Bošković, Željko. 2008. What will you have, DP or NP? In *Proceedings of NELS 37*:101-114.
- Bošković, Željko. 2012. Now I'm a phase, now I'm not a phase: On variability of phrases with extraction and ellipsis. Ms., University of Connecticut. Storrs.
- Bošković, Željko. 2013. Traces do not head islands: what can PF deletion rescue? Ms., University of Connecticut. Storrs.
- Bošković, Željko. to appear. Phases beyond clauses. In *Nominal Constructions in Slavic and Beyond*, ed. by L. Schürcks, A. Giannakidou, U. Etxeberria, and P. Kosta.
- Bošković, Željko. and Jon Gajewski. 2011. Semantic correlates of the DP/NP parameter. In *Proceedings of NELS 39*.
- Cheng, Hsu-Te, Johnny. 2013. Null arguments in Mandarin Chinese and the DP/NP parameter. Doctoral dissertation. University of Connecticut. Storrs.
- Chomsky, Noam. 1973. Conditions on transformations. In *A Festschrift for Morris Halle*, ed. by Stephen Anderson and Paul Kiparsky, 232-286. New York: Holt Rinehart & Winston.
- Chomsky, Noam. 2000. Minimalist inquiries. In *Step by step: Essays on minimalism in honor of Howard Lasnik*, ed. by R. Martin, D. Michaels, and J. Uriagereka, 89-155. Cambridge: MIT Press.
- Corver, Norbert. 1992. Left branch extraction. In *Proceedings of NELS 22*, 67-84.
- Despić, Miloje. 2011. Syntax in the Absence of Determiner Phrase. Doctoral dissertation. University of Connecticut. Storrs.
- Farkas, Donka. & Katarina Kiss. 2000. On the comparative and absolute readings of superlatives. *Natural Language and Linguistic Theory* 18.3:417-455
- Grohmann, Kleanthes. 2003. *Prolific domains: on the anti-locality of movement dependencies*. Amsterdam: John Benjamins.
- Hackl, Martin. 2009. On the grammar and processing of proportional quantifiers: *most* versus *more than half*. *Natural Language Semantics* 17.1:63-98.
- Heim, Irene. 1999. Notes on superlatives. Ms., MIT.
- Kang, Jungmin. In preparation. On syntactic and semantic consequences of phases.
- Krasikova, Sveta. 2012. Definiteness in superlatives. In *Proceedings of the 18th Amsterdam Colloquium*.
- Pancheva, Roumyana. & Barbara Tomaszewicz. 2012. Cross-linguistic Differences in Superlative Movement out of Nominal Phrases. In *Proceeding of WCCFL 30*, UC Santa Cruz.
- Schwarz, Bernhard. 2005. Modal superlatives. In *Proceedings of SALT 15*, 187-204.
- Sharvit, Yael. & Penka Stateva. 2002. Superlative expressions, context, and focus. *Linguistics and Philosophy* 25.4:453-505.
- Szabolcsi, Anna. 1986. Comparative superlatives. In *MIT Working Papers in Linguistics*, ed. by N. Fukui et al., Vol. 8, 245-265. MIT Press, Cambridge.
- Szabolcsi, Anna. 2012. Compositionality without word boundaries: (the) more and (the) most. In *Proceedings of SALT 22*.
- Takahashi, Masahiko. 2011. Some theoretical consequences of Case-marking in Japanese. Doctoral dissertation. University of Connecticut.
- Wurmbrand, Susi. 2011. Tense and aspect in English infinitives. Ms., University of Connecticut. Storrs.
- Wurmbrand, Susi. To appear. QR and selection: Covert evidence for phasehood. In *Proceedings of the North Eastern Linguistics Society Annual Meeting 42*, ed. by Stefan Keine and Shayne Sloggett. Amherst: University of Massachusetts, GLSA.

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