More Students Attended FASL than CONSOLE[*]

Roumyana Pancheva
University of Southern California

1. Overview

In the Slavic languages, the title of this paper cannot be rendered with a phrasal comparative; a clausal comparative must be used instead. I evaluate three types of theories of phrasal comparatives and conclude that only one – the small clause analysis – can accommodate the new observation. I then offer an explanation of the observation in terms of a universal and inviolable anti-locality constraint on movement, in conjunction with a variable and violable constraint on extraction out of subjects. The proposal provides support for the existence of non-overt syntactic structure in phrasal comparatives and for the use of the same comparative quantifier in both phrasal and clausal comparatives; it also further illuminates the role of locality and islands in movement.

2. The Empirical Observation

The empirical contribution of this paper is the observation that phrasal comparatives in Slavic are syntactically restricted, as described in (1).

(1)   In the Slavic languages, a *more*-NP cannot be an underlying
        subject (an external argument) in phrasal comparatives.

Greek, Hungarian and English are like the Slavic languages, while Turkish, Hindi, Japanese and Korean allow phrasal comparatives with *more*-NP underlying subjects. Here I focus on Slavic, but the solution I

propose for (1) will account for the cross-linguistic facts as well, as briefly discussed in section 4.4. That our title is a reduced clausal, not a phrasal, comparative, will be shown in section 4.5.

The Slavic languages clearly mark the distinction between clausal and phrasal comparatives. In Polish, the counterparts of *than* are *niż* (2a) in clausal and *od* (2b) in phrasal comparatives. The complement clause to *niż* may be partially or maximally elided up to a single remnant. DP remnants do not dependent for case on *niż* but have their case determined inside the complement clause. In contrast, at most one DP may appear with *od* and this DP is case-marked genitive by *od*. *Niż* is a conjunction or a complementizer used only in comparatives. *Od* is a preposition 'from' and is used elsewhere in Polish, in addition to comparatives. See Pancheva (2006) for further discussion of the clausal/phrasal distinction in Polish, and Juzwa (2006), of ellipsis in *niż* comparatives.

(2)   a. Jan   waży   więcej   *niż*   Agnieszka   (waży).
         Jan   weighs   more   than   Agnieszka$_{-NOM}$ (weighs)
      b. Jan   waży   więcej   *od*   *Agnieszki*.
         Jan   weighs   more   from   Agnieszka$_{-GEN}$
         'Jan weighs more than Agnieszka (does).'

In Bulgarian, the same preposition *ot* 'from' is the counterpart to *than* in clausal and phrasal comparatives. A degree *wh*-word *kolkoto* 'how many/much' is obligatory in clausal comparatives (3a). In phrasal comparatives, the DP is marked accusative by *ot* (3b), with overt case seen on pronouns only, as elsewhere in the language. See Rudin (1984) and Pancheva (2006) for further discussion of Bulgarian comparatives.

(3)   a. Tja   e   po-visoka   *ot-kolkoto*   e   toj
         she   is   *er*-tall   from-how.much   is   he$_{-NOM}$
      b. Tja   e   po-visoka   *ot*   *nego*
         she   is   *er*-tall   from   him$_{-ACC}$
         'She is taller than he is/him.'

Let me now illustrate (1). Consider Bulgarian first. In (4a-b) the *more*-NP is the subject of a transitive predicate and the phrasal comparative (4a) is not acceptable while its clausal counterpart (4b) is. Importantly, the unacceptability of the phrasal comparatives is variable,

among speakers and sentences – this is indicated with "??/*". Examples (5a-b) show that the *than*-PP *ot Varna* is acceptable, as long as *more* is part of an adjectival or adverbial phrase. Finally, (5c) demonstrates that the *more*-NP can be an object in phrasal comparatives.

(4) a. ??/***Poveče   turisti**   posetixa Sofia *ot*   Varna
          more   tourists   visited   Sofia from Varna
          'More tourists visited Sofia than Varna'.
     b. *Poveče   turisti*   posetixa Sofia *ot-kolkoto*   Varna
          more   tourists   visited   Sofia from-how-many Varna
          'More tourists visited Sofia than visited Varna'.
(5) a. Sofia e *po-goljama ot*(-*kolkoto*   e)   Varna
          Sofia is more-big   from(-how.much   is)   Varna
          'Sofia is bigger than Varna (is).'
     b. Poseštavam Sofia *po-često   ot*(-*kolkoto*)   Varna
          visit-1sg   Sofia more-often from(-how.much) Varna
          'I visit Sofia more often than (I do) Varna.'
     c. Posetih   *poveče   mesta   ot*(-*kolkoto*)   Ana
          visited-1sg more   places   from(-how.many) Ana
          'I visited more places than Ana (did).'

The facts of Polish are identical. I only show below the minimal contrasts. In (6a-b) the *more*-NP is a subject and only the clausal comparative (6b) is well-formed; (6a), the phrasal variant, is not. In case the comparison is adjectival (7a) or adverbial (7b), the phrasal comparative is fully acceptable. As these examples illustrate, the PP *od Słowacji* is acceptable in comparatives, so the contrast with (6a) must be due to the position of *more*. Finally, when the *more*-NP is an object, as in (7c), the phrasal comparative is also well-formed, confirming that there is no general requirement for nominal comparatives to be clausal. The clausal counterparts of (7a-c), not illustrated here, are also acceptable.

(6) a. ??/***Więcej uczniów** zwiedziło Czechy *od*   Słowacji.
           more students visited   Czech R. from Slovakia$_{GEN}$
          'More students visited the Czech Republic than Slovakia.'
     b. *Więcej uczniów* zwiedziło Czechy *niż*   Słowację.
           more   students visited   Czech R. than Slovakia$_{ACC}$
          'More students visited the Czech Republic than Slovakia.'

(7) a. Czechy   są   *większe od* Słowacji.
        Czech R.   are   bigger   from Slovakia$_{GEN}$.
        'The Czech Republic is bigger than Slovakia.'

   b. Marek   zwiedził Czechy wcześniej *od*   Słowacji.
        Marek   visited   Czech R. earlier   from Slovakia$_{GEN}$
        'Marek visited the Czech Republic earlier than Slovakia.'

   c. Marek   zwiedził *więcej   miejsc   od*   Anny.
        Marek   visited   more   places   from Anna$_{GEN}$
        'Marek visited more places than Anna.'

This section presented a novel generalization about the distribution of *more* in Bulgarian and Polish comparatives.[1] When *more* is part of underlying subjects, phrasal comparatives are degraded. Next, I evaluate the existing theories of phrasal comparatives in light of this finding.

3. Evaluating the Analyses of Phrasal Comparatives

There are two main types of analysis of phrasal comparatives. The Reduction Analysis (RA) holds that the complement to *than* is a CP in both phrasal and clausal comparatives. In contrast, the Direct Analysis (DA) claims that the complement to *than* in phrasal comparatives is a DP. In earlier work (Pancheva 2006), I argued for a particular modification of the RA – a Small Clause Analysis (SCA) – suggesting that in phrasal comparatives the complement to *than* is a small clause whose subject is exceptionally case-marked by *than*.

Below I review the basics of the three theories. The conclusion is that the standard RA and the DA are not able to accommodate naturally the empirical finding concerning the distribution of *more*, while the SCA can, after a modification. Then, in section 4, I offer an explanation for the subject restriction, based on the modified SCA.

3.1 Background

In clausal comparatives *than* has a CP complement (see (8)). A *wh*-operator in Spec, CP binds a degree variable in a position syntactically parallel to the position occupied by *more* in the matrix clause (see Heim

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[1] The facts are the same in Slovenian and Serbian/Croatian. In Russian no nominal comparatives can be phrasal. Czech does not have productive phrasal comparatives.

2000 for an overview). In English and Polish the *wh*-operator is null[2], while in Bulgarian it is pronounced. Parts of the CP can be elided, up to a single remnant. In (8) the *v*P is elided, as indicated by shading.[3]

(8)   He visited more cities than **she did**.
        … than $[_{CP}$ ***wh*$_1$ she$_2$ did** $[_{vP}$ **x$_2$ visit d$_1$-many cities**$]]$

The syntax of phrasal comparatives continues to be controversial. The earliest generative accounts are of the RA type, as in (9a), which differs from (8) only in the size of ellipsis and in the mechanism of case-marking the remnant. Proponents include Smith (1961); Ross (1967); Bresnan (1973); Lechner (2001, 2004); Merchant (2009), among many others. The DA in (9b) also has a long history (Hankamer 1973; Kennedy 1999, 2007; among many others).

(9)   He visited more cities than **her**.
        a. than $[_{CP}$ ***wh*$_1$** $[_{TP}$ **she$_2$** $[_{TP}$ **x$_2$ T$_{PAST}$ visit d$_1$-many cities** $]]]$ (RA)
        b. than $[_{DP}$ **her**$]$ (DA)

Syntactically, the 'remnant' DP in phrasal comparatives behaves as the complement of a preposition, a fact captured naturally by the DA. However, the DA has to posit two different *more*s in phrasal and clausal comparatives (see Heim 1985; Kennedy 1999, 2007; Bhatt and Takahashi 2007). The CP complement of *than* in (9a) is interpreted as a predicate of degrees.[4] Yet the DP complement of *than* in (9b) is an individual, not a predicate of degrees. Endowing phrasal *than* with the power to type-shift individuals into predicates of degrees would amount to a non-compositional treatment. Thus, the DA posits two *more*s.

In Pancheva (2006), I proposed the SCA as a way of capturing the syntactic behavior of the *than* PP while preserving the lexical semantic parsimony of the RA. The SCA holds that the complement of *than* is a small clause, whose subject is ECM-ed by *than* and whose predicate is copied from the matrix at LF (see (10); the copy is shaded in (10b)).

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[2] Some Polish speakers allow *ile* 'how many/much' in *niż* comparatives (Pancheva 2006).
[3] Traces are used in movement representations instead of copies, to save space.
[4] In Pancheva (2006) I suggested that in Bulgarian the CP denotes a definite degree description, with clausal *than* turning the *than*-PP into a predicate of degrees. Whether or not this particular detail is correct would not change the argument.

(10) He visited more cities than **her**.   (SCA)

    a. than   [_{PredP} **she Δ**]

    b. than   [_{PredP} **she** [_{vP} **x visit d-many cities**]]

The copying account of ellipsis allowed for the small clause to end up denoting a predicate of degrees without the need for *wh*-movement. Here, however, I will need to modify this aspect of the SCA.

These brief remarks conclude the introduction to the three theories of phrasal comparatives. More details follow below, where I ask whether each theory can account for the restriction observed in section 2.

3.2   The Direct Analysis

Under the DA, phrasal comparatives are mono-clausal and so the source of the restriction has to lie in the type of *more*. Yet neither the syntax nor the semantics of phrasal *more* can be naturally implicated. I discuss two recent accounts, Kennedy (1999, 2007) and Bhatt and Takahashi (2007).

For Kennedy (1999, 2007) phrasal and clausal *more* have the same syntax: both stay in-situ, which, in the cases relevant here, means inside the *more*-NP. (Kennedy does not discuss nominal comparatives, so I extrapolate from his analysis of adjectival comparatives.) The semantics of the two *more*s differs only in the type of their second argument, the *than*-PP. I see only two ways in which the subject restriction can even be stated under this version of the DA, and both are problematic.

One option would be to preclude extraposition of *than*-PPs from a subject *more*-NP when the complement of *than* is a DP, but not when it is a CP. While extraposition out of subjects can certainly be restricted, it is unlikely that it would be parameterized relative to the type of complement to the P heading the PP that moves. One could utilize a categorical distinction between *niż*- and *od*-phrases in Polish, allowing only the former to extrapose out of subjects, yet the same could not be said about Bulgarian, where *ot* heads PPs in both phrasal and clausal comparatives. More importantly, leaving the *than*-PP inside the *more*-NP does not result in well-formed sentences, as the Bulgarian (11a) and Polish (11b) illustrate.[5] The same is true for our title, as seen in (11c). Finally, a movement account of *than*-PP extraposition has been called into question (see remarks in Smith 1961, and Bhatt and Pancheva 2004).

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[5] (11a) is acceptable on an irrelevant reading where the *from*-PP modifies the NP.

(11) a. * *Poveče turisti   ot*   Varna   posetixa Sofia
          more   tourists from Varna   visited Sofia
          'More tourists visited Sofia than Varna'.
     b. * *Więcej uczniów od* Słowacji   zwiedziło Czechy
          more   students from Slovakia-GEN visited   Czech R.
          'More students visited the Czech Republic than Slovakia.'
     c. * More students than CONSOLE attended FASL.

The second option would accept the premise that the *than*-PPs is not initially merged with the *more*-NP, but that the two are combined at LF. (This already substantially changes Kennedy's approach.) Subject *more*-NPs would then be precluded from undergoing the necessary QR when *more* is phrasal. When *more* is clausal, QR of subject *more*-NPs would be allowed, as would be QR of *more*-NP objects for both phrasal and clausal *more*s. Clearly, this would not be a principled explanation.

The DA account of Bhatt and Takahashi (2007), proposed for Hindi and Japanese (for English they endorse the RA), differs in several ways from Kennedy's. *More* is not interpreted in-situ but has to QR. Clausal *more* has two arguments – the *than*-PP and the QR site – and both are predicates of degrees (see (12), the LF for (4b)). Phrasal *more* has three arguments (see (13), the LF for (4a)). The first is an individual denoted by the *than*-PP; the third is an individual denoted by the associate, *Sofia* in (4a). The second argument is a predicate of individuals and degrees, formed as the result of QR of *more* and of the scrambling of the associate. For the semantic composition to work, phrasal *more* needs to tuck in below the moved associate, as in (13).

(12) [$more_{clausal}$ [ot [wh_2 Varna$_3$ [$_{TP}$ *d_2-many tourists* visited x$_3$]]]]$_1$
        [Sofia$_2$ [$_{TP}$ *d_1-many tourists* visited x$_2$]

(13) Sofia$_2$ [[$more_{phrasal}$ [ot [Varna]]]$_1$ [$_{TP}$ *d_1-many tourists* visited x$_2$]]

(13) yields the unacceptable phrasal comparative (4a). The fact that the degree variable is inside the subject cannot be blamed, since the same is true for (12). The tucking in of phrasal *more* cannot be blamed either, since it also derives the LF of the acceptable (5c), as in (14).

(14) I$_2$ [[$more_{phrasal}$ [ot [Ana]]]$_1$ [$_{TP}$ x$_2$ visited *d_1-many places*]]

The scrambling of the associate too is common to (12), (13) and (14). Thus, it seems that the only possibility is to stipulate that phrasal *more* cannot QR from the subject position, unlike clausal *more*. QR from other positions would be allowed. Clearly, this would not be an explanation.

3.3 The Reduction Analysis

Under the RA, the phrasal and clausal comparatives in (4a,b) and (6a,b) have the same *more* and the same matrix syntax. An explanation for the different acceptability needs to be sought inside the *than*-clauses. Yet, aside from case licensing, (15) and (16), the LFs of the *than*-clauses of (4a,b) and (6a,b), are the same. In all, the remnant is scrambled out of the TP, which is elided. The difference is only in the pronunciation of *wh* (Bulgarian, (15)) or the type of *than* (Polish, (16)). These alone cannot account for the difference in acceptability of the resulting sentences.

(15) a. *ot* $[_{CP} \emptyset_{wh2}$ Varna$_3$ $[_{TP}$ *d_2-many tourists* visited x$_3$]]
      b. *ot* $[_{CP} kolkoto_2$ Varna$_3$ $[_{TP}$ *d_2-many tourists* visited x$_3$]]

(16) a. *od* $[_{CP} \emptyset_{wh2}$ Slovakia$_3$ $[_{TP}$ *d_2-many students* visited x$_3$]]
      b. *niż* $[_{CP} \emptyset_{wh2}$ Slovakia$_3$ $[_{TP}$ *d_2-many students visited* x$_3$]]

But perhaps the explanation lies in the mechanism of case licensing. For Lechner (2001, 2004), who writes about English and German, the remnant in phrasal comparatives has default case. This cannot work for the languages discussed here, nor could it provide an explanation for the subject restriction. Merchant's (2009) RA gives an account of case licensing that works better for languages like Polish or Bulgarian. He proposes that in Greek phrasal comparatives the remnant moves out of the CP into the functional domain of the preposition, where it is exceptionally case marked. The LFs for the *than*-clauses in the Polish (6a) and (7c) under this version of the RA are given in (17).

(17) a. *od* Slovakia$_3$ $[_{CP} \emptyset_{wh2}$ $[_{TP}$ *d_2-many students visited* x$_3$]]
      b. *od* Ana$_3$ $[_{CP} \emptyset_{wh2}$ $[_{TP}$ x$_3$ visited *d_2-many places*]]

The ECM movement of the remnant out of the CP cannot be the reason for the unacceptability of (6a)/(17a), since the same type of movement is posited in the acceptable (7c)/(17b). It is also unclear how to link the

movement of the remnant to the position of origin of the *wh*-operator inside the *v*P – if anything, movement of objects tends to be freer than movement of subjects. Thus, the explanation for the empirical generalization in section 2 cannot lie in the mechanism of case licensing.

3.4   The Small Clause Analysis

Like the RA, the SCA posits the same *more* and matrix clause in the two types of comparatives. Thus, the explanation for the subject restriction must lie in the different syntax of the two *than*-clauses. However, the SCA of Pancheva (2006), where the degree predicate in the *s*mall clause is copied from the matrix after QR of *more* cannot capture the distinction. Clearly, simply copying the degree predicate – the shaded constituent – will not differentiate between (18a) and (18b), the LFs that the SCA assigns to Polish (6a) and (7c).

(18)   a. *od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *d$_2$-many students* visit x$_3$]]
       b. *od* [$_{PredP}$ Ana$_3$ [$_{vP}$ x$_3$ visit *d$_2$-many places*]]

The needed modification to the SCA is as follows. In phrasal comparatives, *wh*-movement creates a degree predicate in the *than* small clause, just as happens in clausal comparatives. In both types of *than* clauses *wh*-movement originates in a position identical to the one containing *more* in the matrix, satisfying the identity condition for the resolution of ellipsis. In other words, when the *more*-NP is an underlying subject, the *wh*-movement originates in the Spec, *v*P position in the *than*-clause, in both clausal and phrasal comparatives. The difference is that there is no C in the *than* small clause to attract the *wh*-operator. The movement is purely for the creation of a degree predicate, as in Heim and Kratzer (1998), who tie predicate creation to syntactic movement. The *wh*-operator in the *than* small clause moves to the edge of the predicate – *v*P or *a*P, depending on the type of comparative. This is as far as it can go, in the absence of functional structure in the small clause. The LFs for the Polish (6a) and (7c) under the modified SCA are as in (19) (to be further modified in section 4.1). The small clause predicate (shaded) is obligatorily elided.

(19)   a. *od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *wh$_2$*   [$_{vP}$ *d$_2$-many students* visit x$_3$]]]
       b. *od* [$_{PredP}$ Ana$_3$ [$_{vP}$ *wh$_2$*   [$_{vP}$ x$_3$ visit *d$_2$-many places*]]]

Linking variable abstraction to syntactic movement, as in Heim and Kratzer (1998), imposes locality constraints on the creation of predicates, a desirable result in general. Here, we will capitalize on the locality differences between the *wh*-chains in (19a-b) to account for the subject restriction observed in section 2.

4.   Explaining the Observation

4.1   What Moves?

The commonly assumed LF for clausal comparatives has a degree *wh*-operator in Spec, CP binding a degree variable inside the gradable predicate. But is it just the degree *wh*-word that moves in narrow syntax in *wh*-movement languages or does the degree *wh*-word pied-pipe the whole gradable predicate? The latter is suggested in Vergnaud (1974); Chomsky (1977); and Kennedy (1999). These accounts would posit the structure in (20a) rather than the one in (20b) in the case of (6b).

(20) a. *niž* [$_{CP}$ *wh-many students*$_2$ [$_{TP}$ Slovakia$_3$ [$_{TP}$ [$_{vP}$ x$_2$ visit x$_3$]]]]
      b. *niž* [$_{CP}$ *wh*$_2$ [$_{TP}$ Slovakia$_3$ [$_{TP}$ [$_{vP}$ d$_2$-many students visit x$_3$]]]]

The mismatch in (20a) between the structure produced by narrow syntax and the one needed at LF needs to be fixed, but there are precedents for this in the literature on degree questions and comparatives; thus, both (20a) and (20b) can yield logical forms that denote predicates of degrees.

Which of (20a-b) is the correct output of narrow syntax? Since subjects are islands for extraction (see section 4.3 for further discussion) yet (6b) is fully acceptable, (20a) must indeed be the right structure. The same facts should obtain in phrasal comparatives. Specifically, the whole *wh*-phrase should move to the edge of the small clause, as in (21a), rather than just the degree *wh*, as in (21b), to avoid an island violation.

(21) a. *od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *wh-many students*$_2$ [$_{vP}$ x$_2$ visit x$_3$]]]
      b. *od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *wh*$_2$ [$_{vP}$ d$_2$-many students visit x$_3$]]]

Next, I will suggest that (21a) violates a universal anti-locality constraint and thus cannot be produced. The alternative, (21b), violates a subject island, which leads to variably degraded acceptability.

4.2   A Universal Anti-Locality Constraint on Movement

Movement from Spec, *v*P to (another Spec,) *v*P violates (22), an anti-locality constraint on movement, which should be universally applicable.

(22)   *Anti-Locality Constraint on Specifiers*
        The Specifier of a head H cannot move to a Specifier of H

An observation along the lines of (22), allowing for differences in theoretical frameworks, goes back to Lasnik and Saito (1992: 110-111), where subject topicalization from Spec, TP to TP is shown to be unavailable. A general constraint like (22) is justified on configurational grounds. It favors an approach to phrase structure building along the lines of *Bare Phrase Structure* (Chomsky 1995) over an X-bar-theoretic system. To see why, consider the description of a chain created by a movement such as the one prohibited in (22). In set-theoretic terms, movement of an element X can be defined as the ordered set in (23), where B and A are X's sisters before and after movement, respectively.

(23)   <{X, A}, {X, B}>

According to X-bar theory, Spec, *v*P is a distinct position from an adjunct to *v*P, thus the movement chain we are considering can be non-trivially stated as in (24a). In Bare Phrase Structure terms the chain would be represented as in (24b) and it would be non-distinguishable from a trivial, non-movement chain. That is, such a movement cannot even be stated non-vacuously. Rather than a stipulation, which it is from the perspective of X'-theory, (22) falls out as a consequence of the tenets of Bare Phrase Structure. To the extent that (22) is supported as part of the explanation for the empirical facts presented here, the Bare Phrase Structure approach receives an endorsement as well.

(24)   a. <{*wh*-NP, *v*P}, {*wh*-NP, *v*'}>
        b. <{*wh*-NP, *v*P}, {*wh*-NP, *v*P}>

The *Anti-Locality Constraint on Specifiers* in (22) complements the *Anti-Locality Constraint* on complements of phase heads, formulated by Abels (2003). (22) should in principle apply to all heads, not just phase heads, although for our purposes the relevant head is agentive *v.*

The consequences for comparatives are clear. In clausal comparatives, movement of a subject *wh*-phrase is from Spec, *v*P to Spec, CP. It is not subject to the anti-locality prohibition in (22) and is allowed. In phrasal comparatives, movement of the VP-internal object *wh-many places* (25a) and of the VP adjunct *wh-early* (25b) to the edge of *v*P is not too local, and is allowed; this is why (7c) and (7b), and their Bulgarian counterparts, are acceptable. Only the movement of a subject NP in (25c) is precluded by (22) as too local.

(25) a. *od* [$_{PredP}$ Ana$_3$ [$_{vP}$ *wh*-many places$_2$ [$_{vP}$ x$_3$ [$_{VP}$ visited x$_2$]]]]
      b. *od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *wh*-early$_2$ [$_{vP}$ Marek [$_{VP}$ [$_{VP}$ visit x$_3$] t$_2$]]]
      c. * *od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *wh-many students*$_2$ [$_{vP}$ x$_2$ visit x$_3$]]]

Importantly, the structure in (25c) should be impossible to generate, but instead of the predicted categorical ungrammaticality, (6a) and its Bulgarian counterpart (4a) show variability in the degree of their unacceptability. I address this question in the next sub-section.

A final prediction of our analysis is that degree dependencies originating in unaccusative subjects should be permitted in phrasal comparatives, on the assumption that unaccusative subjects do not originate in Spec, *v*P, therefore moving them to the edge of the *v*P would not be ruled out by (22). As the Bulgarian (26) and the Polish (27) show, this prediction is confirmed – such sentences are judged acceptable.[6]

(26) Dnes poveče hora zaginaxa pri katastrofi *ot* včera.
      today more people died at accidents from yesterday
      'More people died in traffic accidents today than yesterday.'

(27) W ostatnich latach lodowce w Himalajach topniały szybciej
      in latest years glaciers in Himalayas melted faster
      od ubiegłego wieku
      from last$_{-GEN}$ century$_{-GEN}$
      'In the past few years glaciers in the Himalayas have melted faster than in the last century.'

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[6] For reasons I do not understand, the adverbials that are allowed as remnants in phrasal comparatives are restricted in Polish and Serbian. For instance, these languages do not allow *yesterday* as a remnant.

Neither the RA nor the DA can capture the differences in acceptability between phrasal comparatives with different types of *more*-NP subjects. The constraint in (22) is not applicable to either analysis: in the case of the RA, *wh*-movement in phrasal comparatives is to Spec, CP, as in clausal comparatives, and in the case of the DA there is no *wh*-movement in phrasal comparatives.

The SCA account, however, is still incomplete. Why aren't phrasal comparatives, whose *wh*-operator is inside Spec, *v*P subjects, universally precluded? The *Anti-Locality Constraint on Specifiers* should, after all, be universal and inviolable. Yet, the relevant sentences in Slavic show variable degrees of unacceptability, and in languages like Hindi or Turkish they are fully acceptable. The next two sections address the issues of gradient unacceptability and cross-linguistic parameterization.

4.3   Variable Sub-Extraction from Subjects

Subjects are islands for extraction. Contrasts such as those in (28) have been traditionally captured by constraints that categorically prohibit sub-extraction from subjects (e.g., the *Subject Condition* of Huang's (1982) *Condition on Extraction Domains*).

(28)   a.   *   Who$_1$ did [a story about t$_1$] cause a sensation?
         b.   Who$_1$ did you read [a story about t$_1$]?

It has also been noted, however, that violations of subject islands are variable in acceptability. Stepanov (2007) argues that the prohibition is against sub-extraction from those subjects that have been moved to Spec, TP and that extraction from subjects from within *v*P is allowed.[7,8] See Gallego and Uriagereka (2007) and Corver (2006) for further discussion of sub-extraction from subjects.

Jurka (2009) offers experimental evidence from German that subjects in Spec, *v*P and Spec, TP behave differently with respect to sub-extraction. Extraction from in-situ transitive subjects is better than extraction from the same subjects when they are moved, and is even

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[7] Further variability arises between underlying and derived subjects within the *v*P, e.g., Chomsky (2005, 2008). His *Edge Condition* captures this distinction by positing that expressions in phase edges become internally opaque.

[8] Some of Stepanov's examples involve subjects of unaccusatives. See footnote 7.

better than extraction from moved objects.[9] Importantly for us, extraction from subjects in Spec, vP is not categorically precluded and it also exhibits substantial variability among speakers. Sentences with such extractions received an average rating of 3.55 on a 1-7 scale, with individual participants' means ranging from less than 2 to more than 5.5.

In Polish and Bulgarian too, Spec, vP-subjects are islands, with extractions out of them varying in unacceptability. As with the phrasal comparatives with *more*-NP subjects discussed here, the "??/*" in (29) and (30) is meant to indicate the variability in acceptability judgments, among speakers and sentences.

(29) ??/*Za   kogo$_1$ iskaš   [statija   t$_1$] da predizvika   senzacija?
      about whom want$_{-2SG}$ article   to cause   sensation
      'An article about whom do you want to cause a sensation?'

(30) ??/*Którzy$_1$ chciałbyś   żeby   [t$_1$ studenci] zagłosowali?
      which   wish$_{-2SG}$ that$_{-SUBJ}$ students voted
      'Which students do you wish would vote?'

I would like to suggest that this variable unacceptability of subject sub-extractions is behind the variable unacceptability of phrasal comparatives with *more*-NP subjects. (25c), which involves movement of the whole *wh*-phrase subject, is ruled out by (22). In an alternative derivation, just the degree *wh*-word is extracted from the subject, as in (31), avoiding the applicability of (22). This alternative derivation, however, causes an island violation and results in decreased and variable acceptability.

(31) ??/**od* [$_{PredP}$ Slovakia$_3$ [$_{vP}$ *wh* $_2$ [$_{vP}$ [d$_2$-*many students*] visit x$_3$]]]

One might wonder why the deletion of the vP in the *than* small clause does not ameliorate the island violation. It is interesting to note that whereas sluicing (TP-deletion) does indeed repair island violations, vP deletion doesn't (Merchant 2008). Our data is thus consistent with the more general effect of ellipsis on *wh*-extraction out of islands.

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[9] Extraction from in-situ subjects is still worse than extraction from in-situ objects, so the Subject Condition cannot be completely reduced to a freezing effect. See footnote 7.

To sum up, the unacceptability of phrasal comparatives with *more*-NP subjects in Bulgarian and Polish is not absolute, because sub-extraction from subjects is not absolute. Sub-extraction of the *wh*-degree operator out of the Spec, *v*P-subject, as in (31), is an island violation and the penalty is variably degraded acceptability.

4.4   Wh-in-Situ

As noted in section 2, *wh*-in-situ languages such as Turkish, Hindi, Japanese and Korean allow phrasal comparatives with *more*-NP underlying subjects. This is expected under the analysis developed here, which crucially relies on properties of *wh*-movement. The anti-locality constraint in (22) is irrelevant to the syntax of *wh*-phrase subjects in phrasal comparatives in *wh*-in-situ languages. Furthermore, *wh*-dependencies can be established from within islands, thus a degree predicate can be formed in the *than* small clause while the degree *wh*-word remains inside the subject island. As a consequence, phrasal comparatives with *more*-NP subjects are always categorically acceptable.

Incidentally, our analysis also provides an argument against pied-piping as a solution to island-insensitivity in *wh*-in-situ languages (Nishigauchi 1986, a.o.). In the case of phrasal comparatives with *more*-NP subjects, moving the island, the embedded *v*P subject, is prohibited by the *Anti-Locality Constraint on Specifiers* in (22).

4.5   Apparent Phrasal Comparatives in English

Since English is not a *wh*-in-situ language, we would expect its phrasal comparatives to show the same subject restriction as in Polish and Bulgarian. Since the title of our paper is acceptable, the conclusion must be that it is in fact a reduced clausal comparative, as in (32).

(32)   than [$_{CP}$ $\emptyset_{wh2}$ [$_{TP}$ CONSOLE$_1$ [$_{TP}$ x$_2$ T$_{PAST}$ [$_{vP}$ x$_2$ attend x$_1$]]]].

Indeed, whereas remnants in phrasal comparatives may be extracted (although a bit awkwardly perhaps), as (33) illustrates, the remnant in (32) may not be (see (34)).

(33)   a. $^?$Who did the students attend more conferences than?
         b. $^?$Which conference did the students attend FASL earlier than?
         c. $^?$Which conference was FASL better attended than?

(34)   *Which conference did more students attend FASL than?

5.   Conclusion

This paper presents a novel empirical observation concerning the distribution of *more* in Slavic. When *more* is part of adjectival or adverbial phrases, objects or derived subjects, phrasal comparatives are acceptable. When *more* is part of an underlying subject, i.e., a subject that originates in Spec, *v*P, only the clausal comparative is well-formed; its phrasal counterpart shows variable degrees of unacceptability.

The empirical finding supports the small clause analysis of phrasal comparatives over its alternatives. We conclude that phrasal comparatives involve non-overt syntactic structure, similarly to their clausal counterparts. This leads to economy in both the LF syntax and in the functional lexicon. Only one lexical item *more* is needed for phrasal and clausal comparatives, and its LF syntax, arguably that of a degree quantifier, is the same in both. Differences arise from the syntax of the *than* clauses – a full or a small clause – and their realization at PF.

In addition to its main results, this paper contributes to the study of *wh*-movement and subject islands. A universal *Anti-Locality Constraint on Specifiers* is formulated and argued to follow from the principles of Bare Phrase Structure. Further evidence is provided for variability in sub-extraction from subject islands.

References

Abels, Klaus (2003). **"**Successive Cyclicity, Anti-Locality, and
        Adposition Stranding" PhD thesis, University of Connecticut.
Bhatt, Rajesh and Shoichi Takahashi (2007). "Direct Comparisons: Re-
        surrecting the Direct Analysis of Phrasal Comparatives" SALT 17.
Bhatt, Rajesh and Roumyana Pancheva (2004). "Late Merger of Degree
        Clauses" *LI* 35, 1-45.
Bresnan, Joan (1973). "The Syntax of the Comparative Clause
        Construction in English," *Linguistic Inquiry* 4, 275-343.
Chomsky, Noam (1995). "Bare Phrase Structure", in G. Webelhuth (ed.)
        Government and Binding Theory and the Minimalist Program.
        Cambridge: Blackwell. 383–439.

Chomsky, Noam (2008). "On Phases". In *Foundational Issues in Linguistic Theory: Essays in Honor of Jean-Roger Vergnaud,* ed. by R. Freidin, C. P. Otero, M. L. Zubizarreta, 133-166. MIT Press.

Corver, Norbert (2006). "Subextraction" In M. Everaert and H. van Riemsdijk (eds.) *The Blackwell Companion to Syntax*, v. IV. Blackwell.

Gallego, Ángel and Juan Uriagereka (2007). "Sub-extraction from Subjects: A Phase Theory Account", In J. Camacho, N. Flores-Ferrán, L. Sánchez, V. Déprez and M. J. Cabrera (eds.) *Romance Linguistics 2006*. John Benjamins, 149-162.

Hankamer, Jorge. (1973). "Why There are Two Thans in English" CLS 9, 179-191.

Heim, Irene (1985). "Notes on Comparatives and Related Matters," ms, University of Texas, Austin.

Heim, Irene (2000). "Degree Operators and Scope," in *SALT X*, Cornell University, 40–64.

Heim, Irene and Angelika Kratzer (1998). *Semantics in Generative Grammar.* Blackwall.

Huang, C.-T. James (1982). "Logical Relations in Chinese and the Theory of Grammar." Ph.D. thesis, MIT.

Jurka, Johannes (2009). "Gradient Acceptability and Subject Islands in German" Ms. University of Maryland.

Juzwa, Urszula (2006). "The Syntax of Ellipsis in English and Polish: A Comparative View" Ph.D. thesis, Adam Mickiewicz University.

Kennedy, Christopher (1999). *Projecting the Adjective*: *The Syntax and Semantics of Gradability and Comparison*. Garland Press, NY.

Kennedy, Christopher (2007). "Modes of Comparison" CLS 43.

Lasnik, Howard and Mamoru Saito (1992). *Move α: Conditions on its Applications and Outputs*. Cambridge, MA: MIT Press.

Lechner, Winfried (2001). "Reduced and Phrasal Comparatives". *NLLT* 19, 4, 683-735.

Lechner, Winfried (2004). *Ellipsis in Comparatives.* Mouton de Gruyter.

Merchant, Jason (2008). **"**Variable island repair under ellipsis" In Kyle Johnson (ed.) *Topics in Ellipsis*, CUP, 132-153.

Merchant, Jason (2009). "Phrasal and Clausal Comparatives in Greek and the Abstractness of Syntax" *Journal of Greek Linguistics* 9: 134-164.

Nishigauchi, Taisuke. (1986). *Quantification in Syntax*, Ph.D. thesis, University of Massachusetts. Amherst.

Pancheva, Roumyana (2006). "Phrasal and Clausal Comparatives in Slavic" *FASL* 14, 236-257.

Ross, John R. (1967). "Constraints on Variables in Syntax" MIT thesis.

Rudin, Catherine (1984), "Comparing Comparatives", in Joseph Drogo, Veena Mishra and David Tester (eds.), *20th Regional Meeting of the Chicago Linguistic Society*, 334–343.

Smith, Carlota (1961). "A Class of Complex Modifiers in English" *Language* 37 (3), 342-365.

Stepanov, Arthur (2007). "The End of CED? Minimalism and Extraction Domains". *Syntax* 10 (1), 80-126.