

# Phrasal Comparison in Turkish: Associating Individuals with Implicit Degrees\*

Stefan Hofstetter  
stefan.hofstetter@uni-tuebingen.de

Universität Tübingen

## 1. Introduction

For several decades now, an impressive amount of work in linguistic research on comparison constructions has been dedicated to the question of whether a comparative apparently featuring nothing but a single noun phrase (or determiner phrase, depending on the syntactic approach one is pursuing) in its *than*-component such as (1a) below should be given a direct, phrasal analysis, or whether it should be derived from an underlying source that is clausal in nature, roughly along the lines of (1b), cf., for instance, among many others, Bresnan (1973), Hankamer (1973), Hoeksema (1983), Napoli (1983), von Stechow (1984), Kennedy (1997, 2007), Lechner (2004) or Bhatt & Takahashi (2007, to appear), where fundamentally different conclusions are reached.

- (1) a. Mary is taller than Peter.  
b. Mary is taller than Peter is ~~d-tall~~.

At the same time, however, a directly related issue has received considerably less attention, namely what exactly a direct, phrasal account of comparison should look like. For even though it remains highly controversial till this very day whether languages like English or German display phrasal comparison at all, the need for such an analysis has been shown independently for other languages, including the Hindi-Urdu *se*-construction (Bhatt & Takahashi (2007), (to appear)) as well as comparison in the Turkish language, generally (Hofstetter (2009)). To the best of my knowledge, there is only one basic phrasal approach to comparison on the market at the moment, which I shall refer to as the

---

\* I am certainly most indebted to my Turkish native speaker informants, without the help and incredible patience of whom this work surely couldn't have been carried out. Furthermore, I am grateful to various audiences at the University of Tübingen as well as to Lisa Matthewson for helpful comments and advice, just as I am to the audience of *SULA 6-bar* in Manchester in May 2011 and to that of the satellite event on degree semantics accompanying *Sinn und Bedeutung 16* in Utrecht in September 2011, and in particular to the two discussants Sarah Murray and Lisa Bylinina. Finally, I'd also like to thank kegra and our RC 109.

Standard Phrasal Analysis (SPA), which, although it can handle simple and straightforward comparatives in a reasonably successful fashion, unfortunately fails quite systematically when it comes to analyse less trivial cases. For the rest of this article, I shall therefore focus on comparison in Turkish, a language where the need for a genuinely phrasal approach to comparison seems fairly uncontroversial, and develop a new phrasal analysis crucially hinging on the notion of associating individuals with implicit degrees that, on top of the standard ‘vanilla’ cases, also allows to adequately handle more complex types of comparatives. More precisely, I shall introduce a basic example of a Turkish comparative in section 2 of this article, where I’ll also briefly present the main ingredients of the SPA as such. In the following third section, I shall then illustrate the limitations of this analysis on the basis of three exemplary challenges and in section 4, I’ll first go into the details of the new proposal (subsection 4.1), before applying it to the problem cases identified before (4.2) and examining the predictions it makes for comparatives involving a quantificational standard of comparison (4.3). Next, section 5 addresses the question of whether the relatively loose and flexible analysis suggested here should be semantically and/or syntactically restricted or not, and apart from concluding this paper, the ensuing sixth section also formulates a couple of desiderata for future research within this linguistic domain.

## 2. Comparison in Turkish and the Standard Phrasal Analysis

### 2.1 Comparison in the Turkish Language

In Turkish, comparatives are normally organised as follows: They consist of a comparee term (*Maria* in example (2a)), a standard term that typically occurs in the ablative case in this language (*Peter’den*) and a gradable predicate (the adverb *hızlı* in the case at hand):<sup>1</sup>

- (2) a. Maria Peter’den hızlı koş-tu.  
 Maria Peter-ablative fast run-past  
 ‘Maria ran faster than Peter.’

What is crucial about comparison in Turkish is that the standard term has to be strictly phrasal in nature and is never allowed to take on a clausal shape, independently of the precise word order one chooses, as can be seen from the totally ungrammatical status of (2b-c) below, where the insertion of a finite clause into the comparative’s standard term makes the derivation crash immediately:<sup>2</sup>

- (2) b. \*Maria (hızlı) koş-tu Peter’den hızlı koş-tu.  
 Maria (fast) run-past Peter-ablative fast run-past  
 c. \*Maria Peter’den (hızlı) koş-tu hızlı koş-tu.  
 Maria Peter-ablative (fast) run-past fast run-past  
 intended as: ‘Maria ran faster than Peter ran.’

<sup>1</sup> For reasons of spatial limitations, I shall confine myself to comparatives here. For Turkish examples featuring different types of comparison constructions such as superlatives, positives, equatives and many others, I refer the interested reader to the data listed in Beck et al. (2009), pp. 59-60.

<sup>2</sup> For additional evidence for the phrasal status of standard terms in Turkish comparatives, cf. Hofstetter (2009), in particular section 3.

## *Phrasal Comparison in Turkish*

Note in this context, that this situation contrasts sharply with what we find in an English-like language, where it is perfectly natural to have comparatives featuring entire finite clauses as their standard term (cf. (3b)) alongside with their (at least superficially) phrasal counterparts (3a):

- (3) a. Mary ran faster than Peter.  
 b. Mary ran faster than Peter had run the day before.

In contrast to languages like English, Turkish is thus characterised by a total lack of clausal comparison altogether and therefore clearly requires a phrasal approach to comparison, the standard version of which I shall sketch next.

### 2.2 The Standard Phrasal Analysis

There are three basic assumptions that underlie what I intend to summarise under the label ‘Standard Phrasal Analysis’ (SPA), here: First of all, gradable adjectives and adverbs are taken to denote relations between individuals and degrees, as can be seen from the modal lexical entry for the adverb *hızlı* (fast) in (4). Second, both the comparee term (*Maria* in example (2a) from above) and the standard term of a comparison (*Peter’den*) each provide us with an individual. And third, as specified in its lexical entry in (5), a Phrasal Comparison Operator (PCO) intervenes to form and compare the maximal degrees to which these two individuals possess a quality, perform an action, etc., as is spelt out in the matrix clause (the speed of their running in the case of (2a)):

$$(4) \quad [[\text{hızlı}]] = \lambda d \in D_d. \lambda x \in D_e. \text{fast}(x) \geq d; x [\text{be}] d\text{-fast}^3$$

$$(5) \quad [[\text{PCO}]] = \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max(\lambda d. A(d)(y)) > \max(\lambda d. A(d)(x)) \quad [\text{Hofstetter (2009), p. 197}]^4$$

---

<sup>3</sup> In what follows, I shall often be careless enough to simply use the second notational option, even though strictly speaking, this is not quite correct, given that I do assume monotonicity.

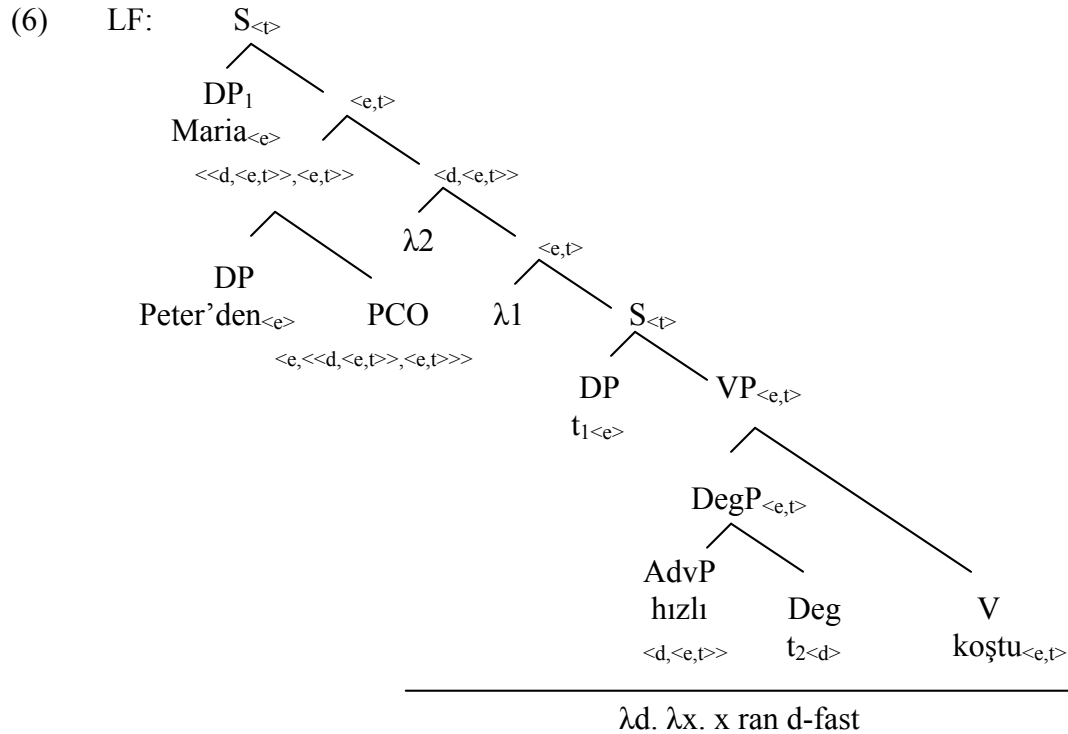
<sup>4</sup> It is not purely for lack of modesty that I make use of my own entry for the PCO, here: Given that I envisage substantially modifying this entry later on, I believe it to be highly preferable to mess around with my own stuff rather than ruining other people’s work. In fact, similar lexical entries can be found in Kennedy (1997), p. 171 and (2007), p. 150 as well as in Bhatt & Takahashi (2007), p. 21 and (to appear), section 1.2, the latter proposing an entry with the same argument structure, but a Seuren-(1973)-style truth value description (cf. (i)), which in my opinion leads to serious difficulties when it comes to the calculation of the meaning of comparatives involving an overt differential such as (ii) below, where it is largely unclear to me what exactly the difference should be added to:

(i)  $[[\text{-er}]] = \lambda x. \lambda P_{\text{det}}. \lambda y. \exists d [P(y,d) \wedge \neg P(x,d)]$  [Bhatt & Takahashi (2007), p. 21; their (8)]

- (ii) Maria Peter’den iki santim uzun.  
 Maria Peter-ablative two centimetre tall  
 ‘Maria is two centimetres taller than Peter.’

Other than that, their entry faces exactly the same difficulties as the one introduced in the main text in (5) with respect to the problematic cases I’ll discuss in section 3 below.

If we now apply this machinery to our initial example (2a), this will result in a Logical Form like the one depicted in (6), where I deliberately left out levels of syntactic representation that are not directly relevant for the line of argumentation I am going to pursue here, and where I also annotated the tree with semantic types and a partial calculation, for the readers' convenience:



Sentence (2a) is thus predicted to be true iff  $\max(\lambda d. \text{Maria ran } d\text{-fast}) > \max(\lambda d. \text{Peter ran } d\text{-fast})$ , which is a very welcome result in view of the fact that this is exactly what this sentence actually means. In spite of such obvious successes, the SPA fares however considerably worse as soon as one leaves the field of standard, well-behaved cases and turns to more complex instantiations of comparatives, which is precisely what I want to do in the next section.

### 3. Problematic Data for the Standard Phrasal Analysis: Three Exemplary Cases

A first set of problematic data for the SPA is related to the fact that in languages like Turkish, standard terms often appear in the form of nominalisations. If one tries for instance to express a statement like *Mary is richer than I thought.*, involving a clausal comparative, in Turkish, this typically results in a nominalisation, as shown in (7) below, where the nominal status of the deverbal element *düşündüğüm*den is underlined by its compatibility with a possessive determiner (*benim*) as well as by its ability to combine

with a case affix (the ablative marker *-den*), both of which constitute properties restricted to elements that are genuinely nominal in nature.<sup>5</sup>

- (7) Maria benim düşün-düğü-m-den   zengin.  
Maria my think-participle-1Sg.-ablative                               rich  
corresponds to: ‘Maria is richer than I thought.’

Blindly applying the SPA to this example predicts it to be true iff  $max(\lambda d. Maria \text{ is } d\text{-rich}) > max(\lambda d. my \text{ thinking is } d\text{-rich})$ , which of course is perfect nonsense.

A second difficulty for the SPA comes from comparatives featuring a modal expression in combination with an overt *exactly*-differential. As observed in Heim (2001), in a situation where somebody has written a draft that is ten pages in length and enquires about the length requirement of the paper that is to be written on the basis of this draft, uttering a sentence like *The paper is required to be exactly five pages longer than that*. gives rise to an interesting ambiguity, in that it can either mean that the prospective article has to be exactly 15 pages long and is not allowed to be any longer or shorter than that or else, it can be taken to specify just its minimal length requirement, in which case the final article would also be permitted to turn out somewhat longer, say 16, 17 or even 18 pages. Heim (ibid., p. 224) suggests to explain this ambiguity in terms of a scope ambiguity, resulting from the fact that the modal expression can either scope above or below the comparison operator itself, as spelt out in the two Logical Forms she sketches, respectively (cf. (8a-b)), the first one generating the exactly-15-pages-in-total reading and the second the minimal requirement interpretation:

- (8) a. required [[exactly 5 pp -er than that] the paper be t long]                                 [her (28b)]  
      b. [exactly 5 pp -er than that] [required [the paper be t long]]                                 [her (28c)]

Interestingly enough, exactly the same ambiguity is also attested in Turkish, where the corresponding example sentence (cf. (9) below, where the bracketed material represents the immediate context of the utterance) also comes with both, an exactly-15-pages-in-total as well as a minimal requirement reading:

---

<sup>5</sup> Strictly speaking, what I simply refer to here as a ‘nominalisation’ should probably be analysed as a light headed relative (cf. Kornfilt (2005)) with a “semantically minimally specified head” (ibid., p. 341, following van Riemsdijk (2000)), as indicated in (i) below, where I put the relative containing the light head e within square brackets:

(i) Maria [benim e düşündüğüm-den] zengin.

This is interesting insofar as we are dealing with a relatively free relation between a relative and its light head here and that I am going to suggest a similarly free relation between an individual and a degree that goes with it later on (cf. subsection 4.1), so that there is independent evidence for the assumption of such a ‘loose’ relationship from a different area of grammar in Turkish. Thanks to Lisa Bylinina for drawing my attention to this phenomenon.

- (9) (Müsvedde on sayfa uzunlu-ğun-da.  
 draft ten page length-genitive-in  
 ‘The draft is ten pages in length.’)  
 Makale müsvedde-den tam beş sayfa uzun  
 article draft-ablative exactly five page long  
 olmak zorunda.  
 is.required  
 ‘The article is required to be exactly five pages longer than the draft.’

Deriving the first of the two readings actually turns out to be quite unproblematic, because we can proceed precisely as with the English example before, yet generating the minimal requirement reading presents a serious challenge: Combining Heim’s assumptions about the interpretation of modals and *exactly*-differentials with the SPA when trying to derive this reading makes (9) denote the following:

- (10)  $\max(\lambda d. \forall w' \in \text{Acc: the article is } d\text{-long in } w') = \max(\lambda d. \forall w' \in \text{Acc: the draft is } d\text{-long in } w') + \text{exactly five pages}$

The fact that we derive (10) is not really a problem as such, given that this corresponds to an – admittedly not very likely – reading that (9) indeed has, namely one in which we compare the article-to-be’s length to that of a potential draft. What is truly problematic, however, is that we cannot generate at all the much more plausible reading sentence (9) gives rise to, that is, a reading in which the article-to-be’s length is compared to the length of the draft in the actual world. Note that simply assigning an actual world variable locally to the draft as has sometimes been suggested with sentences like *Mary wanted to buy a hat just like mine.* (cf. von Stechow & Heim (in preparation), pp. 100-102, their (186)) won’t really do the trick either, given that this would lead to an instantiation of illicit semantically vacuous binding (the second universal quantifier in (10) would not bind anything any more) and thus to a technically incorrect result, so that this problem indeed reveals itself as a particularly delicate one.<sup>6</sup>

A third complication for the SPA is finally constituted by comparatives with a non-agentive standard term, as exemplified with the expression *dünya rekorudan* (world record) in (11):

- (11) Maria dünya rekoru-dan yüksek atla-dı.  
 Maria world record-ablative high jump-past  
 ‘Maria jumped higher than the world record.’

---

<sup>6</sup> As a matter of fact, the situation is much less tricky in a language like English allowing for clausal comparison. Here, no similar problem arises given that the corresponding output would look as in (i) below, where locally assigning an actual world variable to the draft does not lead to vacuous binding and should therefore be possible:

- (i)  $\max(\lambda d. \forall w' \in \text{Acc: the paper is } d\text{-long in } w') = \max(\lambda d. \text{the draft is } d\text{-long in } w') + \text{exactly five pages}$

The SPA predicts (11) to be true iff  $\max(\lambda d. \textit{Maria jumped } d\text{-high}) > \max(\lambda d. \textit{the world record jumped } d\text{-high})$ , which once again makes no sense at all. Critical minds might object at this point, that *dünya rekorudan* is simply not a term denoting an individual to begin with, but that it should rather be analysed directly as a degree-denoting expression. While this objection might indeed be fully justified, note that the difficulty I am describing here is by no means limited to apparently degree-denoting expressions, but that it actually reappears with any comparative featuring an adjunct-like element as its standard term. To a sentence like (12), the SPA would for example ascribe truth conditions according to which  $\max(\lambda d. \textit{Maria worked } d\text{-hard}) > \max(\lambda d. \textit{the week before worked } d\text{-hard})$ , which are equally nonsensical, given that weeks normally do not tend to work, and yet, in contrast to *dünya rekorudan*, the element *geçen haftadan* (the week before) surely cannot be treated as a degree-denoting expression.<sup>7</sup>

- (12) Maria geçen hafta-dan ağır çalış-tı.  
Maria last week-ablative hard work-past  
'Maria worked harder than the week before.'

In sum, it should thus have become obvious that the SPA cannot be maintained as it is and that an alternative approach to phrasal comparison that can handle these empirical data more adequately is absolutely indispensable, instead.

#### **4. A New Proposal for Phrasal Comparison**

##### **4.1 Associating Individuals with Implicit Degrees**

Before introducing a novel account of phrasal comparison as such, I'd first of all like to present three instructive observations that guided my way when developing this new analysis: First, it is the fact that the lexical entry of the PCO itself rigidly forces us to compare the individuals provided by the comparee and the standard term to the exact same property (cf. the entry in (5), repeated from above) which seems to be the core difficulty underlying all the problem cases for the SPA identified in section 3 above:

---

<sup>7</sup> Alternatively, one could conceive of (12) as involving a phonologically not realised counterpart of 'the week before' in its matrix clause, that is, something like a silent equivalent of 'this week'. This would yield the more plausible truth conditions specified in (i) for this sentence:

- (i)  $\max(\lambda d. \textit{Maria worked } d\text{-hard this week}) > \max(\lambda d. \textit{Maria [had] worked } d\text{-hard the week before})$

In the end, this makeshift solution will however not be able to adequately solve the problem either, because now, a difficulty of a different sort arises: Given that the PCO makes use of one and the same gradable property twice (with the comparee and the standard term), we cannot guarantee that the appropriate tense, mood and aspect features are chosen. In (i) for instance, it is totally unclear to me where to get the perfective marker *had* in the second half of the truth conditions from, because the matrix clause does of course not contain this element, the insertion of which is even excluded there by virtue of the fact that this clause has a completely different temporal setting altogether. To overcome this obstacle, one could think of using only a lower level of the gradable predicate that does not yet comprise information about tense, mood, aspect and the like as suitable input for the PCO, an idea which would however require further elaboration and which I shall not pursue any further, here.

$$(5) \quad [[\text{PCO}]] = \lambda x \in D_e. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda y \in D_e. \max(\lambda d. A(d)(y)) > \max(\lambda d. A(d)(x))$$

In order to solve these problems, it therefore looks most promising to directly revise this lexical entry in such a fashion that it allows for a considerably higher amount of flexibility. Second, what we'd really need for successfully calculating the denotations of the above-mentioned examples after all is not the whole individual introduced by the standard term, but only a degree associated with it: In (7), what matters is for instance not the entirety of the speaker's thoughts, but just the degree to which (s)he assumes Maria to be wealthy. In a similar fashion, with (9), we are not really interested in the authorship of the draft/article, the language in which these are written or even their contents, but only in their length, and what counts in (11) is not so much who set that world record, on what occasion or under which specific circumstances (strong or light winds, head or tail wind and the like), as the degree of height that goes with this record. And in (12), what is relevant is likewise not every single event that occurred within that week, but we only care about the degree to which Maria worked hard, such as for example the number of working hours she spent in her office that week. Third, direct comparison with a degree happens to be unproblematic in Turkish (cf. the well-formedness of (13) below), which shows that a PCO taking a degree as its first argument must necessarily be an option in this language, anyway.<sup>8</sup>

- (13) Maria bir metre yetmiş santim-den uzun.  
 Maria one metre seventy centimetre-ablative tall  
 'Maria is taller than 1.70m.'

Taking all these considerations together, I'd now like to propose the following: The SPA should be revised in such a way that the PCO takes a degree associated with the individual of the standard term rather than that individual itself as its first argument (cf. its modified entry in (14)). Furthermore, I suggest to make this implicit degree variable accessible by making the function given in (15) operate on the comparative's standard term:

$$(14) \quad [[\text{PCO}]] = \lambda d \in D_d. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda x \in D_e. \max(\lambda d'. A(d')(x)) > d^9$$

---

<sup>8</sup> Expressions like *bir metre yetmiş santimden* (1.70m) are taken to directly denote degrees here, which is arguably the simplest assumption to make about these. I freely admit that this constitutes a highly controversial issue, but note that if it eventually turned out that these denote individuals rather than degrees, this would not present much of a problem for the analysis I am going to present, either, as will become clear shortly.

<sup>9</sup> Alternatively, one might also consider the option of associating an entire set of degrees rather than just a single degree with the standard term, because in sentences like *Mary is taller than Peter.*, the standard term is often analysed as denoting  $\lambda d. \text{tall}(\text{Peter}) \geq d$ , and thus as the whole set of height degrees reached by Peter. An altered lexical entry for the PCO compatible with this view would look as in (i) below:

(i)  $[[\text{PCO}]] = \lambda D \in D_{\langle d, t \rangle}. \lambda A \in D_{\langle d, \langle e, t \rangle \rangle}. \lambda x \in D_e. \max(\lambda d'. A(d')(x)) > \max(D)$

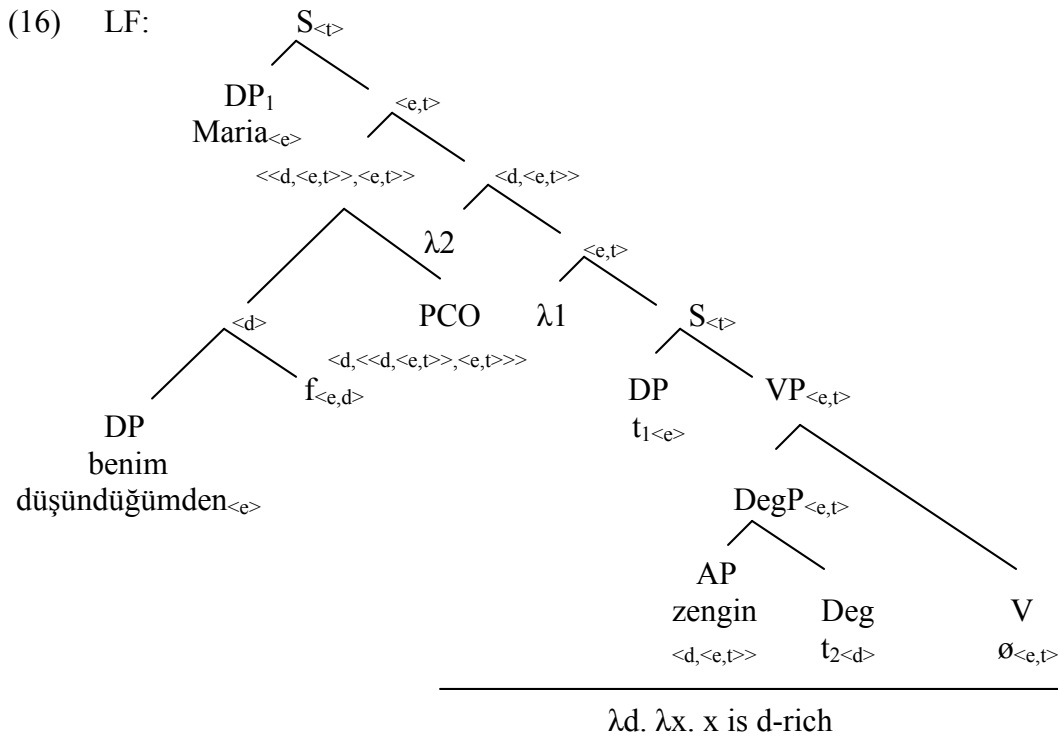


- (15)  $[[f]] = \lambda x \in D_e. d_{x,c}$ , where  $d_{x,c}$  is the most salient degree associated with  $x$  in a given utterance context  $c$ <sup>10</sup>

Of course, the kind of analysis I am offering here is not entirely without precedent, given that approaches which are very similar in spirit have already been made, albeit in quite different areas of grammar, such as for example the famous contextual *target*-function proposed in Winter (2000) or the functional approach to list readings with *wh*-questions elaborated in Chierchia (1993). As a next step, let me illustrate how these changes help to handle the problematic cases discussed in section 3.

#### 4.2 Application to Problem Cases

With example (7), the revised analysis gives rise to a Logical Form roughly along the lines of the one included in (16) below, and the example is predicted to be true iff  $\max(\lambda d'. \text{Maria is } d'\text{-rich}) > d_{\text{my\_thinking},c}$ , which means that Maria has to be richer than the most salient degree associated with ‘my thinking’ in a given utterance context  $c$  for (7) to be judged true. In a straightforward fashion, the adjective *zengin* (rich) in the immediate context will guarantee selecting the speaker’s assumption about Maria’s financial situation for that degree.



In my opinion, this issue ultimately boils down to a great extent to the question of whether maximality is assumed as an independent principle or as being directly introduced by the comparison operator as such, a question which I shall leave open, here.

<sup>10</sup> It is also conceivable to directly incorporate the function specified in (15) into the lexical entry of the PCO itself, which I refrain from doing here because of data like (13), where the standard term straightforwardly appears in the form of a degree, but cf. the discussion in footnote 8.

Similarly, it is the adjective *uzun* (long) in the directly adjacent context that tells us that we are dealing with a degree of length in (9), which can either be established sentence-internally (resulting in the less probable reading described in section 3 above) or else, by making use of the immediately preceding context specifying that the draft is ten pages in length, which finally permits the derivation of the much more likely reading sentence (9) has, namely the one in which the length of the prospective article is compared to that of the draft in the actual world, which was not possible beforehand. Likewise, in an example like (11), it is the expressions *yüksek* (high) and *atladı* (jumped) that ensure picking the world record in high jump and not for instance that in hammer-throwing or decathlon for that degree and finally in (12), the adverb *ağır* (hard) in combination with the verb *çalıştı* (worked) automatically makes us choose the degree to which Maria worked hard, such as the number of hours she spent working. Interestingly enough, the substantial revisions of the SPA suggested here not only allow to cope with these previously problematic cases in an adequate fashion, but they also directly make the right predictions for comparatives featuring quantificational standard terms, which is what I shall examine next.

### 4.3 Welcome Predictions for Quantificational Standard Terms

In this subsection, I'd first like to briefly sketch the empirical facts about Turkish comparatives where the standard term happens to be quantificational in nature. To begin, consider (17) involving universal quantification that my native speaker informants judged to be acceptable only when Maria is indeed taller than all of the (relevant) boys and where it is not enough for her to simply exceed the shortest among these in size:

- (17) Maria her oğlan-dan uzun.  
 Maria every boy-ablative tall  
 'Maria is taller than every boy.'

This corresponds to a reading in which the quantificational determiner phrase (*her oğlandan*; every boy) takes wide scope with respect to the PCO (cf. the truth conditions specified in (18a)), whereas the weaker reading derived from the reverse scopal order (18b) is not attested:

- (18) a.  $[[ (17) ] ] = 1$  iff  $\forall x [\text{boy}(x) \rightarrow \max(\lambda d. \text{Maria is } d\text{-tall}) > \max(\lambda d. x \text{ is } d\text{-tall})]$   
 b.  $[[ (17) ] ] \neq 1$  iff  $\max(\lambda d. \text{Maria is } d\text{-tall}) > \max(\lambda d. \forall x [\text{boy}(x) \rightarrow x \text{ is } d\text{-tall}])$

A similar situation obtains with examples where the comparative's standard term consists of an existentially quantified determiner phrase as in (19), where it is enough for the sentence to come out true if Maria is taller than at least one other person and where she does not have to be taller than everyone else in a given scenario. Thus, once again, we only get the reading where the quantified determiner phrase outscopes the PCO (cf. (20a)) and not the one where the PCO takes scope above that determiner phrase (20b):

- (19) Maria herhangi birin-den uzun.  
 Maria somebody-ablative tall  
 'Maria is taller than some other person.'

*Phrasal Comparison in Turkish*

- (20) a.  $[[ (19) ]] = 1$  iff  $\exists x$  [person(x) & max( $\lambda d$ . Maria is d-tall) > max( $\lambda d$ . x is d-tall)]  
b.  $[[ (19) ]] \neq 1$  iff max( $\lambda d$ . Maria is d-tall) > max( $\lambda d$ .  $\exists x$  [person(x) & x is d-tall])

If we finally add negation to the picture (21), the same basic pattern shows up once more in that only the wide-scope reading of the quantified determiner phrase is actually attested (cf. (22a-b)), because in a given situation, Maria does indeed have to be shortest for (21) to become true, it not being sufficient for her just to be not taller than the tallest among the relevant group of people:

- (21) Maria hiç kimse-den uzun değil.  
Maria somebody-ablative tall not  
'Maria is (the) shortest.'; intended as: '\*Maria is taller than nobody.'<sup>11</sup>

- (22) a.  $[[ (21) ]] = 1$  iff  $\sim \exists x$  [person(x) & max( $\lambda d$ . Maria is d-tall) > max( $\lambda d$ . x is d-tall)]  
b.  $[[ (21) ]] \neq 1$  iff  $\sim$ max( $\lambda d$ . Maria is d-tall) > max( $\lambda d$ .  $\exists x$  [person(x) & x is d-tall])

The general conclusion to be drawn from these empirical data is thus that quantificational standard terms always take wide scope with respect to the PCO and that the reverse situation, where the PCO would scope above this determiner phrase, is not attested.

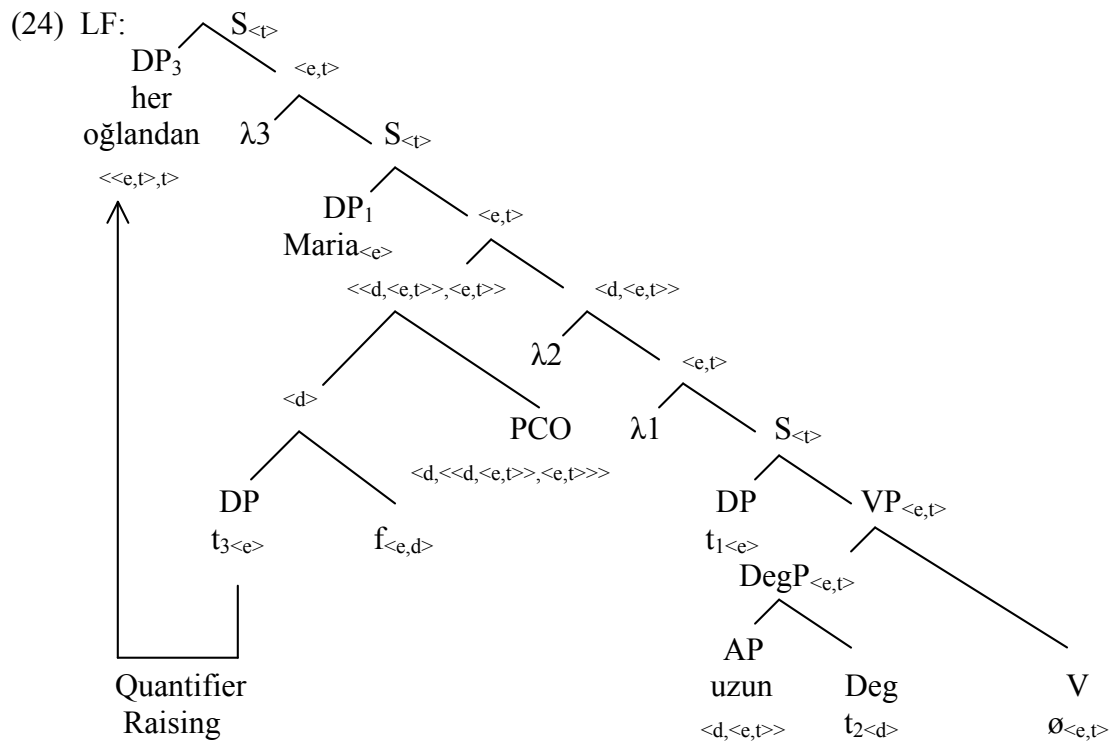
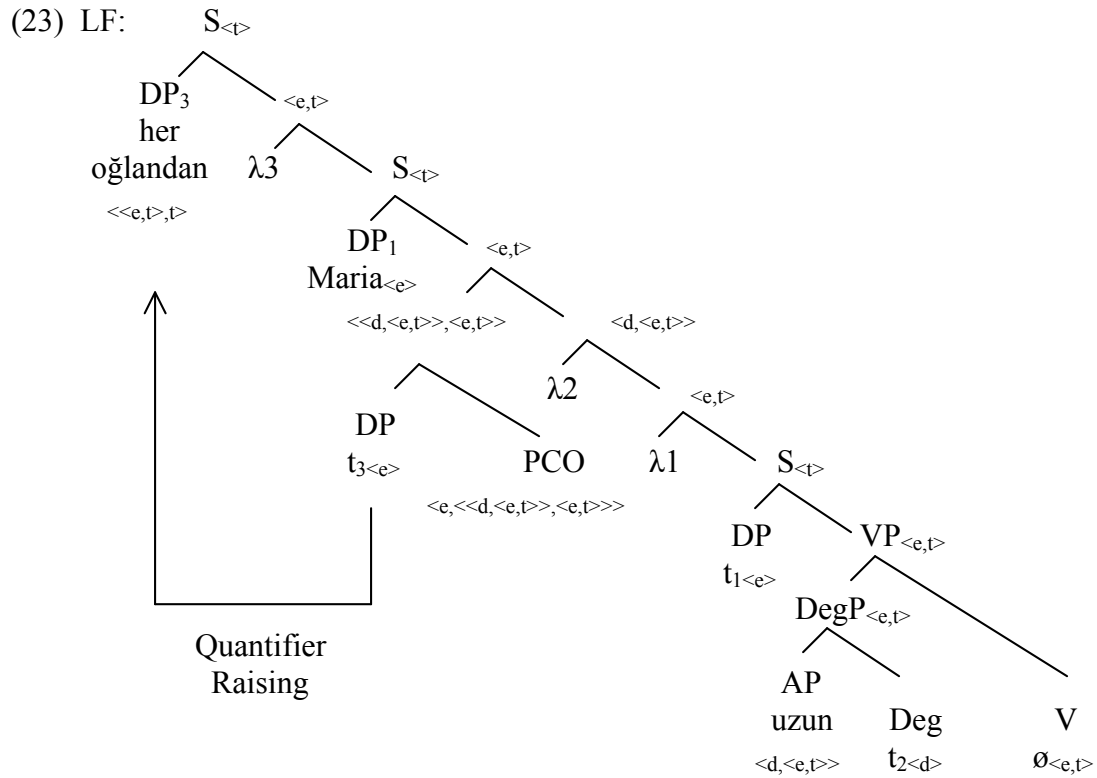
As I have shown in Hofstetter (2009), section 5, the SPA correctly predicts this scopal order on the assumption that a type mismatch forces the quantificational determiner phrase to Quantifier Raise: Due to the fact that the ordinary PCO requires an element of semantic type  $\langle e \rangle$  as its first argument and finds something of the more complex type  $\langle \langle e, t \rangle, t \rangle$  instead, the quantificational determiner phrase undergoes Quantifier Raising, as a result of which it automatically outscopes the PCO as desired, which is illustrated in (23) on the next page for sentence (17) in an exemplary fashion. Of course, it would be highly appealing if my revised proposal essentially preserved these predictions for quantificational standard terms and luckily enough, that is exactly what it does: This time, the function introduced in (15) looks for an argument of type  $\langle e \rangle$  and is confronted with one of the incompatible quantifier type  $\langle \langle e, t \rangle, t \rangle$ . As before, I propose to fix this type mismatch by Quantifier Raising the quantificational determiner phrase (as shown in (24)), thereby once again arriving at a Logical Form where the PCO takes scope below this determiner phrase:<sup>12, 13</sup>

---

<sup>11</sup> The expression *hiç kimse(den)* normally translates as 'nobody' into English, but it cannot be used felicitously without a sentential negation marker (*değil* in the case at hand) and the two negations clearly do not cancel each other, in which case sentence (21) would have to mean that Maria comes out tallest.

<sup>12</sup> Alternatively, one might obviously also think of a solution in terms of type-shifting, but then, my approach would inevitably lose much of its explanatory power, given that the Quantifier Raising account automatically forces the derivation of the readings that are indeed attested, which would not be the case with type-shifting. Interestingly enough, recent work by Martin Hackl (cf., for instance, Hackl, Koster-Moeller & Varvoutis (2007), among many other relevant publications) provides independent evidence for the need of Quantifier Raising, anyway.

<sup>13</sup> Note in passing that essentially the same empirical situation is found in English, too (Kennedy (1997), among many others), which leads to an interesting complication: Given that comparison at least can be clausal in this language (cf. for example *Mary is taller than every boy is.*), Quantifier Raising of the



quantificational determiner phrase should actually be blocked, because it would involve movement across a clausal boundary. In contrast to this, no such problem arises in Turkish, where the standard term is always a simple determiner phrase (or noun phrase, depending on the syntactic model one is making use of), so that no blocking effect is bound to appear.

In total, my revised analysis for phrasal comparison thus not only allows me to adequately handle comparatives that pose a challenge for the SPA, but at the same time, it also enables me to maintain the very welcome predictions the SPA makes for comparatives featuring quantificational standard terms.

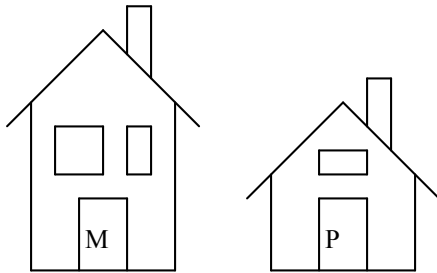
## 5. Restricting the Unrestricted?

As it stands, my revised analysis may seem very ‘loose’ in that in essence, with this kind of account, much boils down to the relatively free notion of associating a given individual with an implicit degree. I’d therefore like to briefly address the question of whether any systematic restrictions should be imposed on it or not. To this end, consider the sentence in (25) below:<sup>14</sup>

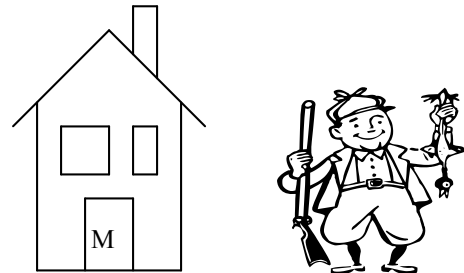
- (25) Maria Peter’den büyük bir ev-ø yap-tı.  
Maria Peter-ablative tall a house-accusative build-past  
‘Maria built a taller house than Peter.’

According to my informants, (25) states that Maria and Peter both built a house and that Maria’s house happens to be larger than that of Peter. This is surely an interpretation that my revised analysis of phrasal comparison can derive, but actually, it also predicts there to be yet another reading: Since there is a second salient degree of height one could associate with Peter, namely that of the physical extension of Peter’s body itself, according to the analysis I present here, sentence (25) should also be able to convey that only Maria built a house and that this house exceeds Peter’s height. The little drawings in (26) below illustrate these two potential readings, respectively:

(26) a. illustration of reading (i)



b. illustration of reading (ii)



However, my Turkish informants unanimously report that a sentence like (25) is not ambiguous in this respect and that it only comes with the first reading described above. Does this mean that I have to constrain my revised analysis? At first sight, it might seem so, but on closer inspection, things change radically: For as soon as I provided my informants with a special context facilitating the second reading, they all of a sudden agreed that after all, (25) can indeed refer to a situation where the height of a house built

<sup>14</sup> I am using the adjective *büyük* (tall) here, rather than *uzun* as I have been doing up to now, because in contrast to the latter, the former can be used equally well for people and for inanimate objects, which will play a crucial role for the ambiguity I am driving at below.

by Maria is directly compared to that of Peter. For this purpose, I designed a context in which Maria and Peter are two five-year-old children putting together little wooden houses on a playground. By virtue of the fact that in such a scenario, the size of the houses and that of the children involved in building them is certainly quite comparable, an ambiguity surfaces that is not attested under normal circumstances, there usually being such a great distance between the height of buildings and that of people that comparing these seems quite unnatural. Therefore, I suggest to leave my revised analysis as flexible as it presently is, and I shall not put any semantic and/or syntactic restrictions on it, because after all, sentences such as (25) do show the ambiguities expected under such a ‘loose’ approach, and the fact that the second reading is normally absent with (25) is due to questions concerning the pragmatic (im)plausibility of such a reading, rather than semantic and/or syntactic features of the construction at hand. Observe finally, that the ambiguity a sentence like (25) gives rise to (at least in a playground scenario) also provides an additional strong argument against maintaining the SPA in its traditional form: Given that under such an approach, the individuals denoted by the comparee and the standard terms are always compared with respect to one and the same property, the SPA can only generate the first reading where Maria and Peter both built a house, the sizes of which are compared to each other, whereas it cannot account for the second reading at all, in which only Maria built a house, the height of which is directly compared to the size of Peter’s body.<sup>15</sup>

## 6. Conclusion and Outlook

On the basis of three sets of problem cases, this article has verified the need for a different approach to phrasal comparison. I have presented such a new analysis, primarily hinging on the idea of associating individuals with implicit degrees – an approach which fares much better with certain pieces of problematic data than the SPA and yet is still able to make the correct scopal predictions for comparatives involving quantificational standard terms. Moreover, based on an exemplary instantiation of a significant ambiguity, it has also been shown that the relatively great flexibility of this approach actually constitutes an advantage rather than a potential drawback. At the same time, there are two interesting consequences of this proposal that I must leave for future research: First of all, the question of how exactly we get from an individual to a degree denotation, or, to put things more precisely: Can we always move from an element denoting an individual to a degree that goes with it, or is this only possible under specific circumstances? And if so, what are the exact conditions, that are probably pragmatic in nature, under which this step is indeed possible? And second, if it turned out that (at least some) comparatives are indeed phrasal even in languages like English or German (cf. the brief sketch of this highly controversial issue in section 1 above), is there any evidence that the revised

---

<sup>15</sup> Of course, the existence of such ambiguities in Turkish also stresses the fact that comparison in this language is fundamentally different from comparison in an English-like language, because a sentence like (ia) below only comes with the first of the two readings described in the main text. As shown in (ib), the second of these readings requires substantial syntactic reordering:

- (i) a. Mary built a taller house than Peter.
- b. Mary built a house taller than Peter.

## *Phrasal Comparison in Turkish*

analysis should also be applied there, or else, can the traditional SPA handle the empirical data in these languages more successfully? Additionally, it remains to be seen for these languages which comparatives featuring nothing but a simple determiner phrase (or noun phrase) in their standard term should potentially be given a phrasal treatment at all, a question which might eventually turn out to be particularly tricky, given that with the normal standard cases, the different approaches often seem fairly indistinguishable. To see this, take a canonical English comparative such as (1a) repeated from the introductory section:

(1) a. Mary is taller than Peter.

Here, the clausal approach would posit a Logical Form along the lines of (1b) (once again repeated from above), and the sentence would be predicted to be true iff  $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \text{Peter is } d\text{-tall})$ :

(1) b. Mary is taller than Peter is ~~d-tall~~.

The SPA would simply take (1a) as its direct input without reconstructing anything, in a ‘what you see is what you get like’ fashion and despite this structural difference, it predicts exactly the same truth conditions for (1a) as the clausal approach, namely that the  $\max(\lambda d. \text{Mary is } d\text{-tall}) > \max(\lambda d. \text{Peter is } d\text{-tall})$  if the sentence is to end up true. Finally, under my revised phrasal analysis, we would expect sentence (1a) to be true iff  $\max(\lambda d'. \text{Mary is } d'\text{-tall}) > d_{\text{Peter},c}$  and it is obvious that the gradable predicate *tall* in the immediate context will most naturally make us select Peter’s height for that degree, so that in the end, the revised phrasal analysis yields exactly the same result as the two other approaches. Just as was the case with the question of how precisely to get from an individual to a degree denotation, I must also leave this highly intriguing issue for future research.

## References

- Beck, Sigrid, Daniel Fleischer, Remus Gergel, Stefan Hofstetter, Sveta Krasikova, Christiane Savelsberg, John Vanderelst, and Elisabeth Villalta. 2009. Crosslinguistic Variation in Comparison Constructions. In Linguistic Variation Yearbook 2009, ed. J. van Craenenbroeck, and J. Rooryck, 1-66. Amsterdam/Philadelphia: John Benjamins.
- Bhatt, Rajesh, and Soichi Takahashi. 2007. Direct Comparisons: Resurrecting the Direct Analysis of Phrasal Comparatives. In Proceedings of SALT 17, ed. T. Friedman, and M. Gibson, 19-36. Ithaca, New York: CLC Publications.
- Bhatt, Rajesh, and Soichi Takahashi. to appear. Reduced and Unreduced Phrasal Comparatives. To appear in Natural Language & Linguistic Theory.
- Bresnan, Joan. 1973. The Syntax of the Comparative Clause Construction in English. Linguistic Inquiry 4:275-343.
- Chierchia, Gennaro. 1993. Questions with Quantifiers. Natural Language Semantics 2:181-234.

- Fintel, Kai von, and Irene Heim. in preparation. Intensional Semantics. Ms., available online at: <http://mit.edu/fintel/fintel-heim-intensional.pdf>; consulted on November 11, 2011.
- Hackl, Martin, Jorie Koster-Moeller, and Jason Varvoutis. 2007. Processing Evidence for Quantifier Raising: The Case of Antecedent Contained Ellipsis. Poster presented at the 20<sup>th</sup> Annual CUNY Conference on Human Sentence Processing, City University of New York, March 2007.
- Hankamer, Jorge. 1973. Why there are two *than*'s in English. In Proceedings of the 9<sup>th</sup> Annual Meeting of CLS, ed. C. Corum, T.C. Smith-Stark, and A. Weiser, 179-191. Chicago Linguistics Society, University of Chicago, Chicago.
- Heim, Irene. 2001. Degree Operators and Scope. In Audiatur Vox Sapientiae. A Festschrift for Arnim von Stechow, ed. C. Féry, and W. Sternefeld, 214-239. Berlin: Akademie-Verlag.
- Hoeksema, Jack. 1983. Negative Polarity and the Comparative. Natural Language & Linguistic Theory 1:403-434.
- Hofstetter, Stefan. 2009. Comparison in Turkish: A Rediscovery of the Phrasal Comparative. In Proceedings of Sinn und Bedeutung 13, ed. A. Riester, and T. Solstad, 191-205. University of Stuttgart, Stuttgart.
- Kennedy, Chris. 1997. Projecting the Adjective: the Syntax and Semantics of Gradability and Comparison. Doctoral dissertation, University of California, Santa Cruz.
- Kennedy, Chris. 2007. Modes of Comparison. In Proceedings of the 43<sup>rd</sup> Annual Meeting of CLS, ed. M. Elliott, J. Kirby, O. Sawada, E. Staraki, and S. Yoon, 141-165. Chicago Linguistics Society, University of Chicago, Chicago.
- Kornfilt, Jaklin. 2005. Free Relatives as Light-headed Relatives in Turkish. In Organizing Grammar. Studies in Honor of Henk van Riemsdijk, ed. H. Broekhuis, N. Corver, R. Huybregts, U. Kleinhenz, and J. Koster, 340-349. Berlin/New York: Mouton de Gruyter.
- Lechner, Winfried. 2004. Ellipsis in Comparatives. Berlin/New York: Mouton de Gruyter.
- Napoli, Donna Jo. 1983. Comparative Ellipsis: A Phrase Structure Analysis. Linguistic Inquiry 14(4):675-694.
- Riemsdijk, Henk van. 2000. SynCom Case 44: Free Relatives. Ms., University of Tilburg, Tilburg.
- Seuren, Pieter. 1973. The Comparative. In Generative Grammar in Europe, ed. F. Kiefer, and N. Ruwet, 528-564. Dordrecht: D. Reidel.
- Stechow, Arnim von. 1984. Comparing Semantic Theories of Comparison. Journal of Semantics 3:1-77.
- Winter, Yoad. 2000. Distributivity and Dependency. Natural Language Semantics 8:27-69.

Sonderforschungsbereich 833  
Universität Tübingen  
Wilhelmstraße 50  
72074 Tübingen

[stefan.hofstetter@uni-tuebingen.de](mailto:stefan.hofstetter@uni-tuebingen.de)