Trapped in the Noun Phrase: When Degree Quantifiers Can't QR

Ellen O'Connor

1. Introduction

Semantic analyses often take degree words like *more, fewer, too, enough* and *most* to be quantifiers over degrees (Cresswell 1976, von Stechow 1984, Heim 1985, Heim 2000 a.o.), drawing important parallels with quantification in the domain of individuals. Scope ambiguities – or lack thereof – constitute an important diagnostic for the quantificational properties of the degree word, including the presence of quantifier raising (Kennedy 1999, Heim 2000, Bhatt & Pancheva 2004). Importantly, however, *lack* of scope ambiguity may suggest a quantificational treatment of the degree word is unjustified (Kennedy 1999), or it may implicate independent grammatical restrictions on the relevant scope configurations (Heim 2000).

This issue has been much discussed with respect to the comparative morpheme *more,* with a number of researchers arguing in favor of degree QR, in part because it is a natural solution for resolving antecedent-contained deletion within the ellipsis site in the *than*-clause (Wold 1995, Heim 2000). However, treatment of *more* need not necessarily extend to other degree morphemes, and e.g. superlatives are sometimes given a non-quantificational or non-movement analyses (Farkas & Kiss 2000, Stateva 2002, Matushansky 2008). Moreover, not all degree clauses contain an ellipsis site with potentially infinite regress; *to*-clauses are one such example. QR of words like *too* is thus plausible following parallel analyses for *more,* although less well-motivated.

This paper bears on these questions using a different approach and a different type of data. We focus on *degree fronting* constructions, characterized by the appearance of the degree word and adjective to the left of the indefinite article, in contrast to typical English attributive syntax, *cf* (1)a-b.

(1) a. too tall a man
    b. a tall man

Degree fronting is typically either analyzed as predicate inversion within the DP, akin to e.g. *N-of-an-N* constructions (Kennedy and Merchant 2000, Troseth 2009; see also Bennis et al, 1998), or it is thought to be related to quantifier raising (Matushansky 2002). After comparing the merits of these two accounts, I will investigate how degree fronting interacts with and is affected by elements that block movement from the extended adjective phrase and noun phrase, respectively. The results suggest not only that degree fronting is an *observable* step of clausal QR, but also that the acceptability and interpretation of degree words is highly sensitive to the possibility of movement, thus supporting a quantificational treatment of the family of degree morphemes.

2. Background on degree fronting

English is somewhat unique in its ability to front a degree word to the left of the indefinite article, although variations of this pattern are apparently attested in several other Germanic languages (Delsing 1993, Leu 2008). Fronting is subject to a puzzling range of idiosyncrasies, many of which are beyond the scope of this paper (see Matushansky 2002 for a detailed overview); however, degree words are associated primarily with one of four patterns: fronting is either obligatory (*how*), optional and default

* Ellen O'Connor, University of Southern California, ewoconno@usc.edu. Thanks to Roumyana Pancheva for many helpful discussions and feedback on this paper, and also to Hagit Borer, Andrew Simpson, Audrey Li, Barry Schein and Rajesh Bhatt, and to the reviewers and audience at WCCFL.

 Proceedings of the 32nd West Coast Conference on Formal Linguistics, ed. Ulrike Steindl et al., 149-158. Somerville, MA: Cascadilla Proceedings Project.

(*too, so, as, that*), optional but non-default (*more/fewer, enough*), or illicit (bare adjectives, intensifiers). The class of fronting-as-default words are generally required to undergo fronting in the unmarked case, but are permitted to remain in-situ when modified by negation or a differential such as *much* or *just*; *more* and *enough* may also optionally front, but will usually remain in-situ.

Word	Fronted	In-situ	Pattern
how	how complex a problem	*a how complex problem	OBLIGATORY
too	(much/not) too complex a problem	a *(much/not) too complex problem	DEFAULT
as	(just) as complex a problem	a *(just) as complex problem	DEFAULT
so	(not) so complex a problem	a *(not) so complex problem	DEFAULT
that	(not) that complex a problem	a *(not) that complex problem	DEFAULT
more	more complex a problem	a more complex problem	NON-DEFAULT
enough	complex enough a problem	a complex enough problem	NON-DEFAULT
very	*very complex a problem	a very complex problem	ILLICIT
∅	*complex a problem	a complex problem	ILLICIT

Because degree words appear in multiple places within the noun phrase with no obvious change in meaning, fronting is overwhelmingly treated as DP-internal movement with pied-piping of the accompanying adjective (Bolinger 1972, Bresnan 1973, Hendrick 1990, Kennedy and Merchant 2000, Matushansky 2002, Troseth 2009) rather than base-generation (Abney 1987):

(2) too tall (of) a ~~too tall~~ man

The movement is triggered by properties of the relevant degree words, the specifics of which are a matter of debate.

3. Fronting as predicate inversion

For Troseth (2009), degree fronting is associated with predicate inversion, an operation characterized by fronting of the predicate to a subject position, while the true subject appears after the copula, as shown in (3) (Williams 1974, Heggie 1988, Moro 1997, but see Higgins 1979, Heycock and Kroch 1999 for an alternative account). The predicate and subject originate in a small clause, the head of which undergoes "domain-extending" movement to the higher clause, licensing raising of the predicate to an A-position (den Dikken 2006).

(3) The best philosophy is [$_{SC}$ sink or swim ~~the best philosophy~~].

Inversion is thought to occur in the clause and DP alike: in *N-of-an-N* constructions (*a bear of a guy*), the indefinite article following *of* is the head of the small clause, and it adjoins to the semantically vacuous nominal copula *of,* followed by inversion of the predicate *bear* (Bennis et al 1998):

(4) a. bear of a guy
b. [$_{FP}$ bear [$_{F}$ of+a [$_{SC}$ guy [~~a~~ [~~bear~~]]]]]

Degree fronting constructions also involve some type of inversion; however, a problem for this account is that the meaning of the fronted adjective is similar to an attributive modifier rather than a predicate. For example, degree fronting constructions such as *too old a friend* license intersective readings – where *old* modifies *friend* – as well as non-intersective readings – where *old* modifies the friendship. Non-intersective meanings are generally limited to adjectives in attributive position (Vendler 1967, Siegel 1976, Larson and Segal 1995, Larson 1998, 1999). Similar results obtain for *beautiful dancer* (= dances beautifully) and *heavy sleeper* (= sleeps heavily):

(5) a. My friend is old. (intersective only)
b. an old friend (intersective, non-intersective)
c. too/so/as/that old a friend (intersective, non-intersective)

(6) a. That dancer is beautiful. (intersective only)
b. a beautiful dancer (intersective, non-intersective)
c. too/so/as/that beautiful a dancer (intersective, non-intersective)

(7) a. That sleeper is heavy. (intersective only)
b. a heavy sleeper (intersective, non-intersective)
c. too/so/as/that heavy a sleeper (intersective, non-intersective)

Also like attributive adjectives, fronted adjectives license only distributive readings. Schwarzschild (2002, 2006) argues that the syntax of attributive modifiers is associated with a dimension that is not monotonic on the part-whole structure of the nominal domain. That is, adding *two-pound rocks* to *two-pound rocks* still yields *two-pound rocks* with no change to the aggregate weight, in contrast to pseudopartitive constructions like *two pounds of rocks.* Consequently, using an adjective like *heavy* attributively will necessarily yield a distributive weight-per-unit reading, rather than a statement about collective weight. To the extent that speakers accept fronting with plural nouns[1], the meaning is distributive – in spite of the fact that the syntax resembles a pseudopartitive.

(8) a. the cherries are heavy (collectively heavy; distributively heavy)
b. the heavy cherries (distributively heavy)
c. too heavy of cherries (distributively heavy)

Subtle differences in interpretation can also be found in the comparison class of the respective adjective types. Predicative adjectives invoke different comparison classes than attributive ones (Higginbotham 1985), and in (9)a the adjective *small* is not necessarily computed relative to other butterflies but rather could be true of a butterfly that is small compared to birds, but large compared to other butterflies. (9)a is therefore not a contradiction. But in (9)b-c, *small* is only relative to other butterflies, and the (salient) meaning of the sentence is contradictory (McKinney-Bock 2010).

(9) a. That butterfly is small, but it's large for a butterfly.
b. # That is a small butterfly, but it's large for a butterfly.
c. # That is too small (of) a butterfly, but it's large for a butterfly.

Comparatives show a similar pattern: whereas a predicate comparative like (10)a only implies that *my mother* is tall, the attributive one in (10)b yields a pragmatically odd inference that *my mother* is a tall man, due to the presence of the elided NP *a tall man* in the *than*-clause (Bresnan 1973). The fronted structures also yield this odd inference, patterning again with attributive structures.

(10) a. I've never met a man taller than wh_1 my mother ~~is d$_1$ tall~~.
b. # I've never met a taller man than wh_1 my mother ~~is a d$_1$ tall man~~.
c. # I've never met more tall a man than wh_1 my mother ~~is a d$_1$ tall man.~~

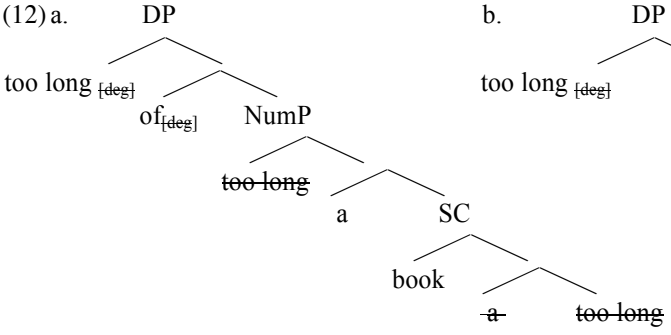
[1] Fronting is widely reported to be unacceptable with mass or plural nouns, although a subset of English speakers accept such cases as colloquially grammatical with obligatory *of*-insertion. Representative examples are in (i-iv).
(i) We're far **too good of friends** to say good-bye. (*Ugly Betty*, Episode 418)
(ii) Roseburg Police say they deal with **too young of children** being left alone in cars about once every week. (http://www.kpic.com/news/local/Police-K-9-captures-man-who-ran-from-stolen-car-259125461.html)
(iii) Unfortunately, we also don't have **as good of weather** as they do in the Southeast. (PBS Newshour; example from COCA, Davies 2008)
(iv) You need to treat the area with **as hot of water** as the victim can stand. ("Steve Irwin Remembered", CNN; example from COCA, Davies 2008)

Even if these issues could be resolved, predicate inversion approaches also suffer from problems in implementation, since they generally require a copular element, e.g. the verb *be* in (11)b.

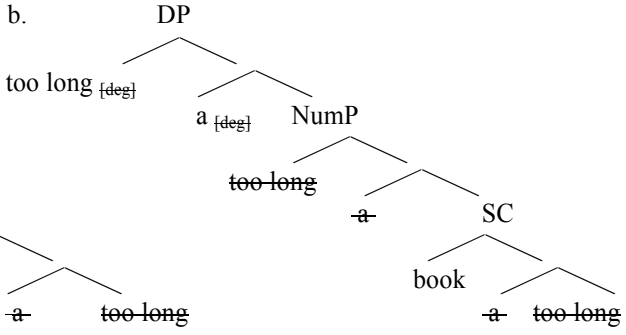
(11) a. Swimming is considered (to be) the best approach.
b. The best approach is considered *(to be) swimming.

In fronting constructions there is no obvious copula. For Bennis et al (1998), the English nominal copula is the preposition *of* – but while *of* can be included in degree fronting constructions, it is not obligatory. Troseth (2009)'s predicate inversion approach to degree fronting therefore must posit the indefinite article as the copula, with *of* occupying a higher functional projection. The AP then undergoes two movements: predicate inversion around the small clause head, followed by checking of a [+degree] feature in a higher position.

(12) a.



b.



This proposal is problematic in light of the fact that in some dialects, degree fronting is licit absent an indefinite article, e.g. as in (13) (see footnote 1). One would have to also allow *of* to be a copula, thus generating it as the small clause head; however, this wrongly generates (14).

(13) They are not as good of friends as I thought.

(14) a. *as good of friend
b. [$_{DP}$ as good of [$_{NumP}$ ~~as good~~ ~~of~~ [$_{SC}$ friend ~~of~~ ~~as good~~]

Finally, Troseth (2009)'s inversion account fails to naturally capture the range of fronting degree words. Intensified adjectives – and even bare ones – probably also have degree morphology, and thus would also plausibly have a [+degree] feature, if it existed. Worse, stipulation that e.g. *very* does not have this feature will rule out only the second movement, which is feature-driven – but fails to rule out the initial step of predicate inversion, wrongly generating (15).

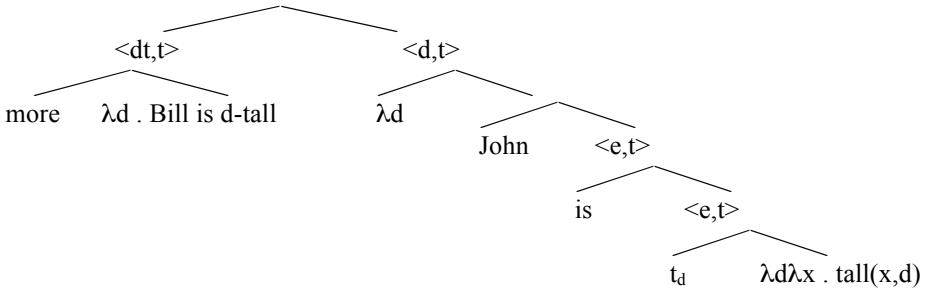
(15) a. *very long a book
b. [$_{NumP}$ ~~very long~~ ~~a~~ [$_{SC}$ book ~~a~~ ~~very long~~]

4. Fronting as QR

An important characteristic of fronting degree words is that they belong to the family of proposed degree quantifiers, denoting a relation between two sets of degrees. A degree quantifier analysis is frequently proposed for *more* (Cresswell 1976, von Stechow 1984, Heim 1985, Heim 2000), with e.g. the semantics in (16), and is often assumed to extend to words like *too, as, enough,* and *so*. The degree clause (*than*-clause, *as*-clause, *that*-clause, or *to*-clause) provides the first set of degrees and clausal QR derives the second, as shown in (17).

(16) [[more]] = λDλD'. max D' > max D (Heim 2000)

(17) John is taller than Bill is.



Matushansky (2002) accordingly proposes that the successive cyclic movement of the degree operator, on its way to get clausal scope, must pass through an escape hatch at the periphery of the noun phrase. This movement is overtly observable in English as degree fronting, though presumably necessary in all languages. This proposal suggests not only a motivation for the movement – resolution of type mismatch – but also explains naturally why there is no inversion of the adjective alone (*complex a problem*), or the adjective and intensifier (*very complex a problem*): these expressions are not usually thought to contain elements that would require clausal scope.

A reviewer notes that *that* also participates in fronting (*that* ADJ *a* NOUN), although its status as a degree quantifier is less clear. *That* does indeed alternate with measure phrases (***that*** *tall* / ***5 feet*** *tall*), and could therefore plausibly denote a referential degree, but this is not necessarily so: Schwarzschild (2005) argues independently that such phrases denote a predicate of intervals (type <i,t>) – or equivalently, using sets of degrees instead of intervals, a generalized degree quantifier (type <<d, t>, t>). In fronting constructions, *that* combines with an overt degree clause, patterning together the other quantifiers (*more…than, as…as, so…that*) – and away from measure phrases, which do not combine with a degree clause and cannot front. Also importantly, *that…that* constructions generally involve positive (norm-related) adjectives, thus rendering the intended meaning in (18) absent. This suggests that in fronting constructions, the degree argument of *tall* is not directly saturated by *that,* but by a covert morpheme responsible for producing positive interpretations of bare adjectives. *That* likely quantifies over sets of differential degrees extending from the standard height for fifth-graders, perhaps analogous to comparisons of deviation, such as (19) (Kennedy 1999).

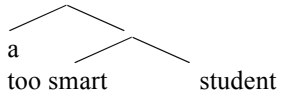
(18) (Intended: It's rare to see a fifth-grader who has the degree of height such that having that degree of height precludes him from riding the roller coaster.)
a. # It's rare to see fifth-grader **that tall** that he can't ride the roller coaster.
b. # It's rare to see **that tall a fifth-grader** that he can't ride the roller coaster.

(19) John is more tall than Bill is short.

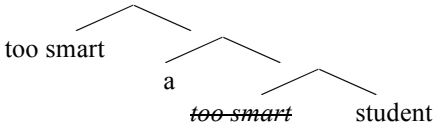
As mentioned in section 2, only a *subset* of degree quantifiers front overtly. For example, the comparative morpheme *more* typically remains in-situ at PF, and this apparently does not affect its status as a degree quantifier. Thus, overt fronting is not required for successful QR; the overtness of this movement is likely driven by phonological properties, perhaps prosodic in nature (see Bolinger 1972 for an account along these lines).

The proposed fronting operation is illustrated in (20) for *too*, here assuming late merger of the degree clause (Bhatt & Pancheva 2004). The adjective and degree operator first merge in attributive position, (20)a. *Too* then overtly QRs to the noun phrase escape hatch, pied-piping the adjective, which is interpreted in-situ. Finally, *too* reaches its clausal position and the *to*-clause is merged. *Too* is pronounced in its intermediate position.

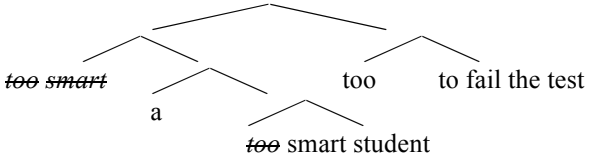
(20) a. Step 1: *too* merges with *smart*



b. Step 2: *too* overtly QRs to NP periphery



c. Step 3: covert clausal QR of *too* with late merger of the *to*-clause; *smart* interpreted in-situ



Matushansky (2002)'s account predicts that whenever fronting is observed, this movement should be subject to scope islands. In the following sections we test this prediction by embedding the degree operator under a variety of barriers. We conclude that blocking effects are robustly found for degree fronting in English and discuss implications for theories of degree QR.

5. Trapped in the AP: intervening negation

We first test what happens when a degree word is trapped in the adjective phrase by embedding it under constituent negation. In general, degree quantifiers cannot scope over negation, plausibly because this would pick out the maximum degree of a set that has no such maximum[2] (Rullmann 1995, Heim 2000). (21) illustrates the missing reading: because there are infinite degrees that Mary is not tall to, negation always takes wide scope over the degree operator:

(21) Mary isn't taller than 4 feet. (Heim 2000)

a. NOT > -ER ¬ max {d: tall(m, d)} > 4 feet

b. # -ER > NOT max {d: ¬tall(m, d} > 4 feet

If a degree quantifier is embedded under constituent negation, the result should be ungrammatical: the quantifier must move at LF or type mismatch will result, but movement can only yield the illicit *too* > *not* scope configuration. For the reasons above, the hypothesis that fronting is the first step of clausal QR thus entails that fronting is incompatible with constituent negation. To test this prediction, we use Klima (1964)'s tag-question diagnostic, which establishes that fronting in (22) indeed requires sentential negation.

(22) a. √ sentential negation: John is not [[too smart] a student] is he?

b. * constituent negation: * John is [[not too smart] a student] isn't he?

Let us turn to how patterns of negation affect the in-situ degree word. The same diagnostics show that (23) contains constituent negation, unsurprising given the placement of *not* under the indefinite article:

(23) a. * sentential negation: * John is a not too smart student, is he?

b. √ constituent negation: John is a not too smart student, isn't he?

And, crucially, (24) shows that under constituent negation, the clausal complement cannot be merged. No such problem arises with sentential negation in (25), or with the nonnegative modifier in (26).

---

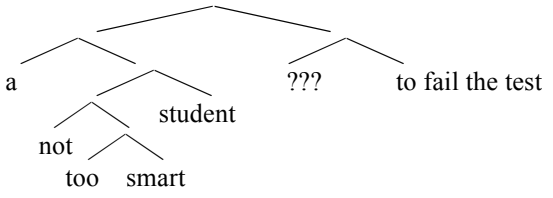
[2] Alternatively, there could be a syntactic intervention effect that rules out movement of a quantifier over negation, similar to what is proposed by Beck (1996) for LF-movement in German. I remain neutral on this point.

(24) John is a not too smart student (*to fail this test).
(25) John is not too smart a student (to fail this test).
(26) John is a much too smart student (to fail this test).

The failure to merge the degree clause follows if, following Bhatt & Pancheva (2004), the degree clause is merged *at the clausal QR site. Too* is trapped in-situ by constituent negation, and it can never reach this position.

(27) PF: * a not too smart student to fail the test

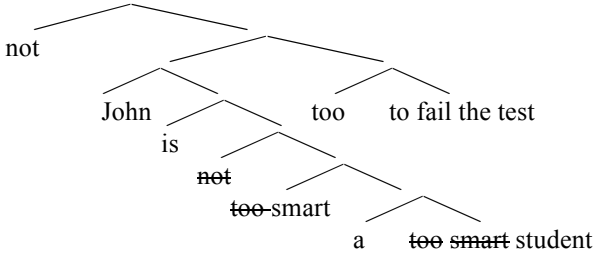
LF:



Sentential negation can take wide scope in the clause, with the degree quantifier tucking in underneath (or alternatively, sentential negation is base-generated in a position higher than the landing site for degree QR):

(28) PF: not too smart a student to fail the test

LF:



In sum, this section shows that fronting is only available where QR is available: it is unattested in situations where QR would yield an illicit result. This constitutes support for Matushansky (2002)'s treatment of degree fronting and thus provides evidence that in a limited range of cases, QR of degree words is *directly observable.* Moreover, when the degree word cannot move out of its base-generated position, there is no way for it to reach the clausal QR site and merge with the degree clause. This blocking effect is in line with a broader movement-based approach to degree constructions.

Because this section focuses on AP-internal negation, we have only shown the need for the degree word to move out of the adjective phrase, but have not ruled out QR to a position within the noun phrase. The next section tackles this question by investigating blocking effects at the DP-layer.

6. Trapped in the DP: intervening determiners

There is a long history of treating DP as a scope island, dating back to Larson (1985)'s observation that split scope readings in sentences like (29) are unattested. Although it is possible for the embedded quantifier *every city* to scope over *someone* (May 1977), it is not possible for it to independently scope over other quantificational expressions outside of the DP. Thus, *two politicians* must scope above or below both *someone* and *every city;* the reading in (29)c, however is missing.

(29) Two politicians spy on [$_{DP}$ someone from every city].
- a. 2 > ∀ > ∃: 2 politicians are such that in every city, there is someone they spy on.
- b. ∀ > ∃ > 2: In every city, there is someone who is spied on by 2 politicians.
- c. *∀ > 2 > ∃: In every city, there are 2 politicians such that they spy on someone from that city.

This is usually interpreted as evidence that DP constitutes a scope island (but see Sauerland 2005). Assuming that verbal arguments are always DPs (Longobardi 1994), and if DP is a scope island, then we should observe restrictions on degree fronting in argument nominals.

Fronting out of a definite or strong DP is impossible, an observation in line with the predictions above; see (30). This suggests that fronting targets a position below DP and that the indefinite article is similar to what is found in predicate nominals (*John is **a** doctor*).

(30) * too difficult [$_{DP}$ {the, this, my, John's, every} problem]

It is also sometimes noted in passing that fronting is degraded in indefinite arguments (Bresnan 1973, Abney 1987, Matushansky 2002, Troseth 2009), although this issue has not been investigated in detail due to variability in judgments across speakers and sentence types. Closer investigation reveals that some of this variability is captured by (i) whether the noun phrase is a subject or object, and (ii) whether the predicate contains any abstract or overt adverbial quantifiers. I will show how these facts also follow if fronting is sensitive to intervening quantifiers within the DP layer.

The subject-object asymmetry is illustrated in (31): whereas fronting is licit in a predicative noun phrase, it is marginal in objects and particularly degraded in subjects.

(31) Subject-object asymmetry:
- a. ?? **Too lazy a student** failed the class.
- b. ? The teacher failed **too lazy a student**.
- c. John is **too lazy a student**.

This asymmetry is confirmed by patterns of use of *how ADJ (of) a NOUN* in the Corpus of Contemporary American English (Davies 2008), which shows an overwhelming bias towards fronting in predicate nominals, accounting for 59% of all cases. By contrast, only 2.3% of fronting occurred in a subject noun phrase, the vast majority of which were either passive subjects or subjects of there-existentials. The status of fronting in objects was mixed: while objects accounted for 30% of the fronting data, well over half contained one of four predicates: *to make a d-good deal, to have (*e.g., *a d-large share, a d-bad day*)*, to play a d-big role,* and *to do a d-good job*. This suggests that objects with fronting are somewhat acceptable but not particularly productive in use.

Although both subject and object noun phrases project a DP layer, in objects, D may be bound externally through existential closure, which happens at the level of the VP (Diesing 1992). This type of explanation predicts that fronting becomes more acceptable whenever a quantifier external to DP can bind D, bringing us to observation (ii) above: predicates containing covert generic operators and/or adverbial quantifiers, such as (32), are markedly better than those that do not:

(32) a. Too rich a president could never identify with the average citizen.
- b. ??Too rich a president didn't identify with the average citizen in the last election.

Such cases also arguably allow for an open variable within the DP to be bound externally – by the adverb or covert generic operator. Accordingly, there is no element in D with inherent quantificational force to induce blocking effects.

Turning to in-situ degree words, the pattern first observed in section 5 extends here: the degree word may be embedded in a DP, but in such cases the clausal complement cannot be merged.

(33) {the, this, my, John's, every} far too difficult problem

(34) The students were upset about the far too difficult problem (*to solve) on the math test (*to solve).

As before, I interpret this as evidence that the degree operator cannot reach its clausal QR site to merge with the degree clause.

7. Extensions & future work

Sections 5 and 6 showed that a degree operator stuck in-situ fails to combine with its clausal complement. Yet surprisingly, failure to QR does not yield total ungrammaticality: (24) and (34) are acceptable without the clausal complement, and *not too/as/so tall* has the meaning of a degree modifier (≈ *not very tall*). In fact, degree operators seem to frequently have irregular meanings when placed in syntactic environments that preclude QR. Most famously, definite comparatives are attested but resist merging with an overt *than*-clause (Lerner & Pinkal 1995):

(35) George owns the/ever faster car (*than Bill).

Beil (1997) notes that such comparatives are interpreted relative to a presupposed set from the preceding discourse, i.e. a set of cars under discussion in (35), but this is not strictly true. The comparative morpheme can also robustly yield a (euphemistic) positive reading of the adjective it accompanies, which is far more salient when the syntactic context precludes quantificational comparison, for example, in subject attributive comparatives:

(36) The older gentleman at the check-in was very helpful. (≈ *the old gentleman*)

(37) a. *An older gentleman at the front desk was very helpful than at the valet.
b. –er (λd. a d-old gentleman at the valet was very helpful)
(λd. a d-old gentleman at the check-in was very helpful)

Such uses of *–er* are not new (examples from 16th century texts can be found in Poutsma 1930) and not limited to English (with degree morphemes alternating between quantificational and intensified meanings in at least Dari, Pashto, and Bangla; and apparently also in Malayalam, Mongsen Ao, Maori, and Tohono O'odham; Bobaljik 2012).

These facts suggest that the quantificational nature of the degree operator is dependent on the possibility of QR, potentially supporting the decomposition of degree morphemes into quantificational and comparative components. In the absence of quantification, existential closure may apply, yielding comparison against a standard. Thus, *an older gentleman* can be older than some overtly or contextually specified degree, or older than some relevant standard of age.

8. Conclusion

It remains controversial in the literature whether (and which) degree words are quantifiers, especially given the lack of consistent scope ambiguities. The results here provide a different type of evidence for a quantificational approach to fronting degree words. Fronting was found to be incompatible with environments that preclude QR, as expected if fronting is an overtly observable step of QR. Moreover, degree words that cannot move out to the clause fail to combine with a clausal complement and may yield deviant readings. These results fall in line neatly with late-merger of the degree clause (Bhatt & Pancheva 2004) – since the presence of a degree clause would be impossible without QR of the degree quantifier – and provide support for the proposed parallels between the domain of degrees and individuals.

References

Abney, Steven Paul. (1987). The English noun phrase in its sentential aspect. PhD dissertation, MIT.
Beck, Sigrid. (1996). Quantified structures as barriers for LF-movement. *Natural Language Semantics* 4:1–56.
Beil, Franz. (1997). The definiteness effect in attributive comparatives. In *Proceedings of SALT VII,* 37-54.
Bennis, Hans, Norbert Corver & Marcel den Dikken. (1998). Predication in nominal phrases. *Journal of Comparative Germanic Linguistics* 1(2): 85-117.
Bobaljik, Jonathan. (2012). *Universals in comparative morphology.* MIT Press.
Bolinger, Dwight. (1972). *Degree words.* Walter de Gruyter.
Bhatt, Rajesh, & Roumyana Pancheva. (2004). Late merger of degree clauses. *Linguistic Inquiry, 35*(1), 1-45.

Bresnan, Joan. (1973). The syntax of the comparative clause construction in English. *Linguistic Inquiry* 4:275-343.

Cresswell, Max. (1976). *The semantics of degree*. In B. Partee (Ed.) *Montague Grammar.* New York Academic Press.

Davies, Mark. (2008-) *The Corpus of Contemporary American English: 450 million words, 1990-present*. Available online at http://corpus.byu.edu/coca/.

Delsing, Lars-Olof. (1993). The internal structure of noun phrases in the Scandinavian languages. PhD thesis, University of Lund.

Den Dikken, Marcel. (2006). Relators and linkers: the syntax of predication, predicate inversion, and copulas. MIT Press.

Farkas, Donka & Katalin Kiss. (2000). On the comparative and absolute readings of superlatives. *Natural Language and Linguistic Theory* 18:417-455.

Heim, Irene. (1985). Notes on comparatives and related matters. Ms, University of Texas, Austin.

Heim, Irene. (2000). Degree operators and scope. In *Proceedings of SALT X*.

Hendrick, Randall. (1990). Operator Movement in NP. In *Proceedings of the 9th West Coast Conference on Formal Linguistics*.

Heycock, Caroline & Anthony Kroch (1999). Pseudocleft connectivity: implications for the LF interface. *Linguistic Inquiry* 30.3:365-397.

Higginbotham, James. (1985). On semantics. *Linguistic Inquiry* 16:547-594.

Higgins, Francis. (1979). *The Pseudo-Cleft Construction in English.* New York: Garland.

Kennedy, Christopher. (1999). *Projecting the adjective: The syntax and semantics of gradability and comparison*: Routledge.

Kennedy, Christopher and Jason Merchant. (2000). Attributive comparative deletion. *Natural Language and Linguistic Theory* 18:1:89-146.

Klima, Edward. (1964). Negation in English. In Jerry A. Fodor & Jerold J. Katz (eds), *The Structure of Language,* 246-323.

Larson, Richard. (1985). Quantifying into NP. Ms, MIT.

Leu, Thomas. *The internal syntax of determiners.* PhD dissertation, NYU.

Lerner, Jan & Manfred Pinkal (1995). Comparative ellipsis and variable binding. In *Proceedings of SALT V*.

Longobardi, Giuseppe. (1994). Reference and proper names: a theory of N-movement in syntax and logical form. *Linguistic Inquiry* 25.4:609-665.

May, Robert. (1977). *The grammar of quantification.* PhD dissertation, MIT.

Matushansky, Ora. (2002). *Degree of movement/movement of degree.* PhD dissertation, MIT.

Matushansky, Ora. (2008). On the attributive nature of superlatives. *Syntax* 11:1, 26-90.

Moro, Andrea. (1997). *The Raising of Predicates: Predicative Noun Phrases and the Theory of Clause Structure.* Cambridge University Press, Cambridge, MA.

Rullmann, Hotze. (1995). Maximality in the semantics of wh-constructions. PhD dissertation, UMass Amherst.

Sauerland, Uli. (2005). DP is not a scope island. *Linguistic Inquiry* 36:303-314.

Schwarzschild, Roger. (2002). The grammar of measurement. In *Proceedings of SALT XII.*

Schwarzschild, Roger. (2005). Measure phrases as modifiers of adjectives. *Recherches Linguistiques de Vincennes,* 35:207-228.

Schwarzschild, Roger. (2006). The role of dimensions in the syntax of noun phrases. *Synax* 9:1, 67-110.

Stateva, Penka. (2002). How different are different degree constructions? PhD dissertation, University of Connecticut.

Troseth, Erika. (2009). Degree inversion and negative intensifier inversion in the English DP. *The Linguistic Review* 26:1 37-65.

von Stechow, Arnim. (1984). Comparing semantic theories of comparison. *Journal of Semantics* 3:1-77.

Williams, Edwin Samuel. (1974). *Rule ordering in syntax.* PhD dissertation, MIT.

Proceedings of the 32nd West Coast Conference on Formal Linguistics

edited by Ulrike Steindl, Thomas Borer, Huilin Fang, Alfredo García Pardo, Peter Guekguezian, Brian Hsu, Charlie O'Hara, and Iris Chuoying Ouyang

Cascadilla Proceedings Project Somerville, MA 2015

Copyright information

ISBN 978-1-57473-466-9 library binding

Ordering information

Orders for the library binding edition are handled by Cascadilla Press.
To place an order, go to www.lingref.com or contact:

Cascadilla Press, P.O. Box 440355, Somerville, MA 02144, USA
phone: 1-617-776-2370, fax: 1-617-776-2271, sales@cascadilla.com

Web access and citation information

This entire proceedings can also be viewed on the web at www.lingref.com. Each paper has a unique document # which can be added to citations to facilitate access. The document # should not replace the full citation.

This paper can be cited as:

O'Connor, Ellen. 2015. Trapped in the Noun Phrase: When Degree Quantifiers Can't QR. In *Proceedings of the 32nd West Coast Conference on Formal Linguistics*, ed. Ulrike Steindl et al., 149-158. Somerville, MA: Cascadilla Proceedings Project. www.lingref.com, document #3166.