QR Is Restrictor Sharing

Danny Fox and Kyle Johnson

A popular way of giving quantificational nominal expressions their scope is with a syntactic rule, sometimes known as Quantifier Raising (QR), that May (1977, 1985) laid out. That rule covertly moves a DP headed by certain quantificational determiners to a position from which its scope is determined. We will argue for a revision to May's rule that preserves most of its content, but moves the phrase inside the DP that restricts the quantification, rather than the DP itself. Moreover, we will implement that idea with an interpretation of movement that has a moved phrase occupy two syntactic positions in one representation: moved phrases are daughters of two mothers. These are both features of the analysis of QR offered in Johnson (2012). Here we show how that analysis might shed light on the nature of two problematic constructions.

One of those are the cases of "split antecedence" for relative clause extraposition that Perlmutter and Ross (1970a) discovered:

(1) A man entered the room and a woman went out who were quite similar.
(Perlmutter and Ross, 1970a: (3), p. 350)

What's key in this example is that the relative clause cannot restrict *a man* or *a woman*, but instead must modify a predicate of pluralities that is true of man-woman pairs. This is what makes it different from the cases of Right Node Raising studied in Grosz (2015).

The other is what Link (1984) called "hydras," exemplified by (2).

(2) Every man and every woman who met at the party have left.

Like (1), the relative clause in (2) modifies a predicate of pluralities that is true of man-woman pairs, even though this does not seem to be what it syntactically combines with.

The syntax we will adopt for these constructions is a lightly revised version of that in Zhang (2007). We will show how Zhang's account follows from a minor adjustment to the version of QR in Johnson (2012) and we will work out its semantics. We begin by introducing the version of QR in Johnson (2012), and then adjust it so that it applies correctly to (1) and (2).

1. Quantifier Raising

Quantifier Raising (QR) is one of a series of "Movement" rules which put together a syntactic process and a semantic process. Under one formulation, the syntactic process does two things: it merges a copy of the quantificational phrase into a new position, and it makes that copy unpronounced. The semantic rule also does two things: it makes the quantificational phrase a restricted variable and it makes the copy bind that variable. A representative picture of these processes is in (3).

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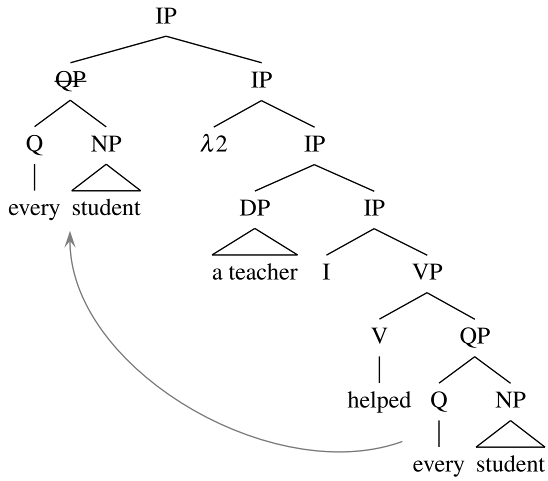
(3)



QR has merged the copy of a quantificational phrase to a position adjacent to a λ operator it inserts, and makes this copy of the quantificational phrase silent (indicated here with strike-outs.) The lower, original, version of the quantificational phrase will get a special interpretation, which we will turn to in a moment.

This formulation of QR has a number of virtues. It correctly allows *every* to be semantically interpreted in its higher position. We can see that this is desirable by noting that the interpretation *a teacher* gets can place it within the scope of *every*. It also correctly makes the NP part of the quantificational phrase restrict the quantification. At the same time it makes the NP associated with the quantificational phrase semantically interpreted in the lower QP too, and this is as it should be as we can see from the disjoint reference effect in (4).

(4) * She_1 helped every student of Jane's_1.

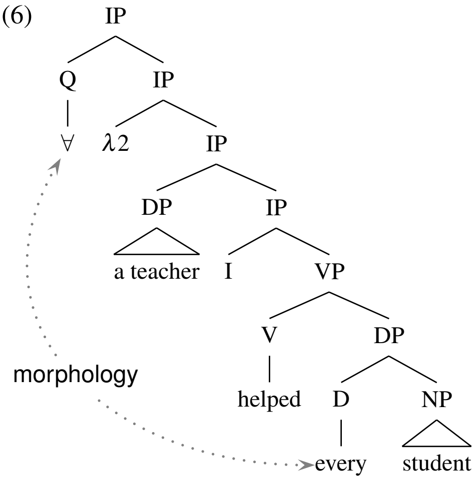
The NP part of a QR'd quantificational phrase is semantically interpreted in two places, then.

For the semantics to work out correctly, the original quantificational phrase – the one that is spoken – must be interpreted as a variable bound by the λ operator. The method of achieving this that we will focus on gives the quantificational phrase the meaning of a restricted variable. The restriction is provided by the NP part of the QP. The rule that gives the QP this meaning is called "trace conversion" by Fox (2002), and it treats the quantificational phrase as if it's the kind of definite description that gets a variable interpretation. An example of such a definite description is *the department*, in (5), which can be interpreted as a variable bound by *every department*.

(5) A professor from every department will outline the department's budget at our next meeting.

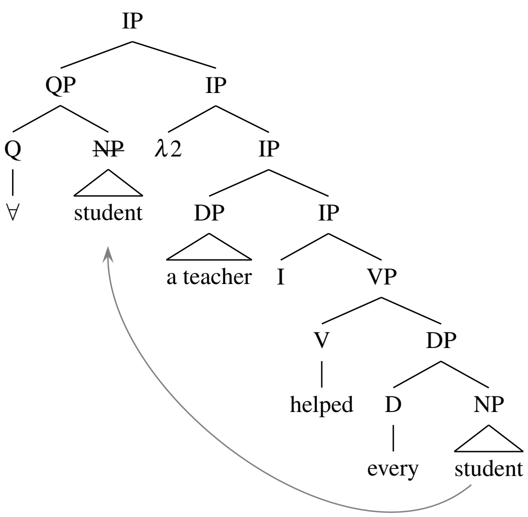
We'll adopt this view of what the meaning of the quantificational phrase is as well, but rather than use trace conversion, we'll use a special rule of morphology. Assume that quantificational expressions like *every student* are just special pronunciations of definite descriptions. The definite determiner is pronounced as *every*, rather than *the*, because it is the exponent of a universal quantifier that is introduced higher. (See Beghelli (1993), Beghelli and Stowell (1997), Butler (2004) and Sportiche (2003) for the idea that the quantificational part of a quantificational expression is introduced in its scope position.) The picture we have, then, is (6).

(6)



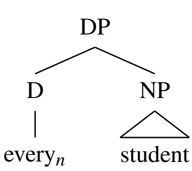
The NP part needs to combine with Q to restrict it, and this is what justifies moving the NP part of a quantificational DP, as in (7).

(7)



We'll have to give *every student* an index, so that it can be bound by the λ operator.[1] Following Elbourne (2005), let an index be part of the syntax of DPs in the way indicated in (8).

(8)



Assume that indexed *every* has a denotation identical to the definite description, headed by an indexed *the*, we see in (5). It combines with a predicate (the denotation of its NP sister) and returns the individual that the relevant assignment function assigns to the index provided that the NP's denotation is true of that individual. It is otherwise undefined. (9a), the denotation we propose, will be revised in the next section. (9b) gives a denotation for a DP headed by *every*, which will be helpful in comparing (9a) with its revision in the following section.

[1] Moreover, something will have to ensure that the index is the same that comes with the λ operator. Nothing we say will do that; something needs to be added.

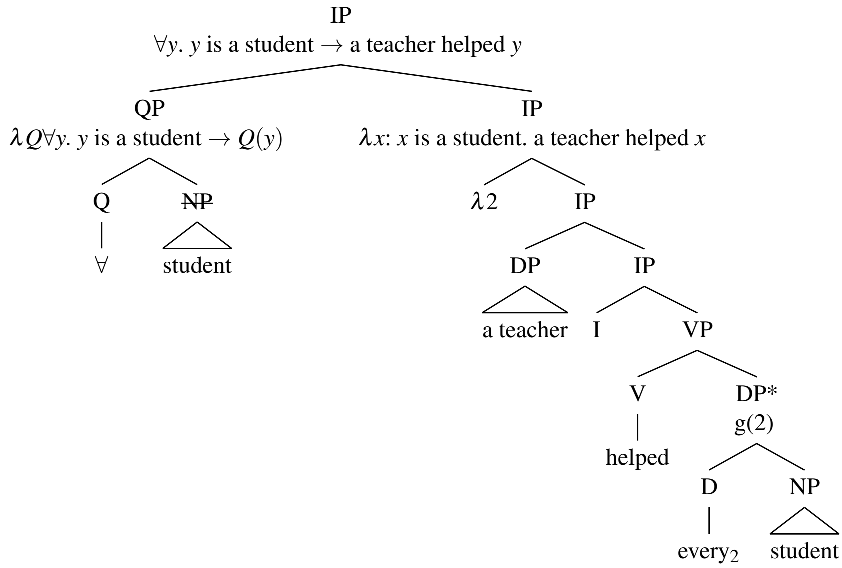
(9) a. $[\![\text{every}_n]\!]^g = [\![\text{the}_n]\!]^g = \lambda P_{<e,t>}: P(\text{g(n)}) = 1.\ \text{g(n)}$
b. $[\![\text{every}_n\ \text{NP}]\!]^g = [\![\text{the}]\!]([\![\text{NP}]\!] \cap \{\text{x: x = g(n)}\})$

Our assumption is that *every student* is just a special way of pronouncing *the student*, so our denotation for *every* matches that typically given to *the*.

If we let the denotation for ∀ be the one standardly assigned to *every*, then the semantics associated with QR is as (11) indicates.

(10) $[\![\forall]\!] = \lambda P\ \lambda Q\ \forall x.\ P(x) \rightarrow Q(x)$

(11)



presupposition: DP* (and constituents that dominate it up to the λ abstractor) has a denotation only if g(2) is a student.

When certain conditions hold, there is material in the NP part of a QR'd DP that is interpreted only in the higher position. This is the case with relative clauses that contain a so-called "antecedent contained ellipsis." Such relative clauses contain an elided VP whose antecedent contains the DP the relative clause modifies. (12) is an example.[2]

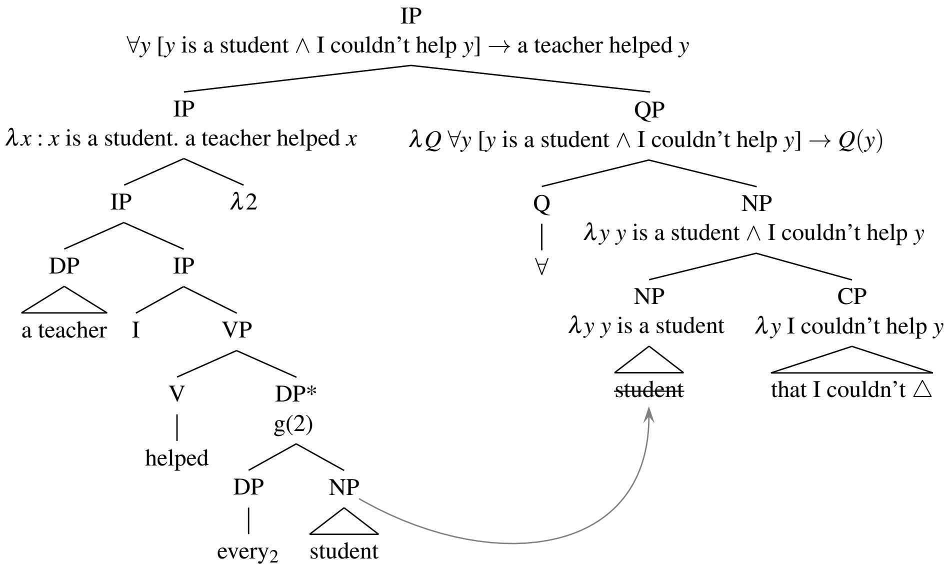
(12) A teacher helped every student that I couldn't △.
△ = $[_{\text{VP}}$ help $x]$

Fox (2002) argues that in these cases, the relative clause is syntactically only in the higher NP. This requires that QR be rightwards and that it be able to move one NP into another, larger, NP as indicated in (13).[3]

[2] The "x" in (12) represents the variable denoted by a constituent within the relative clause. This variable must be understood as equivalent to the restricted variable that *every student* denotes. How that is achieved we won't spell-out here.

[3] More precisely, the material that is pronounced in the higher copy of a QRd phrase must be linearized to the right of the lower copy. For some methods of deriving this, see Fox and Pesetsky (2009) and Johnson (2012).

(13)



presupposition: DP* (and constituents that dominate it up to the λ abstractor) has a denotation only if g(2) is a student.

The relative clause in (12) is not, despite appearances, actually inside the object *every student*, and it is therefore not within the antecedent for the ellipsis it contains.

The claim, then, is that these relative clauses are always in an extraposed position, sometimes string-vacuously as in (12) (see Baltin 1987). This is supported by contrasts like (14), from Tiedeman (1995).

(14) a. * I [$_{\text{VP}}$ said that everyone you did △ arrived].

b. I [$_{\text{VP}}$ said that everyone arrived] that you did △.

△ = said that x arrived

(Fox, 2002: (35b), (36b), p. 77)

Under standard assumptions, only (14b) allows a parse in which the relative clause with the elided VP is outside that VP's antecedent. We'll assume, then, that all relative clauses with an elided VP are pronounced in a position that puts them outside the antecedent. See Fox (2002) for details.

We've looked at these special cases of relative clauses with "antecedent contained ellipsis" to introduce one motivation for the account of relative clause extraposition in Fox and Nissenbaum (1999) and Fox (2002) that hinges on QR. An extraposed relative clause on this account sits visibly in the higher QP that QR produces. The Perlmutter and Ross examples of split antecedents involve an extraposed relative clause, and this, then, is how those examples teach us something about QR. Before we turn to that, however, we introduce the last relevant ingredient in Johnson's version of QR.

The theory of QR just developed has removed much of its semantic idiosyncrasy. All that remains of the two parts to QR's former semantic component is that part which makes the higher copy bind the lower copy. QR's semantic rule amounts to inserting a λ expression beneath Q and ensuring that it bind the index inside the DP from which NP moves. We no longer need trace conversion, at least not in instances of QR, because the lower DP is now born with the denotation that trace conversion used to give it.

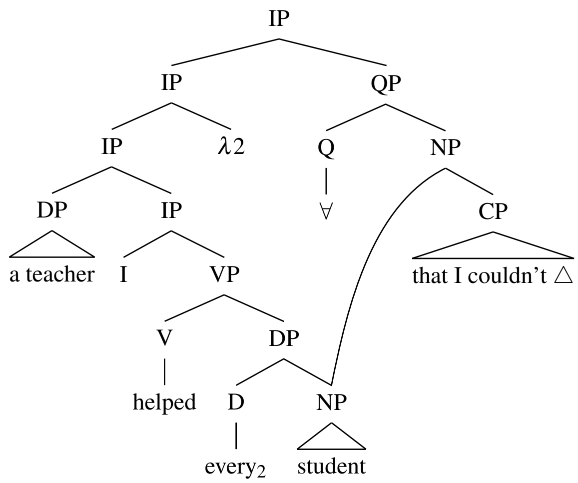
The syntactic part of QR, however, has only minimally changed. It still does two things: merge a copy of the phrase to be moved in a new position, and inhibit the pronunciation of that copy. Nunes (1995, 1996) proposes a way of deriving that one of the two copies of the moved phrase not be pronounced, and this leads us to multidominance. (For a suggestion about why it's the lower copy that gets pronounced in the case of QR, see Fox and Pesetsky 2009 and Johnson 2012.) Nunes suggests that the algorithm which linearizes a syntactic representation into a string treats copies as if they were the same thing in two positions. Because of the way linearization algorithms work, this will require it to calculate a string position for a copy from only one of its syntactic positions. If the algorithm were to use both of a copy's syntactic positions to calculate a string position, inconsistent strings would arise. For instance, if one position a copy occupies would cause it to be linearized so that it precedes some term, α, and the other position that copy occupies would cause it to be linearized so that it follows α, then the linearization would define a string that impossibly puts α both before and after the copy.

To get this idea off the ground, we need something that ensures (15).

(15) Two copies of $\beta =_{\text{def.}} \beta$ in two syntactic positions.

This leads to multidominant representations like (16).

(16)



We'll adopt this view: a moved phrase is a single phrase with different (immediate) mothers.

The syntactic rule for QR becomes (17).

(17) QR
Let α be the restrictor of D, and β be the restrictor of Q. If D is the exponent of Q then β reflexively dominates α and if β reflexively dominates α then D is the exponent of Q.

(This will be changed in section 3 when we get to Hydras.)

2. Extraposed relatives with Split Antecedents

Having QR move the restrictor part, rather than the whole DP, allows a flexibility that can be used to understand the examples discovered by Perlmutter and Ross (1970b). We'll use (18) as our model for these cases.

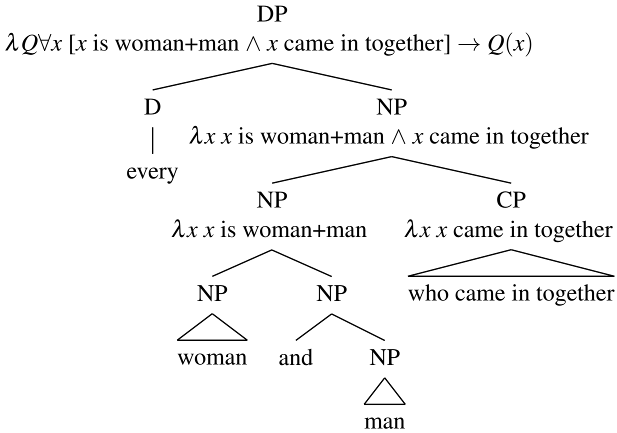
(18) Every woman is smiling and every man is frowning who came in together.

The relative clause in (18) modifies both subject DPs. (18) has a meaning very close to (19).

(19) Every woman and man who came in together are smiling and frowning respectively.

The DP in (19) uses standard mechanisms of semantic composition. The two NPs *woman* and *man* are brought together with an apparently non-boolean *and* to form a larger NP. This NP denotes a predicate which holds of pluralities that are the sum of two singulars: one a man and the other a woman. (See Link 1983, Winter 2001 and Champollion 2015.) This larger NP then combines with the relative clause as shown in (20).

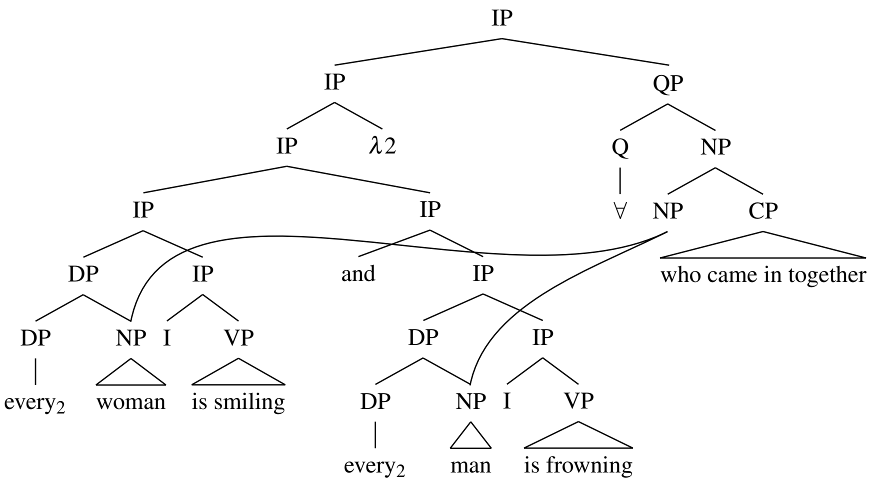
(20) “woman+man” is shorthand for a predicate that is true of sums of a woman and a man



This will be our model for (18).

Our view of extraposed relative clauses, recall, is that they sit within the higher, otherwise unpronounced, copy of the NP moved by QR. In (18), this higher NP is composed of the NPs that are found in each of the two subjects. We suggest that this is achieved by QRing the NPs of each subject into a single higher QP, as shown in (21).

(21)



This is essentially the account given in Zhang (2007), who uses “sidewards movement” to create a representation similar to (21). Compare also Moltmann (1992) and McKinney-Bock (2013), for similar proposals that use multidominant representations. The two restrictors, *man* and *woman*, have merged together to form a larger NP, and this NP has merged with the relative clause to make the restrictor for $\forall$. This complies with (17) only if $\forall$ has determined the morphological shape of both subject DPs. (17) allows the NPs of each subject DP to be part of the NP that restricts Q only if each of the heads of those DPs is the exponent of that same Q. Indeed, it appears that this must be the case, at least over a wide range of examples. When the quantifiers represented by the determiners of the subjects differ, the constructions degrade sharply, as the contrasts in (22) indicate. (This fact is first, to our knowledge, reported in Moltmann 1992.)

(22)
a. * A woman is smiling and every man is frowning who came in together.
b. A woman is smiling and a man is frowning who came in together.
c. * Every woman is smiling and some man is frowning who came in together.

d. Some woman is smiling and some man is frowning who came in together.
e. * Most women are smiling and every man is frowning who came in together.
f. ? Most women are smiling and most men are frowning who came in together.
g. * Every woman is smiling and few men are frowning who came in together.
h. Few women are smiling and few men are frowning who came in together.
i. * No woman is smiling and every man is frowning who came in together.
j. No woman is smiling and no man is frowning who came in together.

There are examples, like (23) suggested to us by Ming Xiang, where determiner-like material in each of the subjects differs and the result is fully grammatical.

(23) One woman is smiling and other women are frowning who came in together.

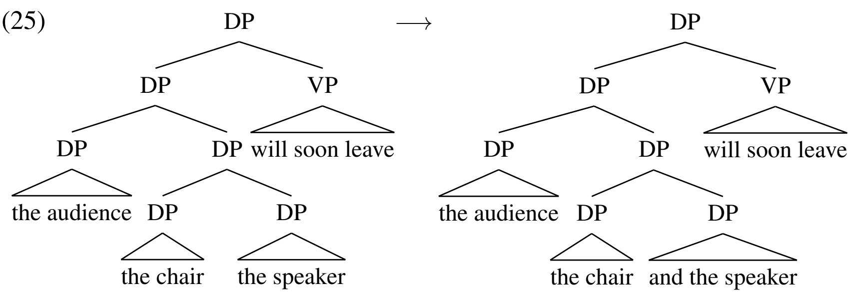
We suspect that the differing material in this, and similar examples, is not the relevant quantifier, however. In (23), for example, the subject DPs plausibly involve the same existential quantifier and therefore also fit the prediction.

To know how to assign a meaning to (21) requires knowing how two merged NPs are combined semantically. Since NPs do not overtly merge in the way that (21) shows, we'll also need to understand how to restrict these structures to situations where they are not pronounced. What we suggest is that English permits asyndetic coördinations, like, for instance, Sarcee (Athapaskan) does:

(24) [dítòò dóó-ʔī] iná áání-lã.
[own.father own.mother-DET] she told
'She told her own father and mother.'
(Johannessen, 1993: (28a), p. 163)

Unlike Sarcee, however, English has a Spell Out rule that requires *and* to be inserted in the final conjunct, as in (25).

(25)

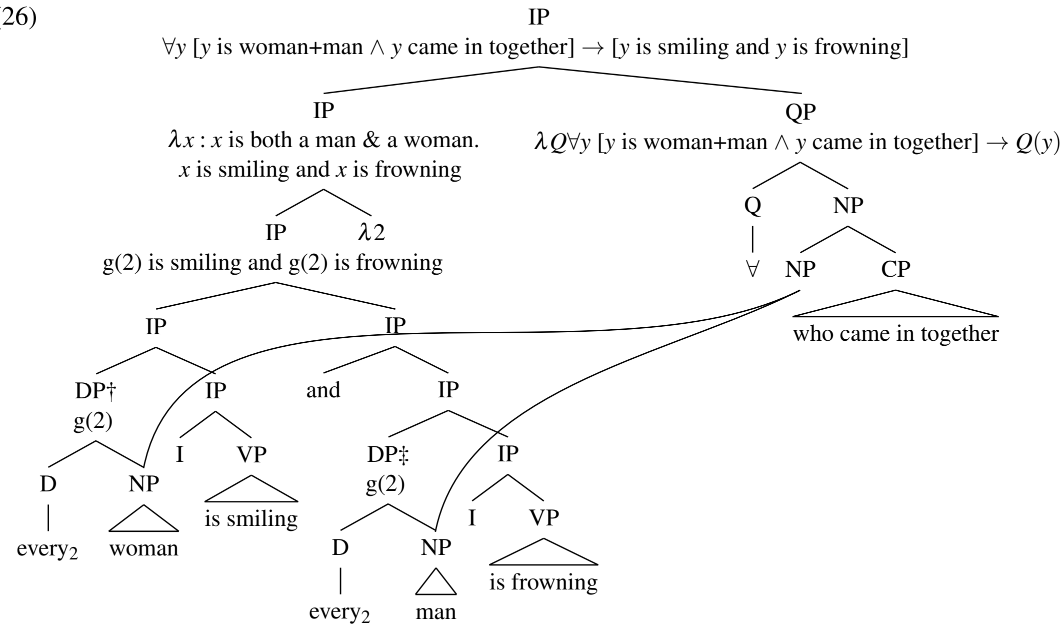


Because the NPs that are brought together in (21) are not pronounced, they are not subject to the rule. What this means, then, is that two merged NPs are subject to the same set of semantic composition rules that NPs joined with *and* are.[4] In (21), we can assume that the two NPs are composed in the same way that the NPs in (20) are.

With these assumptions, the semantics QR delivers to (21) is indicated in (26).

[4] This is basically the same thing that Moltmann (1992) suggests, and virtually identical, modulo the differences in our syntax, to Zhang (2007)'s proposal.

(26)



presuppositions: DP† (and constituents that dominate it up to the λ abstractor) has a denotation only if g(2) is a woman.

DP‡ (and constituents that dominate it up to the λ abstractor) has a denotation only if g(2) is a man.

This isn't right. It presupposes (under universal projection) a contradiction, namely that every plurality which is the sum of a man and a woman who came in together is both a man and woman.[5]

Our semantic model for a DP headed by a quantifier's exponent is a definite description. Our thesis is that *every NP* has just the range of meanings available to *the NP*. What is needed in (26) is for the *every*-phrases to impose a presupposition that can be satisfied by a proper subpart of the group referred to by the variable. This is something that *the NP* phrases can indeed do, as (27) shows.

(27) A friend of every woman and man who agreed to dance thinks that the woman is better than the man.

The definite descriptions in (27) are interpreted as variables whose values vary with every woman and man, and they successfully pick out just that individual in the woman+man pair that is appropriate to their gender. It's this kind of meaning for a definite description that is required in (26).

To capture this ability of definite descriptions, we'll change the denotation of *the* (=*every*) to (28).

(28) a. $[\![\text{every}_n]\!]^g = [\![\text{the}_n]\!]^g = \lambda P_{<e,t>}$: there is a unique maximal sub-part of g(n), x, such that P(x) = 1. the unique maximal sub-part of g(n), x, such that P(x) = 1.

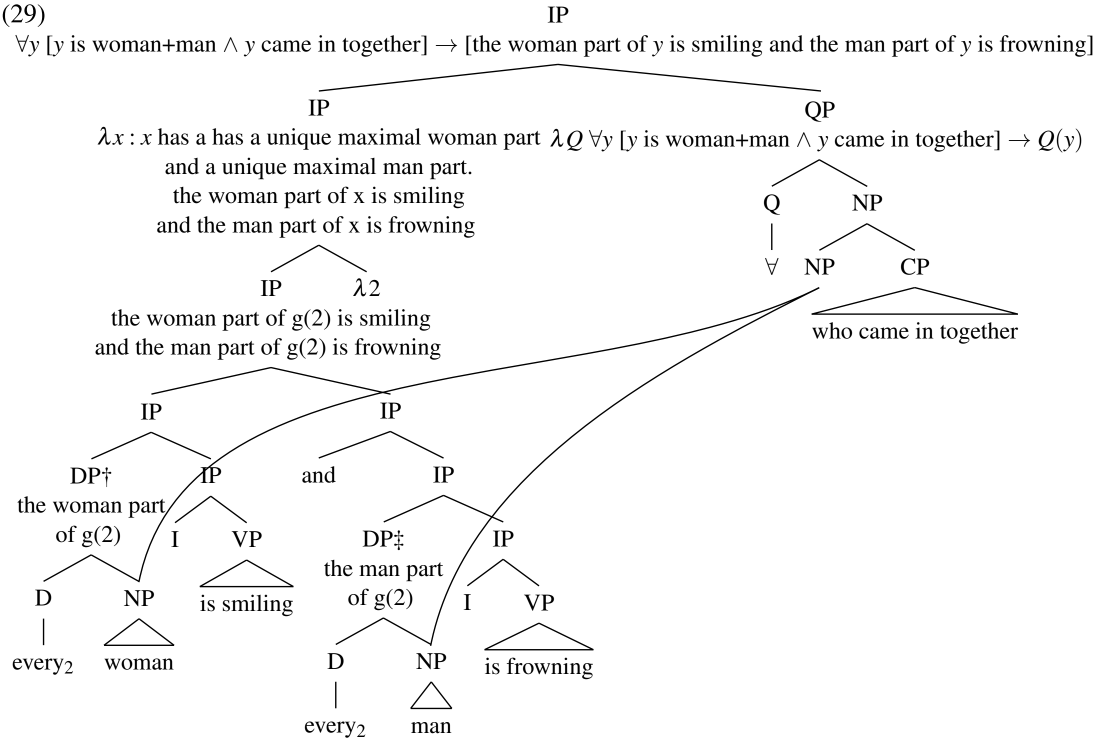
b. $[\![\text{every}_n\ \text{NP}]\!]^g = [\![\text{the}]\!]([\![\text{NP}]\!] \cap \{\text{x: x} \leq \text{g(n)}\})$

The version in (28b) makes the connection with (9) most transparent.[6] The modification is rather minimal and involves a move from identity to the weaker "part of" relation (one that not only holds between x and itself but also between x and proper parts of x). This does no harm in the simple examples of QR we've been looking at, since in those maximality ensures that the relevant DP will receive the same interpretation that it received before (for any relevant assignment function). For the Perlmutter-Ross cases, however, it converts (26) to (29).

[5] The presupposition remains pathological even under the weakest theory of presupposition projection, namely that some individual which is the sum of a man and a woman who came in together is both a man and a woman.

[6] The fact that (9b) is syncategorematic suggests that we might be wrong about the syntax and that the index might be part of the sister of *the*/*every* (as in Rullmann and Beck 1998 and Fox 2002). We will have to leave the consequences for the syntax of QR to some further occasion.

(29)



presuppositions: DP† (and constituents that dominate it up to the λ abstractor) has a denotation only if there is a unique maximal woman part of g(2).

DP‡ (and constituents that dominate it up to the λ abstractor) has a denotation only if there is a unique maximal man part of g(2).

This is the right meaning.

3. Hydras

Let's consider how this account can be fit to Link (1984)'s hydras. We'll use (30) as our exemplar.

(30) Every man and every woman who'd agreed to dance with each other got out on the floor.

This has the same meaning as (31).

(31) Every man and woman who'd agreed to dance with each other got out on the floor.

We have an account for (31) which would extend to (30) if we had a way of making the meaning of *every NP* the same as the meaning of just *NP*. A leading idea in the analysis of QR employed here is that the word *every* is merely an exponent of an expression found elsewhere. That idea lends itself to the problem posed in (30). We suggest that the *every*s in (30) are not the determiners we have used to build the expressions bound by the quantifiers up to now, but are instead a semantically empty morpheme within those expressions. The *every*s in (30), in other words, are exponents of the determiners we have up to now written as *every*. Those exponents reside within the determiner's sister.

That determiners can have an exponent within their sister is widely attested. In many languages, definite descriptions express the definite determiner with either a morpheme in D position or a morpheme within the D's complement. Sometimes, as in the Swedish (32), it can be expressed in both positions. (See, e.g., Delsing 1993, Embick and Noyer 2001, Hankamer and Mikkelsen 2005, Embick and Marantz 2007 and Katzir 2011.)

(32) den gamla mus-en
the old mouse-def
'the old mouse'

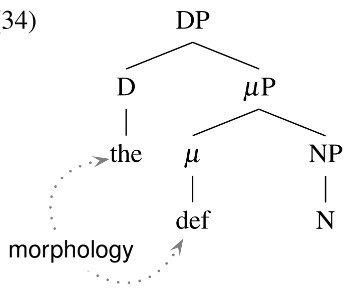
Under certain circumstances, only the lower morpheme is found. In Swedish, for instance, only the lower morpheme is pronounced when there is no attributive adjective:

(33) (*den) mus-en
the mouse-def
'the mouse'

In these situations, then, the only exponent of the definite determiner, whose denotation is in D position, is within its projection.

Similar facts exist in Hebrew, Arabic and many other languages. In these languages, a picture like (34) exists, where the position of μ, an exponent of the definite determiner, varies by language.

(34)



In these cases, the term that has the meaning of a definite description is arguably in D position, and the morpheme in μ is semantically vacuous.

Let's import this syntax into English. Suppose that the English definite determiner in D position always expresses its exponent on just μ.

(35) μ is always the exponent of D.

We have also seen, however, that the morphological shape of D's exponent is determined by the contents of Q, the quantifier that binds it. μ, then, can be the exponent of both D and Q.

(36) μ is always the exponent of D and Q.

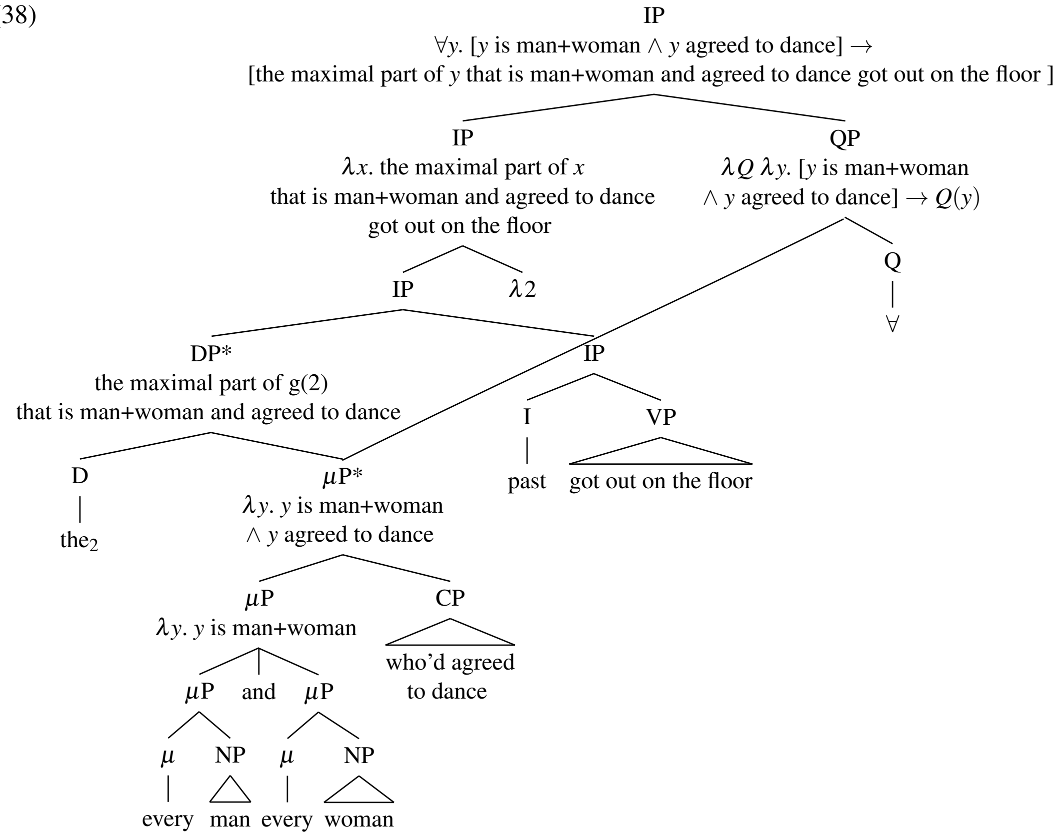
Because μ precedes everything but D in the DP, it seems reasonable to assume that the sister of D is μP. It is μP, then, which QR causes D and Q to share; that is, QR makes μP part of the restrictors of both D and Q. This leads us to our final formulation of QR:

(37) QR
If μ is the exponent of both D and Q then a projection of μ is a sister to D and Q and if a projection of μ is a sister to D and Q, then μ is the exponent of both D and Q.

Like our previous definition of QR in (17), (37) will force the restrictor of D to be reflexively dominated by the restrictor of Q when Q and D have the same exponent. But (37) makes more transparent that the reason has to do with the morphology of quantifier words. It requires a relationship between μ and the two lexical items that μ is the exponent of. QR is how the syntax satisfies this requirement. *every* is now a semantically vacuous morpheme in μ position. The DPs that contain *every* are headed by definite determiners in D position, and the QPs that contain *every* are headed by $\forall$ in Q position. If we assume that *every* is defined as the exponent of *the* and $\forall$ (and likewise for other Qs and their morphological exponents in μ position), then their occurrence will require QR.

These assumptions allow hydras to get the structure in (38).

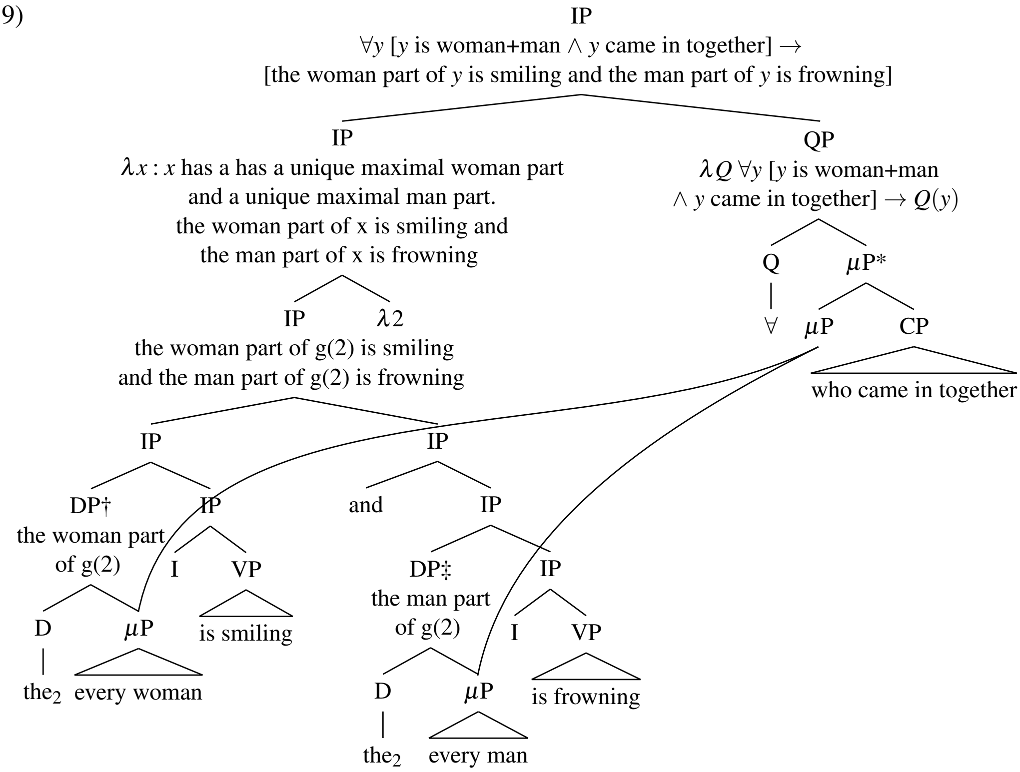
(38)



presupposition: DP* (and constituents that dominate it up to the λ abstractor) has a denotation only if g(2) is man+woman and agreed to dance.

Because μ is semantically inert, the μPs will have the same denotations that the NPs have. As before, the contents of Q are in a morphological relationship with D, but now Q and D express their exponent in μ. D continues to have the denotation that *the* has, and when it comes with an index it gives the DP it heads the meaning of a variable. These moves to accommodate (30) do not affect the account we've given for the Perlmutter and Ross examples. Simply replace the NPs in (29) with μPs, make the Ds silent, and everything runs the same, as we can see in (39).

(39)



Link (1984) and Zhang (2007) note that, as with the Perlmutter and Ross examples, the exponent of the quantifier in a hydra must be the same in each conjunct.

(40)
- a. * A woman and every man who'd agreed to dance with each other got out on the floor.
- b. A woman and a man who'd agreed to dance with each other got out on the floor.
- c. * Every woman and some man who'd agreed to dance with each other got out on the floor.
- d. Some woman and some man who'd agreed to dance with each other got out on the floor.
- e. * Most women and every man who'd agreed to dance with each other got out on the floor.
- f. ? Most women and most men who'd agreed to dance with each other got out on the floor.
- g. * Every woman and few men who'd agreed to dance with each other got out on the floor.
- h. Few women and few men who'd agreed to dance with each other got out on the floor.
- i. * No woman and every man who'd agreed to dance with each other got out on the floor.
- j. No woman and no man who'd agreed to dance with each other got out on the floor.

This follows from (37) if we understand the μP formed by conjoining two other μPs to be a projection of them both. In (38), there is just one *the* and one $\forall$, and so there is only one exponent licensed. Because the μPs are conjoined (with *and* in this example), the μs that head them can express that exponent only if there is a joint projection of them that is a sister to D and there is a joint projection of them that is a sister to Q. In (38) that is satisfied by the same projection: μP*.

That the quantifiers in the Perlmutter-Ross examples must match remains a prediction of (37) as well. While there are two *the*s in the Perlmutter-Ross examples, there remains just one Q, and therefore the only μs that are licensed are the exponents defined for that Q. In (39), that Q is $\forall$, and therefore only μs with *every* in them are allowed. As in (38), it's μPs that are conjoined in (39), although now without the aid of *and*. These conjoined μPs jointly project μP*, which is a sister to $\forall$, and they are each independently sisters to *the*. (39) meets the requirements of the definition of QR in (37), then, if the μs heading the conjoined μPs are both exponents of *the*+$\forall$, that is: *every*.

That the μs must be the same in these constructions emerges, on our proposal, from two facts about their syntax. In both hydras and the Perlmutter-Ross examples, there is only one Q, and therefore only one quantifier word is licensed. And in both hydras and the Perlmutter-Ross examples, μPs are conjoined, allowing the μs that head them to jointly project a phrase that is a sister to this Q.

4. Across-the-Board QR

The representation given here for the Perlmutter and Ross examples, the one in (29), raises questions about the nature of movement out of coördinations. Our analysis forms structures in which determiners that are exponents of the same quantifier, but are in two separate conjuncts, allow the quantifier they are exponents of to be interpreted outside the coördination. One way of describing this kind of scenario is that the quantifier has an "across-the-board" relationship to the conjuncts; QR, in other words, can participate in an across-the-board relationship. QR is sometimes claimed to not allow across-the-board relationships.[7] Bošković and Franks (2000), for instance, argue against the existence of across-the-board QR because of (41).

(41) a. Some delegate represented every candidate and nominated every candidate.
$\neq$ for every candidate, some delegate represented and nominated him.

b. Some boy hugged every girl and kissed every girl.
$\neq$ for every girl, some boy hugged and kissed her.

(Bošković and Franks, 2000: (21), p. 114)

The examples in (41) do not get an interpretation in which *every* quantifies over the coördination, and this suggests that something prevents across-the-board QR. Bošković and Franks (2000) argue that all covert movements are blocked from happening across-the-board, and sketch a way of deriving that effect.

From the perspective of the present proposal, there is a flaw with the examples in (41), however. The restrictors in the quantificational DPs are the same in each conjunct. That also degrades the Perlmutter and Ross examples.

(42) ?* Every woman is smiling and every woman is frowning who came in together.

The ungrammaticality of (42) can be related to the ungrammaticality of (43).

(43) * Every woman and woman who came in together are smiling.

Something prevents two identical predicates from conjoining (see Hoeksema 1988), and this will also prevent two identical predicates from merging together in the way that (29) indicates. When this problem is removed, it becomes easier to find examples with an interpretation that fit across-the-board QR. (44) is one.

(44) Some philosopher or other has praised every dialogue by Plato and trashed every book by Aristotle.
can mean:
For every dialogue_by_Plato+book_by_Aristotle, there is some philosopher that has praised the dialogue and trashed the book.
equivalent to:
For every dialogue by Plato and every book by Aristotle, there is some philosopher that has praised the dialogue and trashed the book.

We conclude that across-the-board QR is available even when it doesn't involve an extraposed relative clause, as in the Perlmutter and Ross examples.

We can tell from examples like (44) that across-the-board QR is available in the way our proposal predicts by assessing how the quantifiers in each conjunct are related to a quantifier outside the

[7] But see Sabbagh (2007).

conjunction. Since Perlmutter-Ross examples do not involve a quantifier outside the coordination, we need a different method for determining where the quantifier is interpreted. Moreover, our version of the Perlmutter-Ross example (=(18)) isn't of the right kind to determine whether the universal quantification is outside the coördination, as predicted.

(18) Every woman is smiling and every man is frowning who came in together.

Indeed, it is not easy to find Perlmutter-Ross examples that can tell us whether the quantification outscopes the coördination. We haven't found many that seem clear and convincing. Our best is (45).

In a conversation about a school trip that requires the teachers to get a release form signed for every child that attends. The teacher reports to the principal:

(45) Every man signed the release form or every woman did, who are the child's parents.

This has a reading in which *every* is interpreted outside the disjunction; a reading that can be paraphrased with (46).

(46) Every man and woman who are the child's parents are such that either the man signed the release form or the woman did.

In this example, then, it seems that the quantification can escape the disjoined sentences as our account requires.

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