QR as an Agent of Vehicle Change

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1 Introduction

Fiengo and May (1994) discuss a number of examples where Condition C appears to be obviated under VP ellipsis. F&M propose essentially two analyses of these cases: some are instances of QR bleeding Condition C (an analysis later refined in Fox 1995), while others involve "Vehicle Change" (VC) — the replacement of an r-expression in an ellipsis site with a pronominal correlate. VC has also been argued to account for strict readings of reflexives under ellipsis (F&M, Kitagawa 1991).

Our main contention is that VC applies only to A′-trace and not to lexical r-expressions. Hestvik (1995) argues that reflexives which receive strict readings in subordinate structures undergo QR. Building on Aoun and Nunes (2008), we argue that Hestvik's QR analysis can be extended cases of Condition C obviation involving lexical r-expressions. After a review of the evidence for VC in §2, we introduce our analysis in §3 and give supporting evidence in §4-§6. In §7 we provide independent evidence from comparative constructions for Hestvik's assumption that reflexives can undergo QR. Japanese and Hindi-Urdu phrasal comparatives have been argued to have non-ellipsis derivations (Bhatt and Takahashi 2011). However, reflexives can receive strict readings in this construction. In the absence of ellipsis the strict reading cannot be derived via VC, but we show that it can be derived via QR of the reflexive.

2 Evidence for Vehicle Change

The principal function of VC is to account for the general absence of Condition C effects under ellipsis (Fiengo and May 1994:278):

(1) a. *I like John$_1$'s friends more than he$_1$ likes John$_1$'s friends.
b. I like John$_1$'s friends more than he$_1$ does.

(2) I like John$_1$'s friends more than he$_1$ [likes ~~John$_1$~~⇒his$_1$ friends].

It is not only lexical r-expressions which are subject to VC. A′-trace and reflexives can also be targeted:

(3) Which student$_1$ did you talk to t_1 after he$_1$ asked you to [talk to ~~t_1~~⇒him$_1$]?

(4) Mary$_1$ talked to every boy who wanted her to. (F&M, 282)
LF: Mary [$_{VP}$ [every boy who$_1$ t_1 wanted her to [$_{VP}$ talk to ~~t_1~~⇒him$_1$]] [$_{VP}$ talked to t_1]]

(5) Mary introduced every guy to every woman he wanted her to. (F&M, 280)
LF: e.g.$_1$ [e.w.$_2$ he$_1$ wanted her to introduce t_1 to t_2 [M introduced ~~t_1~~⇒him$_1$ to t]]

(6) John$_1$ defended himself$_1$ better than his lawyer did [defend ~~himself$_1$~~⇒him$_1$].

Given only the preceding data, VC would appear to be a somewhat ad-hoc mechanism for exempting elided r-expressions from Condition C. However, VC accounts not only for the unexpected absence of Condition C effects in the preceding examples, but also for the presence of a Condition B effect in (7a):

(7) a. *I like John$_1$ more than he$_1$ does.
b. I like John$_1$'s friends more than he$_1$ does.
c. I like John$_1$ more than he$_1$ wants me to.

The only way to get around the Condition C violation in (7a) is to replace *John* by its pronominal correlate within the elided VP. However, the resulting structure violates Condition B, since the correlate is locally bound by *he*. Thus, (7a) must violate either Condition C or Condition B. The data in (7) provide crucial support for F&M's analysis, since they show that elided material is indeed visible to the binding constraints. This rules out the otherwise-attractive option of restricting Conditions A and C to apply only when both of the relevant DPs are overt. Further evidence for VC is that the targeted r-expression can sometimes receive an interpretation characteristic of a pronominal. In particular, traces which undergo VC can be rebound — (8) — or receive an E-type interpretation — (9b):[1]

(8) I met with every suspect, though most$_1$ claimed I didn't [meet with **them**$_1$].

(9) I ate at least five cookies but I don't know why I did.
a. I ate at least five cookies but I don't know why I did [eat five cookies].
b. I ate at least five cookies but I don't know why I did [eat **them**].

While it is difficult to rule out the possibility that these interpretative options are open to unmodified A′-trace, these data have a very natural account on the VC analysis.

The main contention of this paper is that VC always applies to A′-traces and never to lexical r-expressions. In cases where VC appears to apply to lexical r-expressions, these have in fact undergone QR, and it is the trace of QR which is the true target of VC. Our modified analysis is designed to address the following problems with F&M's original.

(i) F&M have no satisfying explanation for why VC is possible only under ellipsis. It is only by stipulation that they rule out the possibility of overt r-expressions having the feature specification [+pronominal,-anaphor]. We restrict VC to apply only to A′-traces within islands. Such traces can occur without an accompanying island violation only when they are placed in an island configuration via LF copying.

(ii) Examples such as (7a) notwithstanding, Condition C obviation is in fact observed in certain Condition B configurations (Aoun and Nunes 2008):

(10) a. I don't tell stories about John$_1$ as often as he$_1$ does.
b. *He$_1$ often tells stories about him$_1$.

Adapting A&N's analysis, we argue that these examples can be accounted for via QR of a DP containing the offending r-expression.

(iii) Not all forms of ellipsis show Condition C obviation effects:

[1] F&M:227, Merchant (2001:204).

(11) a. I like John$_1$'s pictures more than he$_1$ does.
b. *I like John$_1$'s pictures more than him$_1$.

This is unexpected on F&M's account, since VC applies freely to any r-expression in any ellipsis site. We argue that the lack of Condition C obviation in in (11b) is a consequence of locality constraints on QR.

3 Condition C obviation via QR

Hestvik (1995), building on Heim (1998/1993), argues that the strict reading of (12a) can be derived via QR of the reflexive:[2]

(12) a. John$_1$ defended himself$_1$ better than the lawyer did.
b. John defended John better than the lawyer defended John.

(13) John [$_{VP}$ himself [$_{\mathbf{VP}}$ defended *t*]] better than the lawyer did [$_{\mathbf{VP}}$ defend *t*].
QR
LF copying

We argue that QR is also implicated in Condition C obviation in subordinate structures. Rather than allowing VC to apply freely to all r-expressions, we propose that it applies only to the trace of A′-movement. Condition C is obviated either by QRing the offending r-expression itself — (15) — or a phrase containing it — (16):

(14) Mary likes pictures of Bill$_1$ more than he$_1$ does.
(15) Mary [$_{VP}$ Bill$_1$ [$_{\mathbf{VP}}$ likes [pictures of *t*]]] more than he$_1$ does [$_{\mathbf{VP}}$ like [pictures of *t*]].
QR
LF copying
(16) Mary [$_{VP}$ [pictures of Bill$_1$] [$_{\mathbf{VP}}$ likes *t*]] more than he$_1$ does [$_{\mathbf{VP}}$ like *t*].
QR
LF copying

Given that QR typically reconstructs for Condition C, VC cannot be permitted to apply freely to the trace of QR. The key factor in examples such as (14) is that the elided VP is contained in an island.[3] F&M:226 note that VC can rescue structures where LF copying places an A′-trace within an island:

(17) Who$_1$ did you talk to t_1 before I did [talk to ~~t_1~~⇒him$_1$]?

We propose that it is in fact *only* when an A′-trace is contained within an island that VC applies. Thus, VC applies not freely but as a kind of last resort repair operation:

(18) Vehicle Change
If *t* is an A′-trace separated from its antecedent α by an island, then replace *t* with a pronoun bound by α.

The question now arises why VC is available only within ellipsis sites. F&M simply stipulate that VC is tied to LF copying. However, once VC is restricted to apply to A′-traces in island configurations, a more principled explanation for this restriction becomes available.

[2] Hestvik's paper works through a number of alternative analyses in addition to the QR analysis shown here.
[3] An adjunct island in the case of (14).

F&M observe that VC may not be used to create resumptive pronominals in languages which lack resumptive pronouns (p. 284). Thus in English (19), VC cannot apply to t_1 to repair the island violation:

(19) *Dulles suspected everyone who Angleton wondered why Philby did.

Impossible VC LF:

[everyone [who$_1$ A wondered why P did [suspect $\cancel{t_1}$⇒him$_1$]]]$_1$ [D suspected t_1]

An A′-trace within an island can be non-resumptively pronominalized only if it is a duplicate created by LF copying. In these cases the *wh*-phrase already binds a variable (the original trace), so that the output of pronominalization can be interpreted as an ordinary bound pronoun. The restriction of VC to ellipsis contexts is therefore derived as a side-effect of an independently-required constraint.

If VC applies only to A′-traces in island configurations, then we expect A′-traces copied into non-island configurations to trigger Condition C effects. In (20b), for example, the trace within the elided VP can be bound by the *wh*-phrase in matrix Spec,CP with no intervening island. As expected, VC cannot apply to remove Condition C violations triggered by this trace:

(20) a. [Which boy$_1$ that Mary is expected to tell stories about t_1]$_1$ claimed that Jane will [tell stories about t_1] too?

b. *[Which boy$_1$ that Mary is expected to tell stories about t_1]$_1$ claimed that he$_1$ will [tell stories about t_1] too?

The unacceptability of (20b) is unexpected on F&M's analysis, since nothing prevents VC applying to t_1 within the embedded clause.

At this point it will be useful to set out our assumptions regarding the locality of QR. We assume that QR is typically impossible out of finite clauses and DPs, and that QR targets either VP or TP. QR is constrained by the relatively lax formulation of Scope Economy in (21):

(21) *Relatively Lax Formulation of Scope Economy* (LSE)

A phrase α cannot QR over a phrase β unless α and β are scopally non-commutative or β is a variable.[4]

[4] A 'variable' here is an expression whose inner index is a variable in the sense of Heim (1998). The trace of A-movement is typically a variable on this definition. The formulation of Scope Economy in (21) is a variant of Potts's (2001:31) interpretation of Fox (2000:21). A stricter Scope Economy constraint would be incompatible with our analysis, since we must assume that any DP can QR out of its local VP segment. Under Fox's original formulation of the constraint, this is possible only if either (i) there is some scope-shifting effect or (ii) if the DP is an object quantifier which cannot compose directly with the verb due to a type mismatch.

4 Condition C effects in comparative stripping

The English comparative stripping construction is exemplified in (22):

(22) John met Bill before Mary [$_{XP}$ ... [$_{VP}$ met Bill]].

Following Kennedy and Lidz (2001) we assume that (22) involves ellipsis of a constituent larger than vP/VP.[5] We refer to this constituent as XP. K&L note that the size of XP has implications for Hestvik-style QR analyses. Whereas DPs which undergo short QR should be able to escape VP ellipsis, such DPs should not be able to escape the deletion involved in stripping. K&L use this observation to argue that strict readings of reflexives in comparative stripping constructions, exemplified in (23), are not amenable to Hestvik's analysis:

(23) John defended himself better than [John defended] Mary.

If, as we propose, Hestvik-style derivations are also implicated in Condition C obviation, then Condition C obviation should also not occur in comparative stripping. This prediction appears to be correct:

(24) a. John greeted Mary$_1$'s friends as often as she$_1$ did.
b. *John greeted Mary$_1$'s friends as often as her$_1$.

The explanation for the contrast in (24) is as follows. In (24a), Condition C can be obviated via QR of *Mary's friends* out of the VP before the VP is copied into the ellipsis site. In (24b), on the other hand, copying of the antecedent VP to the ellipsis site would place *Mary* within the c-command domain of *her*, as shown in (25b):[6]

(25) a. John greeted Mary$_1$'s friends as often as she$_1$ did.
b. *John greeted Mary$_1$'s friends as often as her$_1$ [greeted Mary$_1$'s friends].
LF: John [$_{XP}$ [$_{VP}$ [Mary$_1$'s friends]$_2$ [$_{VP}$ greeted t_2]]] [as often as her$_1$ [$_{XP}$ e]]

QR of *Mary's friends* to the matrix TP is impossible given LSE. Thus, a Condition C violation is unavoidable. Standard VC analyses must either under- or over-generate here. If stripping is not actually an ellipsis construction then the Condition C effects are unexpected; if it is then they should be eliminable via VC.

LSE will not prevent QR out of the stripping XP if there is a suitable higher landing site. Thus, we do expect to find instances of Condition C obviation with comparative stripping if a suitable landing site for QR can be provided. One way of doing this is to embed the antecedent within a control infinitival. In the configuration shown in (26), LSE permits QR to remove the offending r-expression from the embedded stripping antecedent. It cannot,

[5] Pancheva (2006) presents an analysis of comparative stripping in terms of LF copying. However, she assumes that the copied constituent is a small clause of category vP.

[6] LSE does permit QR to a position above matrix Spec,TP in cases where this changes scope relations. We might therefore expect the unacceptability of (25b) to be ameliorated if the subject and object were quantificational and had inverse scope. The judgment here is unclear: *%A different boy greeted each of Mary$_1$'s friends as often as her$_1$*. However, on Bruening's (2001) analysis inverse scope must always be derived by short QR to VP followed by lowering of the subject.

however, escape the matrix stripping antecedent.[7] This accounts for the contrast between (27) and (28). In (27), QR to the matrix VP is sufficient to remove the offending r-expression from both the matrix and embedded antecedent VPs, so that both of the indicated readings are available. In (28), by contrast, QR can only remove the offending r-expression from the embedded antecedent, so that reading (28b) is not available:

(26)

matrix stripping antecedent

embedded striping antecedent

$[_{TP}$ **DP** $[_{TP}$ Subj$_1$ ... **[$_{XP}$** ... $[_{VP}$ **DP** $[_{VP}$ ... $[_{TP}$ PRO$_1$ ... **[$_{XP}$** ... $[_{VP}$ ... ***t*** ...] **]**]]]] **]**]]

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(27) I refused to proofread Mary$_1$'s papers as often as she$_1$ did.

a. I refused to [proofread Mary's papers as often as she proofread them].

b. I [refused to proofread Mary's papers] as often as [she refused to proofread them].

... some less accessible readings omitted...

(28) I refused to proofread Mary$_1$'s papers as often as her$_1$.

a. I refused to [proofread Mary's papers as often as she proofread them].

b. *I [refused to proofread Mary's papers] as often as [she refused to proofread them].

...

The data in this section show that Condition C obviation is crucially predicated on the structural relation between the ellipsis antecedent and the offending r-expression. This supports an approach that ties obviation to movement of the offending r-expression (or a phrase containing it) out of the ellipsis antecedent.

5 Condition C and scope

Our analysis predicts certain interactions between Condition C and scope. These are abstractly similar to the effects noted in Fox (1999:173). Owing to the locality of QR, a Condition C violation triggered by a deeply embedded r-expression can be obviated only by QR of a larger phrase containing the offending r-expression. This larger phrase can potentially contain another dependent element which blocks pronominalization, thus preventing obviation of Condition C. This sort of scenario is illustrated in the following examples. The pronoun *his* can receive a sloppy interpretation in (29), and Condition C is obviated under VP ellipsis in (30). These two effects cannot however be combined, as shown in (31):

(29) John$_1$ [painted [$_\alpha$ his$_1$ portrait of Mary] quicker than Bill$_2$ did [paint [$_\alpha$ his$_2$ portrait of Mary]].

(30) John$_1$ [painted [$_\alpha$ a portrait of Bill$_2$'s mother]] quicker than he$_2$ did [paint [$_\alpha$ a picture of Bill$_2$'s mother]].

(31) *John$_1$ [painted [$_\alpha$ his$_1$ portrait of Bill$_2$'s mother]] quicker than he$_2$ did [paint [$_\alpha$ his$_2$ portrait of Bill$_2$'s mother]].

[7] PRO and the traces of VP-internal subjects are variables (see also footnote 4), so the relevant DP may QR over these according to (21).

The sloppy reading indicated in (31) could not be derived if VC applied to α, since this would remove the internal structure of α, so that *his* could not be bound by *he*. On the other hand, if VC did not apply to α then *he* and *Bill* would trigger a Condition C violation. On our analysis there is therefore no licit LF for the sloppy reading. In contrast, the standard VC analysis incorrectly predicts that it should be possible to derive the sloppy reading via the following LF:

(32) John$_1$ [painted his$_1$ p. of B$_2$'s mother] quicker than he$_2$ did [paint his$_2$ picture of ~~Bill's~~$_2$⇒his$_2$ mother].

6 Condition B under ellipsis

Our analysis and F&M's original analysis make different predictions with regard to Condition B effects fed by VC. Condition B violations fed by VC are triggered under the configuration in (33a). QR of the offending r-expression — (33b) — will lead to a Condition B configuration if a VP containing the trace of QR is copied into an island, triggering pronominalization of the trace (see §3 above). However, QR of an expression containing the offending r-expression should never induce a Condition B violation — (33c):

(33) a. *[$_\alpha$ ... ~~r-expr$_1$~~⇒pronominal$_1$ ... pronoun$_1$ ...] (α is GC of pronoun$_1$)
b. *r-expr$_1$ ... [$_\alpha$ ... ~~t$_1$~~⇒pronominal$_1$ ... pronoun$_1$ ...]
c. [... r-expr$_1$ ...]$_2$ ... [$_\alpha$ ... ~~t$_2$~~⇒pronominal$_2$ ... pronoun$_1$ ...]

Aoun and Nunes (2008) note that Condition B effects are indeed obviated under ellipsis in examples such as (34). To A&N's examples can be added those in (35)–(36):[8]

(34) a. *He$_1$ often tells stories about him$_1$.
b. I don't tell stories about John$_1$ as often as he$_1$ does.

(35) a. *He$_1$ often talks about him$_1$.
b. I talk about John$_1$ more often than he$_1$ does.

(36) a. *He$_1$ wants him$_1$ to win.
b. I want John$_1$ to win just as much as he$_1$ does.

A&N argue that the (b) examples in (34)–(36) involve a configuration abstractly similar to the one in (33c). When the offending r-expression is a direct object, its formal features move to attach to the verb, and only these formal features are copied into the ellipsis site. These features have the index of the original r-expression, but the feature bundle as a whole behaves as a pronominal. For example, (7a) has the derivation in (37):

(37) I [$_{vP}$ admire John$_1$]
more than he$_1$ does [$_{v^0}$ FF(John$_1$)+admire+v^0]
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When the object is an expression containing the offending r-expression (e.g. a clause or another DP) then it is the formal features of the containing expression which move. Since these do not bear or contain the index of the r-expression there is no Condition C violation:

[8] Aoun and Nunes's actual examples involve coordination rather than subordination.

(38) I [$_{vP}$ said [$_{CP}$ that John$_1$ was intelligent]$_2$]
more often than he$_1$ did [$_{v^0}$ FF(CP$_2$)+said+v^0]

(39) I [$_{vP}$ admire [$_{DP}$ pictures of John$_1$]$_2$]
more often than he$_1$ does [$_{v^0}$ FF(DP$_2$)+admire+v^0]

A&N note that Condition B effects can be avoided not only by embedding the r-expression within the antecedent, but also by embedding the ellipsis site:

(40) I [$_{vP}$ admire John$_1$]
more than he$_1$said that he does [$_{v^0}$ FF(John$_1$)+admire+v^0]

To deal with this, A&N propose that FF(α) has the status of a pronominal when α is an r-expression.

We adopt A&N's analysis of (34)–(36), but with QR taking the place of FF movement. There is an advantage to modifying the analysis in this way. It is not clear on A&N's original analysis how to explain explain VC involving adjuncts or the complements of prepositions (since these do not undergo A-movement out of VP). Thus, the absence of Condition C effects in (41) is unexpected:

(41) a. I spoke at John$_1$'s wedding before he$_1$ did [speak at John$_1$'s wedding].
b. I spoke to John$_1$'s mother before he$_1$ did [speak to John$_1$'s mother].

The problems that arise are closely related to those identified by Kennedy (1997) for A-movement analyses of QR. Examples such as (41) pose no special difficulty for the QR analysis, since QR out of adjuncts is independently motivated by the possibility of inverse scope in examples such as (42):

(42) A different man spoke at every woman's wedding.

One puzzle for the QR variant of A&N's analysis is posed by the absence of a Condition C effect in examples such as (43):

(43) I believe that John$_1$ is intelligent just as much as he$_1$ does.

Given that QR is typically finite clause bound, it should not be possible to QR *John* out of the matrix VP. On A&N's original analysis, Condition C obviation occurs in (43) because the formal features of the clause itself move to enter into a checking relation with the verb. What appears to be required, then, is some means of extracting the embedded clause from the matrix VP. One option would simply be to permit clausal complements to undergo QR. Another possibility is that the clause extraposes. If we take extraposition to be a species of rightward A$'$-movement, then there is nothing to prevent string-vacuous extraposition of the embedded clause out of the matrix VP. When the VP is copied into the ellipsis site, the duplicate trace is trapped in an adjunct island, triggering VC.

It may seem that there is an alternate analysis of the data in this section in terms of reflexivity (Reinhart and Reuland 1993). The cases where Condition B is not obviated under ellipsis are all cases where the offending pronoun is a co-argument of the DP which locally binds it. Thus, one might modify the standard VC analysis by adding one of the following hypotheses:

(i) An unpronounced r-expression can be converted to a simplex reflexive (such as Dutch *zich*) which is subject only to Semantic Condition B and not the Chain Condition.

(ii) An r-expression can be converted to either a reflexive (which reflexive-marks its predicate) or a pronominal (which does not).

Given either (i) or (ii), one could then impose the requirement that the reflexivity of the predicates in the antecedent and the elided VP must match. This would account for (34)–(36) and (41). However, the assumption that a reflexivity mismatch is never possible cannot be correct given the possibility of reflexives receiving strict readings, as in e.g. (12a) above. Further evidence against a reflexivity analysis comes from a contrast in the behavior of verbal and complementizer ECM:

(44) a. I want [$_{\text{CP}}$ for John$_1$ to win] just as much as he$_1$ does.
b.??I believe [$_{\text{TP}}$ John$_1$ to be intelligent] just as much as he$_1$ does.

The Condition B violation in (44b) is unexpected on a reflexivity analysis. On our analysis it is a consequence of the non-extraposability of ECM TPs:

(45) a. I want t_1 very much [$_{\text{CP}}$ for John to win]$_1$.
b. *I believe t_1 fervently [$_{\text{TP}}$ John to be intelligent]$_1$.

If the embedded TP in (44b) cannot extrapose, there is no constituent containing *John* that can move out of the ellipsis site, so a Condition B violation is inevitable.[9]

7 Extending Hestvik's analysis to phrasal comparatives

7.1 Japanese and Hindi-Urdu

Bhatt and Takahashi (2011) argue that some phrasal comparatives in Japanese and all phrasal comparatives in Hindi-Urdu have a "direct" analysis (Heim 1985). B&T's derivation exploits parasitic scope. Movement of the subject out of vP introduces a λ-abstractor over individuals. The degree phrase then "tucks in" between the subject and the λ-node to introduce an abstractor over degrees — (46b). The degree head first composes with the complement of *than*, then with the predicate of degrees and individuals, and finally with the subject — (46c):

(46) a. Taroo-wa [Hanako-yori] ooku-no hon-o yonda. (Japanese)
Taroo-TOP Hanako-than many-GEN book-ACC read
'Taroo read more books than Hanako'
b. [Taroo [$_{\text{vP}}$ [$_{\text{DegP}}$ H-than Deg] [$_{\text{vP}}$ λd [$_{\text{vP}}$ λx [$_{\text{vP}}$ x [$_{\text{VP}}$ [$_{\text{NP}}$ d-many books read]]]]]]]

[9] We assume that extraposition of complement clauses leaves an A′-trace. The explanation for the non-extraposability of TP ECM clauses is perhaps the following. Suppose that the ECM subject remains within the embedded clause in the overt syntax. Then extraposition must precede covert movement of the ECM subject to receive Case in the higher clause. However, once the clause is extraposed it is in an adjoined position, so that movement of the subject out of it is impossible. On the other hand, if the ECM subject raises overtly into the matrix, then extraposition of the embedded clause is possible, but is to no avail for the purposes of Condition B/C obviation.

c. $\text{Deg}([\![\text{H}]\!])(\lambda d \lambda x\,.\,x \text{ read } d\text{-many books})([\![\text{T}]\!])$
(where $\text{Deg}(x)(\text{P})(y) \leftrightarrow \exists d[\text{P}(y,d) \wedge \neg\text{P}(x,d)]$)

Given this sort of derivation, it seems on the face of it that a reflexive within comparative clause ought to be bound by the (trace of) the vP-internal subject to yield a sloppy reading. However, phrasal comparatives in Hindi-Urdu and Japanese permit both strict and sloppy readings. This is shown for Japanese in (47) (Kishida 2012) and Hindi-Urdu in (48):[10]

(47) Mary-ga John yorimo hageshiku zibun-o hihan-shi-ta (Japanese)
Mary-NOM John than severely self-ACC criticize-do-PAST
'M criticized M more severely than J criticized J/M.'

(48) John apnii hifaazat Tim se behtar kartaa hai (Hindi-Urdu)
John self's defense Tim than better do is
'J defended J better than T defended T/J.'

In the absence of ellipsis, VC clearly cannot be responsible for the strict readings. Hestvik's analysis, on the other hand, combines neatly with B&T's to derive the strict reading. The reflexive QRs above the degree operator and is bound by the raised subject. The internal and external arguments of *criticize* then translate as distinct non-covarying variables. The LF for the strict reading of (47) is shown in (49):

(49) [M [$_{\text{vP}}$ herself [$_{\text{vP}}$ λy [$_{\text{vP}}$ [$_{\text{DegP}}$ J-than Deg] [λd [λx [$_{\text{vP}}$ x criticized y d-severely]]]]]]]

The LF in (49) can be derived as shown in (50) using the indexation system of Heim (1998). The derivation of the strict reading from (v) of (50) is shown in (51). We assume a variant of Heim's system where expressions may carry multiple outer indices and hence bind multiple distinct variables:[11]

Notation: superscripts are outer indices, subscripts are inner indices.

(50) [$_{\text{vP}}$ $\text{M}^{[1,4]}$ criticized herself^2_4 [B-than Deg]^3 severely] (i)
'Mary' raises from vP-internal subject position:
[M^4 [λ_1 [$_{\text{vP}}$ t_1 criticized herself^2_4 [B-than Deg]^3 severely]]] (ii)
'herself' undergoes QR to adjoin between 'Mary' and its index node:
[M^4 [herself_4 [λ_2 [λ_1 [$_{\text{vP}}$ t_1 criticized t_2 [B-than Deg]^3 severely]]]]] (iii)
'Mary' QRs to bind 'herself' via introduction of λ_4:
[M [λ_4 [t_4 [herself_4 [λ_2 [λ_1 [$_{\text{vP}}$ t_1 criticized t_2 [B-than Deg]^3 severely]]]]]]] (iv)
Comparative morpheme tucks in below raised subject and QRed reflexive:
[M [λ_4 [t_4 [herself_4 [λ_2 [[B-than Deg] [λ_3 [λ_1 [$_{\text{vP}}$ t_1 criticized t_2 t_3 s.ly]]]]]]]] (v)

(51) M(λ4 (4 (4 (λ2 ((B-than Deg) (λ3 (λ1 (1 criticized 2 3 severely))))))))
(M (M (λ2 ((B-than Deg) (λ3 (λ1 (1 criticized 2 3 severely)))))))
(M ((B-than Deg) (λ3 (λ1 (1 criticized M 3 severely)))))

[10] We thank Dave Kush for providing Hindi-Urdu data.

[11] This is just to say that following each movement, an arbitrary index may be chosen for the trace and the newly-inserted λ which binds it.

7.2 Non-ellipsis derivations for English comparatives

There appear to be similar examples of English reflexives receiving strict readings in the absence of ellipsis. For example, (52) permits both a strict and a sloppy interpretation:

(52) Out of all the boys, John painted the best picture of himself.

a. ..., John painted the best picture of John. (strict)

b. ..., John painted the best self-portrait. (sloppy)

Comparatives of the kind in (52) have also been argued to have a non-ellipsis analysis (Heim 1999). Assuming Heim's analysis, the strict reading can once again be derived via QR of the reflexive:

(53) $\mathrm{Deg}_{\mathrm{sup}}(\mathrm{C})(\mathrm{R})(x) \leftrightarrow \exists d[\mathrm{R}(x,d) \wedge \forall y[y \in \mathrm{C} \wedge y \neq x \rightarrow \neg \mathrm{R}(y,d)]]$ (Heim 1999:3)

(where R is a relation between individuals and degrees and C is a set of individuals)

(54) $[_{\mathrm{VP}}\ \mathrm{J}^{[1,4]}$ paint $[[\text{C-est}]^2$ good pic of $\text{himself}^3_4]]$

$[_{\mathrm{TP}}\ \mathrm{J}^4\ [\lambda_1\ [_{\mathrm{VP}}\ t_1$ paint $[[\text{C-est}]^2$ good pic of $\text{himself}^3_4]]]]$

$[_{\mathrm{TP}}\ \mathrm{J}^4\ [_{\mathrm{VP}}\ \text{himself}_4\ [\lambda_3\ [\lambda_1\ [_{\mathrm{VP}}\ t_1$ paint $[[\text{C-est}]^2$ good pic of $t_3]]]]]]$

$[_{\mathrm{TP}}\ \mathrm{J}\ [\lambda_4\ [_{\mathrm{TP}}\ t_4\ [_{\mathrm{VP}}\ \text{himself}_4\ [\lambda_3\ [\lambda_1\ [_{\mathrm{VP}}\ t_1$ paint $[[\text{C-est}]^2$ good pic of $t_3]]]]]]]]$

$[_{\mathrm{TP}}\ \mathrm{J}\ [\lambda_4\ [_{\mathrm{TP}}\ t_4\ [_{\mathrm{VP}}\ \text{himself}_4\ [\lambda_3\ [[\text{C-est}]\ [\lambda_2\ [\lambda_1\ [_{\mathrm{VP}}\ t_1$ paint $[t_2$ gd pic of $t_3]]]]]]]]]]$

8 Cross-sentential and coordinate VP ellipsis

The Hestvik-style derivation is not available for cross-sentential or coordinate instances of VP ellipsis. However, Condition C obviation is still observed in these configurations:

(55) I like John_1's mother. He_1 does too.

To account for such examples, we propose that the application of VC to an A′-trace can be triggered not only by an island but also by the lack of a c-commanding antecedent:

(56) I $[_{\mathrm{VP}}$ $[\text{John}_1\text{'s mother}]_2$ $[_{\mathrm{VP}}$ like $t_2]]$.
He does $[_{\mathrm{VP}}$ e] too.

LF copying of inner VP:

I $[_{\mathrm{VP}}$ $[\text{John}_1\text{'s mother}]_2$ $[_{\mathrm{VP}}$ like $t_2]]$.
He does $[_{\mathrm{VP}}$ like $t_2]$ too.

Pronominalization of trace triggered by lack of c-commanding antecedent for t_2:

I $[_{\mathrm{VP}}$ $[\text{John}_1\text{'s mother}]_2$ $[_{\mathrm{VP}}$ like $t_2]]$.
He does $[_{\mathrm{VP}}$ like $\cancel{t_2}\Rightarrow\text{her}_2]$ too.

It has sometimes been claimed that reflexives can receive strict readings under cross-sentential and coordinate VP ellipsis. For example, many speakers find a strict reading of (57) somewhat acceptable:

(57) John defended himself. Then his lawyer did.

Hestvik notes that his QR analysis can't account for the availability of strict readings in this configuration. He suggests that examples such as (57) involve deep anaphora in the sense of Hankamer and Sag (1976). This does not seem particularly plausible, given that VP ellipsis in coordinate/cross-sentential configurations patterns with surface anaphora according to the usual diagnostics. An alternative analysis of these cases is given in Kennedy and Lidz (2001), where it is argued that English has a covert analogue of the long-distance reflexives seen overtly in languages such as Chinese.

As in another case of unexpected strict readings discussed by F&M — their "many clauses" puzzle (p. 131) — the strict reading in examples such as (57) is greatly facilitated by the presence of anaphoric connection between the two subjects. For example, (58) receives a strict reading much less readily than (57):

(58) John defended himself. Then the lawyer did.

It is unclear whether the anaphoric connection simply increases the accessibility of the strict reading, or is somehow involved in licensing it.

9 Conclusion

In ellipsis contexts, Condition C can be obviated via QR or extraposition followed by copying of the antecedent into an island. Hestvik's QR-based analysis of Condition A obviation can be extended to phrasal comparatives that have a "direct" analysis. F&M's analysis of Condition C obviation both under- and over-generates, accounting neither for the absence of Condition B effects in examples such as (34b), nor the presence of Condition C effects in examples such as (20b).

We have assumed, following F&M, that VC is a special operation which applies to an r-expression and converts it into a pronominal of some sort. The resulting pronominals have two key features: (i) a [+pronominal,-anaphor] feature specification, and (ii) a lack of internal structure (so that any offending expression contained within the target of VC is eliminated). An alternative view of VC is that it arises as a natural byproduct of the lack of a strict syntactic identity constraint on ellipsis. For example, Merchant (2001) notes that if matching between the elided phrase and its antecedent is constrained only by e-GIVENNESS, then VC comes for free without any special mechanism. This analysis trivially accounts for properties (i)-(ii), but it appears not to predict the constraints on VC that we have observed. For example, it appears to predict that comparative stripping should show Condition C obviation across the board. In more recent work, Merchant has suggested that there may be some kind of syntactic matching constraint on ellipsis (Merchant 2008, 2013).

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