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PSEUDO-GAPPING: AN ALLEGED CASE FOR SCOPE PARALLELISM*

1 ISSUE: THE IDENTITY OF MOVEMENT IN PSEUDO-GAPPING

This paper focuses on the *pseudo-gapping* construction (e.g., Levin 1979). Pseudo-gapping is a kind of ellipsis construction, which at least lacks its main verb. One example is given in the second clause in (1), where the verb and the direct object are missing. The two elided elements are interpreted anaphorically, referring back to the elements in italic in the antecedent clause, namely *give* and *his new toys*, respectively.

(1) John won't *give* **Tom** *his new toys*, but he will _ **Mary** _.

We refer to a constituent following the elided verb as a *remnant* (e.g., *Mary*), and to one contrasted with the remnant in the antecedent clause as a *correlate* (e.g., *Tom*).

In the literature, pseudo-gapping is widely analyzed as involving movement of the remnant (*Move-R*) and phonological deletion of *v*P/VP (*VP-deletion*) (e.g., Jayaseelan 1990, Lasnik 1995). Thus, the derivation of (1) is represented as shown in (2).

(2) … but [he [will [**Mary** ~~[~~$_{VP}$ ~~give *t* his new toys]~~]]]

Here, the indirect object *Mary* undergoes Move-R to the edge of VP and the extracted domain is deleted by VP-deletion. Given this common analysis, we address the identity of Move-R. That is, what type of movement is involved in pseudo-gapping?

In this paper, we compare two approaches that have not been falsified in the lit-

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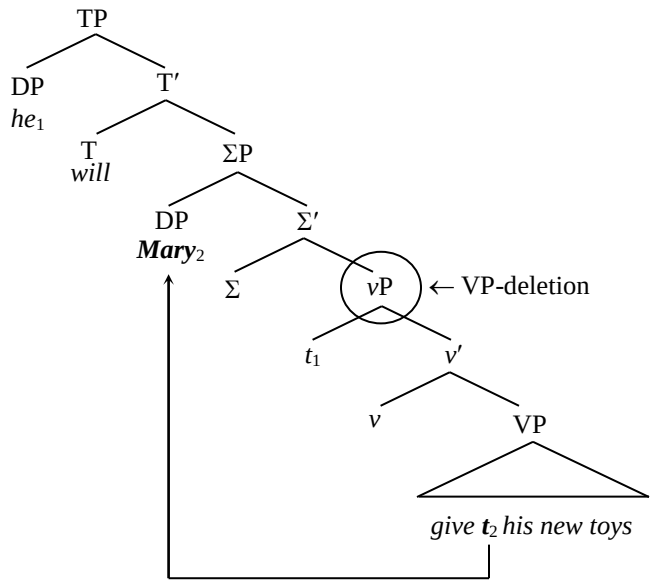
erature: Thoms (2016) and Johnson (2008).[1] Thoms proposes a *Scope Parallelism* approach, and identifies Move-R with *Focus Movement* along the lines of Jayaseelan (2001) and Gengel (2013). On the other hand, Johnson proposes a *Quantifier Raising* (QR) approach, where Move-R is treated as an overt instance of QR. Our claim is that the latter is empirically preferable. Specifically, we support Tanaka's (2017) extension of the QR approach, where he proposes a new phonological theory of QR.

This paper is organized as follows. Section 2 critically reviews Thoms's (2016) Scope Parallelism approach. Section 3 makes arguments for Tanaka's (2017) extension of Johnson's (2008) QR approach. Section 4 lends more support to it by considering a QR-like operation in Icelandic, which Svenonius (2000) refers to as *Quantifier Movement*. Section 5 concludes with a note on the validity of Scope Parallelism, suggesting that pseudo-gapping offers no conclusive evidence for it.

2 Review: Thoms's (2016) Scope Parallelism Approach

We begin by sharing Thoms's (2016) proposal. First, he follows Jayaseelan (2001) and Gengel (2013) in identifying Move-R with *Focus Movement* (FM) into a focus-oriented phrase, say, ΣP. This functional category projects in the left periphery of *v*P, with its complement *v*P deleted after FM applies, as shown in (3). Importantly, Thoms assumes that ΣP can create only one Spec position, hosting polarity particles such as negation *not* and emphatic *too* and *so* (e.g., Laka 1990, López 1999).

(3)



[1] See Tanaka (2017) for a critical review of Takahashi (2003, 2004), who unifies Jayaseelan's (1990) and Lasnik's (1995) approaches and proposes that Move-R is a combination of *Heavy NP Shift* and *Object Shift*.

Second, he proposes that the correlate must also move to a parallel position, namely the Spec of ΣP in the antecedent clause, and that it is done by covert QR. He motivates the covert QR of the correlate by positing a *Scope Parallelism* (SP) condition on ellipsis as stated in (4) (e.g., Griffiths and Lipták 2014).

(4) **Scope Parallelism in Ellipsis**
Variables in the antecedent and the elided clause are bound from parallel positions. (Thoms 2016: 295)

Thus, since the remnant is extracted out of the ellipsis site in the ellipsis clause, SP requires that there be a parallel variable-binding relation in the antecedent clause. For instance, the covert structures for (1) are represented as shown in (5).

(5) a. QR: [$_{TP}$ John won't [$_{\Sigma P}$ **Tom**$_1$ λx_1. [$_{vP}$ give x_1 his new toys]]]

b. FM: [$_{TP}$ he will [$_{\Sigma P}$ **Mary**$_2$ λx_2. [$_{vP}$ ~~give x_2 his new toys ~~]]]

To support his SP approach, Thoms discusses three facts. First, it appears that the remnant and full negation are in complementary distribution. More specifically, the remnant can occur with contracted negation, which he assumes is a Σ head affixed to T, but it cannot occur with full negation, as shown in (6).

(6) a. Students should *bring* **wine**, but they shouldn't **beer**.
b. ?* Students may *bring* **wine**, but they may not **beer**. (*ibid.*: 292)

This contrast follows, because full negation is supposed to occupy the Spec of ΣP, and its presence blocks FM of the remnant to the same position. This complementary distribution is a consequence of the assumption that ΣP can host only one Spec.

Second, Move-R can cross the boundary of an infinitival clause, but not that of a finite clause (e.g., Johnson 2008). For example, as shown in (7a), if the remnant is originated in an embedded infinitival clause, it is grammatical, but this is not the case when the remnant is originated in an embedded finite clause, as shown in (7b).

(7) a. ? Kathy *wants to study* **astronomy**, but she doesn't _ **meteorology**.
b. * Kathy *thinks she should study* **French**, but she doesn't _ **German**.
(*ibid.*: 287, 294)

This contrast is captured if SP requires the correlate to undergo QR into a parallel position. It is well-known that in general QR cannot cross a finite clause boundary, which is suggested by the lack of inverse scope in (8b).

(8) a. **Someone** wants to visit **everyone**. ✓∃ > ∀, ✓∀ > ∃
b. **Someone** thinks you should kiss **everyone**. ✓∃ > ∀, *∀ > ∃
(*ibid.*: 297)

Thus, the ungrammaticality of (7b) is due, not to the impossibility of Move-R across a finite boundary, but to that of QR across a finite boundary. That is, in (7b), QR cannot bring the correlate to the matrix ΣP, thus inducing a violation of SP, as shown in (9).

(9) [Kathy [$_{\Sigma P}$ [$_{vP}$ thinks [$_{CP}$ she should study **French**]]]]
[she doesn't [$_{\Sigma P}$ **German** [$_{vP}$ think [$_{CP}$ she should study ***t***]]]]

Third, the AP remnant is allowed in comparative pseudo-gapping, but not in regular pseudo-gapping, as shown in (10).

(10) a. Rona *looked* **more annoyed** than she did _ **frustrated**.
b. * Rona *looked* **annoyed**, but she didn't _ **frustrated**.
(Levin 1979: 25)

This contrast also follows if the correlate must undergo QR. The point is that the correlate in (10a), but not in (10b), is contained in a comparative phrase (i.e., *more annoyed*), which Thoms assumes is a quantifier and accessible to QR (e.g., Kennedy 2002). Thus, the correlate in (10b) cannot be moved by QR into the Spec of ΣP, inducing a violation of SP.

We have shown that Thoms's SP approach is successful in accounting for the three facts above. However, we point out that it has at least two problems. First, it is a dubious assumption that the remnant and the correlate must move to the unique Spec of ΣP. To begin, we disagree that the presence of full negation is totally ungrammatical. For instance, two informants accepted (11a) (but not (11b)).

(11) a. ? Although John may like **onion**, he may *not* **carrot**.
b. * Although John may like **onion**, he may **carrot** *not*.

Even if this fact can be ignored, Thoms should predict that full negation is also prohibited in the antecedent clause, because the correlate must also occupy the unique Spec of ΣP. This is not true, though, as shown by the grammaticality of (12b).[2]

[2] The literature also provides similar acceptable examples, as shown in (i).

(i) a. You might *not* believe **me** but you will _ **Bob**. (Lasnik 1999a: 204)
b. That may *not* bother **you**, but it does _ **me**. (Hoeksema 2006: 1)

(12) a. The students did *not* date **doctors**, but they dated **nurses**.
b. The students did *not* date **doctors**, but they did _ **nurses**.

Moreover, multiple remnants, and hence multiple correlates, are possible, as shown in (13) (e.g., Bowers 1998, Baltin 2003, Takahashi 2003, 2004). This suggests that neither of them move to such a position as the unique Spec of ΣP.

(13) a. Although I can't discuss **this topic** **with anyone**, I can **that one with Mary**.
b. I can't talk **to anyone** **about John's secret**, but I can **to you about Mary's**.

Second, there is reason to deny the identification of Move-R with FM. To begin, FM in general cannot apply to multiple elements (while Move-R can, as shown in (13)). For instance, an informant accepted (14) and (15), but not (16), which is an instance of multiple FM.[3]

(14) Speaker A: Can you discuss this topic with John or Mary?
Speaker B: I can't discuss **this topic** with anyone,
but **that one** I can discuss with Mary.

(15) Speaker A: Can you discuss this topic with John or Mary?
Speaker B: I can't discuss this topic **with John**,
but **with Mary** I can discuss it.

(16) Speaker A: Can you discuss this topic with John or Mary?
Speaker B: ?? I can't discuss **this topic** **with anyone**,
but **that one** **with Mary** I can discuss.

Furthermore, Move-R cannot apply in the absence of ellipsis, but this restriction does not hold for an instance of FM, namely the FP into the CP periphery. This is shown by the contrast in (17).

[3] According to the informant, all of the B-examples in (14-16) require a very specific prosody. He reported that he had to reach each one several times to find the correct prosody. Still, he felt (16B) quite degraded among others. Thus, it is generally true that multiple FM is not possible. As additional support for this, note that multiple FM is also excluded in other languages such as Italian, as shown in (i).

(i) a. ***IL TOO LIBRO*** *ho comprato* (*non il suo*).
'YOUR BOOK I read, not his.'
b. * ***A GIANNI*** ***IL LIBRO*** *darò* (*non a Piero, l'articolo*).
'TO JOHN THE BOOK I'll give, not to Piero, the article.' (Rizzi 1997: 290)

(17) a. * John will **beer** bring ***t*** to the party.

b. John sent me **records** last year, and **books** he sent me ***t***, too.

(Thoms 2016: 292-293)

The point is that Thoms gives no account of why the FM into the *v*P periphery, but not the FM into the CP periphery, is limited to ellipsis clauses. Thus, the identification of Move-R with FM is not justified, unless their differences are derived in a principled fashion.

In summary, let us assume that the remnant can potentially co-occur with full negation; the alleged contrast in (6) is not real. Then there are at least four facts that any approach should capture, as shown in (18).

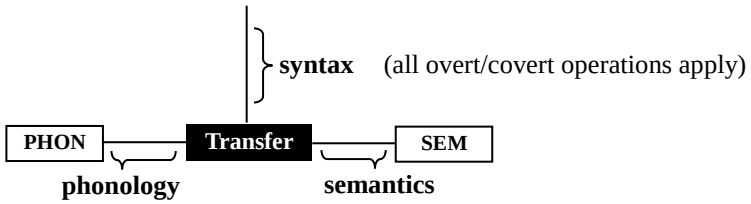
(18) a. Clause-boundedness of Move-R: see (7)
b. Exceptionality of comparative Move-R: see (10)
c. Possibility of multiple Move-R: see (13)
d. Ellipsis-only nature of Move-R: see (17)

Since Thoms's SP approach fails to capture (18c) and (18d), we conclude that it is empirically untenable.

3 Claim: An Extension of Johnson's (2008) QR Approach

We now argue for Johnson's (2008) claim that Move-R is an overt instance of QR. In particular, we support the QR approach developed by Tanaka (2017) under the *single output model of grammar* (e.g., Bobaljik 1995). This model is different from the traditional, *dual output model* (e.g., Chomsky and Lasnik 1977), in that the former employs only one syntactic cycle with no overt/covert distinction, as shown in (19).

(19) **Single Output Syntax**



Thus, this model assumes that "covert" movements such as QR result from pronunciation targeting a lower copy of a moved element. This means that the model does not

deny the possibility that the output of QR can be phonologically realized under certain conditions. Given this possibility, let us consider Tanaka's proposal.

Tanaka begins by making two assumptions. First, he assumes that QR can apply to what is type-theoretically defined as quantifiers, namely expressions of type <<**e**, **t**>, **t**> (e.g., Heim and Kratzer 1998). Thus, with type-shifting operations such as Partee's (1987), any kinds of NPs can be regarded as quantifiers in the above sense. In other words, if Move-R is QR, it follows that it can potentially apply to any kinds of NPs, including indefinites, proper names, and definite descriptions.[4,5] Note that it might be a controversial assumption that QR can apply to "non-quantificational" NPs such as definite descriptions. However, there is a way to render them quantificational, especially when they appear as pseudo-gapping remnants. This is because the remnant must be contrastively focused in semantic terms, as illustrated by Lasnik (1995). For instance, the remnant must be contrasted with its correlate, in the sense that their denotations may not be identical, as shown by the contrast between (20B) and (21B).

(20) Speaker A: Is she suing **the hospital**?
Speaker B: She is _ **the doctor**. (Halliday and Hasan 1973: 49)

(21) Speaker A: Is she suing **the hospital**?
Speaker B: * Yes, she is _ **the hospital**. (Lasnik 1995: 145)

Also, since focused constituents must contain phonological stress (e.g., Rooth 1992), it is predicted that unstressed remnants are disallowed. This is true, as noted by Hoeskema (2006); consider the contrast in (22), where capital letters indicate stressed elements.

(22) a. Maybe they fool YOU, but they certainly don't _ ME.
b. * Maybe they FOOL you, but they certainly DON'T _ me.
(Hoeskema 2006: 9)

Then, what is important is that focused elements can behave as if they are quantifica-

[4] In the case of PP remnants, we assume that Move-R (= QR) actually applies to their complement NPs, but moves the entire PPs by pied-piping. There is suggestive evidence for this. For instance, Baltin (2000) observes that, while PPs can be remnants, intransitive prepositions alone (or particles) cannot, as shown in (i). This contrast is captured if the PP remnant is a result of pied-piping.

(i) a. Although I wouldn't *send it* **up the stairs**, I would _ **down the fire escape**.
b. * Although I wouldn't *send it* **up**, I would _ **down**. (Baltin 2000: 18-19)

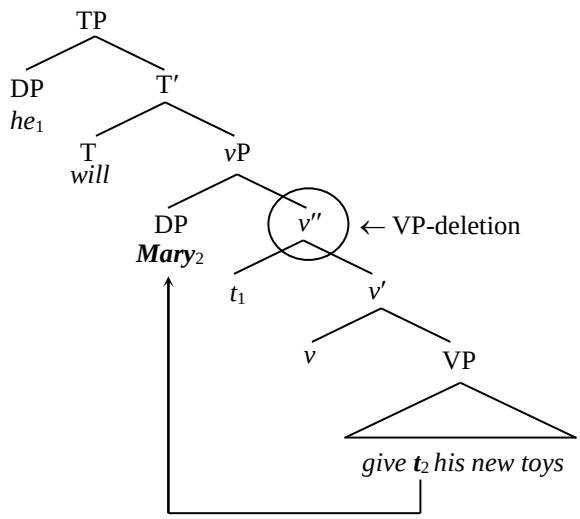
[5] In fact, it is not true that Move-R can apply to any kinds of NPs. For instance, Baltin (2000) points out that predicative NPs, which are of type <**e**, **t**>, cannot be remnants, as shown by the contrast in (i). Still, note that this restriction can be given a semantic account under the QR approach; see Tanaka (2017) for more details.

(i) a. The students did not *date* **doctors**, but they did _ **nurses**. (non-predicative NP)
b. * The students did not *become* **doctors**, but they did _ **nurses**. (predicative NP)

tional. For instance, they induce weak crossover effects in the same way as inherent quantifiers do, as noted by Chomsky (1976). Thus, in the case of pseudo-gapping, there is reason to assume that proper names and definite descriptions are also accessible to QR, because remnants are contrastively focused.

Second, Tanaka assumes that QR can target the edge of nodes of type **t**, which include *v*P and TP under the *v*P-internal subject hypothesis (e.g., Heim and Kratzer 1998). Still, he adopts Fox's (1998: 26) principle of *Shortest Move*, which says that, for any quantifier Q, QR must adjoin Q to the node of type **t** closest to Q. This means that QR must apply successive-cyclically; if QR goes out of *v*P, it must stop at its edge first, without going in one fell swoop to the edge of TP. Thus, if Move-R is QR, its initial landing site is restricted to the edge of *v*P. This is shown in (23), where we assume that VP-deletion applies only to the remnant's sister, namely *v*″.[6]

(23)



Given these assumptions, Tanaka proposes a new phonological theory of QR, especially an algorithm for reducing the chain of QR. The algorithm is given in (24),

[6] This stipulation, namely the deletion of the remnant's sister, can be motivated empirically. For instance, Levin (1979) points out that pseudo-gapping can also elide preverbal adverbials, which we assume are adjoined to the left of a projection of *v*. This is shown in (iB), where the adverb *easily* is elided.

(i) Speaker A: He could *easily convince* **me**.
Speaker B: He could _ **me**, too. (Levin 1979: 21)

Of course, this is not enough evidence for the deletion of the remnant's sister, because it is not guaranteed that the adverb *easily* in the elided clause actually appears in the same position as in the antecedent clause. However, the assumption may be required anyway if we want to capture the fact that *sluicing*, another case of ellipsis, must also elide the remnant's sister, including the head C, as shown in (ii).

(ii) Speaker A: Mary saw someone.
Speaker B: Who (*did) ~~Mary see~~? (adapted from Lasnik 1999b: 158)

where any copy of α counts as *accessible* iff it is not deleted independently.

(24) **Chain Reduction Algorithm for QR in English**
For the QR chain of copies of γ, (a) if γ is focused, delete every copy of γ except the lowest *accessible* one; (b) otherwise, delete every copy of γ except the lowest one. (cf. Tanaka 2017: 278)

Importantly, this algorithm correctly predicts that the output of QR can be overt in pseudo-gapping, given that the remnant is focused. For instance, suppose that QR of γ has applied successive-cyclically up to TP, creating the structure in (25).

(25) $[_{TP}\ \gamma_1\ [_{vP}\ \gamma_2\ [_{v''}\ \dots\ \gamma_3\ \dots\ ]]]$

If VP-deletion does not apply, the algorithm predicts that the output of QR is never realized, regardless of whether γ is focused or not. That is, both the (a) and (b) instructions in (24) lead to the same output of QR, deleting every copy of γ except γ_3, as shown in (26). This is because the lowest *accessible* copy of γ and the lowest copy of γ are the same, namely γ_3. Thus, (26a) and (26b) represent general cases of QR, where its output is covert.

(26) a. $[_{TP}\ \mathbf{\gamma_1}\ [_{vP}\ \mathbf{\gamma_2}\ [_{v''}\ \dots\ \mathbf{\gamma_3}\ \dots\ ]]]$ (where γ is focused)
b. $[_{TP}\ \gamma_1\ [_{vP}\ \gamma_2\ [_{v''}\ \dots\ \gamma_3\ \dots\ ]]]$ (where γ is not focused)

However, if VP-deletion applies and deletes *v″*, the (a) and (b) instructions lead to different outputs of QR, as shown in (27).

(27) a. $[_{TP}\ \mathbf{\gamma_1}\ [_{vP}\ \mathbf{\gamma_2}\ \sout{[_{v''}\ \dots\ \gamma_3\ \dots\ ]}]]$ (where γ is focused)
b. $[_{TP}\ \gamma_1\ [_{vP}\ \gamma_2\ \sout{[_{v''}\ \dots\ \gamma_3\ \dots\ ]}]]$ (where γ is not focused)

As in (27a), if γ is focused, then its lowest *accessible* copy is identified with γ_2, because the very lowest copy γ_3 is deleted by VP-deletion independently. Thus, the second lowest copy γ_2 remains undeleted. On the other hand, if γ is not focused as in (27b), the copy γ_2 at the edge of *v*P must be deleted, because it is not the lowest copy. This means that no copy of γ is realized in this case, given that the lowest copy γ_3 is deleted by VP-deletion. The point is that (27a) represents the case of QR in pseudo-gapping, where the overt copy γ_2 corresponds to the remnant.[7]

[7] Tanaka (2017) notes that (27b) represents the case of covert QR out of VP-ellipsis. That is, (27b) predicts that covert QR of a non-focused object should be possible out of an elided VP. This prediction is borne out by (i), whose ellipsis clause allows the elided quantifier *more than 3 languages* to outscope the negative element *not*.

(i) Ken Hale doesn't speak **more than 3 languages**. Rob Pensalfini does**n't** _ as well.
(ellipsis clause: ✓*not* > *more than 3*, ✓*more than 3* > *not*) (Fox 1998: 46)

We now demonstrate how the QR approach derives the facts listed in (18), which is repeated below.

(28) a. Clause-boundedness of Move-R: see (7)
b. Exceptionality of comparative Move-R: see (10)
c. Possibility of multiple Move-R: see (13)
d. Ellipsis-only nature of Move-R: see (17)

To begin with, the QR approach can predict what the SP approach can. We can derive (28a), because the clause-boundedness of QR blocks it from moving the remnant out of a finite clause. Thus, unlike Thoms's account, it does not matter whether the correlate must also move or not. The ungrammaticality of (7b) is simply reduced to the unavailability of Move-R or QR out of a finite clause, as shown in (29).

(29) [Kathy [$_{vP}$ thinks [$_{CP}$ she should study **French**]]]
[she doesn't [$_{vP}$ **German** [$_{v''}$ think [$_{CP}$ she should study ***t***]]]]
*

We can also derive (28b) by assuming that the AP remnant in (10a) is contained in a null quantifier phrase, say, *Degree Phrase* (DegP) (e.g., Kennedy 2002), whereas the AP remnant in (10b) is not. Thus, only the former is a quantifier and can be shifted by QR, as shown in (30).

(30) (10a): … than [she did [$_{vP}$ [look [$_{DegP}$ Deg [$_{AP}$ **frustrated**]]]]]
(10b): … but [she didn't [$_{vP}$ [look [$_{AP}$ **frustrated**]]]]
*

Furthermore, we can even predict what the SP approach cannot. We can derive (28c), because QR can apply as long as it is semantically allowed; there is no reason to prevent QR from applying to multiple elements. This point will be discussed in more detail later, but for now, assume that multiple QR targets multiple edge positions of *v*P, as shown in (31).

(31) (13a): … [I can [$_{vP}$ **that one** [$_{v'''}$ **with Mary** [$_{v''}$ discuss ***t t***]]]]
(13b): … [I can [$_{vP}$ **to you** [$_{v'''}$ **about Mary's** [$_{v''}$ talk ***t t***]]]]

Note that here we expect Richards's (2001) "tucking-in" effects to arise. Crosslinguistically, if movement of multiple elements targets the edge of the same head, the origi-

nal hierarchical order of the moved elements is preserved; that is, a lower element must tuck in beneath a higher element. Thus, the prediction is that the order of multiple remnants may not be altered. As Takahashi (2003) notes, this is the case, and illustrated by the contrast in (32).

(32) a. Although I can't discuss **this topic** **with anyone**, I can **that one with Mary**.
b. ?? Although I can't discuss **this topic** **with anyone**, I can **with Mary that one**.

Finally, we can also derive (28b), because in the absence of VP- deletion, the (a) instruction in (24) disallows the output of QR to be overt, thus resulting in the pattern in (26a). Specifically, regardless of whether QR brings copies of the remnant to both *v*P and TP, the lowest *accessible* copy of it is in its base position and must remain undeleted, as shown in (33).

(33) (17a): $[_{TP}$ **beer** [John will $[_{vP}$ **beer** [bring **beer** to the party]]]]

$\rightarrow_{Deletion}$ $[_{TP}$ ~~**beer**~~ [John will $[_{vP}$ ~~**beer**~~ [bring **beer** to the party]]]]

Given these outcomes, we therefore conclude that the QR approach is empirically preferred to the SP approach.

4 Support: A View from Quantifier Movement in Icelandic

One might not be satisfied with our account of the fact in (28c), because we did not demonstrate that QR can actually move multiple elements. This point is difficult to make in a visible way, since QR in English applies covertly in general cases. However, there are other languages where we can do that. For instance, Svenonius (2000) argues that Icelandic has an overt instance of QR, which he calls *Quantifier Movement* (QM). One property of QM is that it is obligatory for negative quantificational NPs, but only optional for non-negative ones, as shown in (34) and (35).[8]

(34) a. * *Strákarnir* *höfðu* *hent* ***engu grjóti*** *í* *bílana.*
the.boys had thrown no rock in the.cars

[8] QM is different from a well-known movement operation in Icelandic, namely *Object Shift* (OS), in that OS, but not QM, is subject to *Holmberg's Generalization* (Holmberg 1986). That is, OS is blocked from crossing overt non-adverbial elements such as in-situ verbs, but QM is not.

b. *Strákarnir höfðu **engu grjóti** hent **t** í bílana.*
the.boys had no rock thrown in the.cars
(Svenonius 2000: 260)

(35) a. *Strákarnir höfðu hent **miklu grjóti** í bílana.*
the.boys had thrown much rock in the.cars

b. ? *Strákarnir höfðu **miklu grjóti** hent **t** í bílana.*
the.boys had much rock thrown in the.cars
(*ibid.*: 261)

Note that optional QM such as in (35b) is stylistically marked. However, as emphasized by Svenonius, many such examples are perfect for many speakers, so that we safely assume that optional QM is essentially acceptable. Thus, all we can say about the applicability of QM is that the more negative a quantifier is, the more necessary it is for the quantifier to undergo QM, as Rögnvaldsson (1987) demonstrates by using the following examples.

(36) a. * *Jón hefur lesið **engar bækur**.*
John has read no books

b. *Jón hefur **engar bækur** lesið **t**.*
John has no books read (Rögnvaldsson 1987: 6)

(37) a. ? *Jón hefur lesið **fáar bækur**.*
John has read few books

b. *Jón hefur **fáar bækur** lesið **t**.*
John has few books read (*ibid*.)

(38) a. *Jón hefur getað lesið **dálítið**.*
John has could read a little

b. *Jón hefur **dálítið** getað lesið **t**.*
John has a little could read (*ibid*.)

In the remainder of this section, we follow Svenonius in assuming that QM is indeed an overt instance of QR, and show that a close look at QM lends support to our account of the fact in (28c).

Let us begin by checking the basic properties of QM. First of all, as implied above, QM cannot apply to non-quantificational NPs, such as indefinites, definite descriptions, and proper names, as shown in (39).

(39) a. * *Strákarnir* *höfðu* ***steinum*** *hent* ***t*** *í* *bílana.*
the.boys had stones thrown in the.cars

b. * *Strákarnir* *höfðu* ***bjórflöskunni*** *hent* ***t*** *í* *bílana.*
the.boys had the.beer.bottle thrown in the.cars

c. * *Helgi* *hefur* ***Atómstöðina*** *lesið* ***t.***
Helgi has *The Atom Station* read

(Svenonius 2000:262)

Still, note that there is a focus effect on the applicability of QM. For instance, Svenonius reports that, for some speakers, QM can apply to weak quantifiers such as numerals, and that four of six polled accepted (40), where a numeral is moved. In other words, the status of (40) varies from speaker to speaker, which is indicated by %.

(40) % *Strákarnir* *höfðu* ***þremur steinum*** *hent* ***t*** *í* *bílana.*
the.boys had three stones thrown in the.cars

(*ibid.*: 263)

What is important here is that "for the [two] speakers who rejected [(40)], similar examples with [the focus particle] *bara* 'only' before the numeral were substantially improved" (Svenonius 2000: 262). Thus, although QM is basically for quantificational expressions, the assignment of focus to an element makes it more accessible to QM. This is reminiscent of English QR, as we have assumed that it can be applied to focused elements, particularly in the case of pseudo-gapping. While the focus effect on QM remains to be investigated in more detail, it seems true that Icelandic QM and English QR pattern in the same direction.

In fact, there is additional support for these lines of reasoning. That is, QM can escape infinitive clauses, but not finite/indicative clauses, as shown in (41) and (42). This behavior of QM patterns with that of QR.

(41) a. *Hann* *hefur* *lofað* *að* *lesa* ***margar bækur***.
he has promised to read many books
'He has promised to read many books.'

b. *Hann* *hefur* ***margar bækur*** *lofað* *að* *lesa* ***t.***
he has many books promised to read

(*ibid.*: 267)

(42) a. *Hún hefur lengi vitað að hann getur keypt **margt**.*
she has long known that he can bought many
'She has long known that he could buy many.'

b. * *Hún hefur lengi **margt** vitað að hann getur keypt **t**.*
she has long many known that he can bought
(*ibid.*: 267-268)

Given this contrast, we take it for granted that QM is overt QR. Then if we are correct in claiming that Move-R is overt QR, it is predicted that the same restrictions on QM are also applied to Move-R. This seems true. For instance, if there are multiple auxiliaries, QM must move an NP to the left of the highest non-finite auxiliary verb. This holds for both negative and non-negative QM, as shown in (43) and (44).

(43) a. *Hann mun **ekkert** hafa getað gert **t**.*
he will nothing have could done

b. * *Hann mun hafa **ekkert** getað gert **t**.*
he will have nothing could done

c. * *Hann mun hafa getað **ekkert** gert **t**.*
he will have could nothing done
(Rögnvaldsson 1987: 8)

(44) a. *Hann mun **mikið** hafa viljað lesa **t**.*
he will much have wanted read

b. * *Hann mun hafa **mikið** viljað lesa **t**.*
he will have much wanted read

c. * *Hann mun hafa viljað **mikið** lesa **t**.*
he will have much wanted read
(Svenonius 2000: 266-267)

Note that the finite auxiliary verb (e.g., *mun* 'will') is supposed to move to the head T or higher, so that it is assumable that the actual landing site of QM is the edge of the phrase originally projected by the finite auxiliary verb, which is later extracted by head movement; that is, QM targets the edge of the highest headless AuxP. For example, the structure for (44a) can be represented as shown in (45).

(45) [$_{TP}$ *Hann* [$_{T'}$ *mum*$_1$ [$_{AuxP}$ ***mikið*** [$_{Aux'}$ t_1 [*hafa viljað lesa* ***t***]]]]

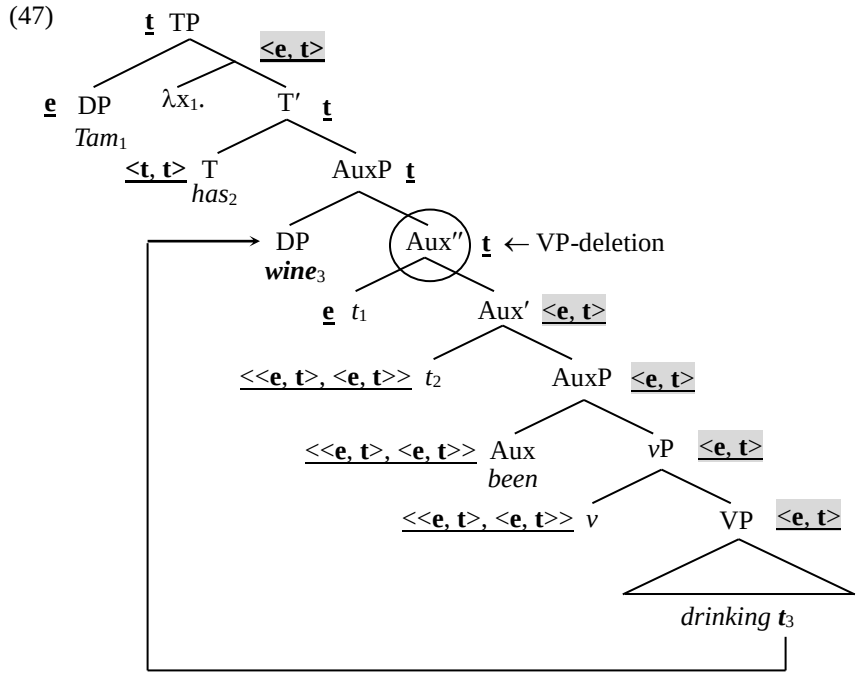
Thus, if Move-R patterns with QM, it should follow that Move-R also moves the remnant to the left of the highest non-finite auxiliary verb. This prediction is borne out, as shown in (46), a fact which is noted by Thoms (2016).

(46) a. Rab has been drinking beer, and Tam has **wine** ~~been drinking **t**~~.

b. * Rab has been drinking beer, and Tam has been **wine** ~~drinking **t**~~.
(Thoms 2016: 290)

This restriction on Move-R can be derived if Move-R is overt QR and must target the edge of nodes of type **t**. For instance, let us assume that auxiliary verbs are of type <<**e**, **t**>, <**e**, **t**>>. This means that an auxiliary verb is merged with a predicate (type <**e**, **t**>) whose subject has yet to be introduced, and base-generates the subject at its edge. Under this assumption, if there are multiple auxiliaries, the maximal projection of the highest Aux is the node of type **t** closest to any *v*P-internal elements, and hence the initial landing site for Move-R/QR, as shown in (47).[9]

(47)



[9] Since we rely on non-event semantics, we assume that the little *v*, which is responsible for introducing external arguments, is of type <<**e**, **t**>, <**e**, **t**>> and denotes something close to λP.λx.[**Agent**(x) ∧ P(x)] (cf. Kratzer 1996). For instance, the denotation of *v*P in (47) is λx.[**Agent**(x) ∧ **drink**(x)(**wine**)], if we semantically reconstruct the moved object.

One possible argument for this typed tree is that it is compatible with the distribution of floating quantifiers such as *all*. According to Dowty and Brodie (1984) and Bobaljik (1995), floating quantifiers are adverbials and expressions of type <<**e**, **t**>, <**e**, **t**>>. Thus, one prediction from the typed tree in (47) is that floating quantifiers can be adjoined to any of the nodes of type <**e**, **t**>. This is borne out, as shown in (48).

(48) a. The proletarians **all** would have been working.
b. The proletarians would **all** have been working.
c. The proletarians would have **all** been working.
d. ? The proletarians would have been **all** working.
(Bobaljik 1995: 209)

Moreover, the typed tree leads to another prediction. That is, it should hold that no floating quantifier can occur right above or below the remnant. This is because the AuxP right above the remnant is of type **t**, hence not a possible site for adjunction of floating quantifiers, and the Aux′ right below the remnant, although being of type <**e**, **t**>, is contained in the domain deleted by VP-deletion. This prediction is also met, as shown in (49) and (50).[10]

(49) a. Although many of them like their coach's methods, they don't ***all*** like **his personality**.
b. ?? Although many of them like their coach's methods, they don't ***all*** __ **his personality**.
c. * Although many of them like their coach's methods, they don't __ **his personality *all***.

(50) a. Neither of them likes my girlfriend, but they ***both*** like **my sister**.
b. ?? Neither of them likes my girlfriend, but they do ***both*** __ **my sister**.
c. * Neither of them likes my girlfriend, but they do __ **my sister *both***.

Considering these results, let us assume that Icelandic QM and English Move-R or QR are the same movement operation. We now return to our account of the fact in (28c), namely that multiple Move-R is possible. The question is whether QR can actually move multiple elements. This can be clarified if we consider whether QM can do that. According to Svenonius (2000), it is possible in principle, as shown in (51).[11]

[10] It appears that there is speaker variation on this kind of examples. For instance, while Merchant (2008) judges similar examples as unacceptable, Tanaka (2011) reports that they are marginally acceptable. However, note that their examples include an extra element between the floating quantifier and the remnant, namely the adverb *yet*, which is likely to interfere with their judgements, especially Tanaka's.

[11] It should be noted that some cases of multiple QM are not acceptable; see Svenonius (2000: 281).

(51) a. *Ég hef* ***ýmsum*** ***ekkert*** *sagt* ***t*** ***t***.
I have various nothing said
'I have told various [people] nothing.'

b. *Ég hef* ***engum*** ***neitt*** *sagt* ***t*** ***t***.
I have nobody anything said
'I have told nobody anything.' (Svenonius 2000: 281)

Thus, there is reason to believe that multiple QR is available in English, suggesting that our account of the fact in (28c) is on the right track.

5 Conclusion: The Validity of Scope Parallelism

In this paper, we addressed the identity of Move-R in pseudo-gapping, and compared two approaches which have not been refuted for any good reasons: Thoms's (2016) SP approach and Tanaka's (2017) extension of Johnson's (2008) QR approach. In order to verify them, we considered the following four facts.

(52) a. Clause-boundedness of Move-R: see (7)
b. Exceptionality of comparative Move-R: see (10)
c. Possibility of multiple Move-R: see (13)
d. Ellipsis-only nature of Move-R: see (17)

Based on these facts, we argued that the QR approach is preferable, because it derives all the facts, while the SP approach fails to explain (52c) and (52d). Furthermore, we made an additional argument for the QR approach by pointing out that the behavior of Move-R patterns with that of an overt instance of QR in Icelandic, namely QM. We therefore concluded that Move-R should be identified with overt QR.

If our claim is on the right track, then it carries an implication for Thoms's (2016) SP condition in (4), repeated below.

(53) **Scope Parallelism in Ellipsis**
Variables in the antecedent and the elided clause are bound from parallel positions. (Thoms 2016: 295)

That is, the validity of SP cannot be supported in light of pseudo-gapping, because it plays no role in the QR approach; we can explain a variety of facts without SP. Certainly, Thoms argues that the postulation of SP explains other facts. For example, pseudo-gapping cannot be used to answer a wh-question, as shown in (54B).

(54) Speaker A: **What** (**else**) did he eat?
Speaker B: *He did **a salad**. (*ibid.*: 302)

The unacceptability of (54B) follows from SP, because the correlate (i.e., *what*) and the remnant (i.e., *a salad*) are not in parallel positions. However, this account cannot be carried over to the unacceptability of (55B), where the remnant appears to be in a position parallel to that of the correlate.

(55) Speaker A: **What else** did he eat?
Speaker B: ***A salad** he did.

Thus, pseudo-gapping makes no conclusive evidence for SP. We leave it for the future study what account is possible for the status of (54B) and (55B).

References

Baltin, Mark (2000) "Implications of Pseudo-gapping for Binding and the Representation of Information Structure," ms., New York University.
Online: http://www.nyu.edu/gsas/dept/lingu/people/faculty/baltin/

Baltin, Mark (2003) "The Interaction of Ellipsis and Binding: Implications for the Sequencing of Principle A," *Natural Language and Linguistic Theory* 21, 215-246.

Bobaljik, Johnathan (1995) *Morphosyntax: The Syntax of Verbal Inflection*, Doctoral dissertation, MIT.

Bowers, John (1998) "On Pseudogapping," ms., Cornell University.
Online: http://linguistics.cornell.edu/people/Bowers.cfm/

Chomsky, Noam (1976) "Conditions on Rules of Grammar," *Linguistic Analysis* 2, 303-351.

Chomsky, Noam (1995) *The Minimalist Program*, MIT Press, Cambridge, MA.

Chomsky, Noam and Howard Lasnik (1977) "Filters and Control," *Linguistic Inquiry* 8, 425-504.

Dowty, David R. and Belinda Brodie (1984) "A Semantic Analysis of "Floated" Quantifiers in a Transformational Grammar," *Proceedings of WCCFL* 3, 75-90.

Fox, Danny (1998) *Economy and Semantic Interpretation: A Study of Scope and Variable Binding*, Doctoral dissertation, MIT.

Gengel, Kirsten (2013) *Pseudogapping and Ellipsis*, Oxford University Press, Oxford.

Griffiths, James and Anikó Lipták (2014) "Contrast and Island-Sensitivity in Clausal Ellipsis," *Syntax* 17, 189-234.

Hoeskema, Jack (2006) "Pseudogapping: Its Syntactic Analysis and Cumulative Effects on Its Acceptability," ms., University of Groningen.
Online: http://www.let.rug.nl/~hoeksema/pseudogapping.pdf

Heim, Irene and Angelika Kratzer (1998) *Semantics in Generative Grammar*, Black-

well Publishers, Oxford.
Jayaseelan, K. A. (1990) “Incomplete VP Deletion and Gapping,” *Linguistic Analysis* 20, 64-81.
Jayaseelan, K. A. (2001) “IP-internal Topic and Focus Phrases,” *Studia Linguistica* 55, 39-75.
Johnson, Kyle (2008) “The View of QR from Ellipsis,” *Topics in Ellipsis*, ed. by Kyle Johnson, 69-94, Cambridge University Press, Cambridge.
Kennedy, Chris (2002) “Comparative Deletion and Optimality in Syntax,” *Natural Language and Linguistic Theory* 20, 553-621.
Kratzer, Angelika (1996) “Severing the External Argument from Its Verb,” *Phrase Structure and the Lexicon*, ed.by Johann Rooryck and Laurie Zaring, 109-137, Kluwer Academic Publishers, Dordrecht.
Laka, Itziar (1990) *Negation in Syntax: On the Nature of Functional Categories and Their Projections*, Doctoral dissertation, MIT.
Lasnik Howard (1995) “A Note on Pseudogapping,” *Papers on Minimalist Syntax*, *MITWPL* 27, 143-163.
Lasnik, Howard (1999a) “On Feature Strength: Three Minimalist Approaches to Overt Movement,” *Linguistic Inquiry* 30, 197-217.
Lasnik, Howard (1999b) “Pseudogapping Puzzles,” *Fragments: Studies in Ellipsis and Gapping*, ed. by Elabbas Benmamoun and Shalom Lappin, 141-174, Oxford University Press, Oxford.
Levin, Nancy S. (1979) *Main Verb Ellipsis in Spoken English*, Doctoral dissertation, Ohio State University.
López, Luis (1999) “VP-ellipsis in Spanish and English and the Features of Aux,” *Probus* 11, 263-297.
Merchant, Jason (2008) “An Asymmetry in Voice Mismatches in VP-ellipsis and Pseudogapping,” *Linguistic Inquiry* 39, 169-179.
Partee, Barbara (1987) “Noun Phrase Interpretation and Type-shifting Principles,” *Studies in Discourse Representation Theory and the Theory of Generalized Quantifiers*, ed. by Jeroen Groenendijk, Dick de Jongh, and Martin Stokhof, 115-143, Foris, Dordrecht.
Richards, Norvin (2001) *Movement in Language: Interactions and Architectures*, Oxford University Press, Oxford.
Rizzi, Luigi (1997) “The Fine Structure of the Left Periphery,” *Elements of Grammar: Handbook in Generative Syntax*, ed. by Liliane Haegeman, 281-337, Kluwer Academic Publishers, Dordrecht.
Rögnvaldsson, Eiríkur (1987) “OV Word Order in Icelandic,” ms., University of Iceland.
Online: https://notendur.hi.is/eirikur/ovwo.pdf
Rooth, Mats (1992) “A Theory of Focus Interpretation,” *Natural Language Semantics* 1, 75-116.
Svenonius, Peter (2000) “Quantifier Movement in Icelandic,” *The Derivation of VO and OV*, ed. by Peter Svenonius, 255-292, John Benjamins, Amsterdam.
Takahashi, Shoichi (2003) “Pseudogapping: The View from Scandinavian Languages,” Paper presented at *Comparative Germanic Syntax Workshop 18*, University of Durham, September 2003.

Takahashi, Shoichi (2004) “Pseudogapping and Cyclic Linearization,” *Proceedings of NELS 34*, 471–585.
Tanaka, Hideharu (2017) “Pseudo-gapping: Evidence for Overt Quantifier Raising,” *University of Pennsylvania Working Papers in Linguistics* 23-1, 271-280. Online: http://repository.upenn.edu/pwpl/vol23/iss1/30
Tanaka, Hidekazu (2011) “Voice Mismatch and Syntactic Identity,” *Linguistic Inquiry* 42, 470-490.
Thoms, Garry (2016) “Pseudogapping, Parallelism, and the Scope of Focus,” *Syntax* 19, 286-307.

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