

The Preposition Stranding Generalization and Conditions on Sluicing: Evidence from Emirati Arabic

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Merchant (2001) argues that sluicing is derived by IP-deletion from an underlying wh-construction at the level of PF (following Ross 1969), as shown in (1):

- (1) a. Jack bought something, but I don't know [_{CP} what_i [_{IP} ~~Jack bought t_i~~]].
b. Jack talked to someone, but I don't know [_{CP} who_i [_{IP} ~~Jack talked to t_i~~]].

Merchant proposes (2) to capture the parallelism between sluicing and wh-questions:

(2) *Preposition-stranding generalization* (PSG)

A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular wh-movement.

The PSG is demonstrated in (1b) in which the wh-sluice 'who' leaves a stranded preposition under sluicing, which corresponds to the fact that English is a P-stranding language. Merchant further demonstrates the descriptive power of the PSG by verifying its applicability to more than twenty languages. Examples drawn from other languages continue to confirm its validity (e.g. Almeida and Yoshida 2007, Stjepanović 2008, Rodrigues, Nevins and Vicente 2009, Van Craenenbroeck 2010). In this squib, I investigate Emirati Arabic (henceforth EA) in detail and argue that it provides cases in which the PSG can be falsified. In EA, while P-stranding is banned in wh-questions, sluicing is possible even when the underlying structure would contain a stranded

preposition, e.g.:

- (3) John ʃərab gahwa [wɪjja həd], bəs maa ʃərf [mənu
John drank coffee with someone but not I.know who
~~John ʃərab gahwa [pp-wɪjja t_i]].~~

John drank coffee with

‘John drank coffee with someone, but I don’t know who.’

Potential counterexamples to PSG have been adduced from other languages, yet further analyses reveal that they do not involve P-stranding by wh-movement (e.g. Brazilian Portuguese, French (Rodrigues, Nevins and Vicente 2009), Serbo-Croatian (Stjepanović 2008)). At first glance EA might seem to be one such case since it possesses two types of wh-constructions, namely *wh-fronting* (a movement construction) and *wh-clefts* (a non-movement construction). For the sake of uniformity, I call the elliptical wh-construction formed by wh-fronting ‘sluicing’, and the one formed by wh-clefts ‘pseudosluicing’ (Merchant 2001). Several claims are defended in this paper. First, EA allows both sluicing and pseudosluicing. Second, sluicing and pseudosluicing are distinguished by individual lexical and morphosyntactic properties on the one hand, and the syntactic projection of the antecedent clause on the other hand. Third, I argue that the PSG is falsified even though both sluicing and pseudosluicing are at work. Lastly, I

propose that in order to preserve the original insight of the PSG, its statement should be modified so that for languages in which the P-stranding constraint is defined at the level of PF, violations can be rescued by sluicing as a result of PF-deletion. That is to say, any language which parametricizes the P-stranding constraint under wh-movement as a PF-condition can salvage P-stranding violation via sluicing as PF-deletion.

1. Two types of wh-constructions in Emirati Arabic

EA possesses two types of wh-questions, namely *wh-fronting* (4a) and *wh-clefts* (4b):¹

- (4) a. $\int u u_i$ $\int t a r - e e t$ t_i $? m s ?$
 what bought-2SM yesterday
 ‘What did you buy yesterday?’
- b. $\int u u_i$ (hu) $\epsilon l l i$ $\int t a r - e e t - a h_i$ $? m s ?$
 what 3SM that bought-2SM-3SM yesterday
 ‘What was it that you bought (it) yesterday?’

The two wh-constructions have been documented in various Arabic dialects (e.g. Wahba 1984, Shlonsky 1997, 2002, Aoun, Benmamoun and Choueiri 2010). Wh-fronting leaves a movement gap (i.e. t_i in (4a)), whereas wh-clefts are a non-movement type of wh-dependency which requires a resumptive pronoun (e.g. *-ah* in (4b)) at the base position, along with the relative complementizer *elli* ‘that’.² Moreover, wh-clefts allow an optional copular pronoun *hu* (as in (4b)) which signals a cleft structure (Eid 1983).³ Wh-fronting is more productive than wh-clefts in that the former co-occurs with any type of wh-expression, e.g. wh-words and wh-phrases (4, 5a), including wh-PPs (5c), as well

as wh-arguments and wh-adjuncts (5b). P-stranding by wh-movement is strictly ungrammatical (5d). On the other hand, wh-clefts only allow the use of bare wh-words and wh-arguments (4b). They strictly ban the use of *which*-NPs (6a), wh-adjuncts (6b) and wh-PPs (6c):

- (5) a. ?aj kitab ʃtər-et ?ms?
 which book bought-2SM yesterday
 ‘Which book did you buy yesterday?’
- b. kɛɪf xalʕlʕasʕ-t əl-wadʒəb?
 how finished-2SM the-assignment
 ‘How did you finish the assignment?’
- c. f-?aj mokaan laag-et John?
 at-which place met-2SM John
 ‘At which place did you meet John?’
- d. *?aj mokaan laag-et John fi ?
 which place met-2SM John at
 ‘Which place did you meet John at?’
- (6) a. *?aj kitab (hu) ɛlli ʃtər-et-ah ?ms?
 which book 3SM that bought-2SM -3SM yesterday
 ‘Which book is it that you bought yesterday?’
- b. *kɛɪf (hu) ɛlli j-xalləsʕ John fi-ha əl-wadʒəb?
 how 3 SM that 3SM-finish John in-3SM the-assignment

‘How is it that John finishes the assignment?’

- c. *f-ʔaj mokaan (hu) elli laag-et John fi-h?
 at-which place 3SM that met-2SM John at-3SM

‘At which place is it that you met John?’

These distinctions will be crucial in identifying the underlying source of sluicing/pseudosluicing.

2. Emirati Arabic sluicing and pseudosluicing

Given the two types of *wh*-constructions, we can distinguish the use of a *wh*-*sluice* (as derived by *wh*-fronting) and a *wh*-*pseudosluice* (as derived by *wh*-clefts). The examples in (7) show that any type of *wh*-expression can form a bare *wh*-*sluice*. The use of a *wh*-*pseudosluice*, signaled by the copular pronoun *hu*, is grammatical in limited cases (e.g. 7a):⁴

- (7) a. John ʃərab ʃaj, bəs maa ʃərf [ʃuu (hu)].
 John drank something but not 1.know what 3SM
 ‘John drank something, but I don’t know what.’
- b. John laaga Mary, bəs maa ʃərf [kɛɪf (*hu)].
 John met Mary but not 1.know how 3SM
 ‘John met Mary, but I don’t know how.’
- c. John jəʃrəb xamər, bəs maa ʃərf [ʔaj nooʃ (*hu)].
 John drink alcohol but not 1.know which kind 3SM
 ‘John drinks alcohol, but I don’t know which kind.’
- d. John jəʃrəb xamər, bəs maa ʃərf [wɪjja mənʊ (*hu)].

John drink alcohol but not 1.know with who 3SM

‘John drinks alcohol, but I don’t know with who.’

Given the distinctive properties of wh-fronting and wh-clefts as listed above, we can immediately identify the underlying source of some of the instances of sluicing in (7). For instance, since wh-adjuncts (e.g. *kef* ‘how’), *which*-NPs (e.g. *ʔaj noof* ‘which kind’) and wh-PPs (e.g. *wijja mənū* ‘with who’) can only be used in wh-fronting (see 5a-c), the underlying source of (7b-d) must be wh-fronting. This is further confirmed by the ungrammaticality of the use of wh-pseudosluice in expressions such as **kef hu* ‘how is it’, **ʔaj noof hu* ‘which kind is it’, and **wijja mənū hu* ‘with who is it’. The use of a bare wh-expression *fuu* ‘what’ in (7a), however, does not provide us with a clear indication of its underlying source. (7a) can either be a case of wh-sluice, or wh-pseudosluice in which the copular pronoun *hu* is deleted, as shown in (8):

(8) John ʃərab ʃaj, bəs maa ʃərf [ʃuu ~~hu~~].

John drank something but not 1.know what 3SM

‘John drank something, but I don’t know what it is.’

As a result, argument wh-NPs such as *fuu* ‘what’ or *mənū* ‘who’ do not give a clear identification of the sluicing source.

3. Falsifying the Preposition Stranding Generalization

Given the distinction between sluicing (formed by wh-fronting) and pseudosluicing (formed by wh-clefting), we look at the PSG again. Example (3) neither supports nor falsifies the PSG since bare wh-NPs (e.g. *fuu* ‘what’ and *mənū* ‘who’) can be cases of either wh-sluicing or wh-pseudosluicing. Now consider the examples in (9) which are

more convincing:

- (9) a. John fərab gahwa [wijja s^ʕadiq], bəs maa ʕərf [ʔaj s^ʕadiq].

John drank coffee with friend but not 1.know which friend
 ‘John drank coffee with a friend, but I don’t know which friend.’

- b. John kətab baħθ-ah [f-kombjutər], bəs maa ʕərf [ʔaj

John wrote research-his in-computer but not 1.know which
 kombjutər].

computer

‘John wrote his research on a computer, but I don’t know which computer.’

Recall that *wh*-sluices formed by *which*-NPs must be derived by *wh*-fronting.⁵ In (9a, b), the use of *which*-NPs in the second clause in the absence of a preposition is fully grammatical, suggesting that (9a, b) can only be the result of *wh*-movement of the *which*-NP which strands a preposition, followed by IP-deletion. This is shown in (10):

- (10) John fərab gahwa [wijja s^ʕadiq], bəs maa ʕərf [[ʔaj

John drank coffee with friend but not 1.know which
 s^ʕadiq]_i ~~John fərab gahwa~~ [_{PP} ~~wijja t_i~~].

friend John drank coffee with

‘John drank coffee with a friend, but I don’t know which friend.’

The observation can be stated as in (11) which stands in contrast with the PSG:

- (11) Emirati Arabic allows P-stranding under sluicing but not under regular *wh*-movement.

One issue is whether the PSG is falsified because of (9), or whether the PSG should be

modified to allow for this counterexample. One option is to reformulate the PSG as follows, making reference to the level at which P-stranding violations are defined:⁶

(12) A language *L* will allow preposition stranding under sluicing, even though it may not allow it under *wh*-movement, iff in *L*, preposition stranding violations are determined at PF.

In fact, EA may not be the first language which shows that P-stranding violations can be rescued by sluicing. Sato (2011) claims that Indonesian sluicing can also rescue P-stranding violation. He argues that Indonesian obligatorily requires the *wh*-feature to percolate to PP (e.g. ‘to whom’), thus banning P-stranding by *wh*-movement. He suggests that P-stranding violation in Indonesian is defined at the level of PF, and can be repaired by sluicing.⁷

4. The impact of the antecedent correlate on the choice of the sluicing source

So far we have looked into cases in which *wh*-fronting and *wh*-clefts differ in terms of structural descriptions and numeration. That is to say, the use of either *wh*-construction is legitimate as long as individual morphosyntactic properties are met (e.g. 5-7). However this does not suffice to account for the distinction between the formation of *wh*-sluices and *wh*-pseudosluices, if the antecedent clause is taken into account. In (13a, b), the antecedent clause contains an implicit argument (indicated by the underscore).⁸ The use of either *wh*-construction in the second clause is grammatical:

- (13) a. John jsuug __, bəs maa ʔərf [ʃuu jsuug].
 John 3SM.drive but not I.know what 3SM.drive
 ‘John drives, but I don’t know what he drives.’

- b. John jsuug __ , bəs maa ʕərf [ʃuu (hu) elli
 John 3SM.drive but not 1.know what 3SM that
 jsuug-ah].
 3SM.drive-3SM

‘John drives, but I don’t know what it is that he drives (it).’

(14) shows that the use of wh-sluiice *ʃuu* ‘what’ is grammatical. The wh-pseudosluice indicated by *ʃuu hu* ‘what it is’, however, is strictly banned:

- (14) John j-suug __ , bəs maa ʕərf [ʃuu (*hu)].
 John 3SM-drive but not 1.know what 3SM

‘John drives, but I don’t know what (it is).’

The contrast between (13) and (14) on one hand, and between (8) and (14) on the other hand, is puzzling if we assume that a wh-sluiice/wh-pseudosluice is the elided outcome of wh-fronting/wh-clefts. Comparing (14) with (8) in which both wh-sluiicing and wh-pseudosluicing are available options, the antecedent correlate is implicit in (14), whereas it is overtly present in (8). That is to say, wh-pseudosluicing is immediately precluded if the antecedent correlate is implicit. Combining this with the aforementioned observations, we can summarize the following restrictions on the use of wh-pseudosluice:^{9, 10}

(15) In Emirati Arabic, wh-pseudosluicing is banned if (i) the antecedent correlate is implicit, (ii) it is a wh-adjunct or (iii) it is a wh-phrase (e.g. *which*-NP, wh-PP).

5. Conclusion

In this squib, we have demonstrated that in Emirati Arabic, the bare wh-words in a sluicing clause can be derived from two sources, namely wh-fronting and wh-clefts, and the bare wh-word is called ‘wh-sluice’ and ‘wh-pseudosluice’ respectively. The choice of the sluicing sources is conditioned by (i) the morphosyntactic properties and conditions imposed on individual wh-constructions, and (ii) whether the antecedent correlate is implicit. A wh-sluice can be used freely for any type of wh-expression, and regardless of the syntactic projection (or not) of the antecedent correlate. The use of wh-pseudosluice, on the other hand, is limited to bare wh-arguments (e.g. *fuū* ‘what’ and *mānu* ‘who’, but not wh-phrases such as *which*-NP or wh-PP), and is strictly banned if the antecedent correlate is implicit. We have provided evidence showing that EA is a counterexample to Merchant’s Preposition Stranding Generalization (PSG). That is to say, preposition stranding is possible under sluicing, even though it is strictly banned in the case of wh-movement. The PSG can be preserved by stating that the constraint on P-stranding can be defined as a PF condition in languages such as Emirati Arabic. Such move is consistent with the PF-deletion approach to sluicing: sluicing a result of PF-deletion can rescue P-stranding violations as defined at the level of PF.

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Earlier versions of this squib were presented at the 46th and 47th Annual Conference of Chicago Linguistic Society (CLS-46, 47) and the Twenty-fifth Annual Symposium on Arabic Linguistics (ALS-25). I would

like to thank Fatima Eissae, Mariam Kaabi and Aamna Shemeili for the discussion of Emirati Arabic data, and Stephen Matthews, Roumyana Pancheva, and the two *LI* reviewers for their comments. This paper is dedicated to the memory of my academic and life mentor, Jean-Roger Vergnaud.

¹ See Shlonsky 1997, 2002, Aoun and Choueiri 1997 and Aoun, Benmamoun and Choueiri 2010 for discussion of wh-questions in various Arabic dialects.

² Aoun, Choueiri and Hornstein (2001) claim that Lebanese Arabic (LA) wh-questions formed by a resumptive pronoun involve movement. In particular, they argue that resumption outside islands is movement-driven, whereas resumption inside islands is not. EA differs from LA in that the latter allows the use of resumptive pronouns in wh-fronting. On the other hand, wh-fronting in EA is formed by a gap. For further arguments of treating wh-fronting and wh-clefts in EA as involving distinct constructions, see Leung and Al-Eisaei 2010.

³ Clefts typically include a copular pronoun as a pivot, for example:

(i) hu əl-ktaab elli ftər-eet-ah.

3sm the-book.M that bought-2SM-3SM ‘It is the book that you bought (it).’

⁴ The claim that the wh-pseudosluice is derived from wh-clefts is evident from the observation that both display the same morphosyntactic properties. First, the copular pronoun can be used in both constructions. Also neither can be used with wh-adjuncts (e.g. **kəlf hu?* ‘How is it?’, **lelf hu?* ‘Why is it?’) or wh-PPs (e.g. **f-ʔaj mokaan hu?* ‘In which place is it?’).

⁵ Observe the following contrast between wh-fronting (i) and wh-cleft (ii) formed by *which*-NPs:

(i) fi ʔaj kombjutər John kətab baħθ-ah?

in which computer John wrote research-his

‘On which computer did John write his research?’

(ii) *fi ʔaj kombjutər (hu) elli John kətab baħθ-ah?

⁶ Thanks to an *LI* reviewer for the suggestion.

⁷ Sato’s analysis rests upon the notion of wh-feature percolation (Chomsky 1972). Languages are parametricized in terms of whether the PP-containing wh-expressions (e.g. ‘who’ as in ‘to who’) can

percolate their [+wh] feature to its containing PP. In the derivation of wh-questions, the interrogative C attracts the closest goal with a [+wh]. For P-stranding languages, such wh-feature percolation to PP is optional, and as a result overt wh-movement can either strand a preposition or not.

⁸ In this squib, I consider implicit arguments as semantic arguments which are not syntactically projected. For further discussion of the analysis of implicit arguments as unprojected elements vs. as null pronouns, please refer to Bhatt and Pancheva 2006.

⁹ One reviewer suggests that the contrast may lie in the semantic contribution of the copular pronoun *hu*. Carnie (1995) pointed out that in Hebrew, the use of a copular pronoun is obligatory in equative sentences (e.g. *Dani *(hu) ha-more* (Danny 3SM the-teacher) ‘Danny is the teacher’). We can claim that the EA copular pronoun *hu* also implies an equative structure which requires an R-expression for the wh-pseudosluice, hence the requirement for an overt antecedent correlate. Native speakers also express the intuition that the copular pronoun *hu* which follows the wh-pseudosluice must be anaphoric to a discourse-linked antecedent. On the other hand, the wh-sluiice (without a copular pronoun) does not have this requirement. This requirement for a D-linked antecedent also explains why wh adjuncts are banned in wh-pseudosluicing.

¹⁰ The impact of the implicit antecedent correlate on the sluicing source is reminiscent of, though not identical to, Chung, Ladusaw and McCloskey’s (1995) discussion of *Merger* or *Sprouting*. The use of implicit antecedent correlates, however, does not suffice to falsify the PSG, for example:

- (i) John yfækker, bas maa farf <b-fuu/*fuu>.
John think but not know.1SG of-what/what
‘John thinks, but I don’t know *(of) what.’