



Preposition stranding under sluicing: Evidence from Hijazi Arabic

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Abstract

Based on data from numerous languages, such as English, Frisian, and Danish, Merchant (2001) proposes the *preposition stranding generalization* (PSG), which states that only languages that allow preposition stranding under wh-movement also allow preposition stranding under sluicing. The availability of this generalization has been the subject of a number of studies. Two contrasting views have been identified in the literature. The first view confirms the availability of the PSG in a number of different languages. The other view claims that this generalization is untenable as there exist non-preposition stranding languages that allow preposition stranding under sluicing. Our aim in this paper is to examine the availability of the PSG in the dialect of Hijazi Arabic (HA). Based on empirical data from HA on the syntactic behavior of preposition stranding under wh-movement and under sluicing, we argue that this PSG does not hold in HA. It has been observed that HA is like Emirati Arabic, Brazilian Portuguese, and Indonesian in that it disallows preposition stranding under wh-movement but allows it under sluicing. Therefore, the results of this research may contribute to the ongoing discussions on the phenomenon of sluicing in linguistic theory to help obtain a more universal analysis of this interesting ellipsis construction.

Keywords: preposition stranding; sluicing; Hijazi Arabic; preposition stranding generalization; ellipsis

1. Introduction

In syntax, the ellipsis phenomenon refers to the deletion of a syntactic constituent within a larger syntactic structure. Several types of elliptical constructions have been identified, such as VP ellipsis, gapping, and stripping. In particular, Ross (1969) was the first to note a specific type of elliptical construction, which was termed *sluicing*. In this type of construction, the wh-phrase appears stranded, and the sentential portion of a constituent question is deleted, as shown in (1). Unlike the other types of ellipsis, sluicing appears to be widespread cross-linguistically (Merchant, 2006).

(1) Bill saw something, but I don't know [what_i Bill saw _{t_i].}

Several analyses of sluicing have been developed. The most elegant and successful analysis of sluicing is the structural analysis that involves a wh-movement out of IP, which is subsequently elided (Albukhari, 2016; Algryani, 2010; Alshaalan & Abels, 2020; Chung, 2006, 2013; Lasnik, 2001, 2007;

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Leung, 2014; Merchant, 2001, 2006; Ross, 1969)². Among the main support for this approach, which treats the *wh*-phrase in sluicing like its *wh*-phrase counterpart in a nonelliptical structure, is the availability of preposition stranding parallelism. As posited by Merchant (2001), languages that allow preposition stranding under *wh*-movement also allow preposition stranding under sluicing, as illustrated in (2). This generalization is known as the *preposition stranding generalization* (PSG).

(2) a. Who was he talking with?

b. Peter was talking with someone, but I don't know (with) who.

(Merchant, 2006, p. 274)

The PSG has been extensively discussed in the literature, from which two different views can be identified. One view is that the PSG is robust, and its availability has been attested in a number of languages, including English, Norwegian, Danish, and Chamorro (see e.g., Chung, 2006, 2013; Merchant, 2001, 2006). The other view is that the PSG is untenable, as there exist certain languages, including Emirati Arabic, Brazilian Portuguese, Saudi Arabic, and Indonesian, that prevent preposition stranding under *wh*-movement but allow it under sluicing (Almeida & Yoshida, 2007; Alshaalan & Abels, 2020; Fortin, 2007; Leung, 2014; Nykiel & Sag, 2008; Sato, 2011). In this paper, we examine the availability of the PSG in the dialect of Hijazi Arabic (HA), a local Arabic dialect spoken in the western regions of the Kingdom of Saudi Arabia. In line with the second view, we argue that the PSG is also not attested in HA. We provide empirical evidence from HA that reveals that although it is a non-preposition stranding language, it allows prepositions to be stranded under sluicing.

The rest of the paper proceeds as follows. Section (2) presents the essential theoretical background on the two syntactic phenomena of preposition rules and sluicing. Section (3) reviews the major work that has already been conducted on the PSG in numerous languages. Section (4) discusses the rules of prepositions in HA. Section (5) provides evidence for the unavailability of the PSG in HA. Section (6) concludes the paper.

2. An Overview of Theoretical Essentials

2.1. Preposition Stranding and Pied Piping

Whether separated or not, languages differ in how they treat prepositions and their objects, especially in *wh*-constructions. Such diversity is represented by two interesting rules or parameters that are used cross-linguistically: *pied piping* and *preposition stranding* rules. Pied piping is the rule that prohibits the separation of the preposition from its object (Beatrice & Kroch, 2007). This rule is common among languages, including Serbo-Croatian (3) and Arabic (4) (Aoun et al., 2010; Stjepanović, 2008).

(3) *Sa kim je Ana govorila?*

with whom.INST is Ana spoken

'Who did Ana speak with?'

(Stjepanović, 2008, p. 197)

(4) *maša man takallamat zeina?*

with who talked. 3fs Zeina

'With whom did Zeina talk?'

(Aoun et al., 2010, p. 131)

² See Abels (2017), Culicover and Jackendoff (2005), Kim (2015), and Riemsdijk (1978) for a different (nonstructural) analysis.

The other rule is preposition stranding³, which allows the separation of the preposition from its object. In other words, the preposition remains *in situ* while its object moves. Although preposition stranding is very rare in natural languages, it is free in Scandinavian languages and English (Maling & Zaenen, 1985; Riemsdijk, 1978). The example in (5) illustrates the rule of preposition stranding in English, while (6) illustrates it in Icelandic.

(5) **Which** village did you come **from**?

(6) *Hann spurði hvern ég hefði talað við*
 he asked **whom** (ACC) I had talked **to**

(Maling & Zaenen, 1985, p. 155)

Interestingly, some languages use the two rules simultaneously. English and Dutch, for example, use the two rules interchangeably, as shown in (7-8). Such optionality, however, is not observed frequently. In other languages, including but not limited to French and Italian, the rule of preposition stranding is not allowed; in other words, only pied piping is possible in these languages, as illustrated in (9).

(7) a. **From which** town did you come?

b. **Which** town did you come **from**?

(8) a. *Waarna heeft hij zijn boek gepubliceerd*

b. *Na wat heeft hij zijn boek gepubliceerd*
 after what did he his book publish

‘After what did he publish his book?’

(Hornstein & Weinberg, 1981, p. 56)

(9) a. *la fille de qui il parlait*
 the girl **of whom** he spoke

b. **la fille qu’il parlait de*
 the girl **who** he spoke **of**

c. *l’auto con la quale Giovanni ha portato Mario*
 the car **with which** Giovanni drove Mario

d. **l’auto la quale Giovanni ha portato Mario con*
 the car **which** Giovanni drove Mario **with**

(Hornstein & Weinberg, 1981, p. 57)

2.2. Elliptical Construction

As mentioned in section (1), elliptical construction refers to the omission of a syntactic constituent within a larger syntactic structure. In elliptical constructions, as Merchant asserted (2020), syntacticians must extend their considerations beyond the surface structures to include phonologically inactive structures. Interestingly, Merchant (2020) also pointed out that ellipses can be studied through the syntactic forms around them rather than studying them directly. There are various kinds of

³ For further discussion on the phenomenon of preposition stranding, see Hornstein and Weinberg (1981), Kayne (1981), Maling and Zaenen (1985), and Riemsdijk (1978).

elliptical constructions; however, Lobeck (1995) classified them into two major categories, each of which has common features. The first category comprises gapping, pseudogapping, and stripping, as illustrated, respectively, in examples (10-12).

- (10) Jack ate salad, and Sara [_{VP}_____] pizza. (gapping)
 (11) Jack can speak French, and Sara can [_{VP}_____] German. (pseudogapping)
 (12) Jack can speak French, and Sara [_{IP}_____] too. (stripping)

The second category includes NP-ellipsis, VP-ellipsis, and IP-ellipsis. The sentences in (13-15) are examples of NP-ellipsis, VP-ellipsis, and IP-ellipsis, respectively. The IP-ellipsis, which is known as *sluicing* (Ross, 1969), is the category that concerns us in this paper.

- (13) Sara ate three apples, and I ate one. (NP ellipsis)
 (14) Sara can swim, and I can too. (VP ellipsis)
 (15) Sara ate something, but I do not know what. (IP ellipsis)

To aid in further narrowing the focus, in 1969, Ross proposed the phenomenon of sluicing and defined it as an elliptical construction that results from omitting the IP at PF (i.e., phonetic form). Chung (2013) pointed out that “The hallmark of sluicing is that it has the meaning of a constituent question but the surface form of an interrogative phrase; the rest of the question is ‘missing’” (p. 1). That is, the question is present in the structure but is not spelled out, as illustrated in examples (16) from English.

- (16) a. Sara saw something, but I don't know [_{CP} what_i [_{IP} ~~Sara saw t_i~~]].
 b. Ahmad sent flowers to someone, but I don't know [_{CP} who_i [_{IP} ~~Ahmad sent flowers to t_i~~]].

As seen in (16), the second clause in the construction of sluicing involves a *wh*-phrase in a structure in which one might expect the presence of a complete question. As reported by Chung (2006), this *wh*-phrase (e.g., *what* in (16a)) is called a *remnant* since it refers to an antecedent element in the initial clause, and the expected interrogative structure is referred to as the *elided IP* or *ellipsis site* (e.g., the strikethrough parts in (16)). As the terminology suggests, and as argued by several linguists, this structure exists syntactically but is deleted at PF (Albukhari, 2016; Algryani, 2010; Alshaalan & Abels, 2020; Chao, 1987; Chung et al., 1995; Chung, 2006, 2013; Lasnik, 2001, 2007; Leung, 2014; Lobeck, 1991, 1995; Merchant, 2001, 2006; Ross, 1969). The two aforementioned elements, the remnant and the elided IP, constitute the *sluice* (Chung, 2006). The initial clause in the construction is usually referred to as the *antecedent IP*. The antecedent IP normally contains the *correlate* (e.g., *something* in (16a)), which is an overt equivalent material to the remnant (Chung, 2006). The content of the antecedent IP roughly parallels the content of the elided IP or ellipsis site, whereas the remnant corresponds to either the covert or overt correlate. For clarity reasons, these terms suggested by Chung (2006) will be used in this paper.

Essentially, the distinction between two types of IP ellipsis needs to be emphasized (Merchant, 1998; Ross, 1969). The first type is sluicing, which is derived from *wh*-fronting followed by IP deletion, as illustrated in (16). The second type, as introduced by Merchant (1998), is pseudosluicing, which is derived from *wh*-clefts, as illustrated in (17) from both English and HA. Unlike sluicing, the formation of pseudosluicing involves an omission of the subject ‘*It*’ and the copula.

(17) a. Sara saw something, but I don't know what [~~it was~~].

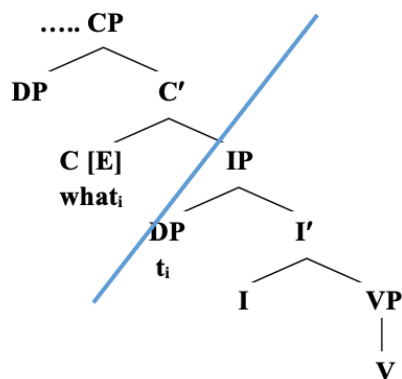
b. *Rayad ?akal-at hāzaa, bas maa ?a-ʕrif ?eef* [~~kaan-at~~].

Raghad eat.PST-3.Fem.Sg something, but not 1.Sg-know what [~~be-3.Fem.Sg~~].

‘Raghad ate something, but I don't know what.’

Generally, the wh-fronting and the wh-clefts are considered as the underlying sources of sluicing and pseudosluicing, respectively. The tree in (18) demonstrates the structure of sluicing.

(18)



(Adapted from Merchant, 2001)

2.3. Preposition Stranding Under Sluicing

The more widely accepted analysis of the internal structure of sluicing is that it involves a wh-movement out of IP, which is subsequently deleted (see, e.g., Lasnik, 2001, 2007; Merchant, 2001, 2006; Ross, 1969)⁴. Among the primary motivations for such analysis, which treats the wh-phrase “remnant” in sluicing similarly to its wh-phrase counterpart in a nonelliptical structure, is the availability of preposition stranding parallelism. In 2001, based on an examination of twenty languages, Merchant proposed the rule in (19) as a general rule to capture the parallelism between wh-questions and sluicing.

(19) Preposition Stranding Generalization (PSG):

“A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular wh-movement” (Merchant, 2001, p. 92).

It has been observed that English, Swedish, Danish, Russian, Hebrew, and others are among the languages that approve the availability of the PSG. Recent research, however, has revealed cases in which non-preposition stranding languages and dialects allow preposition stranding under sluicing, thereby refuting Merchant’s initial generalization. Brazilian Portuguese, Emirati Arabic, Saudi Arabic, and Indonesian are instances of languages that present counterevidence against the PSG’s availability (cf. Almeida & Yoshida, 2007; Alshaalan & Abels, 2020; Fortin, 2007; Leung, 2014; Nykiel & Sag, 2008; Sato, 2011). The evidence and counterevidence that some languages present will be discussed in detail in the subsequent section.

3. Previous Analyses

⁴ For a more extensive discussion on the analysis of sluicing, see Albukhari (2016), Algryani (2010), Alshaalan and Abels (2020), Chao (1987), Chung et al. (1995), Chung (2006, 2013), Leung (2014), and Lobeck (1991, 1995).

As stated above, the availability of the PSG has been observed in a number of languages. Based on data from Chamorro, an Austronesian language of the Mariana Islands, Chung (2006, 2013) confirmed the availability of Merchant's (2001) PSG in this language. Chamorro disallows preposition stranding under wh-movement, as in (20). Thus, as predicted by the PSG, Chamorro disallows prepositions stranding under sluicing, as in (21a). Only pied piping is possible in Chamorro sluicing and wh-movement, as shown in (21b).

(20) a. *Ginin hayi na un-risibi ennao na katta?*

from who? COMP AGR-receive that L letter

‘From whom did you receive that letter?’

b. **Hayi un-risibi i katta ginin?*

who? AGR-receive the letter **from**

(‘Who did you receive the letter from?’)

(Chung, 2006, p. 76)

(21) a. **Si Joe ha- hunguk i istoria ginin guahu, lao ti hu-tungu*’

Joe AGR-hear the story from me but not AGR-know

[*kuantu más na taotao* _].

how. many? more L person

(‘Joe heard the story from me, but I don’t know how many others.’)

b. *Si Joe ha- hunguk i istoria ginin guahu, lao ti hu- tungu*’ [*ginin*

Joe AGR-hear the story from me but not AGR-know **from**

kuantu más na taotao _].

how.many? more L person

‘Joe heard the story from me, but I don’t know from how many others.’

(Chung, 2006, pp. 76-77)

Furthermore, Merchant (2006) provided empirical data from a number of languages as supporting evidence for his generalization. Greek and Russian, for instance, are pied piping languages that disallow preposition stranding in regular wh-movement; therefore, as shown in (22) for Greek and (23) for Russian, they do not allow the preposition to strand under sluicing as well.

(22) a. *I Anna milise me kapjon, alla dhe ksero *(me) pjon.*

the Anna spoke with someone but not I.know **with who**

b. **Pjon milise me?*

who she. spoke **with**

(Merchant, 2006, p. 274)

(23) a. *Anja govorila s kem-to, no ne znaju *(s) kem.*

Anja spoke with someone, but not I.know **with who**

b. **Kem ona govorila s?*

who she spoke **with**

(Merchant, 2006, p. 275)

As for preposition stranding languages, English, which is a preposition stranding language, strands the preposition under sluicing, as shown in (24).

(24) *Peter was talking with someone, but I don't know (with) who.* (Merchant, 2006, p. 274)

Likewise, Danish and Frisian behave similar to English regarding the discussed phenomenon. As languages that strand the preposition in regular wh-constructions, Danish and Frisian allow the preposition to be stranded under sluicing, as illustrated, respectively, in (25-26).

(25) a. *Peter har snakket med en eller anden, men jeg ved ikke (med)*

Peter has talked with one or another but I know not **with**
hvem.

who

b. *Hvem har Peter snakket med?*

who has Peter spoken **with** (Merchant, 2006, p. 274)

(26) a. *Piet hat mei ien sprutsen, mar ik wyt net (mei) wa.*

Piet has with someone talked but I know not **with who**

b. *Wa hat Piet mei sprutsen?*

who has Piet **with** spoken (Merchant, 2006, p. 274)

Despite the fact that the availability of the PSG has been attested in many languages, a number of researchers have provided counterevidence to the PSG from various languages and dialects. First, in 2007, Almeida and Yoshida presented counterexamples against the PSG from Brazilian Portuguese (BP). BP is one of the languages that do not license preposition stranding under regular wh-movement. The examples in (27) show that only pied piping is allowed in BP. However, Almeida and Yoshida provided fully grammatical sentences in BP that allow preposition stranding under sluicing. These examples confirm that the PSG does not hold in all languages. Almeida and Yoshida introduced the example in (28) as supporting evidence for their argument and indicated that it was judged as acceptable by several native speakers.

(27) a. *Com quem_i que a Maria dançou t_i?*

with who_i that the Maria danced t_i

‘With whom did Maria dance?’

b. **Quem_i que a Maria dançou com t_i?*

who_i that the Maria danced **with** t_i

‘Who did Maria dance with?’

(Almeida & Yoshida, 2007, p. 350)

(28) A *Maria dançou com alguém, mas eu não lembro [CP quem_i [IP ~~the~~*

the Maria danced with someone but I not remember [CP **who_i** [IP ~~the~~

~~Maria dançou com t_i].-~~

~~Maria danced with t_i].-~~

‘Maria danced with someone, but I don’t remember who.’ (Almeida & Yoshida, 2007, p. 350)

Another threat to the availability of the PSG was provided by Nykiel and Sag (2008). They argued against the accuracy of the PSG by providing empirical data from various languages. For instance, in

German⁵, which is a non-preposition stranding language, the presence of preposition stranding in sluicing is evident, as shown in (29)⁶.

- (29) *Grethe hat an eine Reise gedacht, aber sie weiss nicht*
 Grethe has about some trip thought, but she knows not
 (an) *welche* (Reise)
 (about) **which** (trip)

(Nykiel & Sag, 2008, p. 2)

Additional PSG-defying analysis is provided by Sato (2011). Sato has shown that Indonesian, a pied piping language, is inconsistent with the PSG. As analyzed by Sato, Indonesian disallows preposition stranding in regular wh-movement, as in (30a). It is speculated, therefore, that Indonesian engages in pied piping of the preposition in sluicing as well, but this is not the case. Novel data are provided to argue against such a prediction. Indonesian involves cases in which the preposition strands under sluicing despite being a pied piping language, as shown in (30c). Interestingly, the analysis of Sato is in line with an older analysis proposed by Fortin (2007). As stronger evidence, the two analyses found that Indonesian inevitably constitutes a counterexample to the PSG.

- (30) a. **Siapa yang kamu berdansa dengan?*

who COMP you dance **with**

‘Who did you dance with?’

- b. *Dengan siapa kamu berdansa?*

with who you dance

‘With whom did you dance?’

- c. *Saya ingat Ali berdansa dengan seseorang, tapi saya*

I remember Ali dance with someone but I

tidak tahu (dengan) siapa

NEG know **with who**

‘I remember Ali danced with someone, but I don’t know (with) whom.’

(Sato, 2011, p. 6)

More PSG-defying analysis continues to emerge in the literature. Leung (2014) argued that Emirati Arabic (EA) constitutes a counter example to the PSG. EA allows preposition stranding under sluicing even though it disallows it in regular wh-constructions, as illustrated in (31). In his analysis, Leung provided empirical data using *which*-NPs that strand prepositions and follow them with IP-deletion, as shown in (32). As for BP, this example shows that the PSG does not hold in EA.

- (31) a. *f-ʔaj mʔkaan laag-et John?*

at-which place met-2_{SM} John

‘At which place did you meet John?’

⁵ Despite the fact that Merchant (2001, 2006) uses data from German to confirm his generalization.

⁶ Note that Nykiel and Sag (2008) use the counterexamples to the PSG to argue against the analysis of preposition deletion. They explicitly state that the omission of prepositions in sluicing has nothing to do with the possibility of preposition stranding under regular wh-movement.

b. *ʔaj Mukaan laag-et John fi?

which place met-2_{SM} John **at**

‘Which place did you meet John at?’

(Leung, 2014, p. 334)

(32) John fərab gahwa. [wijja sʻadiq], bəs maa ʕərf [[ʔaj sʻadiq]_i

John drank coffee with friend but not 1.know which friend

~~John fərab gahwa [PP wijja t_i]].~~

John drank coffee with

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

(Leung, 2014, p. 336)

Leung’s results are further corroborated by more recent experimental work conducted by Alshaalan and Abels (2020). In their experimental study, Alshaalan and Abels found that Saudi Arabic⁷ violates the PSG. They concluded that although Saudi Arabic is a non-preposition stranding language, it allows preposition stranding in sluicing under the analysis that suggests the presence of syntactic identity between the antecedent and elided IPs.

In contrast, Algryani (2010) argued that the possible occurrence of preposition stranding in Libyan Arabic (LA) sluicing, as in (33a), which is essentially a non-preposition stranding language, as in (33b), does not violate the PSG because LA sluicing under preposition stranding stems from the elliptical wh-cleft, not from a regular wh-question. He suggested that in LA, pseudosluicing is derived from a wh-question that has a different structure from that of the antecedent IP. In other words, it is derived from an underlying copular clause, as pointed out in section (2.2). Algryani attempted to reconcile his LA data with Merchant’s PSG by suggesting that these are instances of pseudosluicing, not true sluicing. However, as discussed above, the research on other Arabic dialects, and on other languages, does not support such a reconciliation (Almeida & Yoshida, 2007; Alshaalan & Abels, 2020; Fortin, 2007; Leung, 2014; Nykiel & Sag, 2008; Sato, 2011).

(33) a. Ali tekəllem mʕa wahed lakin ma-ʕrafna-š man (hu) illi

Ali talked.3_{MS} with someone but NEG-knew.1_{P-NEG} who (PRON.he) ~~that~~

~~Ali tekəllem mʕa ah~~

~~Ali talked.3_{MS} with him~~

‘Ali talked with someone, but we didn’t know who.’

b. *man Ali tekəllem mʕa?

who Ali talked.3_{MS} **with**

‘Who did Ali talk with?’

(Algryani, 2010, pp. 13-14)

It is worth pointing out that the syntactic phenomenon of sluicing has been largely overlooked in Arabic. Very few studies (e.g., Albukhari, 2016; Algryani, 2010; Alshaalan & Abels, 2020; Leung, 2014) have addressed sluicing in some of the Arabic dialects, namely, Jordanian Arabic, Libyan Arabic, Saudi Arabic, and Emirati Arabic. Moreover, the availability of Merchant’s PSG (2001) in the various Arabic dialects has not been widely discussed. In this paper, we seek to examine whether the dialect of HA supports or contradicts this generalization. The subsequent sections, therefore, discuss

⁷ Alshaalan and Abels (2020) did not make it clear which dialect they examined, as there are various dialects in Saudi Arabia. Based on the reported data, it seems that they were examining the dialect of Najdi Arabic, which is spoken primarily in the central part of Saudi Arabia.

the rules of prepositions in HA regular wh-questions and sluicing and then show how HA constitutes a violation of the PSG.

4. Preposition Stranding and Pied Piping in HA

There are two types of wh-questions in HA: (i) wh-fronting and (ii) wh-clefts, as illustrated, respectively, in examples (34).

(34) a. *ʔeef_i ʔakaal-t t_i ʔawal?*
 what eat.PST-2.Masc.Sg previously
 ‘What did you eat previously?’

b. *ʔeef_i (hwwa) elli ʔakaal-t-o_i ʔawal?*
 what he that eat.PST-2.Masc.Sg-3.Masc.Sg previously
 ‘What was it that you ate (it) previously?’

As shown in examples (34), wh-fronting involves a movement of the wh-word and leaving a trace behind. By contrast, wh-clefts do not involve such movement; instead, they require the presence of a resumptive pronoun *-o* ‘3.Masc.Sg’ or *-iha* ‘3.Fem.Sg’, the complementizer *elli* ‘that’, and an optional pronominal copula *hwwa* ‘3.Masc.Sg’ or *hiija* ‘3.Fem.Sg’. These two types of wh-constructions have been observed in several Arabic dialects, such as Najdi Arabic, Lebanese Arabic, Palestinian Arabic, and Egyptian Arabic (Albaty, 2013; Aoun et al., 2010; Shlonsky, 2002; Wahba, 1984).

According to Aoun et al. (2010), Arabic disallows the separation of the preposition from its object in regular wh-movement; thus, it is a pied piping language. In other words, stranding the preposition in regular wh-movement is ungrammatical in Arabic, whereas pied piping is grammatical, as exemplified in (35) from HA.

(35) a. **ʔeef ti-tkalam-ii ʃan?*
 what Pres-talking-2.Fem.Sg about
 ‘What are you talking about?’

b. *ʃan ʔeef ti-tkalam-ii?*
 about what Pres-talking-2.Fem. Sg
 ‘What are you talking about?’

c. **ʔeen ʔent-a men?*
 where you-Sg.Masc from
 ‘Where are you from?’

d. *men ʔeen ʔent-a?*
 from where you-2.Masc.Sg
 ‘Where are you from?’

e. **meen roħt-ii maf?*
 who go.PST-2.Fem.Sg with
 ‘Who did go with?’

f. *maf meen roħt-ii?*

with who go.PST-2.Fem.Sg

‘With whom did you go?’

As seen in (35), HA behaves similarly to Chamorro, Serbo-Croatian, Greek, German, and many other languages (Chung, 2006; Merchant, 2001, 2006; Stjepanović, 2008), which all permit the pied piping rule disallowing the separation of the preposition from its object, as opposed to the preposition stranding rule. This fact has been experimentally confirmed. In their first experiment on Saudi Arabic, Alshaalan and Abels (2020) found that pied piping is grammatical in nonelliptical questions, whereas preposition stranding is ungrammatical.

5. Preposition Stranding under Sluicing in HA

HA is like its EA counterpart, which has both sluicing and pseudosluicing. While sluicing is derived from regular wh-fronting, as in (36), pseudosluicing is derived from wh-clefts, as in (37).

(36) a. *Noura rawah-at maʕ aħad, bas maa ʔa-ʕrif meen.*

Noura go.PST-3.Fem.Sg with someone.3.Masc.Sg, but not 1.Sg-know who

‘Noura went with someone, but I do not know who.’

b. *hiija ti-graa ĥazaa bas maa ʔa-ʕrif ʔeef.*

she 3.Fem.Sg-read.Pres something, but not 1.Sg-know what

‘She is reading something, but I don’t know what.’

(37) a. *Yousef mxabb-i ĥazaa bas maa ʔa-ʕrif ʔeef*

Yousef hide.Pres-3.Masc.Sg something, but not 1.Sg-know what

hiija.

she

‘Yousef is hiding something, but I do not know what it is.’

b. *ʔal-buzuura kaan-uu jelʕab-uu fi makaan, bas*

the-children be.PST-3.Masc.Pl play.Pres-3.Masc.Pl in place, but

maa ʔa-ʕrif feen kaan.

not 1.Sg-know where be.3.Masc.Sg

‘The children were playing in someplace, but I don’t know where it was.’

According to Merchant (2001), only languages that allow preposition stranding under regular wh-movement allow preposition stranding under sluicing. Consequently, the PSG predicts that HA does not allow preposition stranding under sluicing since it is a non-preposition stranding language. Interestingly, this is not the case. We argue that HA provides cases that allow preposition stranding under sluicing despite being a non-preposition stranding language. The example in (38) from HA provides strong evidence against the availability of the PSG.

(38) *Noura rawah-at maʕ ʔuxt-ahaa, bas maa ʔa-ʕrif ʔaj ʔuxt.*

Noura go.PST-3.Fem.Sg with sister-her, but not 1.Sg-know **which sister**

‘Noura went with her sister, but I do not know which sister.’

Our argument is supported by the lexico-syntactic requirement on sluicing, stated in (39), which was proposed by Chung (2006).

- (39) “Every lexical item in the numeration of the sluice that ends up (only) in the elided IP must be identical to an item in the numeration of the antecedent CP.” (p. 83)

This requirement supports our argument that the preposition strands in HA sluicing because we assume the preposition that strands in the elided IP are identical to the preposition in the antecedent IP. In an example like (38), the lexical items that end up in the elided IP (viz., *Noura*, *go*, and *with*) are identical to the lexical items in the antecedent IP. Thus, the absence of the preposition in the second clause indicates that the remnant was fronted and then followed by IP-deletion while the preposition remained *in situ*, as illustrated in (40).

- (40) *Noura rawah-at maf ʔuxt-ahaa, bas maa ʔa-ʕrif* [CP *ʔaj*
 Noura go.PST-3.Fem.Sg with sister-her, but, not 1.Sg-know [CP **which**
~~*ʔuxt_i* [_{IP} ~~*Noura rawah-at*~~ ————— [~~*maf t_i*~~]].~~
~~**sister_i** [_{IP} ~~*Noura go.PST-3.Fem.Sg*~~ ————— [~~**with t_i**~~]].~~
 ‘Noura went with her sister, but I do not know [CP **which sister_i** [_{IP} ~~*Noura went with t_i*~~]].’

As further evidence that HA allows preposition stranding under sluicing, the example in (41) involves another wh-expression as a remnant.

- (41) *Saleh saafar li-makaan, bas maa ʔa-ʕrif feen.*
 Saleh travel.PST.3.Sg.Masc to-place, but not 1.Sg-know **where**
 ‘Saleh traveled to a place, but I do not know where.’

The formation of the structure in which wh-PPs occur is consistent with the structure of *which*-NPs since both involve wh-fronting. Consequently, the missing preposition in the second clause indicates that it is stranded in its original position, while the remnant is fronted, and the IP is elided, as demonstrated in (42).

- (42) *Saleh saafar li-makaan, bas maa ʔa-ʕrif* [CP **feen_i** [_{IP} ~~*Saleh*~~
 Saleh travel.PST.3.Sg.Masc to-place, but not 1.Sg-know [CP **where_i** [_{IP} ~~*Saleh*~~
~~*saafar*~~ ————— [~~*li t_i*~~]].
~~travel.PST.3.Sg.Masc ————— [~~*to t_i*~~]].~~
 ‘Saleh traveled to a place, but I do not know [CP **where** [_{IP} ~~*Saleh traveled to t_i*~~]].’

Moreover, it is worth pointing out that HA optionally allows both rules of prepositions in sluicing, namely, pied piping and stranding, as shown in (43).

- (43) a. *Fatima deras-at maf aʕhad, bas maa*
 Fatima study.PST-3.Fem.Sg with someone.3.Masc.Sg, but not
~~*ʔa-ʕrif* [CP **meen_i** [_{IP} ~~*Fatima deras-at*~~ ————— [~~*maf t_i*~~]].~~
 1.Sg-know [CP **who_i** [_{IP} ~~*Fatima study.PST-3.Fem.Sg*~~ ————— [~~**with t_i**~~]].
 ‘Fatima studied with someone, but I do not know [CP **who_i** [_{IP} ~~*Fatima studied with t_i*~~]].’
 b. *Fatima deras-at maf aʕhad, bas maa ʔa-ʕrif*
 Fatima study.PST-3.Fem.Sg with someone.3.Masc.Sg, but not 1.Sg-know
 [CP **maf meen_i** [_{IP} ~~*Fatima deras-at*~~ ————— [~~*t_i*~~]].
 [CP **with who_i** [_{IP} ~~*Fatima study.PST-3.Fem.Sg*~~ ————— [~~*t_i*~~]].
 ‘Fatima studied with someone, but I do not know [CP **with who_i** [_{IP} ~~*Fatima studied t_i*~~]].’

This evidence indicates that prepositions in HA sluicing could be either fronted with the remnant or stranded in their original place in the elided IP. However, the proposal by Algryani (2010) accounts for LA data violation of the PSG by suggesting that these are actual instances of pseudosluicing rather than true sluicing and that these cases that appear to violate the PSG are actually derived from an underlying copular clause, not from a regular wh-question. If we follow such an analysis, we need to postulate two different assumptions. With the pied piping rule, the structure of the elided IP is identical to the structure of the antecedent IP (i.e., true sluicing), but with the preposition stranding rule, the elided IP has a different structure from the antecedent IP (i.e., pseudosluicing). Assuming two different syntactic structures for the same clause, which has essentially the same semantics, is conceptually undesirable.

In contrast, and as Merchant (2020) pointed out, some wh-expressions require certain syntactic features in the structure in which they are used. For instance, the wh-PP presented in (42) obligatorily strands the preposition under sluicing; otherwise, it will yield ungrammaticality, as shown in (44)⁸.

- (44) *Saleh saafar li-makan, bas maa ʔa-ʕrif [CP **li-feen**_i
 Saleh travel.PST.3.Sg.Masc to-place, but not 1.Sg-know [CP **to-where**_i
 [_{IP} ~~Saleh saafar~~ ~~_____~~ ~~t_i]].
 [_{IP} ~~Saleh travel.PST.3.Sg.Masc~~ ~~_____~~ ~~t_i]].
 ‘Saleh traveled to a place, but I do not know [CP where_i [_{IP} ~~Saleh traveled to~~ ~~_____~~ ~~t_i]].’~~~~~~

Another interesting point regarding sluicing involves the status of the correlate and whether it is covert or overt in the structure. As defined by Chung et al. (1995), cases in which the correlate is overt are called *merger* cases, whereas cases, where it is covert, are called *sprouting*. Based on data from English, Danish, and Norwegian, Chung (2006) claimed that the remnant needs to have an overt correlate in the antecedent IP for sluicing to strand a preposition in the elided IP (i.e., merger). In other words, preposition stranding in sluicing is impossible when the remnant is sprouted, i.e., when it has no overt correlate in the antecedent IP, as illustrated in (45b & 46b). In such cases (i.e., sprouting), only pied piping is possible, as illustrated in (45a & 46a).

- (45) a. Last night he was very afraid, but he couldn’t tell us of what.
 b. *Last night he was very afraid, but he couldn’t tell us what.

(Chung, 2006, p. 80)

This claim is well-attested in HA. As illustrated in (46), only pied piping is possible when the remnants do not have overt correlates in the antecedent IP, but stranding is not. It is worth noting that preposition stranding is disallowed in these examples not because HA disallows preposition stranding under regular wh-movement but because of the absence of the remnant’s correlate in the antecedent IP.

- (46) a. Kaan marraa xaajef ʔams, bas maa geder
 be.3.Masc.Sg very afraid yesterday but not can
 ju-gool l-na min ʔeef.
 3.Masc.Sg-say.Pres to-us from what
 ‘He was very afraid yesterday, but he couldn’t tell us of what.’

⁸ This sentence was judged as strange by several native speakers of HA compared to the sentence in (42) where the preposition is stranded, which is more acceptable.

- b. *Kaan marraa xajeef ʔams, bas maa geder
 be.3.Masc.Sg very afraid yesterday but not can
 ju-gool l-na ʔeef.
 3.Masc.Sg-say.Pres to-us what

‘He was very afraid yesterday, but he couldn’t tell us of what.’

Given the empirical evidence presented here from HA, it can be concluded that Merchant’s (2001) PSG is inaccurate as it predicts that only preposition stranding languages, such as English, will allow preposition stranding under sluicing; by contrast, we have provided instances from HA that argue against this generalization. These instances from HA also present counterevidence against the claim by Aoun et al. (2010) that Arabic does not allow preposition stranding. We have shown that HA does allow preposition stranding under sluicing.

6. Conclusions

Since its emergence, questions have been raised about the availability of Merchant’s (2001) PSG because it speculates that only languages that strand prepositions in regular wh-construction will strand them under sluicing. Although its availability has been confirmed in a number of languages, cases in which the PSG availability can be threatened continued to emerge. In this paper, we have argued that the PSG does not hold in HA and that HA is a counterexample to such generalization. Adopting the structural analysis of sluicing, we have shown that HA involves cases where the preposition strands under sluicing despite being a non-preposition stranding language. Our findings are in line with those of previous works in different languages and dialects, such as EA, BP, Saudi Arabic, and Indonesian, which all offer counterevidence to the PSG. These findings present some sort of challenge to one of the major arguments of the most widely accepted analyses of sluicing as involving the movement of wh-phrase. Notwithstanding the fascinating points about the current topic, a deeper analysis of HA elliptical constructions, especially sluicing, is left for future research.

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Appendix A.

Table 1. Abbreviations used in the paper

Abbreviation	Description
1, 2, 3	First, Second, Third Person
ACC	Accusative
AGR	Agreement
BP	Brazilian Portuguese
COMP	Complementizer
E	Ellipsis
EA	Emirati Arabic
F/ Fem	Feminine
HA	Hijazi Arabic
INST	Instrumental
LA	Libyan Arabic
M/ Masc	Masculine
NEG	Negative
P/Pl	Plural
PF	Phonetic Form

Pres	Present
PRON	Pronominal Copula
PSG	Preposition Stranding Generalization
PST	Past
S/Sg	Singular
t	Trace

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