Sluicing, Idioms, and Island Repair

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In this article, we investigate idiom reconstruction in the context of sluicing constructions. We demonstrate that some idioms in English are not compatible with resumptive pronouns. On the basis of this observation, we argue that sluicing involves *wh*-gap dependencies rather than *wh*-resumptive pronoun dependencies, and that the island amelioration effect of sluicing does not result primarily from the island amelioration effect of resumptive pronouns.

Keywords: sluicing, idiom reconstruction, islands, island amelioration, resumptive pronouns

1 Introduction

1.1 Sluicing and Island Amelioration

As is well-known, sluicing does not show some of the structural properties that nonelliptical *wh*-movement shows. Ross (1969) reports, for instance, that sluicing ameliorates island violations (see also, e.g., Chung, Ladusaw, and McCloskey 1995, Lasnik 2001, Merchant 2001). The following contrast illustrates the island amelioration effect of sluicing:

(1) They want to hire someone who speaks a Balkan language, but I don't remember which (Balkan language) ($*[_{TP}$ they want to hire $[_{NP}$ someone $[_{CP}$ who speaks ____]]]).

In (1), the Complex NP Constraint is violated. In the context of sluicing, this violation does not give rise to unacceptability, unlike regular *wh*-movement.

As Merchant (2001) clearly shows, studying island amelioration can provide a good understanding of the nature of island constraints (for a similar point, see also Boeckx 2008b, Hornstein, Lasnik, and Uriagereka 2007). Several different approaches to island amelioration have been proposed (Boeckx 2008a, Chung, Ladusaw, and McCloskey 1995, Erteschik-Shir 1977, Lasnik 2001, 2005, 2007, Merchant 2001, Pollmann 1975, Wang 2007). The purpose of this article is to critically evaluate one of the approaches to island amelioration effects under sluicing: the resumptive pronoun approach (Boeckx 2008a, Wang 2007). As Boeckx (2008a:218) argues, the advantage of the resumptive pronoun approach to island amelioration is clear: the island repair

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¹ Under Ross's original judgment, sluicing is still marginally island-sensitive. In this article, we follow the widely accepted judgment that island violations are absent under (argument) sluicing.

effects of sluicing can be attributed to the independently observed island repair effects of resumptive pronouns.² Thus, one need not assume anything special about sluicing with respect to island repair effects. Indeed, Merchant (2001:128–145) acknowledges the advantage of the resumptive approach. Yet on the basis of four separate arguments, which we describe in detail below, he concludes that the resumptive approach is not tenable. In response, Boeckx (2008a) and Wang (2007) argue that none of Merchant's arguments are strong enough to exclude the resumptive approach.

Given the advantage of the resumptive approach, we contend that any argument in support of it requires serious attention and careful evaluation. As far as we know, however, no such evaluation of Boeckx's and Wang's arguments has been undertaken in the literature. Therefore, we will critically investigate these arguments here. In line with Merchant, we conclude that island amelioration effects under sluicing cannot be attributed solely to the presence of resumptive pronouns. Specifically, our conclusion crucially depends on idioms under sluicing, as in (2).

- (2) a. John pulled strings to get his position, but I don't know which strings.
 - b. I heard John *made headway* on his project, but I don't know *how much headway*.

We show that these idiom chunks are not compatible with resumptive pronouns; that is, island-violating idiom *wh*-questions cannot be salvaged by resumptive pronouns.

- (3) a. *Which strings was Mary angry because John pulled t/them?
 - b. *What headway did the project get funded [because she was finally able to make t/it]?

Crucially, however, idioms can appear in a sluicing context in which islands are violated, as (4a-b) suggest.

- (4) a. Mary was angry because John pulled strings to get his position, but no one knows which (strings) (*[$_{TP}$ she was angry because he pulled \emptyset /them]).
 - b. Mary was jealous because John made headway on his project, but we don't know how much (headway) (*[$_{TP}$ she was jealous because he made \emptyset /it]).

1.2 Two Types of Approaches to Island Amelioration Effects

Under the assumption that clausal ellipsis in sluicing is associated with full-fledged clausal structure (Lasnik 2005, 2007, Merchant 2001), the controversy with regard to the island amelioration effect under sluicing is concerned with the type of *wh*-dependency involved in sluicing. Here, we focus on two possible types: whether sluicing involves a *wh*-gap (either trace or copy) dependency, as nonelliptical *wh*-interrogatives do (Lasnik 2001, 2005, Merchant 2001), or a *wh*-resump-

² The analysis in which a resumptive pronoun is the residue of movement is not specifically proposed to capture the island amelioration effects of sluicing. Rather, Boeckx and his colleagues approach various problems employing similar analyses. For example, Boeckx (2003) and Boeckx and Hornstein (2008) explore consequences of the movement analysis of resumptive constructions in general. Boeckx's analysis of sluicing is to be understood as an extension of this line of analyses, and even if his analysis of sluicing poses problems, it does not necessarily contradict the movement analysis of resumptive pronouns in general.

tive pronoun dependency (Boeckx 2008a, Wang 2007). These two approaches suggest different views on the nature of islands. Roughly, under the theories that incorporate a *wh*-gap dependency, islands are understood as illegitimate representations at PF. Thus, PF deletion operations, such as sluicing, can ameliorate island violations (e.g., Lasnik 2001, 2005, Merchant 2001; cf. Chung, Ladusaw, and McCloskey 1995). On the other hand, under the theories incorporating a *wh*-resumptive pronoun chain, islands are understood as a condition on syntactic derivation, and not as a matter of "pronunciation" of the island domains (Boeckx 2008a,b, Wang 2007).

1.3 Idiom Reconstruction under Sluicing

Part of the idiom chunk of some idiomatic expressions can be moved to the left by means of whmovement.

- (5) a. John pulled strings to get his position.
 - b. Which strings did John pull to get his position?
- (6) a. John made headway on his project.
 - b. How much headway did John make on his project?

In the transformational grammar tradition, this type of idiom is taken as strong evidence for a movement operation and the existence of an underlying representation of sentences (e.g., Bresnan 1976, Chomsky 1981, Koopman and Sportiche 1991, Marantz 1984, 1996, Perlmutter 1970; cf., e.g., Nunberg, Sag, and Wasow 1994, Ruwet and Goldsmith 1991). We can find the same type of idiom in a sluicing context, as in the nonelliptical *wh*-movement sentences (5b) and (6b).

- (7) a. John *pulled strings* to get his position, but I don't know which *strings*.
 - b. I heard John made headway on his project, but I don't know how much headway.

As in nonelliptical wh-sentences, there can be idiomatic interpretations in sluiced clauses like those in (7a-b). Following the standard argument, examples like (7a-b) suggest that the idiom chunk is reconstructed, and that the type of wh-movement involved in nonelliptical wh-movement sentences is also involved in sluicing. Therefore, idioms under sluicing can provide additional evidence for the wh-movement analysis of sluicing (e.g., Lasnik 2001, Merchant 2001, Ross 1969). We specifically point out that the evidence from idiom reconstruction is not easily captured under the resumptive analysis for island amelioration effects of sluicing (Boeckx 2008a, Merchant 2001, Wang 2007).

2 Resumptive Approaches to Island Amelioration

Boeckx (2008a) and Wang (2007) argue for a resumptive pronoun approach to the island amelioration effect of sluicing. They attempt to link the island amelioration effect of sluicing to the island amelioration effect of resumptive pronouns. It has long been claimed in the literature that resumptive pronouns have a "saving function": a resumptive pronoun is possible only when the derivation with a gap is ruled out for violating syntactic constraints (e.g., Aoun, Choueiri, and Hornstein 2001, Aoun and Li 2003, Chomsky 1982, Erteschik-Shir 1992, Hornstein, Lasnik, and

Uriagereka 2007, McDaniel and Cowart 1999, McKee and McDaniel 2001, Ross 1967, Sells 1984, Shlonsky 1992).³ Adopting Wang's argument, Boeckx argues that if sluicing involves resumptive pronouns, and if resumptive pronouns may repair island violations, then sluicing should repair island violations. Note that the recent analyses of resumptive pronouns assume that resumptive constructions involve regular *wh*-movement and that resumptive pronouns are the 'derivational residue' of *wh*-movement (Boeckx 2001, 2003, 2008a, Boeckx and Hornstein 2008, Wang 2007). Thus, the derivations assumed in resumptive pronoun analyses and other movement analyses are the same, as far as *wh*-movement is concerned. The difference lies in how they analyze island repair effects. Under the resumptive pronoun analyses, the island repair effects of the resumptive strategy. Under nonresumptive analyses, the island repair effects must be attributed to some other cause. Thus, an appealing feature of resumptive pronoun analyses is that one need not assume anything special about the island repair effect of sluicing.

Merchant (2001), however, provides arguments against the resumptive pronoun approach to the island amelioration effect of sluicing. Merchant points out that there are at least four arguments against resumptive analyses of island repair:

- 1. Case mismatch effects suggest that sluicing does not involve *wh*-resumptive pronoun chains.
- 2. Some languages that lack resumptive pronouns nonetheless allow sluicing and exhibit island amelioration effects under sluicing.
- 3. A *wh*-phrase associated with a trace can have a functional reading, whereas one associated with a resumptive pronoun cannot.
- 4. Merchant's preposition-stranding (P-stranding) generalization (i.e., the observation that languages seem to allow P-stranding either in both *wh*-movement and sluicing constructions, or in neither) favors the *wh*-movement approach.

What follows are Merchant's arguments and Boeckx's and Wang's responses.

2.1 Case Mismatch Effects

Merchant's first argument against the resumptive analysis of island repair involves case (mis)-match effects. Merchant argues that a sluiced *wh*-phrase typically receives the same case as its antecedent, and thus the sluiced *wh*-phrase is generated in the same configuration as its antecedent in the underlying structure. A *wh*-phrase linked to a resumptive pronoun, however, does not need to have the case that is assigned to the position that the resumptive pronoun occupies, which is the original position of the *wh*-phrase if the pronoun is not resumed. Thus, either such *wh*-phrases tend not to be case-marked, or they bear default case. Merchant (2001:133) cites examples like (8) and (9).

³ Recent experimental studies have cast doubt on the "saving function" of resumptive pronouns in English (see, e.g., Alexopoulou and Keller 2008, Heestand, Xiang, and Polinsky 2011, Omaki and Nakao 2010). These experimental studies argue against the resumptive analysis of island amelioration as they show that resumptive pronouns do not ameliorate island violations.

- (8) Who₁/*Whose₁ did the police say that finding his₁ car took all morning?
- (9) The police said that finding someone's car took all morning, but I can't remember whose/*who.

In (9), the case of the sluiced *wh*-phrase must match that of its genitive antecedent *someone's*; hence, only *whose* is possible. In contrast, the grammatical resumptive in (8) displays a case mismatch; the case-matched example is ungrammatical. If sluicing involved a *wh*-resumptive pronoun chain, we would expect the same case pattern in sluices and resumptive sentences, contrary to fact. Thus, Merchant argues that sluicing does not involve *wh*-resumptive pronoun chains.

Wang (2007) notes that Merchant considers resumptive chains where a higher element binds a lower resumptive pronoun. Adopting Boeckx's (2003) theory of resumptive pronouns, he argues however that resumptive chains involve wh-movement. Since Wang and Boeckx regard resumptive pronouns as the "derivational residue" of wh-movement, an argument against the "traditional" analysis of the resumptive chain does not necessarily apply to Wang's analysis. Furthermore, adopting this movement construal of resumption, Boeckx (2008a) contends that the antecedent of a resumptive pronoun does not participate in case checking before movement as the wh-phrase in a nonresumptive chain does. Thus, the wh-phrase does not receive case and, consequently, bears the default case. Boeckx (2008a) further argues that default case is "assigned" at PF. Employing the PF approach to default case, he argues that the case morphology on the wh-phrase in sluicing, which is assigned at PF, must be the same as the case morphology on the indefinite DP, which serves as the antecedent of the wh-phrase, for reasons of recoverability: under sluicing, the resumptive pronoun, which receives and manifests the case morphology, is absent at PF. Boeckx (2003:219) contends that "the case morphology assigned to the wh-remnant at PF must be the same as the one borne by the relevant element in the antecedent clause for reasons of recovery." Thus, this recoverability requirement demands that the dependent wh-phrase have the same case morphology that is assigned to the resumptive pronoun, which coincides with the indefinite DP in the antecedent clause. Following this type of argument, Boeckx (2008a) concludes that the sluiced wh-phrase has a specific case morphology that does not entail the absence of a resumptive pronoun in the ellipsis.

The approach that Boeckx takes in response to Merchant's criticisms, however, does not seem convincing, because Boeckx (2008a) provides neither a conclusive argument for the position that "recovery" has something to do with case, nor a clear definition of "recovery" from which the case matching would follow.

2.2 Island Repair Effects in Languages without Resumptive Pronouns

Merchant's (2001) second argument against the resumptive analysis is that some languages, such as West Flemish, may not have resumptive pronouns but nevertheless allow sluicing and exhibit island amelioration effects under sluicing. Boeckx (2003, 2008b) remarks that no language possesses a pronominal paradigm that is specific to resumptives; thus, resumptive pronouns may scarcely be distinguishable from regular pronouns. Consequently, he argues that to claim that some languages do not have resumptive pronouns may be equivalent to claiming that they do not

have any pronouns. Additionally, citing Kennedy and Lidz (2001), Boeckx argues that it may well be the case that those languages that apparently lack resumptive pronouns do have resumptive pronouns under ellipsis. Kennedy and Lidz (2001) claim that long-distance reflexives in English are only available under ellipsis. Their reasoning is that English does not have the right morphology to spell out long-distance reflexives; therefore, long-distance reflexives may appear when they are not pronounced, namely, under ellipsis (for detailed discussion, see Kennedy and Lidz 2001:323–324). Following this argument, Boeckx suggests that languages that lack obvious resumptive pronouns also lack the morphological exponents of resumptive pronouns and thus resumptives may show up only under ellipsis. By denying Merchant's premise that some languages lack resumptive pronouns, Boeckx argues for the resumptive analysis of island amelioration under sluicing (Boeckx 2008a, Wang 2007).

Boeckx's argument that the languages that apparently lack resumptive pronouns do in fact have them under ellipsis does not seem to be supported by clear independent evidence. We view this argument more as an ad hoc solution to the problem presented by Merchant. At a minimum, we find no argument in the literature that there is a "morphologically resumptive" pronominal series. Indeed, as Boeckx argues, resumptive pronouns are pronouns that are used in a resumptive context, and thus the claim that a language may have resumptive pronouns solely in a particular context would not make sense if that language had an identical distribution for all pronouns, both resumptive and otherwise.

2.3 The Interpretation of the Wh-Phrase

Merchant's (2001) third argument against the resumptive analysis is that a *wh*-phrase has different interpretations when it is associated with a trace and when it is associated with a resumptive pronoun: namely, a *wh*-phrase can have a functional reading in the former context but not in the latter. However, this distinction disappears under sluicing; there is not a subset of *wh*-phrase meanings available in connection with resumptive pronouns (Merchant 2001:145; for related discussion, see Doron 1982, Sells 1984).

Boeckx (2008a) posits that the correlation between the specific interpretation and a specific *wh*-chain is not as strong as Merchant suggests. Boeckx argues that the restricted class of readings may have more to do with the type of resumptive pronoun the *wh*-phrase is associated with than with the *wh*-phrase itself. While resumptive pronouns are characteristically definite, Boeckx argues that Wang's (2007) resumptive account of sluicing may involve a resumptive-type indefinite *pro* element, leading to more available readings than would typically be found with a definite resumptive pronoun.⁴ Thus, by this analysis, Wang's resumptive account of sluicing relies only on the

⁴ Note that the nature of this *pro* element is not clear in Boeckx's (2008a) argument. An element like an indefinite *pro* has been reported in the literature—for example, in Greek (e.g., Giannakidou and Merchant 1997). However, it is not clear whether the indefinite null object in Greek and the resumptive indefinite *pro* element that Boeckx argues for show the same distribution and licensing conditions. Because it has not been made clear what exactly this *pro* element is, it is not possible to validate Boeckx's analysis on the basis of this element.

existence of an element that is resumptive in nature, though not one that is necessarily definite (Boeckx 2008a).

2.4 The P-Stranding Generalization

Merchant's (2001) fourth argument against the resumptive analysis derives from a P-stranding generalization: namely, that languages that allow P-stranding in wh-movement allow P-stranding in sluicing constructions, and conversely, languages that do not allow P-stranding in wh-movement do not allow P-stranding in sluicing constructions. Merchant takes this observation as evidence for the wh-movement approach. Because resumptive pronouns rescue P-stranding violations (Boeckx 2003), as in Welsh examples like (10), Merchant's generalization seems to pose a serious problem for Wang's (2007) resumptive account of sluicing.

(10) Beth y siaradodd ef ag ef/*0? what PRT spoke he about it/0 'What did he speak about?'
(Borsley 1986:73)

However, Boeckx (2008a) points out that there are numerous counterexamples to Merchant's generalization. Some languages that do not allow P-stranding in general—for example, Brazilian Portuguese (Almeida and Yoshida 2007) and Serbo-Croatian (e.g., Stjepanović 2008)—are reported to permit preposition omission in sluicing. Therefore, he casts doubt on the validity of Merchant's P-stranding generalization.

Additionally, Wang (2007) argues that P-stranding is felicitous in otherwise non-P-stranding languages like Hebrew, when "separable/free" prepositions are used. Wang argues that Hebrew allows P-less sluicing when a preposition that can be separated from nominals is used.⁵

- (11) a. Dani katav le-mishehu, aval ani lo yode'a *(le)-mi.

 Dani wrote to-someone but I not know (to)-who
 'Dani wrote to someone, but I don't know to who.'
 - b. *Mi Dani katav le?who Dani wrote to'Who did Dani write to?'
 - c. Yoshi diber al sefer mesuyam. Aval ani lo zoxer (al) eize sefer. Yoshi talked on book specific but I not remember (on) which book 'Yoshi talked about a specific book, but I don't remember which book.' (Wang 2007:(48))

Wang suggests that prepositions that are prefixed to nominals are case markers and that they are "inseparable" from the nominals. Being inseparable, such a preposition must move together with

⁵ This observation was originally made in a prepublication draft of Fox and Lasnik 2003. (The data are reported in the version available at http://mit.edu/fox/www/F&L.pdf.)

the *wh*-phrase and, as a result, P-less sluicing is not legitimate (see Law 1998, 2006 for a similar treatment of prepositions in Romance languages). Because such a preposition cannot be separated from the nominal it is prefixed to and must accompany the *wh*-phrase, inserting a resumptive pronoun after it is not an option. On the other hand, the "separable/free" prepositions can be omitted under sluicing because a resumptive pronoun can be inserted and can save the P-stranding violation. Thus, Wang and Boeckx conclude first that Merchant's P-stranding generalization is not correct, and second that the resumptive analysis of sluicing can correctly capture the crosslinguistic patterns of P-stranding under sluicing.

However, this argument seems to be empirically problematic. It appears that the "inseparable" prepositions can actually be omitted. Thus, for native speakers of Hebrew, an example like (11a) with a bare *wh*-phrase is not as bad as one with the preposition. The acceptability of the related example in (12) also supports this point.

(12) Yoshi katav *le*-misrad mesuyam aval ani lo zoxer (*le*)-eize (misrad). Yoshi wrote *to*-office certain but I not remember (*to*)-which (office) 'Yoshi wrote to some office, but I don't remember (to) which.'

Thus, the real generalization here seems to be that P-less sluicing is possible in Hebrew, and thus Hebrew is another exception to the P-stranding generalization, like Brazilian Portuguese and Serbo-Croatian. These facts from Hebrew thus may cast doubt on the validity of the P-stranding generalization, and may indeed be compatible with the resumptive approach, as Boeckx argues.

There is, however, an issue related to the P-stranding generalization that must be resolved. It is not clear whether P-less sluicing in languages without P-stranding has the same derivation as regular sluicing. It has been suggested that P-less sluicing in non-P-stranding languages is derived from the (truncated) cleft or copular source rather than the regular wh-movement structure (Van Craenenbroeck 2010, Rodrigues, Nevins, and Vicente 2009, Szczegielniak 2005, Vicente 2008). If P-less sluicing in these languages indeed has the (truncated) cleft or copular structure, then the omission of prepositions is not related to the availability of resumptive pronouns. Furthermore, these studies have suggested that when the cleft/copular structure is unavailable (e.g., by means of 'else' modification), P-less sluicing in non-P-stranding languages is not acceptable (Van Craenenbroeck 2010, Merchant, to appear, Rodrigues, Nevins, and Vicente 2009, Szczegielniak 2005, Vicente 2008). Such a correlation between the availability of cleft/copular sources and the possibility of P-less sluicing is not predicted by the resumptive analysis. Rather, if a resumptive pronoun can salvage illegal P-stranding in non-P-stranding languages, it should make P-less sluicing grammatical regardless of whether the cleft/copular source is available.

⁶ We consulted 3 native speakers of Hebrew about all the sentences reported in this article.

 $^{^{7}}$ The native speakers of Hebrew whom we consulted judged both (11a) and (12) to be acceptable with or without the preposition on the wh-phrase. They suggested that such examples are frequently heard in colloquial speech.

2.5 Summary

So far, we have reviewed Merchant's (2001) arguments against the resumptive pronoun analysis of island-violating sluicing and Wang's (2007) and Boeckx's (2008a) responses to Merchant's arguments. Among the four points (case mismatch effects, island amelioration under sluicing in a language without resumptive pronouns, the difference in the interpretation of wh-gap chains and wh-resumptive pronoun chains, and the P-stranding generalization), we find Boeckx's rebuttal to Merchant's P-stranding generalization to be potentially compelling evidence to support Boeckx's resumptive analysis. Even if the exceptions to the P-stranding generalization may provide some support for the resumptive analysis, the resumptive analysis of P-less sluicing remains at odds with other analyses such as the cleft analysis (Van Craenenbroeck 2010, Rodrigues, Nevins, and Vicente 2009, Vicente 2008). In our view, then, Boeckx's rebuttals to Merchant's arguments are not conclusive at this point.

In what follows, we show that idiom chunks that are not compatible with resumptive pronouns appear in island-violating sluicing contexts. We argue that idioms under sluicing provide evidence against the position that the resumptive chain is the primary cause of island amelioration effects under sluicing, even though the idiom evidence does not exclude the resumptive analysis.

3 Idiom Reconstruction and Island Amelioration

One way to test the validity of the resumptive analysis is to check whether elements that are incompatible with resumptive pronouns can appear in an island-ameliorating sluicing context.⁸ In this section, we point out that idioms in English are one case where such elements can appear, and we show that idiom reconstruction under sluicing raises a considerable challenge to the position that the resumptive chain is the primary cause of island amelioration effects under sluicing. The generalization on which we base our argument is that English resumptive pronouns do not participate in the idiom chunk.⁹

First, let us examine the type of relative clause in which improvement of island violations is frequently reported. Consider:

⁸ Merchant (2001) and Agüero-Bautista (2007) offer similar types of arguments. Merchant argues that in English (and also in Irish), some *wh*-phrases (e.g., the adjunct *wh*-phrases *when*, *where*, and *how much*) do not have resumptive pronoun counterparts. Merchant shows, however, that even these *wh*-phrases can be extracted from island domains under sluicing (Merchant 2001:129–130). Agüero-Bautista shows that a certain type of pair-list reading is available under sluicing, and he argues that this reading is possible only if sluicing involves successive-cyclic *wh*-movement. He further points out that the pair-list reading is not available with a resumptive chain (see Chao and Sells 1983, McCloskey 1979, Sells 1984, Sharvit 1999). Thus, Agüero-Bautista's argument also supports the position that sluicing involves a regular *wh*-gap chain rather than a *wh*-resumptive chain. Our argument accords with the types of arguments that Merchant and Agüero-Bautista offer.

⁹ Note that in other languages, it has been observed that resumptive pronouns can participate in the idiom chunk (see Aoun, Benmamoun, and Choueiri 2010 for Arabic, and Salzmann 2006 for Zurich German). Thus, the properties of 'resumptive pronouns' can be subject to crosslinguistic variation. The facts from Arabic and Zurich German are indeed predicted from the movement approach to resumptive constructions. This difference between English and these languages raises a question about the status of 'resumptive pronouns' in English, specifically whether English 'resumptive pronouns' and those in other languages are different elements.

- (13) a. We were surprised at the headway that Mary said that John made.
 - b. *We were surprised at the headway that Mary is angry because John made ____/ it.
- (14) a. Mary was worried about the strings that Bill said that John pulled to get his position.
 - b. *Mary was worried about the strings that Bill is angry because John pulled ____/ them.

As the acceptability patterns in (13) and (14) suggest, resumptive pronouns do not improve the judgment of island violation examples when idioms are involved.

Boeckx (2008b:155) reports that resumptive pronouns improve acceptability in adjunct clauses. He cites the following contrast:

- (15) a. *Which woman did John laugh [after Bill kissed ____]?
 - b. Which woman did John laugh [after Bill kissed her]?

Native speakers of English whom we interviewed indeed detected a slight improvement in the acceptability of the example with the resumptive pronoun compared to the one with the gap (7 out of 10 speakers).¹⁰ If resumptive pronouns can participate in the idiom chunk, we expect the same improvement in the judgment of the island-violating examples.

In the examples in (13) and (14), we used *because*-clauses, not temporal clauses as in Boeckx's original examples of adjunct islands, in order to create a sensible context for the use of idiom chunks. For the same reason, we tested the possibility of resumptive pronouns with idiom *wh*-movement in the environment of the *because*-clause island violations. In so doing, we tested the possibility of resumptive pronouns with nonidiom D-linked *wh*-phrases in *because*-clauses, in order to see if the resumptive pronoun could improve the *because*-clause island violation in the same way as in Boeckx's original examples. We tested the examples in (16).

- (16) a. *Which woman was John angry [because Bill kissed ____]?
 - b. Which woman was John angry [because Bill kissed her]?

Once again, native speakers of English preferred the example with the resumptive pronoun to the one with the gap (7 out of 10 speakers).

These judgments suggest that the presence of a resumptive pronoun can indeed improve the adjunct island violation. ¹¹ Even in this environment, however, resumptive pronouns fail to ameliorate the island violation caused by idiom wh-movement, as (17) shows, exactly as in the relativization examples (13b) and (14b) (0 out of 10 speakers).

- (17) a. *What headway did the project get funded [because she was finally able to make ____/it]?
 - b. *What strings was Mary angry [because John pulled ____/them to get his position]?

¹⁰ Note that none of the speakers we interviewed reported a crystal-clear difference in acceptability between these two examples. Nonetheless, they reported that the example with the resumptive pronoun, (15b), is more acceptable than the one without, (15a).

¹¹ See, however, the findings in recent experimental studies mentioned in footnote 3.

The same pattern extends to the other verb-object idioms. We tested six more verb-object idioms, and our consultants found none of them acceptable with either a resumptive pronoun or a gap.¹²

(18) a. *How much attention is John angry because Mary paid ____/it to this problem? b. How much attention does John think that Mary paid _____ to this problem? (19) a. *How much care of the infants was John happy because Mary took ____/it? b. How much care of the infants does John think that Mary took ____? (20) a. *How close of tabs was the president thrilled because the FBI keeps ____/them on the spy?¹³ b. How close of tabs does the president believe that the FBI keeps ____ on the spy? (21) a. *Which beans was the director of the lab angry because a lab member spilled ____/ them about one of their new research projects? b. Which beans does the director of the lab believe that a lab member spilled _____ about one of their new research projects? (22) a. *Which nerve was John angry because Mary touched ____/it when she asked about his past? b. Which nerve did John say that Mary touched ____ when she asked about his past? (23) a. *Which picture was Mary delighted because John took ____/it? b. Which picture did Mary say that John took ____?

Different possible factors can account for the fact that resumptive pronouns cannot participate in idiom chunks. For example, it is sometimes argued that portions of idiom chunks are not referential (e.g., Rizzi 1990), but resumptive pronouns are: they must refer to an antecedent that is known to both the speaker and the hearer (Chao and Sells 1983, Erteschik-Shir 1992, Sells 1984). Thus, it is plausible to conclude that resumptive pronouns cannot take part in the idiom chunk because of these conflicting requirements.

¹² We consulted 10 native speakers of English about the examples in (18) through (23). No speakers found any difference in acceptability in these examples except (22), where 2 out of 10 speakers detected a slight improvement in the resumptive example (22a).

¹³ An anonymous *LI* reviewer suggested that *how close of tabs* may not be acceptable. We checked the acceptability of (20a) and (20b) independently with an additional 5 native speakers, and 3 speakers agreed that (20a) is less acceptable than (20b) and that an idiomatic reading with *how close of tabs* is possible. We also searched *how close of tabs* using Google and found 1,696 cases in which *how close of tabs* is used as an idiom (duplicates and unclear cases excluded). Though 2 of our consultants did not accept the expression *how close of tabs*, on the basis of the judgments we collected and the naturally occurring examples found using Google, in this article we assume that *how close of tabs* is grammatical.

¹⁴ We must be careful about the notion of referentiality. Idioms can serve as antecedents of pronouns, as in (i) and (ii) (see Nunberg, Sag, and Wasow 1994:502 for related observations and discussion).

⁽i) John promised to pull a lot of strings to get me this job and I hope he pulls them soon.

⁽ii) John made significant headway, but sadly it was in the wrong direction.

Therefore, it is not clear how nonreferential idiom chunks are. Here, we follow Rizzi's argument and assume that idiom chunks are not referential, though we recognize this assumption to be controversial.

Furthermore, the contrast between these pronouns, which can refer to part of the idiom chunk, and the resumptive pronoun, which cannot refer to part of the idiom chunk, may suggest that these pronouns are different in nature.

Turning to the cases of sluicing, if sluicing in the island context involves resumptive pronouns, we expect that idioms in such contexts should not be possible. However, as we saw in (4), idioms are possible under sluicing constructions that apparently involve islands. In (24), we list idioms under sluicing that we have checked. All of them show the same pattern (10 out of 10 speakers found a clear difference in acceptability between the sluicing examples and the nonellipsis examples).

- (24) a. Mary was angry because John pulled strings to get his position, but no one knows which (strings) (*[TP] she was angry because he pulled Ø/them]).
 - b. Mary was jealous because John made headway on his project, but we don't know how much (headway) ($*[_{TP}$ she was jealous because he made $\emptyset/it]$).
 - c. The project was funded because she was finally able to make some headway, but no one can tell how much (headway) ($*[_{TP}$ she was finally able to make \emptyset /it]).
 - d. John was happy because Mary paid a certain amount of attention to the problem, but I don't know exactly how much (attention) (*[TP he is happy because she paid Ø/it to this problem]).
 (Lasnik 2011)
 - e. John was happy because Mary took care of the infants, but we don't know how much (care) (*[$_{TP}$ he was happy because she took \emptyset /it of them]).
 - f. The president was thrilled because the FBI kept close tabs on the spy, but we don't know how close (tabs) (*[TP] he was thrilled because the FBI kept Ø/them on the spy]).
 - g. The director of the lab was angry because a lab member spilled the beans about their new research project, but we don't know which (beans) (*[TP] he was angry because the lab member spilled Ø/them about their new research project]).
 - h. John was angry because Mary touched a nerve when she asked about his past, but we don't know which (nerve) (*[TP] he was angry because she touched Ø/it when she asked about his past]).
 - i. Mary was delighted because John took pictures of their vacation, but we don't know which (pictures) (*[$_{TP}$ she was delighted because he took \emptyset /them of their vacation]).

If resumptive pronouns are generated in the trace position of the *wh*-phrase in the ellipsis, all of the examples in (24) should be excluded, just as (13b) and (14b) are excluded. The acceptability of the examples in (24) thus suggests that an island-violating sluice with idiom *wh*-movement does not involve resumptive pronouns.

Even though idiom reconstruction under sluicing looks problematic for the resumptive analysis, we should still consider some of Boeckx's (2008a) and Wang's (2007) arguments, especially their argument relating to the interpretation of wh-phrases. They note that the availability of a functional interpretation, which is not typically compatible with resumptive wh-chains, is not a strong counterexample to the resumptive analysis because it is possible that the resumed element is a "resumptive indefinite," and not a pronoun. This possibility is very difficult to examine given that the nature of the "resumptive indefinite" is not clear. Here, we would like to point

out a potential problem with this approach. As far as we can tell, "resumptive indefinites" do not seem to be independently available outside of sluicing contexts, at least in English. One may still argue that such resumptive indefinites are available only under sluicing for morphological reasons, as Boeckx (2008a) suggests regarding resumptive pronouns for languages that lack them. However, it does not seem desirable to stipulate that such a special resumptive element, which is not an independently available resumptive pronoun, arises only under sluicing. Thus, if there is no compelling independent evidence for the existence of the "resumptive indefinite," we believe it is better not to adopt such a narrow stipulation.

There is an alternative account for the idiom reconstruction in (24)—namely, that these examples do not involve the structure of islands. Merchant (2001) claims that the violation of so-called propositional islands is not ameliorated under sluicing. He argues that propositional islands are LF islands, and thus that PF operations, such as deletion, cannot repair island violations. Merchant proposes that the apparent amelioration of propositional islands under sluicing actually involves the structure of short extractions: the ellipsis involves just the structure of the embedded clause of propositional islands, as illustrated in (25a), rather than the structure of the whole relative clause, as in (25b) (Merchant 2001:209).

- (25) They hired someone who speaks a Balkan language.
 - a. Guess which (Balkan language) [TP sheE-type speaks t].
 - b. Guess which (Balkan language) [TP they hired someone who speaks t].

Merchant further argues that this short extraction structure involves an E-type pronoun in the subject position. Therefore, if the relative head *someone* is replaced with *anyone* or *no one*, neither of which licenses an E-type pronoun, sluicing with the relative clause island is not acceptable because a short extraction source is not available (Merchant 2001:211).

- (26) They didn't hire anyone who speaks a Balkan language,
 - a. *but I don't remember which (Balkan language) [TP she^{E-type} speaks t].
 - b. *but I don't remember which (Balkan language) [TP they didn't hire anyone who speaks-t].

On the other hand, Lasnik (2001, 2005) points out that the parallelism—namely, sluicing is unacceptable when the source of sluicing does not violate an island—does not always hold. Lasnik observes that if *certain* is added in an example like (26), the example's acceptability improves. This type of example thus suggests that the availability of E-type pronouns in the ellipsis is not related to the acceptability of the apparent island-violating sluices.

(27) ?They didn't hire anyone who speaks a certain Balkan language, but I don't remember which (Balkan language).¹⁵ (Lasnik 2005:263)

¹⁵ This is Lasnik's judgment. We independently checked the acceptability of (27) with 10 native speakers, and they all reported that it is more acceptable than (26).

Furthermore, Lasnik points out that there are some examples in which an island must exist in sluicing. Lasnik cites the following example involving the *each*... *the other* construction (Lasnik 2001, 2005):

- (28) a. Each of the linguists met [$_{NP}$ a philosopher [$_{CP}$ who criticized some of the other linguists]], but I'm not sure how many of the other linguists.
 - b. ?*How many of the other linguists did the philosopher criticize? (Lasnik 2005:264)

Because *the other* must be licensed by *each* (as in (28a)) and *each* is located in the matrix clause, the ellipsis must involve the whole clause including the materials in the matrix clause. ¹⁶

To test whether idioms are possible under an island that involves sluicing, we must check whether idioms are possible in environments like (27) and (28a). As the examples in (29) suggest, even when an E-type pronoun is not licensed in sluicing, idioms are possible (10 out of 10 speakers found these examples acceptable).

- (29) a. Mary did not criticize *anyone* who pulled *certain* strings to get his position, but no one knows which (strings).
 - b. The professor did not scold *anyone* who made a *certain* amount of headway on his project, but it's not clear how much (headway).
 - c. John did not praise *anyone* who paid a *certain* amount of attention to the problem, but I don't know exactly how much (attention).
 - d. John did not praise *anyone* who took a *certain* amount of care of the infants, but we don't know how much (care).
 - e. John did not hate *anyone* who touched a *certain* nerve by asking about his past, but we don't know which (nerve).

Examples that involve each . . . the other are also acceptable with idioms. 17

- (30) a. *Each* of the lab members is angry because one of the lab managers helped make headway for *the other* lab members, but I don't know how much headway for *the other* lab members.
 - b. Each of the researchers was happy because the RA paid attention to the other researchers' problems, but I don't know exactly which of the other researchers' problems.
 - c. *Each* of the lab members was happy because the lab managers took care of the problem of *the other* members in the current project, but no one can tell exactly which problem of *the other* members.

¹⁶ We checked the acceptability of the examples in (28) with 10 native speakers, and 7 out of 10 speakers found the contrast between (28a) and (28b).

¹⁷ We consulted 10 native speakers about the examples in (30). We compared these examples with simple *wh*-interrogative counterparts without ellipsis (*which/how many/how much of the other DP*...). Of the 10 speakers, 7 found the contrast between the sluiced examples and the nonelliptical *wh*-interrogatives.

- d. *Each* of the lab members was angry because the director of the lab spilled the beans about *the other* members' research, but we don't know which beans about *the other* members' research.
- e. *Each* of the politicians was amused because a meddlesome interviewer touched *the other* politicians' nerves when he asked about their past scandals, but we don't know which of *the other* politicians' nerves.

Another possible way to show that the *wh*-dependency spans across island domains is to make use of a bound pronoun in a *wh*-phrase that is bound by a quantifier in the matrix clause. Lasnik (2001:16) cites the following examples:

- (31) a. Every linguist₁ met [DP a philosopher who criticized some of his₁ work], but I'm not sure how much of his₁ work.
 - b. ??Every linguist₁ met [DP a philosopher who criticized some of his₁ work], but I'm not sure how much of his₁ work the philosopher criticized.

In (31a), the pronoun is in the *wh*-remnant, which corresponds to the correlate generated inside a relative clause island. To establish the bound reading in the sluice, the pronoun must be bound by the quantificational subject in the same way as in the antecedent clause. If so, the ellipsis site must have a structure that involves the matrix subject and the relative clause island, not just the structure of the embedded clause.

Examples of idioms under sluicing that involve bound pronouns are also acceptable. (Of the 10 speakers we consulted, 7 found the difference in acceptability in (32)–(34); therefore, 3 speakers did not find a difference in acceptability. The same 3 speakers did not find an acceptability difference in (31) either.) To guarantee that the pronoun is contained in the wh-phrase, we focus on examples in which the PP is part of the interrogative phrase, not a separate constituent stranded by ellipsis.

- (32) a. No mother₁ was disappointed because the new babysitter took care of her₁ dog as well as the infants, but it is not clear how much care of her₁ dog.
 - b. *No mother₁ was disappointed because the new babysitter took care of her₁ dog as well as the infants, but it is not clear how much care of her₁ dog the babysitter took _____.
- (33) a. No politician₁ was happy because a meddlesome interviewer touched his₁ nerve when she asked about his past, but we don't know exactly which of his₁ nerves.
 - b. *No politician₁ was happy because a meddlesome interviewer touched his₁ nerve when she asked about his past, but we don't know exactly which of his₁ nerves the interviewer touched _____.
- (34) a. No new bride₁ was delighted because the cameraman did not take some pictures of her₁ husband, but it's not clear which pictures of her₁ husband.
 - b. *No new bride₁ was delighted because the cameraman did not take some pictures of her₁ husband, but it's not clear which pictures of her₁ husband the cameraman did not take _____.

These examples suggest that the short extraction structure is not a requirement for achieving an idiomatic meaning under sluicing with islands. Even if a portion of an idiom is extracted out of an island, the idiom interpretation is still possible. Therefore, these examples strongly argue against the position that resumptive pronouns are the primary cause of the amelioration of island violations under sluicing.

4 Conclusions

In this article, we have shown that idiom reconstruction under sluicing provides a good testing ground for the competing theories of the island amelioration effects of sluicing. On the basis of idiom tests, we conclude that sluicing involves regular *wh*-movement without resumptive pronouns, even when islands are involved. Together with the discussion regarding the possibility of short extraction structures, the data from idiom reconstruction under sluicing suggest that resumptive pronouns cannot be the primary source for island-ameliorating sluicing.

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