

Voice Mismatches in English and Spanish Sluicing¹

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Abstract: Voice mismatches are claimed to be disallowed in sluicing due to a morpho-syntactic requirement dictating that voice specifications must be isomorphic between the antecedent and the elliptical clause (Merchant 2007). However, following Vicente's (2008) and Rodrigues et al.'s (2009) analysis of apparent P-stranding in Spanish sluicing, one must conclude that voice mismatches are a natural consequence of the need for copular constructions as sources for sluiced clauses in this language. The picture that emerges is one in which we need a mixed system of copular and non-copular sources in Spanish sluicing resolution. The present paper also shows that only passiveactive mismatches are possible and offers an explanation based on trivial structural requirements of subject DPs in copular clauses. Interesting new data is analyzed with respect to English that suggest that we may also need the postulation of such a mixed system in this language, contrary to what is generally assumed. Furthermore, it is shown that voice mismatch data in English sluicing can be accounted for along the same lines as those used for Spanish. The cross-linguistic facts discussed throughout the paper also help to provide evidence for the proposal that, aside from semantic and pragmatic requirements, there are morpho-syntactic conditions to be considered in sluicing and also that sluicing involves the construction of full structures in the elided clauses that are later deleted at PF.

Keywords: active voice, copular constructions, ellipsis, passive voice, predicational, preposition stranding, sluicing, sluicing resolution, specificational, voice mismatches, VoiceP.

Resumen: Se ha señalado que la incompatibilidad de diátesis no está permitida en el truncamiento debido a un requisito morfosintáctico según el cual las especificaciones de voz deben ser isomórficas entre la cláusula antecedente y la elíptica (Merchant 2007). Sin embargo, siguiendo a Vicente (2008) y Rodrigues et al. (2009) con respecto a los casos de abandono aparente de la preposición en el truncamiento en español, debemos concluir que las incompatibilidades de diátesis son una consecuencia natural de la necesidad de tener construcciones copulativas como fuentes de las cláusulas truncadas en esta lengua. El cuadro resultante hace necesario el uso de un

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sistema mixto de fuentes copulativas y no copulativas en la resolución del truncamiento en español. Este trabajo también muestra que las únicas incompatibilidades posibles son pasiva-activa y ofrece una explicación basada en requisitos estructurales triviales de los SDs que son sujetos de cláusulas copulativas. A continuación se analizan datos interesantes del inglés que sugieren que también podemos necesitar ese sistema mixto en esta lengua, al contrario de lo que se asume generalmente. Es más, se muestra que los datos sobre las incompatibilidades de diátesis en el truncamiento en inglés pueden explicarse de una forma similar a como se hace para el español. Los datos analizados también sirven para apoyar la propuesta de que, además de requisitos semánticos y pragmáticos, existen condiciones morfosintácticas que deben tenerse en cuenta en el truncamiento y que este supone la construcción de estructuras completas en las cláusulas elididas que son luego eliminadas en FF.

Palabras clave: abandono de la preposición, construcciones copulativas, elipsis, especificativo, incompatibilidades de diátesis, predicativo, resolución del truncamiento, SVoz, truncamiento, voz activa, voz pasiva.

Resumo: Tem sido defendido que as não correspondências de voz não são permitidas em truncamento devido a uma condição morfo-sintáctica que dita que as especificações de voz têm de ser isomórficas entre o antecedente e a oração elíptica (Merchant 2007). No entanto, seguindo a análise de Vicente (2008) e Rodrigues et al. (2009) do aparente isolamento da preposição em truncamento no espanhol, concluímos que as não correspondências de voz são uma consequência natural da necessidade de construções copulativas como fontes para as orações truncadas nesta língua. O quadro que emerge é aquele em que necessitamos de um sistema misto de fontes copulativas e não copulativas na resolução do truncamento em espanhol. O artigo também demonstra que apenas são possíveis as não correspondências passiva-activa e oferece uma explicação baseada em condições estruturais básicas de sujeitos DPs em frases copulativas. Em seguida, são analisados novos dados relativos ao inglês, sugerindo que talvez seja necessário postular um sistema misto também nesta língua, contrariamente ao que é geralmente assumido. Para além disso, demonstramos que os dados relativos à não correspondência de voz em truncamento no inglês podem ser explicados da mesma forma que aqueles usados para o espanhol. Os factos interlinguísticos discutidos ao longo do artigo ajudam ainda a sustentar a proposta de que, além de condições semânticas e pragmáticas, existem condições morfo-sintácticas a ser consideradas no truncamento e também que o truncamento envolve a construção de estruturas completas nas orações elididas que posteriormente são apagadas na PF.

Palavras-chave: voz activa, construções copulativas, elipse, voz passiva, predicacional, isolamento da preposição, truncamento, resolução de truncamento, especificacional, não correspondências de voz, VoiceP.



1. Introduction

This paper deals with the phenomenon of sluicing (Ross 1969), i.e., with the kind of elliptical clauses where only an interrogative wh-phrase remains, as exemplified in (1):

(1) Mary saw someone but she doesn't remember **who** (she saw).

In particular, the paper will analyze the claim that sluicing does not allow voice mismatches between the antecedent clause and the elliptical clause -something not applicable to all kinds of ellipsis- (Merchant 2007, 2009). The sluicing facts are illustrated in (2) for English:

(2) a. passive antecedent, active ellipsis:

*The president was attacked, but we don't know who (attacked the president).

b. active antecedent, passive ellipsis:

*Someone attacked the president, but we don't know by who/who by (the president was attacked).

Even though the necessary identity conditions between antecedent and elliptical clauses in sluicing cannot be exclusively established in morphosyntactic terms,² the ban on voice mismatches has been taken as evidence that there actually are some morpho-syntactic conditions that cannot be violated in sluicing. This morpho-syntactic requirement regarding voice has served, in turn, as key evidence in favor of the proposal that there is a fully constructed TP in the elliptical clause that is deleted at PF after wh-movement (see Merchant 2007).3 Two major proposals capitalizing on the idea that the morpho-syntactic expression of voice must be isomorphic in both clauses are those of Chung (2006) and Merchant (2007).

Chung (2006) aims to account for the ungrammaticality of sentences like (2) by making use of her "lexico-syntactic requirement", shown in (3) below:

(3) Chung's (2006) Lexico-syntactic requirement in sluicing (p.11):

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.

This paper will not be concerned with the exact characterization of such non-syntactic identity conditions (for some proposals see, for example, Merchant 2001 and references therein) and it will be assumed in what follows that they are always met.

² An illustrative example is provided below:

⁽i) I'll start playing if you tell me how (*I will start playing/OK to play).

³ The same is true of the fact that the wh-remnant in case-marked languages tends to show the case marking it would carry in the full version of the clause (Merchant 2001 and Ross 1969, among others). We will be assuming the full structure+PF deletion proposal here. For a different analysis, see, for example, Culicover and Jackendoff (2005).



In her analysis, it is crucial that lexical items cannot be "fully inflected words but rather bundles of features" and, therefore, that "passive verbs have a different featural make-up from the corresponding active verbs" (p. 16).

In a case like (2b), the Numeration of the sluice would contain the items be, attack-PASSIVE, the, president, by, and who. All except for the last two would end up only in the elided TP. Leaving aside be, which is known not to be used in computing identity conditions in sluicing because the same restrictions are found in languages with synthetic passives (Merchant 2007), all the items in the sluiced clause except for the verb match an identical item in the antecedent clause: we have murder-PASSIVE in the sluiced clause and murder-ACTIVE in the antecedent.

Following the general idea in Chung (2006), Merchant (2007, 2009) offers a purely syntactic account of the claimed impossibility of having voice mismatches in sluicing. Assuming that sluicing is TP deletion and that Voice is hosted by a syntactic head below TP -see also Merchant (2008) and Gallego (2009), among others, he defines the ban on voice mismatches as the condition that VoiceP must be identical in both clauses if it is to be deleted.⁴

The reduced structures of the examples in (2a,b) are provided in (4) and (5), respectively –with irrelevant information omitted:⁵

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(4) *The president was attacked but we don't know who.
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(5) *Someone attacked the president, but we don't know by whom.

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a. active antecedent

[TP(Antecedent) ... [VoiceP Voice [active] [_\nu_P ... [VP attack the president]]]]
b. passive sluice

[by whom ... [TP(Ellipsis) ... [VoiceP Voice [passive] [_\nu_P ... [VP attack < the president>]]]]]
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⁴ VP-ellipsis is not affected by this ban and allows voice mismatches. As Merchant (2007, 2009) claims, the reason would follow naturally from the fact that VP-deletion eliminates material that is located below VoiceP, leaving this higher phrase unrelated to the requirements involved in the deletion process. VP-deletion also differs from sluicing in taking different forms of *be* into consideration for the computation of identity (Lasnik 1995). A detailed comparison between sluicing and other types of ellipsis phenomena in this regard would surely be illuminating but it far exceeds the goals of the present paper.

⁵ Remember that passive *be* is known not to count in the computation of identity in sluicing. Also, note that the difference in the reference of the subjects of the active and passive clauses (i.e., *someone* vs. *the president*) is not necessarily a problem either. As is well known, changes in nominal references are actually allowed in sluicing (see example in footnote 2). For more details, see Merchant (2007).



In other words, in (4-5) above there is a mismatch in the head of VoiceP between the antecedent and the elliptical TPs that accounts for the ungrammaticality of the sluice when TP is deleted.

There is no question about the ungrammaticality of the English data in (2). However, it will be shown in this paper that the constraint on voice mismatches in sluicing can't be universal since they are allowed in Spanish. From this it will not follow that sluicing resolution is not dependent on having a full structure in the elliptical clause, but rather that the fully articulated source need not meet the requirements proposed by Merchant. This will have the interesting consequence that it is possible to find English-Spanish sluicing counterparts that in the surface would appear to be structurally identical but which are actually derived from structurally different sources. Furthermore, it will be proposed that facts like those to be discussed with regards to Spanish may lend support to the proposal that voice mismatches could actually be possible in English as well. Finally, it will be made clear that, even though voice mismatches are to be allowed in sluicing, a ban preventing them will still be required.

Section 2 presents the relevant Spanish data showing that voice mismatches may occur in this language. Section 3 offers an explanation to the Spanish data. Section 4 reanalyzes English sluicing by extending the Spanish analysis to that language. Finally, Section 5 sums up and offers conclusions.

2. An English-Spanish contrast

The crucial examples showing that voice mismatches exist in Spanish sluicing are related to the phenomenon of preposition stranding (or Pstranding). Therefore, it will be useful to introduce the interaction between sluicing and P-stranding next.

2.1. Preposition stranding and sluicing

After analyzing a wide array of cross-linguistic data belonging to different language families, Merchant (2001: 92) provides the following generalization regarding the relationship between sluicing and P-stranding:

(6) Form-Identity generalization II: Preposition stranding.

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

English may serve as a prototypical illustrative case in that it allows Pstranding in regular wh-movement and, hence, a sluiced counterpart is also grammatical. This is shown in (7a-b), where the preposition with is not piedpiped together with the wh-DP:



(7) a. Which professor was Peter working with?

b.Peter was working with one of his professors but I don't know which [he was working with <which>].6

Another sluicing example is provided in (8) below. The elliptical clause in this sentence is passive and the stranded preposition that gets deleted is *by*:

(8) This sculpture was restored by a novel artist but I don't remember which [this sculpture was restored by <which>].

On the other hand, Spanish does not allow preposition stranding under regular wh-movement. As opposed to what we saw in the English example (7a), stranding the preposition *con* 'with' produces the ungrammatical result in (9a), the only grammatical option being that in which the preposition moves together with the wh-DP, as shown in (9b):

- (9) a.*¿Qué profesor estaba trabajando Pedro con? which professor was working Pedro with b.¿Con qué profesor estaba trabajando Pedro?
 - b.¿Con qué profesor estaba trabajando Pedro? with which professor was working Pedro

However, the Spanish counterparts of English (7b) and, crucially, (8) are grammatical, as shown in (10) and (11), respectively:

- (10) Pedro estaba trabajando con uno de sus profesores pero no sé cuál. Pedro was working with one of his professors but not know-I which
- (11) Esta escultura fue restaurada por un artista novel pero no recuerdo cuál. this sculpture was restored by a artist novel but not remember-I which

What is striking here is that, if the generalization in (6) is correct, no preposition stranding can be available in the elliptical clauses that undergo sluicing in Spanish. Focusing on (11), this implies that the elliptical clause in this sentence cannot be (12a), which is the counterpart of (12b), the passive source we find in English:

(12) a....*cuál [esta escultura fue restaurada por <cuál>] b.... OK which [this sculpture was restored by <which>]

In other words, even though the antecedent clause in (11) is passive in Spanish, the sluiced clause is not. Remember that, according to the analysis presented so far about English, this language does not allow voice mismatches in sluicing. In contrast, sentences like (11) strongly suggest that voice mismatches in sluicing are indeed allowed in Spanish. A consequence of this is that, even though the English sentence in (8) and the Spanish sentence in (11) are grammatical and could be considered to be each other's literal counterpart, they are not structurally identical. The same can be said of (7b) and (10).

⁶ Following standard notation, strikethrough indicates elided material and angle brackets are used around unpronounced copies of moved constituents.



Sentences similar to (10-11) have been analyzed by Vicente (2008) and Rodrigues et al. (2009) as cases of apparent P-stranding, more specifically, as sentences involving a copular source for the sluiced clause. But before we discuss this, let us first entertain, and reject, two possible analyses that might come to mind in order to explain the observed difference between English and Spanish with respect to voice mismatches in sluicing.

2.2. Two preliminary ideas to account for the English-Spanish contrast.

One idea that might be invoked to explain the Spanish-English contrast described in section 2.1 is the hypothesis that sluicing in Spanish would somehow not affect VoiceP. A more drastic one would be that the answer to voice mismatches should be found outside syntax.

2.2.1 Spanish sluicing excludes VoiceP

Exclusion of VoiceP from the target of sluicing could be achieved in two ways. On the one hand, if we assume that the hierarchical layout of the TPs is identical in English and Spanish, it would have to be because sluicing in Spanish targets a constituent below VoiceP. This would contrast with English, where it targets TP, as generally assumed. On the other hand, if we assume that sluicing is TP deletion in both languages, the second way of excluding VoiceP from being deleted in Spanish would be to project it higher than TP. In other words, in both cases the target of sluicing in Spanish would have to be a constituent lower than VoiceP.

However, both assumptions can easily be discarded. First, passive auxiliaries are assumed to be generated above VoiceP. But note that the passive auxiliary fue 'was' in (11), like English was in (8), is part of the elided information. If a constituent lower than VoiceP is the target of deletion in sluicing, absence of the passive auxiliary would be mysterious. Most importantly, excluding VoiceP would not account for the fact that while passiveA(ntecedent)-activeE(llipsis) is allowed (cf. 11), activeA-passiveE is not, as shown in (13) – note that the presence of the agentive por 'by'-phrase makes it clear that the sluiced clause is passive:

(13) *Un artista novel restauró la escultura, pero no sé an artist novel restored the sculpture but not know-I by which

Furthemore, active A-passive is not even possible when the active antecedent clause has the informational structure of a passive construction (i.e., theme verb – agent). This is illustrated in (14), where we see first the theme la escultura 'the sculpture' doubled by the clitic la 'it', then the verb restauró 'restored', and finally the agent un artista novel 'a novel artist':

(14) *La escultura la restauró un artista novel, pero no sé por cuál. the sculpture it restored an artist novel but not know-I by which



In short, the exclusion of VoiceP in Spanish sluicing is incompatible with the facts and leaves unexplained why only passiveA-activeE sluices are allowed.

2.2.2. Voice mismatches are not the responsibility of the syntactic component

Appealing to non-syntactic factors in order to explain the Spanish-English contrast with regards to voice mismatches in sluicing does not seem to help either. First, from a strictly semantic point of view, active and passive do not differ and the voice distinction is not expected to have any effect. Second, discourse issues are also unlikely to play any significant role since, as (14) above shows, an active clause with passive pragmatics/informational structure cannot serve as the antecedent for a passive sluiced clause.

Let us consider a final possible non-syntactic explanation. As we saw above, only passive A-active E is allowed in Spanish sluicing. This is reminiscent of Frazier's (2008) work regarding elliptical constructions. According to Frazier, all mismatches -no matter what the ellipsis type- are ungrammatical but can be repaired, in particular, passive A-active E patterns. Frazier claims that this is possible because passives are commonly misremembered as actives. In other words, one might be lead to think that Spanish sentences like (11) or (13) are all ungrammatical but the former can be judged acceptable after being misinterpreted as unproblematic non-voice-mismatched active A-active E cases.

However, there is a major problem if we use this elliptical repair strategy in order to account for the availability of passive_A-active_E sluices in Spanish. Frazier herself specifically claims that passive_A-active_E repair seems to apply to non-sluicing elliptical constructions only (e.g., VPE) due to the complexity created by the need to interpret a variable site in sluicing. Furthermore, she states that in the case of sluicing, active_A-passive_E is better than passive_A-active_E, which she illustrates with the following examples (Frazier 2008: 31):⁷

- (15) Someone cleaned the filthy kitchen, but I don't know by which janitor.
- (16) The filthy kitchen was cleaned but I don't know which janitor.

In other words, she claims that exactly the opposite of what we find in Spanish must be true.

Summing up, it seems reasonable to reject the postulation of a different structural layout between Spanish and English TPs as well as the appeal to

⁷ Examples (15-16) are not given any notation indicating their grammaticality status by Frazier. She actually agrees that "[i]n general, it may be true that sluicing is worse with voice mismatches than VPE" to later say that "some mismatched voice sluicing examples don't seem completely unacceptable, at least not to all speakers" (Frazier 2008: 31). I have to say that both (15) and (16) are completely unacceptable to all the speakers I consulted.



semantic, pragmatic, and processing issues in order to account for the observed English-Spanish contrast with regards to voice mismatches in sluicing.

3. Copular sources

As was advanced at the end of 2.1, the answer to the problem raised by the Spanish sentences (10-11), repeated below as (17-18), will involve the use of a non-P-stranding copular source for the sluiced clause, which consequently makes them structurally different from their P-stranding non-copular English counterparts:

- (17) Pedro estaba trabajando con uno de sus profesores pero no sé cuál. Pedro was working with one of his professors but not know-I which
- (18) Esta escultura fue restaurada por un artista novel pero no recuerdo cuál. this sculpture was restored by a artist novel but not remember-I which

3.1. Solving the preposition stranding facts in Spanish

As discussed in Vicente (2008) and Rodrigues et al. (2009), the key to the analysis of sentences like (17-18) is that here preposition stranding is only an illusion and that they actually require the obligatory use of a specificational copular construction (Mikkelsen 2008) as source for the sluiced clause. In other words, the elliptical clauses in (17) and (18) are those in (19) and (20), respectively:⁸

- (19) ...cuál [es el profesor <cuál>] which is the professor which
- (20) ...cuál [es el artista novel <cuál>]. which is the artist novel which

A key piece of evidence showing that we are in fact dealing with copular sources in apparent P-stranding cases comes from multiple sluicing; more specifically, from the restrictions in leaving out the preposition in the first wh-

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⁸ For Vicente (2008) and Rodrigues et al. (2009), the elided DPs should be *el profesor con el que estaba trabajando* 'the professor he was working with' and *el artista novel por el que fue restaurada la escultura* 'the novel artist by whom the sculpture was restored'. A more articulated version of the DP subject of the copular source will be relevant in the discussion of multiple sluicing that comes next. However, nothing crucial to the general proposal that will be advanced here seems to hinge on this.

Also, note that (17-18) are not instances of deep anaphora (Hankamer and Sag 1976). That is, they are not cases of pseudosluicing, in which "the missing material could be reconstructed using non-linguistic resources" (Potsdam 2007: 606). This is illustrated in (i):

⁽i) [shown a picture of an artist restoring a sculpture]*No sé quién.not know-I who



remnant. As explained in Rodrigues et al. (2009), it is the first remnant that establishes the difference between English and Spanish in multiple sluicing since absence of the preposition in the second remnant yields ungrammaticality even in a P-stranding language like English. As can be seen in the English example (21), the preposition of the second wh-remnant cannot be omitted whereas that of the first remnant can.

(21) Peter talked about something to somebody but I can't remember (about) what *(to) whom.

However, the Spanish sentence (22) shown below contrasts with (21) in that absence of the preposition in the first wh-remnant produces an ungrammatical result (Rodrigues et al. 2009: 7):9

(22) Ella habló con alguien sobre algo pero no sé *(con) quién *(sobre) qué. she talked with someone about something but not know-I with who about what As Rodrigues et al. (2009) state, this behavior with respect to the occurrence of prepositions in remnants of multiple sluicing also means that Spanish does not "save" otherwise P-stranding violations by PF elimination of the locus of the violation.

Before moving on, it is important to point out that there is a kind of data that has incorrectly been used as evidence of a lack of a copular source. I am referring to "más 'else'-modification" in Spanish. Following Merchant's (2001) observation that copular sources do not accept wh-remnants with "else-modification", Vicente (2008) and Rodrigues et al. (2009) incorrectly claim that such modification is not possible with apparent P-stranding in Spanish sluicing precisely because they involve a copula. However, as discussed in Martín González (2010), Merchant's observation is not accurate. Moreover, as we can see in the following sluicing example, apparent P-stranding, and hence a copular source, is indeed available in cases of modification of the wh-remnant

⁹ According to Rodrigues et al. (2009), the first remnant does not really incur in any violations. What explains the ungrammaticality of the sentence is that apparent P-stranding implies the existence of a bi-clausal cleft source and the only way in which the second whphrase could survive is by movement out of the relative clause, thus violating the Right Roof Constraint (Ross 1967 and Soames & Perlmutter 1979).

On a different note, a switch in the order of the wh-remnants in (22) dramatically improves the sentence when the preposition is omitted from the first remnant. This is shown in (i):

⁽i) Ella habló sobre algo con alguien pero no sé (sobre) qué *(con) quién. she talked about something with someone but not know-I about what with who This is likely to be due to the fact that Spanish allows both hablar sobre algo 'talk about something' and hablar algo '(lit.) talk something'. Then, when the preposition in the first remnant is absent, the antecedent may be reinterpreted using the second option, as in (ii):

⁽ii) Ella habló algo con alguien pero no sé qué con quién. she talked something with someone but not know-I what with who



by *más* 'else' as long as the context makes it clear that the referent questioned by the wh-remnant is part of an already introduced larger set. In the grammatical sentence in (23) this information is provided by the first clause:

(23) Juan fue visto con varias de sus estudiantes. Seguro que fue visto con Paula y Juan was seen with several of his students surely that was-HE seen with Paula and con María pero no recuerdo **quién(es)/cuál más**. with María but not remember-I whosg/pl/which else

Once the existence of specificational copular sources for apparent P-stranding cases in sluicing is acknowledged in Spanish, the question arises as to whether these sources may also be available for sluicing in general in this language besides the regular resolution based on a syntactically parallel antecedent. After all, copulas are an available source provided by the system and, in the absence of a strong justification to the contrary, a system that makes use of an available resource makes more sense than one that ignores it. Furthermore, it is in fact the source speakers often resort to when asked to resolve sluicing. We will take this path. A consequence of following this path is that copular constructions other than specificational must be allowed as sources for sluicing. For example, as we can see in (24) below, the copular source for the sluiced clause is predicational:¹¹

(24) Trajeron un regalo pero no sabemos para quién [es el regalo <para quién>]. brought-THEY a present but not know-we for who is the present for who

In general terms, we may then assume that a copular clause is available in sluicing resolution in Spanish as long as the construction *X* be wh-remnant is grammatical. Furthermore, the X in this copular construction must be a DP with a correlate in the antecedent. The condition that X must have a correlate

A detailed analysis of the exact distribution of (non-)copular sources for sluiced clauses in Spanish should be carried out. Suffice it to say for the time being that sluicing resolution may involve copular constructions of different kinds as well as non-copular clauses.

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¹⁰ We would need these regular cases in Spanish anyway. In fact, there are examples for which a copular source is hard to postulate, requiring instead such a syntactically parallel source, like sentence (i) below:

⁽i) Quiero ir pero no sé cómo (ir). want-I go but not know-I how (go)

¹¹ See Vicente (2008) for examples showing restrictions on predicational sources.

¹² The need for a correlate DP in the antecedent is not a requirement of all sluices. A reviewer mentions an example of swiping in English as evidence. The Spanish counterpart in (i) –which, by the way, does not instantiate swiping- makes the same point since the sentence is grammatical in spite of the fact that no appeal to a DP correlate in the antecedent clause is needed:

⁽i) Bill votó en las últimas elecciones pero no sé por quién. Bill voted in the last elections but not know-I for who



present in the antecedent is illustrated with (25a) below. The general ban on structurally parallel voice mismatching in sluicing makes (25b) an impossible source. Further, the non-copular P-stranding source in (25c) is unavailable because Spanish is not a P-stranding language. This leaves us with the option of a copular source. The ungrammaticality of (25a) under a copular resolution can be explained by the absence of a correlate for the DP subject of the copular clause, as shown in (25d):14

- (25) a.*La escultura será restaurada pero no sabemos quién. the sculpture be-Future restored but not know-we who
 - b.... *quién [<quién> restaurará la escultura]
 who who restore-Future the sculpture
 - c....*quién [la escultura será restaurada por <quién>] who the sculpture be-Future restored by who
 - d. ...quién [??? es <quién>] who is who

3.2 Voice mismatches in Spanish sluicing

The discussion so far shows that the existence of sentences like (18) above, now repeated as (26), proves that Spanish sluicing allows voice mismatches. As indicated by the boldfaced items, the antecedent clause in (26) is passive but its elliptical clause is not:

(26) Esta escultura **fue restaurada** por un artista novel pero no recuerdo cuál (el artista this sculpture **was restored** by a artist novel but not remember-I which the artist novel **es** <cuál>).

novel is which

In fact, it should be stressed that the "correlate DP" requirement refers only to those sluices for which a copular source is available since it is relevant under such a resolution. As will be made clear in 3.2, a copular source is not available for the sentence in (i); therefore, the requirement is not applicable to it. The grammaticality of this sentence is due to the fact that it still has available the syntactically parallel voice-matching source shown in (ii):

(ii) ... pero no sé por quién [Bill votó <por quién>] but not know-I for who Bill voted for who

¹³ The source in (25c) would also violate Chung's (2006) lexico-syntactic requirement mentioned in (3) since the preposition *por* 'by', which gets deleted, does not have a correlate in the numeration of the antecedent CP.

¹⁴ The reviewer mentioned in footnote 12 also points out that inclusion of a 'by'-phrase in the antecedent in (25a) makes it grammatical, which is true as shown by a sentence like (18). But this is exactly the point this requirement is trying to capture. The lack of a 'by'-phrase, which in this case means the lack of a correlate DP, is responsible for the ungrammaticality of an otherwise grammatical sentence with such a phrase. In fact, the appeal to the absence of the correlate DP could be seen to follow the same spirit of Chung's (2006) lexico-syntactic requirement.

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In fact, voice mismatches in Spanish sluicing are a natural consequence of the requirement that a copular construction must be the source for sluiced clauses involving apparent P-stranding. Furthermore, note that the mismatch is possible because the elliptical clause is not syntactically parallel to the antecedent clause.

The data presented so far regarding the possibility of having voice mismatches in Spanish sluicing may be summarized with the following descriptive generalization:

(27) Generalization about voice mismatches in Spanish sluicing

Voice mismatches between the antecedent and the sluiced clause in Spanish are allowed only if the latter is derived from a grammatical copular source of the form *X* be wh-remnant.

N.B. In the *X be wh-remnant* copular source, X is a DP with a correlate in the antecedent.

The generalization in (27) not only accounts for the cases where voice mismatches are allowed. It also explains those examples where the mismatch yields ungrammaticality. Remember that active A-passive E examples like (13) and (14) –now repeated as (28) and (29)- are ungrammatical.

- (28) *Un artista novel restauró la escultura, pero no sé an artist novel restored the sculpture but not know-I by which
- (29) *La escultura la restauró un artista novel, pero no sé por cuál. the sculpture it restored an artist novel but not know-I by which

Following (27), what in principle would constitute an instance of an illicit mismatch would be allowed if the sluiced clause had a copular construction as its source. This would entail a derivation like that provided in (30a). However, such a source is not allowed because, as (30b) shows, this is not a grammatical sentence in Spanish:

(30) a.*... por cuál [es el artista novel <por cuál>] by which is the artist novel by which

b.*¿Por cuál es el artista novel? by which is the artist novel

In other words, active A-passive E mismatches remain illicit because there is no copular source available for the sluice.

Furthermore, at the beginning of this subsection it was shown that passiveA-activeE mismatches in sluicing are grammatical when the sluiced clause is derived from a copular source. But we should ask ourselves if there are any ungrammatical examples with this mismatch pattern and, if so, whether their ungrammaticality could follow from (27). This is indeed the case on both counts. We have already seen this with respect to sentence (25), discussed at the end of 3.1, but there are more cases to be mentioned.



According to Vicente (2008), apparent P-stranding cases where the remnant does not "question its correlate in the antecedent" are ungrammatical (Vicente 2008: 13):

(31) Mauricio ha hablado sobre una novela de Neal Stephenson, pero no Mauricio has talked about a novel by Neal Stephenson but not sé *(sobre) qué obra de Mamet. know-I about what play by Mamet

This is claimed to be a consequence of the lack of a specificational copular source for the sluiced clause.¹⁵ If it is true that a copular source is not available in these cases, the ungrammaticality of passive_A-active_E examples like (32) when the preposition is absent from the wh-remnant is expected:

(32) Esto fue investigado por la policía pero no recuerdo this was investigated by the police but not remember-I
 *(por) qué detective privado.
 by what detective private

A similar type of example can be construed with multiple sluicing. As discussed in Section 3.1, apparent P-stranding with respect to the first whremnant is not possible due to the fact that it should be derived from a copular source. Accordingly, a passiveA-activeE voice mismatch is not allowed:

(33) Esta escultura fue restaurada en una ciudad importante por un artista this sculpture was restored in a city important by a artist novel pero no recuerdo *(en) qué ciudad *(por) qué artista. novel but not remember-I in what city by what artist

One final example of an ungrammatical passive_A-active_E mismatch in sluicing is illustrated by those sentences in which the remnant is marked with accusative (personal) a. As in (31-33) above, there is no grammatical copular source in this case. This is shown in the ungrammatical examples in (35):¹⁶

- (34) *Alguien ha sido expulsado pero no sabemos a quién. someone has been expelled but not know-we *a* who
- (35) a. *... a quién [alguien es <a quién>]
 a who someone is a who
 b. *¿A quién es alguien?
 a who is someone

¹⁶ The sentence without ellipsis is grammatical (though pragmatically repetitive):

(i) Alguien ha sido expulsado pero no sabemos a quién han expulsado. someone has been expelled but not know-we *a* who have-they expelled.

Also, it is clear that case mismatches are not relevant:

(ii) Han expulsado a uno de sus amigos pero no recuerdo cuál. have-they expelled *a* one of his friends but not remember-I which

¹⁵ See Vicente (2008) for details.



In sum, the existence of grammatical voice mismatches in Spanish between the antecedent clause and the sluice is just a natural consequence that cannot be avoided because the sluiced clauses originate as copular sources. In the case of ungrammatical sluices, a regular non-copular source is unavailable because it would involve an illicit voice mismatch and there are no grammatical copular sources for the elliptical clauses.

4. English sluicing

Section 3 has shown that Spanish sluicing resolution makes use of both copular and non-copular sources. In the case of English, we know from Sections 1 and 2 that sluicing is derivable from non-copular sources. In fact, the explanation offered for the lack of voice mismatches relied on that assumption. The question now is whether copular constructions are also available as sources for sluices in English. If they are, two further questions arise: whether we have to assume that voice mismatches exist in English sluicing and whether we can still account for the behavior of ungrammatical voice mismatches in sluicing in this language.

4.1. Copular sources in English

Merchant (2001: 120-127) offers a battery of ten tests that have been influential in spreading the idea that sluiced clauses in a language like English must be derived from non-copular clauses. However, as pointed out in van Craenenbroeck (2010) and Martín González (2010), Merchant's tests would only show that it is not the case that all sluicing instances are reducible to pseudosluicing. In the case of English, this amounts to saying that cleft constructions of the type shown in parenthesis in (36) cannot be the source of sluiced clauses:

(36) Joe met his partner at some bar but I don't know where (it is that Joe met his partner).

Crucially, stating that all sluicing cases are not reducible to pseudosluicing does not mean that copular sources must be obligatorily unavailable.¹⁷

In fact, copular sources seem to be needed in certain cases. For example, the interpretation of sentence (37) is not the one indicated by the full-fledged version of the sluiced clause in (38a), but rather the copular clause shown in (38b):

(37) I just received an invitation to a party but it doesn't say when.

(38) a. *when [I just received [an invitation to a party] <when>]

b. when [it (the party) is <when>]

¹⁷ As Martín González (2010) discusses, the tests also show different degrees of unreliability when applied to English. See the discussion about sentence (23) for one example.



Furthermore, copular sources seem to be preferred in certain cases. In this sense, a sentence like (39) is normally interpreted as in (40a) -and only secondarily with the non-copular clause in (40b).

- (39) Everybody is leaving except two of your workers, but don't ask me which ones.
- (40) a. which ones [they are < which ones>].
 - b. which ones [NEC < which ones > are leaving].

Finally, consider the following sentence:

(41) Mel Gibson told me that Brad Pitt was selling something but I can't remember what.

Complex sentences like (41) are known to have what is sometimes referred to as a "long" and a "short" reading. That is, (41) may be interpreted as in (42a) or (42b) below:

(42) a. Long reading:

...what [Mel Gibson told me that Brad Pitt was selling <what>].

b. Short reading:

...what [Brad Pitt was selling <what>].

Next, consider sentence (43) from Kim (2006: 702, fn 10):

(43) Mel Gibson told me that Brad Pitt was selling some interesting pictures of himself, but I can't remember which pictures (of himself).

As Kim discusses, speakers interpret the anaphor *himself* in (43) as referring to Brad Pitt only. However, if sluicing involves regular wh-movement and the deletion of a non-copular TP, sentence (43) should be as ambiguous as (44), where the anaphor may refer to either Mel Gibson or Brad Pitt:

(44) Which pictures of himself did Mel Gibson say that Brad Pitt was selling?

This means that sentence (43) lacks the long reading and only has the short reading, as shown in (45):

(45) a. Long reading:

*...which pictures of himself [Mel Gibson said that Brad Pitt was selling <which pictures of himself>].

b. Short reading:

...which pictures of himself [Brad Pitt was selling <which pictures of himself>].

The problem lies in that it would remain unexplained why (41) has the two interpretations in (42), whereas (43) would only have the short reading in (45b).

The availability of copular sources and their preference over other possibilities might shed some light regarding this particular fact involving anaphor interpretation.¹⁸ If copular sources could somehow be preponderant – at least in

¹⁸ The existence of a preference for copular over non-copular sources as discussed in sentences like (39) and (43) would constitute evidence against van Craenenbroeck's (2010) claim that copular sources are a last resort to be used only when no other source is available.



cases that would need to be properly qualified – the sluiced clause would be that illustrated in (46) and it would follow that the anaphor would be interpreted as only referring to the closest subject DP:

(46) ...which pictures of himself [they were < which pictures of himself>].

In short, there seem to be grounds for assuming that X be wh-remnant copular sources are also available for sluicing resolution in English.

4.2. Voice mismatches in English sluicing

When we restrict the possible sources in sluicing to clauses that are syntactically parallel to their antecedents, we can explain ungrammatical voice mismatches in English by requiring that morpho-syntactic voice specifications be identical between the antecedent and the elided TP. Note, however, that the assumption of the existence of copular sources in English sluicing forces us to revisit the data from this language.

First of all, we should check if, as was the case in Spanish, voice mismatches are allowed once copular sources are possible. The answer is that they should indeed be allowed in trivially grammatical examples like (47) below:

(47) Someone was attacked but we don't know who [s/he is <who>].

In other words, sentences like (47) illustrate passive_A-active_E voice mismatches, just like we saw in Spanish.

Next, and most importantly, we must check that the existence of copular sources would not make incorrect predictions, providing grammatical derivations for unquestionably ungrammatical sentences. First, remember that active passive mismatches are always ungrammatical in Spanish. English shows the same behavior and, focusing on the possibility of having copular sources in sluicing, it will be explained in a similar fashion: in ungrammatical active passive cases like (48) below, the *by*-phrase remnant is incompatible with a grammatical copular source:

(48) a.*A novel artist restored the sculpture but we don't know by who(m).

b. *...by who(m) [the novel artist is <by who(m)>]

Second, also as in Spanish, passive_A-active_E examples where the remnant is marked for accusative case are ungrammatical, which would be due to the fact that the remnant, once again, precludes the existence of a grammatical copular source. This is shown in (49):¹⁹

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¹⁹ According to one reviewer, sentence (49) is "probably good for most speakers of English". All the native speakers of both British and American English I have consulted agree that the sentence is ungrammatical. Furthermore, sentences of this pattern are marked ungrammatical by other authors (e.g., Chung 2006). In any case, as long as the grammaticality status mentioned by the reviewer represents the systematic judgment of some native speakers,



- (49) a. *Someone has been killed but we don't know whom.
 - b. *... whom [(s/he is <whom>]

Third, we need to address the ungrammaticality of sentences (2a,b) repeated below as (50) and (51), respectively, which served as basic illustrations of the impossibility of voice mismatches in English:

- (50) *The president was attacked, but we don't know who.
- (51) *Someone attacked the president, but we don't know by who.

If we appeal to the use of copular sources and, in particular, to the condition that for a copular source to be available, the X in the putative X be wh-remnant source must be a DP with a correlate in the antecedent, we may have an explanation for both cases. In fact, no copular source meeting that requirement can be used in these sentences since, as indicated in (52) and (53), no DP subject exists with a correlate in the antecedent:²⁰

- (52) ...* who [??? is <who>].
- (53) ...* by who [??? is <by who>].

Finally, having copular sources in English sluicing implies that there would be no obligatory preposition stranding in cases like (54a), since such a sentence could also be derived from a structure like that in (54b):

(54) a. The sculpture was restored by a novel artist but we don't know who/which (one).

b.... who/which (one) [the novel artist is <who/which (one)>]

This has a positive consequence for us because the lack of obligatory Pstranding, in turn, could be used in order to account for a well-known fact; namely, the acceptance of sluices with otherwise ungrammatical preposition stranding (Rosen 1976, Chung et al. 1995, Fortin 2007).21 As we can see in

it merits an explanation. At this point, I can only offer a tentative one. We already know that sluicing resolution may, under certain circumstances, involve a reinterpretation of the antecedent clause. Perhaps the use of the linguistically marked whom, especially when not preceded by its case assigner, counts as one such circumstance for those speakers.

- ²⁰ This is just what we saw for sentences (25) and (28) in Spanish. For a sentence like (50), we would still have to account for its ungrammaticality under a non-voice-mismatched, noncopular P-stranding source like (i):
- (i) *The president was attacked but we don't know who [he was attacked by <who>]. In this case, the account of its ungrammaticality is also familiar. It would follow from Chung's (2006) lexico-syntactic requirement in (3) since the by of the 'by'-phrase is not present in the antecedent CP.
- ²¹ Postulating a copular source, and hence no preposition stranding, for (54) does not make English and Spanish identical in sentences of this pattern. Note that English would still contrast with Spanish in having two possible sources for the sluice, namely, the non-copular Pstranding and the copular non-P-stranding sources. Spanish, on the other hand, only has the copular non-P-stranding source available, as discussed in Sections 2 and 3.



examples (55) and (56), P-stranding in non-elliptical constructions is sometimes ungrammatical (the 'a' cases) but they are perfect if sluicing is involved (the 'b' cases). Independently of the explanation these sentences may receive when non-copular constructions are the basis for the sluiced clauses, if we were to appeal to a copular source for the sluice, there would be no P-stranding at all and hence nothing special to explain in this regard (the 'c' cases):

- (55) a. *Whose wishes did he get married against?
 - b. John got married against someone's wishes, but I don't know whose.
 - c. ... whose [the wishes were <whose>]
- (56) a. *What circumstances will we use force under?
 - b. We are willing to use force under certain circumstances, but we will not say in advance which ones.
 - c. ... which ones [the circumstances are < which ones>]

Summing up, if copular sources enter the picture of sluicing resolution in English, voice mismatches must be allowed in certain passiveA-activeE restricted cases. We also see that ungrammatical voice mismatches are still accounted for not to mention the simpler explanation we find to some unexpected P-stranding facts.

If we were to consider the Spanish and English facts together, we could offer the generalization in (57):

(57) Generalization on Voice mismatches in sluicing

- (i) Voice mismatches between the antecedent and the sluiced clause are allowed only if the latter is derived from a copular source of the form *X* be wh-remnant.
 - N.B. In the X be wh-remnant copular source, X is a DP with a correlate in the antecedent.
- (ii) When a copular source is not available, voice mismatches are not allowed in sluicing.

5. Conclusion

The Spanish facts seem to be rather straightforward and force us to acknowledge the existence of a mixed system for sluicing resolution where both copular and non-copular sources are needed. A natural consequence of this is that voice mismatches will be allowed when copular sources are at play. The availability of copular sources for sluiced clauses in Spanish, especially the typical requirements of their DP subjects, also explains why the direction of the possible mismatches is always passive_A-active_E.

As for English, we know that the ungrammaticality of voice mismatches in sluicing can be explained by the morpho-syntactic requirement that voice must be isomorphic between the antecedent clause and the elliptical clause. But if, as some data would seem to suggest, we were to allow copular sources in



English, the same mixed system we have in Spanish should be adopted, with the consequence that voice mismatches in English sluicing may exist in passive_A-active_E patterns like in Spanish. Furthermore, in this scenario, the ungrammatical English cases would receive an explanation along the same lines as the Spanish ungrammatical examples.

In spite of the existence of voice mismatches in sluicing, one cannot justify postulating a total absence of morpho-syntactic isomorphism between antecedent and sluiced clauses in general (contra Szczegielniak (2008) using Polish and Potsdam (2007) using Malagasy, to name two recent proposals defending this idea). Note that our proposal maintains full syntactic structure in the sluice and the familiar necessary degree of syntactic isomorphism as long as the antecedent and the sluice have parallel constructions. And even in cases of non-parallel constructions, there is an identity requirement: the X in a X be whremnant sluiced clause must have a lexically expressed counterpart in the antecedent.

Needless to say, much remains to be worked out; for example, the exact conditions under which (the different types of) copular sources are available in sluicing.²² Also, it should be determined whether the Generalization on Voice Mismatches in (57) applies to other languages and why this may or may not be the case. Last but not least, the extent to which the issues discussed here might apply to other kinds of clausal ellipsis also needs to be determined.

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(ii) [Speaker A]Esta escultura fue restaurada por un artista novel.this sculpture was restored by a artist novel.[Speaker B]¿Cuál?which
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Needless to say, a semantic analysis might shed some light into the need for copular sources in sluicing. Consequently, this is another aspect that will have to be taken up in future research.

²² Focusing on the fact that the sluiced examples throughout the article are all indirect questions selected by the verb *know* and *remember*, a reviewer suggests that the need to appeal to fully-structured copular sources in sluicing may be strongly related to the semantics of those questions combined with the semantics of the governing verb, in that the embedded clauses would not denote a question -see for example, Groenendijk & Stokhof (1997) and Ginzburg & Sag (2000). However, non-factive, non-resolutive verbs like *ask* or *wonder* may also be used without significant changes:

⁽i) Esta escultura fue restaurada por un artista novel; me pregunto cuál. this sculpture was restored by a artist novel me ask-I which Furthermore, no embedding is necessary, as shown in (ii):



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