1 Introduction

Sluicing is a form of ellipsis that strands a wh-remnant under some identity with an antecedent and an <ellipsis site> (Ross 1969, Chung et al. 1995, Merchant 2001):

(1)  a. Gil ate some CAT FOOD, but I don’t know how much <eat food he ate>.
    b. Gil ate, but I don’t know what <he ate>.

In languages that mark case, sluicing is subject to a case matching condition on correlates (Ross 1969):

(2)  Hans hat JEMANDEN geschlagen, aber ich weiss nicht...
    Hans has someone.ACC hit but I know not
    a. *wer. who.NOM
    b. wen. who.ACC
    c. *wem. who.DAT

‘Hans hit someone, but I don’t know who.’

Recent work by González-Vilbazo & Ramos (2014) has shown that this case matching condition on sluicing in a code switched utterance is determined by the morphology, rather than the syntax.

• This is due in part to an ellipsis generalization observed by Merchant (2015), which states that cross-language ellipsis involves code switching in the ellipsis site into the language of the antecedent.

The present study attempts to refine this generalization to cover cases of code switched sprouts, which test Merchant’s code switching generalization.

Structure of the Talk

§2 introduces previous work and new English-German code switching data
§3 proposes a refinement and a formalization
§4 explores code switching in DM
§5 concludes

2 The data

2.1 Sluicing and code switching: a primer

In a study on Spanish-German code switching, González-Vilbazo & Ramos (2014) show that for code switched, non-sluiced statements, language-specific case assignment facts seem to hold:

(3)  Juan amenazó a alguien, aber ich weiss nicht wer
    John threatened someone.ACC but I know not who.DAT he
    gedroht hat.
    threatened has

‘John threatened someone, but I don’t know who he threatened.’

Spanish amenazar assigns accusative to its object a alguien, and the German equivalent predicate gedrohen assigns dative.
However, a code switched sluice requires accusative marking on the remnant and dative (expected of monolingual German) is ungrammatical.

(4) Juan amenazó a alguien, aber ich weiss nicht
John threatened someone.**ACC** But I don’t know ...
  a. **wen. who.**ACC
  b. *wem. who.DAT
  ‘Juan threatened someone, but I don’t know who.’

From these data, González-Vilbazo & Ramos (2014) conclude that sluicing must be sensitive to morphology: case features on the remnant must be identical to the case features on the correlate in the antecedent.

Merchant (2015) explains similar findings for VPE in Greek-English code switches with the following generalization, proposed to hold for all instances of ellipsis:

(5) **Code Switching Ellipsis Generalization (CSEG)**
All apparently cross-language ellipsis involves code switching at the ellipsis site into the language of the antecedent.

(5) straightforwardly derives González-Vilbazo & Ramos (2014)’s facts, and predicts that all code switching ellipsis work the same.

2.2 The difference between sprouting and merger

For an English-German variety of code switching, the facts surrounding sluices with overt correlates are similar:

* The case of the German wh-remnant seems to match the English structural case.

(6) **Hans served someone**, aber ich weiss nicht **wen**.
  but I know not **who.**ACC
  ‘Hans served someone, but I don’t know who.’

But when an argument is sprouted, the CSEG is apparently violated:

(7) **Hans served the soup**, aber ich weiss nicht **wen**.
  but I know not **who.DAT**
  ‘Hans served the soup, but I don’t know to who.’

Perhaps more interesting are cases where an implicit PP correlate is sprouted. Even in languages that allow P stranding, these Ps may not be stranded in the ellipsis site:

(8) a. Sue laughed, but I don’t know **who at/at who <she laughed>**.
  b. *Sue laughed, but I don’t know **who <she laughed at>**.

Preposition selection across translationally equivalent predicates is idiosyncratic. English *jealous* selects a PP headed by **of**, while German *eifersüchtig* selects **auf**, roughly, ‘on’.

(9) **Sue was jealous of someone**, aber ich weiss nicht...
  but I know not
  a. **von wen. of who**
  b. *auf wen. on who
  ‘Sue was jealous of someone, but I don’t know of who.’

(10) **Sue was jealous**, aber ich weiss nicht...
  but I know not
  a. *von wen. of who
  b. **auf wen. on who**
  ‘Sue was jealous, but I don’t know of who.’

German does not allow P-stranding in sluicing, whereas English does allow this. Interestingly, in a code switch with English antecedent and German remnant, the preposition need not be pied piped. On the other hand, in code switched statements from German to English require pied piping. P stranding is not grammatical.

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1Ten participants in a fieldwork setting participated in this study. Each were fluent in both German and English by the age of three (self-reported), and regularly code switch among their peers. As opposed to a scale on which to rate answers, participants were asked to provide their own grammatical sluiced remnant(s) to sets of incomplete sluices. Subsequent followup questions by the investigator determined whether other relevant remnant choices were licit.

2German does not allow P-stranding in sluicing, whereas English does allow this. Interestingly, in a code switch with English antecedent and German remnant, the preposition need not be pied piped. On the other hand, in code switched statements from German to English require pied piping. P stranding is not grammatical.
These facts pose a puzzle in light of the CSEG:

- (9) is predicted if we assume a code switch in the ellipsis site.
- (10) is not.

If sluicing requires a code switch in the ellipsis site, and ellipsis sites here are arguably identical, how do we derive this set of observations?

3 Morphology in action

3.1 Refining the sluicing requirements

The data in §2.2 test the limits on the identity conditions on sluicing. Chung (2012) proposes the following well-received identity requirements on sluicing:

(11) Chung (2012)’s Requirements for Sluicing
   a. A predicate in the ellipsis site must have an identical argument structure to the corresponding predicate in the antecedent clause.
   b. If the remnant of the sluice is a DP, it is case licensed by a head in the ellipsis site that is identical to a corresponding head in the antecedent clause.

But this clearly cannot be strict lexical identity.

Assuming an underlying structure that is rendered silent at PF (along the lines of Merchant (2001, 2013)) as well as the CSEG, we can derive only the facts for cases of merger (9), and stipulate:

→ English lexical items can idiosyncratically assign a preposition selected by their German translational equivalent (and vice versa).

If instead, we assumed no CSEG and simply translational equivalence for predicates in the ellipsis site and the antecedent, we derive only the sprouting facts (10), and stipulate:

→ The features on an overt correlate “override” any that may have been assigned by the elided predicate.

Neither of these options are optimal.

3.2 An update

What’s really at issue?

→ The presence of an overt correlate.

This can be remedied with an update to the CSEG, and an identity condition based on morphological features.

(12) Updated Code Switching Ellipsis Generalization

All apparently cross-language ellipsis will involve code switching at the ellipsis site into the language of the antecedent if what remains from the elided clause has an overt structural correlate.

Allowing such an update predicts straightforward subtypes of ellipsis will be differentiated based on syntactic principles.

- Ellipsis processes that involve identical structure between the antecedent and the remnant(s) will have a code switch in the silence (sluicing (merger), VPE, NPE, ...).
- Those that need not form a syntactic correspondence between remnants and the antecedent will not posit another code switch (sluicing (sprouting), stripping, bare argument ellipsis, ...).

But positing this is not enough. Recall (11b).

The identity constraint assumes that the case that shows up on the remnant must come from a case assigner in the ellipsis site that is identical to a head in the antecedent.

- For sprouting, these heads cannot be lexically identical
  → If they were, we could not derive the correct case/preposition facts

So where is the identity relation?
If we update Chung (2012)'s sluicing requirements, we can further hone in on precise identity requirements for sluicing:

(13) Updated Requirements for Sluicing
    a. A predicate in the ellipsis site must have an identical argument structure to the corresponding predicate in the antecedent clause. (same)
    b. If the remnant of the sluice is a DP, it is case licensed by features on a head in the ellipsis site that are identical to corresponding features in the antecedent clause.

4 Code switching in Distributed Morphology

It is uncontroversial in DM that roots:

- are acategorical.
- must merge with a category defining head (Marantz 2001, Harley 2008)

In a language variety which draws its lexical units from two languages, I propose that roots are also language non-specific, and it is the category defining heads (n°, a°, v°, ...) that carry language-specific information.

→ This fits with MacSwan (1999), González-Vilbazo (2005): there is no independent “syntax of code switching.”
→ Interactions between features of the languages in question work to create licit grammatical structures and outputs.

How does this work with sluicing identity requirements?

Sluicing in particular is looking to establish first an identity relation between argument structures, and second, between the correlate and the remnant.

- For cases of sluicing with an overt correlate, the structure of the antecedent establishes the required argument structure frame for the predicate in question.
  → There is a syntactic argument, fully specified for case, with which to form an identity relation.
  → Ross (1969)'s original observations about case matching hold.

- A sprouted argument doesn’t form an identity relation with an argument in the antecedent
  → Because there is no dependency, only argument structure considerations need to hold.

Recall (9-10), repeated here as (14-15):

(14) Sue was jealous of someone, aber ich weiss nicht...
    a. von wem... of who
    b. *auf wen... on who
    ‘Sue was jealous of someone, but I don’t know of who.’

(15) Sue was jealous, aber ich weiss nicht...
    a. *von wem... of who
    b. auf wen... on who
    ‘Sue was jealous, but I don’t know of who.’

How are the identity relations established between each of these?

Merger:

Antecedent for (14):

Ellipsis site for (14):

3I use √JEALOUS as shorthand for the non-language specific root. This could just as easily be referenced by an index number. I use the small caps and the English translation for clarity.
A wh-remnant must featurally match an overt correlate’s features in the antecedent. The antecedent and correlate are English, and those features are retained and matched on the German remnant. **Code switching in the ellipsis site occurs.**

**Sprouting:**

<table>
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<th>Antecedent for (15):</th>
<th>Ellipsis site for (15):</th>
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<tbody>
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<td>[\text{a}^0]</td>
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<td>[\sqrt{\text{JEALOUS}}]</td>
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The antecedent contains no overt correlate. Sprouted arguments have nothing to featurally match, and disregarding the trace, the argument structures of the ellipsis site and the antecedent are identical. **Code switching in the ellipsis site does not occur.**

5 Conclusion and Outlook

This project has pushed at the borders of two distinct areas: code switching and sluicing identity constraints.

It has taken ideas from both and set them against each other to attempt to make a step forward in understanding both.

- Code switching happens “in the silence” for ellipsis processes that leave behind structure identical to structure in the antecedent.
- Sluicing is sensitive to sub-lexical identity constraints between correlates and remnants.

For future work:

- Do the conclusions drawn here generalize to all ellipsis types?
- Can we exploit argument structure differences across languages to further hone our understanding of sluicing?
- How can we formalize code switching within DM?

References


Appendix

Stripping data

Erik Zyman (p.c.) suggests that stripping/bare argument ellipsis is another form of ellipsis that potentially “sprouts” an argument:

(16) Emily is singing tomorrow. And Yankee Doodle at that!

Remaining agnostic as to whether stripping is a syntactically or a pragmatically resolved elliptical process (see Hankamer & Sag (1976), footnote 19), it seems plausible that stripping may also be a test case for whether sprouted argument positions are unmarked for code switching.

The following examples have only been validated by two consultants, but are promising:

(17) a. *She’s jealous, und zwar auf/von Julia!
   and at-that on/of Julia
   She’s jealous, and on/of Julia at that!

b. *She’s jealous of someone, und zwar auf/von einer alten Frau!
   and at-that on/of an old woman
   She’s jealous of someone, and of an old woman at that!

Tentatively, stripping seems to be another case where code switching in the ellipsis site is blocked.