"Something fits here, but I don't know what":

A treatment of the hybrid identity condition on sluicing

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In partial satisfaction of the requirements for honors in the Bachelor of Arts in Linguistics program at the University of Chicago

September 25, 2020

Acknowledgements

This paper would not have come into being if it weren't for my year abroad at UCL in 2017-18. It was Klaus Abels' Readings in Syntax course that got me interested in ellipsis. In fact, before that class I wasn't that keen on syntax at all. Thanks to Klaus for making it informative and entertaining, as well as putting up with all my questions along the way.

Of course, thanks as well to my advisor Chris Kennedy, who kept me grounded when I came up with the most outlandish ideas and helped work this paper into what it is.

Thanks to Clio, Jess, Ana, Sara, Trish, and Nora for being my examples. Thanks also to Nora, Julia, Anton, and Mika for putting up with absolutely endless grammar questions about monks, monasteries, and various other strange and obscure sentences. Thanks to Emma for telling me, over and over, that I could do this. You all are some of the best friends anyone could have, and not just because you help me with my papers.

Thank you to my old classmate Sana Kidwai for her brilliant BA thesis, as well as her prompt and thoughtful responses to all of my questions about it.

An enormous thank you to Haj Ross, who complimented my Keith Haring t-shirt and made my day.

Thank you to my family for always supporting me, even when you don't know what I'm talking about.

And thanks, last but of course not least, to Kat, without whose support and love I would never ever have begun this project, let alone finished it.

1 Introduction

The study of ellipsis is a compelling area of linguistic research for many reasons. It has a strong bearing on universal grammar, and insights into ellipsis can be extremely informative about the interface between form and meaning, since ellipsis is meaning with the absence of form. One specific form of ellipsis, and a subject of extensive academic study, is sluicing. Ross (1969) describes sluicing as the linguistic process that allows sentences like (1) to be converted into sentences of type (2).

(1) Somebody is teaching syntax this quarter—guess who is teaching syntax.

(2) Somebody is teaching syntax this quarter—guess who.

In (2), the portion "is teaching syntax" in "guess who [is teaching syntax]" can be deleted and still be implicitly understood. Such constructions, where material is deleted from an embedded question, leaving only the question phrase (wh- phrases in English, qu- in French, hv- in Icelandic, etc.), are possible in a multitude of languages and with a variety of constructions (Merchant, 2001). Before proceeding, it will be necessary to clarify some elements of terminology. Here, I will refer to the remaining wh-phrase (or its equivalent in cross-linguistic examples) as the remnant, and the deleted material as the ellipsis site. The antecedent refers to the portion "somebody is teaching syntax this quarter" in the above example. It is the part that provides the meaning understood at the ellipsis site. The part under question, i.e. "somebody", is the correlate. Together the correlate and the ellipsis site form the sluice.

2 Literature Review

The contemporary discussion about sluicing (Merchant 2001; Chung et al. 1995; Barros 2014, to name but a few) has condensed around three major questions:

(3) a. Is there contextually variable syntactic structure at the ellipsis site?

b. Is the identity condition on ellipsis syntactic?

c. Is sluicing fed by regular wh-movement?

Here, the first question raises that of whether a full-fledged syntactic structure exists and is then deleted, or whether the pronounced remnant (the wh-phrase) is created via some other mechanism. For example, some alternate proposals involve case-copying of the correlate (Manetta, 2013; Chomsky and Lasnik, 1993). The identity condition on sluicing is the question of whether some kind of semantic, pragmatic, or syntactic structure must be identical between antecedent and ellipsis site. If so, in which of these domains is there an enforced identical structure (an "identity condition") and how is it specified? The second question asks whether, given that syntactic structure in particular exists in the ellipsis site, it is necessarily identical to the structure in the antecedent? Finally, the third question asks whether remnants come from the same process that moves wh-phrases in ordinary questions like in (4), and whether, by extension, only constituents that may be moved in this manner can serve as acceptable remnants.

(4) a. They are teaching which subfield this term?

b. Which subfield are they are teaching this term?

The question of variable syntactic structure at the ellipsis site is one that Ross addressed in his original paper and is tightly connected to the question of identity: after all,

there cannot be enforced syntactic identity at the ellipsis site if there is no structure whatsoever. However, if one chooses not to argue for enforced syntactic identity at the ellipsis site, then it becomes a less trivial problem to prove that some kind of structure exists at all.

My focus in this paper is a two-pronged approach to the identity condition on sluicing. Firstly, I discuss the proposed "fit condition" in Abels (2017) and its advantages, along with a few problems that may challenge its robustness. Then, I discuss the advantages of the head-based syntactic identity condition proposed by Rudin (2019), as well as his failure to eliminate certain ungrammatical structures. I explain why supplementing Rudin's account with Abels' proposal remediates this problem in Rudin. I then turn my attention to copular sluices. I argue that by using the semantic equivalent of Rudin's proposed syntactic identity condition, we can identify a semantic condition licensing copular slucies. In this paper I focus on the mechanisms that predict sluices to be grammatical or ungrammatical, with the hope of making novel predictions.

2.1 Abels: On the interaction of P-stranding and Sluicing in Bulgarian

Abels (2017) uses novel Bulgarian data to argue that there must be structure at the ellipsis site but that it cannot be obligatorily identical to the antecedent. To understand why these examples are significant, Abels introduces a few points about Bulgarian grammar. Firstly, that Bulgarian grammar has lost much of the case distinction present in its sister Slavic languages. However, case distinction is still present in pronouns, where there is a general form (G), which can be used anywhere; and a non-subject form (NON-S) which can only be used as an object of verbs or prepositions. In using these examples, Abels both argues against the prevailing no-syntax and syntactic identity accounts and argues for an account

that focuses on the relationship between structure at the correlate and the remnant, positing that there must be structure at the ellipsis site but that it cannot be obligatorily identical to the structure at the correlate. Abels argues that the condition on acceptability of sluices must be somehow mediate between enforcing identity and making sure to eliminate grammatically unacceptable sluices. To build his argument, first, he shows an example that makes a case against syntactic identity:

(5) *Ivan tancuva {s njakoi /s njakogo}, no ne znam koi.*
Ivan danced with someone.G with someone.NON-S but NEG know who.G
'Ivan danced with someone but I don't know who.'

Since preposition stranding (i.e. moving the remnant out of place and leaving a constituent preposition behind) is disallowed in Bulgarian, this sluice would have to be derived from the ill-formed pre-sluice in (5).

(6) **Koi tancuva {s* _____ *Ivan /Ivan s* _____ *}?*
Who.G dance with Ivan Ivan with
'Who did Ivan dance with?'

The grammaticality of (5) makes a strong case against enforced syntactic identity between antecedent and ellipsis site, since under such an identity condition, in (5), the ellipsis site would originally have the same structure as the antecedent and koi would have to undergo wh-movement, leaving the preposition stranded. Such a pre-ellipsis site would resemble (6). This would make the pre-ellipsis site ungrammatical and imply some kind of unspecified repair mechanism for preposition-stranding in languages that do not otherwise allow it. Instead, the ellipsis site can be said to look something like this.

(7) *Ivan tancuva {s njakoi /s njakogo}, no ne znam koi beshe*
Ivan danced with someone.G with someone.NON-S but NOT know who.G was
tova.
that.

'Ivan danced with someone but I don?t know who that was.'

Abels uses another example from Bulgarian to similarly argue against the no-syntax theory of ellipsis.

(8) * *Ivan tancuva {s njakoi /s njakogo}, no ne znam kogo.*
Ivan danced with someone.G with someone.NON-S but NOT know who.NON-S

The alleged pre-sluice here would have to be the following:

(9) * *Ivan tancuva {s njakoi /s njakogo}, no ne znam kogo*
Ivan danced with someone.G with someone.NON-S but NEG know who.NON-S
beshe tova.
was that

Since the general case form of "who" is disallowed in the pre-sluice, it makes sense that (6) would be disallowed under accounts that posit some syntactic structure at the ellipsis site. However, the contrast between the acceptability of (9) and (5) makes little sense under case-copying and other no-syntax accounts. If there is no syntax present at the ellipsis site, then both the general form (5) and non-subject form (9) should be permitted as remnants, as they are for correlates, but only the general form is actually acceptable. If there is syntactic identity present, then, again, both forms permitted as correlates should be permitted as remnants, since the matching syntactic structures should assign them the same case.

Abels uses these two points—the fact that the data both supports the conclusion that there is syntactic structure at the ellipsis site as well as the simultaneous conclusion that there is no enforced identity between the antecedent and that syntactic structure—to argue for the following "fit" condition.

(10) Fit condition: Modulo agreement in the antecedent and wh-movement, replacing the correlate by the remnant in the antecedent must lead to a syntactically well-formed structure with the right meaning or—for sprouting—adding the correlate into the antecedent and making no further changes must lead to a syntactically well-formed structure with the intended thematic interpretation.

Here, "sprouting" refers to sluices where there is no overt correlate.

(11) a. Sara was baking, but I don't know what ~~<Sara was baking>~~.

b. Sara was baking something, but I don't know what ~~<Sara was baking>~~.

Both of these examples are acceptable in English, however, no correlate is present in (11a). The fit condition thus needs the stipulation that adding the correlate into the antecedent must lead to a well-formed structure, because there is, after all, nothing to replace.

(12) Sara was baking **what**?

Here, the structure used to evaluate fit is the same for both (11a) and (11b), where what either replaces something as in (12) or is added with no further changes, as Abels describes.

Contrast with:

(13) Trish is proud but they won't tell us...

a. * who.

b. of who.

Under fit, (5) is predicted to be grammatical because the remnant *koi* can be slotted into the sentence in place of the antecedent to give a grammatical sentence.

(14) *Ivan tancuva s koi?*
Ivan danced with who.G?

Because fit enforces some structure at the ellipsis site, it makes sense that a sentence without a recoverable grammatical pre-sluice would be unacceptable, whereas the no-syntax account leaves this as an open question. Whether we are prepared to accept fit at this point, it is relatively clear that the no-syntax account cannot fully account for what we see in Bulgarian. The question of syntactic identity is, perhaps, more open. Some may suggest that any syntactic identity condition on sluicing is exempt from having to explain copulative structures like those found in (7). Merchant (1999) dubs these structures *psuedo-sluices*. This raises the question of where pseudo-sluices may be prohibited. Perhaps we can repair any malformed sluicing structure by substituting the ellipsis site with a copular clause, leading to no change on the surface structure, but still rendering sluices with ungrammatical ellipsis sites acceptable.

Further data from Abels dealing with so-called contrast sluices makes problems with the no-syntax account even starker. Abels observes that Bulgarian, like English, permits contrast sluices where the remnant deals with an alternative to the correlate instead of its identity.

(15) *Ivan tragna, no ne znam koi oshte.*
Ivan left, but NEG know.1st.SG who else
'Ivan left, but I don't know who else'

A copular structure is disallowed here.

(16) a. * *Ivan tragna, no ne znam koi oshte beshe tova.*
Ivan left, but NEG know.1st.SG who else was that.
'*Ivan left, but I don't know who else it is'

b. *Ivan tragna, no ne znam koi oshte tragna.*
Ivan left, but NEG know.1st.SG who else left.
'Ivan left, but I don't know who else left'

The key is that for contrast sluices where a preposition is strictly required on the indirect object of a verb, the preposition must accompany the pronoun no matter which form is used.

(17) *Ivan tancuva s Maria, no ne znam *(s) {koi /kogo} oshte.*
Ivan danced with Marie, but NEG know.1st.SG with who.G who.NON-S else.
'Ivan danced with Maria, but I don't know with who else.'

Here, the preposition is obligatorily pied-piped, and the copular completion is not available. Under no-syntax accounts this is mysterious, because the possible grammatical structures at the ellipsis site should not influence the acceptability of a sluice. After all, there is no structure.

2.1.1 A problematic example from Icelandic?

Abels' argument, given the Bulgarian data, is very compelling. There is however one English example that proves problematic for him:

(18) For monks in this monastery, it is possible in principle to sing, but the abbot has to specify which monks ~~<can sing>~~.

There is no overt correlate here within the actual antecedent, which is the clause "it is possible in principle to sing". Here, no portion of the structure matches *which monks*. Based

on fit, it is also not a licit example of sprouting. Adding the remnant into the antecedent and making no further changes results in a completely ungrammatical structure, seen in (19. Contrast this with well-formed fragment questions such as (14).

(19) * For monks in this monastery, it is possible in principle *which monks* to sing?

Abels (p.c.) indicated that it may be possible to substitute "For monks in this monastery" with "For which monks", but also noted that this may be more difficult to reconcile in a case-rich language.

(20) For which monks in this monastery?

If which monks is case-marked in a language in a way that is incompatible with the preposition for, substituting which monks as in (20) will not work, and the fit condition may cause acceptable sluices to crash. We can attempt this in a few case-heavy languages to see the results, and whether or not this causes serious issues for the fit condition. First, we examine German, a case-marked language that inflects nouns, adjectives, articles, and pronouns in four cases and three genders. Verbs are also inflected for number and person.

(21) *Für Mönche in diesem Kloster ist es im Prinzip möglich zu*
For monks.PL.ACC in this.DAT monastery.DAT is it in principle.DAT possible to
singen, aber der Abt muss spezifizieren welche Mönche singen
sing but the Abbot must specify which.PL.NOM monks.NOM sing
können.
can.
'For monks in this monastery it's possible in principle to sing, but the abbot must specify which monks can sing'

Here we have the German equivalent of (18). The remnant which monks is inflected in nominative case, whereas the correlate monks is inflected in accusative. However, the

accusative and nominative forms of both *welche* and *Mönche* are syncretic. The fit condition thus predicts that the sluice will be licit, because replacing the correlate with the remnant results in a well-formed fragment question with proper case markings.

(22) *Für welche Mönche in diesem*
For which.PL.ACC/NOM monks.PL.ACC/NOM in this.DAT
Kloster?
monastery.ACC/NOM/DAT i
'for which monks in this monastery?'

Based on (22), the sluiced version should be licit, and we find that it is.

(23) *Für Mönche in diesem Kloster ist es im Prinzip möglich zu*
For monks.PL.ACC in this.DAT monastery.DAT is it in principle.DAT possible to
singen, aber der Abt muss spezifizieren welche Mönche .
sing but the Abbot must specify which.PL.NOM monks.NOM
'For monks in this monastery it's possible in principle to sing, but the abbot must specify which monks'

The problem here is that the case syncretism seems to be a mere accident working in the fit condition's favor. There may be a language where the case assigned by the preposition for, or the equivalent in the construction for monks in this monastery, is morphologically incompatible with the case assigned by the modal verb in which monks may sing. If so, the equivalent of this sluice in that language would be predicted illicit by the fit condition. If it is indeed grammatical, we need to revise our analysis.

To check if this could be the case , we examine Icelandic, a heavily case-marked language. Icelandic declines for number, gender, and case, of which there are four: nominative, accusative, dative, and genitive. Pronouns, specifiers, adjectives, nouns, and numbers one through four all decline. Verbs conjugate in person and number. Glossing specifies where

case morphology is present, as well as number and gender where unclear from context. The definite article in Icelandic is postfix, and this has been indicated as well. There is no indefinite article in Icelandic.

(24) *Það er í grunninn hægt fyrir munkana í klaustrinu að*
It is in principle possible for monks.ACC.THE in monastery.DAT.THE to
syngja, en ábótinn verður að tilgreina {hverjir /hvaða
sing but abbot.NOM.THE must to specify which.NOM.PL.M which.NOM.M
munkar} .
monks.NOM.
'For monks in this monastery it's possible in principle to sing, but the abbot must specify which monks.'

This example emulates the structure of the pre-sluice in (18), but in Icelandic, "monks" takes accusative case in the antecedent, assigned by the preposition *fyrir* (for), and at the pre-ellipsis site, monks is assigned nominative by the modal verb *mega*. If the sluiced version is grammatical, this looks like a disaster waiting to happen for the fit condition, since to satisfy the fit condition we will be forced to fit a nominative remnant into a place meant for the accusative correlate. The sluiced version is indeed grammatical.

(25) *Það er í grunninn hægt fyrir munkana í klaustrinu að*
It is in principle possible for monks.ACC.THE in monastery.DAT.THE to
syngja, en ábótinn verður að tilgreina hvaða munkar mega
sing but abbot.NOM.THE must to specify which.NOM.M monks.NOM may
syngja.
sing.
'For monks in this monastery it's possible in principle to sing, but the abbot must specify which monks may sing'

Given this grammatical sluice, we can try fitting the remnant in the place of the correlate.

(26) *Það er í grunninn hægt fyrir {hverjir /hvaða munkar} í*
It is in principle possible for whichNOM.PL.M which monks.NOM in
klaustrinu að syngja?
monastery.DAT.THE to sing?
Intended: 'For which monks in this monastery, it is possible in principle to sing?'

Neither of these remnants can licitly replace the correlate, which appears to raise a problem for the fit condition.

2.2 Rudin: Head-Based Syntactic Identity in Sluicing

This noted problematic example for Abels is due to Rudin (2019), who in turn acknowledges the example to be modified from Chung (2013). Rudin, like Abels, eschews complete syntactic identity, noting several problematic examples where the antecedent and ellipsis site do not or cannot match because either one or the other possesses a modal verb, agreement head, tense head, or some other verb-modifying content not present in the other.

Finiteness:

(27) a. Clio chops vegetables every night; she learned how ~~<to chop vegetables>~~ from her father.

b. # Clio chops vegetables every night; she learned how ~~<she chops vegetables>~~ from her father.

Here, the antecedent possesses an agreement head that the ellipsis site does not. Instead, the verb at the ellipsis site is an infinitive. (27b) is pragmatically odd. We cannot assign agreement without copying the pronoun, but copying she into the ellipsis site makes it seem as if there is a second feminine referent, which is not intended and not recoverable from the sluiced version.

Tense:

(28) a. Jess's favorite plant is alive, but she can never be sure for how long ~~<her favorite plant will be alive>~~.

b. # Jess's favorite plant is alive, but she can never be sure for how long ~~<her favorite plant is alive >~~.

This example is also pragmatically odd. The recoverable meaning from the sluice is that Jess does not know how long her favorite plant will be alive in the future. The idea that Jess does not know how long her favorite plant is currently alive is odd and unnatural. Based on this observation, the ellipsis site possesses a tense head that the antecedent does not have, again demonstrating a mismatch.

Modality:

(29) a. Ana knows there is always the potential for great things to happen, but she doesn?t know when ~~<great things {will, might} happen>~~.

b. * Ana knows there is always the potential for great things to happen, but she doesn?t know when ~~<great things to happen>~~.

c. # Ana knows there is always the potential for great things to happen, but she doesn?t know when ~~<great things happen>~~.

(29b) is ungrammatical, both acceptable versions of the ellipsis site as in (29) require either a modal verb or a tense head that is not present in the antecedent to sound at all natural. Even allowing the tense head to naturally fall out by agreement in (29c) leads to a pragmatically odd structure.

Given that many of these examples demonstrate pragmatic violations rather than syntactic ones, we may be tempted to identify the pragmatic oddness of some identical structures as the reason that we accept interpretations in the ellipsis site that mismatch the antecedents. Perhaps there is no structure at the ellipsis site, but instead listeners fill in whatever content is most pragmatically relevant. We have to remember Abels' analysis, which shows that a no-syntax account does not make correct predictions about what happens in Bulgarian. We have seen that there must be some deleted structure at the ellipsis site. However, Rudin's examples show that whatever this content is, it cannot be obligatorily identical to the antecedent.

Rudin, like Abels, argues against the full syntactic identity account. Rudin's data shows that there are constituents in the ellipsis site that are not present in the antecedent. He also uses these mismatches to make a case against the account of sluicing in which the antecedent and sluice must mutually entail each other, since a modal mismatch means that there can be no mutual entailment. Instead, Rudin argues, there is a syntactic identity requirement only at the level of the vP. There is a difference between "objective" or "event-introducing" content within the TP, and content that is merely parasitic on another verb. Examples include modality and tense, which are heads that do not introduce a new notion or action into the verbal domain but instead modify what is already there. Rudin claims that the "objective" content contained within the highest event-introducing vP must be isomorphic between antecedent and ellipsis site in order for sluicing to be licit, but that the requirement cannot be any higher along the clausal spine. This objective content within the vP he dubs the "eventive core". He proposes the following semantic identity condition on sluicing.

(30) Given a prospective ellipsis site E and its antecedent A, non-pronunciation of the phonological content associated with any head h in E is licit if at least one of the following conditions holds

a. h did not originate within E?s eventive core

b. h has a structure-matching correlate i in A.

Rudin?s argument hinges on the fact that acceptable examples with mismatches do not have mutual entailment on the entire TP, which is a strike against the older entailment-based semantic identity condition that acts on full TPs (most notably proposed by Merchant), since the modality- and tense-introducing heads are within the TP.

One ostensible problem for Rudin comes from the same set of sentences as the above alleged problem for Abels.

(31) a. * In this monastery, it's possible in principle to sing, but the abbot has to specify which monks <can sing>.

b. In this monastery, it's possible in principle to sing, but the abbot has to specify which songs ~~<to sing>~~.

Rudin?s account incorrectly predicts (31a) to be grammatical. The eventive cores here match. At the ellipsis site can is adjoined above the vP at the T head. Since the non-transitive version of sing is used in (31b), sing is the only component of the vP with phonological content, and it is present and identical in both antecedent and ellipsis site. Non-pronunciation of can should therefore be licit, but this sluice is still ill-formed. Why?

Rudin acknowledges that his account incorrectly predicts (31a) to be grammatical, and argues that because rendering "monks" salient makes the sluice less degraded, the problem is not that the sluice is ungrammatical, but that it is pragmatically odd.

(32) In this monastery, it's possible in principle for monks to sing, but the abbot has to specify which monks ~~<can sing>~~.

(33) For monks in this monastery, it's possible in principle to sing, but the abbot has to specify which monks ~~<can sing>~~.

2.3 Kidwai: Case-(Mis)Matching in Urdu Sluicing

Kidwai (2018) uses Urdu data to advance the merits of the fit condition and to show that fit can account for phenomena that syntactic identity conditions cannot otherwise explain, particularly when it comes to mismatches. First, we should introduce some background on both the Urdu language and case mismatching in sluicing.

Kidwai identifies seven cases in Urdu, which are usually realized as post-nominal clitics. Urdu is usually said to have split ergativity, with ergative case appearing on subjects of transitive verbs and intransitive verbs in perfective form. But, as Kidwai notes has been pointed out in various literature, there are exceptions that lend themselves to the argument that Urdu might essentially follow a nominative-accusative case system, supplemented with an ergative case that is associated with various semantic factors (Butt, 2017). For some verbs, in restricted environments, more than one case can be licitly used. Some of these cases lead to a different semantic interpretation of the content, and some lead to the same reading.

Kidwai's argument hinges primarily on the fact that there are four licit pairs of alternating cases that are permitted in some verbal environments. The four pairs she addresses are:

(a) Ergative-Nominative

(b) Ergative-Dative

(c) Nominative-Accusative

(d) Accusative-Instrumental

For each of the pairs, Kidwai discusses the semantic contribution of case, as well as the acceptability of mismatched sluices. For (a) and (d), where the alternation has a semantic contribution, a mismatched sluice is unacceptable. This is predicted under Abels' analysis above, as he specifies that the syntactically well-formed structure must have the right meaning, although a truly robust account would have to be more specific. In any case, under (a), for example, retrieving the correct meaning with the fit test is not possible.

(34) *Koi khaansa tha lekin mujhe nazar nahi aaya {kaun /*
Someone.NOM coughed was but I.OBL.DAT sight not come {who.NOM |
**kis=ne }*
*who.OBL=ERG}

'For monks in this monastery it's possible in principle to sing, but the abbot must specify which monks'

Here, Kidwai's judgement is that the ergative case conveys the idea of the subject having control over the situation, with the nominative case indicating passiveness or lack of control. The alternating sluice also happens to be unacceptable. The non-sluiced version is grammatical (Kidwai, p.c.).

(35) *Koi khaansa tha lekin mujhe nazar nahi aaya *kis=ne*
Someone.NOM coughed was but I.OBL.DAT sight not come who.OBL=ERG
khaansa.
coughed.
'Someone coughed [by accident] but I didn?t see who coughed [on purpose]'

Like nominative-ergative alternations, accusative-instrumental alternations carry with them semantic differences. Also like nominative-ergative alternations, accusative-instrumental alternations lead to ungrammatical sluices. Kidwai concludes that for case mismatches in Urdu sluicing, two conditions must be met.

(36) a. The verb in the antecedent (and the sluice) licenses both the cases found on the correlate and the remnant.

b. The case marking on the correlate and remnant has the same overall meaning.

2.3.1 Case mismatches in Icelandic

The first fact causes problems for the no-syntax account of sluicing or ellipsis in general, since in many languages, Urdu included, there are synonymous verbs that are capable of assigning different cases to their objects or subjects, and thus license the use of both. However, in these languages the synonymous verb cannot be substituted in an ellipsis site. Take the following in Icelandic. (from (Wood et al., 2016))

(37) A: *María ók bílnum.*
Maria.NOM drove car.the.DAT
'Mary drove the car'

B: *{*Rútan / *Rútuna / Rútunni } líka.*
{*coach.the.NOM | *coach.the.ACC | coach.the.DAT } too.

'The coach too'

The verbs aka ‘drive’ and keyra ‘drive’ are in all respects synonymous, but license different cases. Aka un-controversially licenses dative case only. Some speakers judge *keyra* to license accusative case, but even so, such speakers judge the following unacceptable.

(38) A: *María ók bílnum.*
Maria.NOM drove car.the.DAT
‘Mary drove the car’

B: *~~*<Hún keyrði>~~ *rútuna líka.*
*~~<She drove>~~ coach.the.ACC too.
‘~~She drove~~ the coach too’

Nevertheless, Icelandic does permit mismatches in elliptical structures as long as the original verb licenses both cases.

(39) A: *Mig langar að fara.*
Me.ACC wants to go.
‘I want to go’

B: *{*Ég / Mig / Mér } líka.*
{*I.NOM | me.ACC | me.DAT } too.
‘Me too’

Here, both the accusative and dative versions of the personal pronoun ’ég’ are acceptable remnants, because in the originally sentence the two would have been equally acceptable correlates given the verb *langa*. Similar patterning arises in Urdu as well, where synonymous verbs that license different cases nevertheless cannot license case alternations in sluices if the verb in the antecedent does not also license that case alternation. This causes major problems for a no-syntax account of sluicing, since if the requirement on sluices is mutual entailment, synonyms should be substitutable without issue.

At the same time, Kidwai's introduces further problems for the syntactic identity condition. Since alternation is structurally licensed by the verb, it should be able to assign any case it licenses to the remnant. Based on the differing acceptability of mismatches in Urdu, we can see that this is not the case. If case mismatches are ever licensed, this seems to present a strong case that there is no way the structures in the ellipsis site and the antecedent are required to be identical. When presented next to Abels' evidence regarding licit P-stranding in Bulgarian sluices, the syntactic identity condition appears to have serious flaws, as does the no-syntax account.

3 Proposed analysis

So, if a no-syntax account and a syntactic identity account are both out, what is our middle ground? As established, there must be syntax at the ellipsis site. Copying accounts of sluicing simply will not suffice as shown by examples like (7), where two cases are acceptable in the pre-sluice but only one of them is permitted as a remnant. No-syntax accounts will over-generate here and incorrectly predict ungrammatical sentences to be acceptable. The Bulgarian and Urdu data discussed above show this. But if syntax has to exist at the ellipsis site, what restrictions are placed upon those structures? Clearly we cannot just require them to be identical, as such a rule will under-generate and predict grammatical sentences to be ungrammatical, the opposite problem from the no-syntax account, but one that presents no less of an impediment to the theory. Instead, we have to combine a theory that incorporates both syntactic structure at the ellipsis site, as well as an identity condition that is not syntactic.

The following proposal incorporates both of these requirements: first, a semantic identity condition adapted from Rudin (2017). Then, to supplement this identity condition and satisfy the need for syntactic structure at the ellipsis site, I re-examine Abels? fit condition to explain why his analysis best fits the facts and why it is the best supplement to the aforementioned semantic identity. Finally, I will address ongoing questions regarding the fit condition and indicate some directions forward.

3.1 Why Rudin's Identity Condition is Insufficient; or, How I Learned to Stop Worrying and Love Relevance Theory

Returning to (31), we can see that Rudin?s identity condition over-generates.

(31) a. * In this monastery, it's possible in principle to sing, but the abbot has to specify which monks <can sing>.

b. In this monastery, it's possible in principle to sing, but the abbot has to specify which songs ~~<to sing>~~.

Rudin's eventive core identity condition (ECID) incorrectly predicts (31a) to be grammatical. His response to this counterargument hinges on the fact that (31a) is eliminated by pragmatic machinery, and that the sluices in (31a) and (32) are already grammatical but require additional context in order to be acceptable. Effectively, these sluices are not eliminated by the grammar but instead are unacceptable based on the fact that they are pragmatically odd.

(32) In this monastery, it's possible in principle for monks to sing, but the abbot has to specify which monks ~~<can sing>~~.

(33) For monks in this monastery, it's possible in principle to sing, but the abbot has to specify which monks ~~<can sing>~~.

Unfortunately for this argument, "songs" is no more salient in the antecedent for these sentences than is "monks". Arguably, the verb "sing" renders "songs" salient, but if we are to accept this point in Rudin?s favor we must also acknowledge that "monastery" renders "monks" just as salient as "sing" renders "songs". If speakers are familiar with the concept of a monastery, they know that monasteries are inhabited by monastics, i.e. monks or nuns. By evoking the idea of a monastery, the speaker has identified a location with specific inhabitants whose identity as monastics will be known to anyone who knows the definition of the word. For a speaker who does not know what a monastery is, they can either infer the meaning by presuming relevance or the sentence will lead to a crash.

Similarly, the verb "sing" will evoke the concept of a something that must be sung. "Song" falls in as the natural object here, but in the grammatical example (31b) neither songs nor monks are explicitly mentioned in the antecedent. Instead they are merely words naturally connected to the discourse but not yet mentioned explicitly. In that way, they share a status and if the evocation of one renders a sluice pragmatically unacceptable, the evocation of the other should do the same. Perhaps, one may argue that the remnant must be relevant to the verb in order for a sluice to be pragmatically acceptable. (41) refutes this.

(40) a. In this studio, it's possible in principle to paint, but the director has to specify which { subjects | paintings }.

b. * In this studio, it's possible in principle to paint, but the director has to specify which brushes.

c. * In this studio, it's possible in principle to paint, but the director has to specify which artists.

Here, "artists", "subjects", and "brushes" are all relevant to the verb "paint'. They are either natural objects, natural instruments or natural performers of the action "paint". Yet (40b) and (40c) are both unacceptable.

Perhaps internal arguments for optionally transitive verbs are more acceptable in sprouting than external arguments. This line of inquiry warrants further investigation. However, in any case, we can see that the fit condition makes correct predictions for both sets of sentences. Adding the correlate into the antecedent cannot lead to a syntactically well-formed structure without inserting a preposition, which is prohibited by the rules of the fit condition. So, we can see already one instance in which the fit condition is able to eliminate an ungrammatical sentence that the ECID incorrectly predicts to be grammatical.

(41) * In this monastery, it?s possible in principle which monks to sing.

(42) a. In this studio, it's possible in principle to paint which { subjects | paintings }?

b. In this studio, it's possible in principle which brushes to paint?

c. * In this studio, it's possible in principle which artists to paint?

Here, (42c) is unacceptable and (42b) does not provide the intended meaning. A cursory survey of judgements from native English speakers suggest that sluices like these, where a prepositional addition would make adding the remnant into the antecedent acceptable, exist in a grammatical grey area for some speakers. This analysis is better supported by Abels (2019), whose data in Saudi Arabic shows that sentences with perceived missing prepositions are degraded but not fully unacceptable.

Pragmatic machinery as described by Rudin cannot fully exclude otherwise acceptable sluices. In cases where a missing preposition or case marker is all that renders a sluice unacceptable under fit constraints, pragmatic machinery may exist as a last resort of repair for some speakers.

3.2 Reconciling fit and eventive cores

Given this challenge to Rudin's identity condition and the problems it raises with overgeneration, it may seem as though we should supplant it entirely with Abels' fit condition, given that it does not seem to suffer from the same problems. Doing so would raise some questions. Firstly, Rudin's eventive core identity condition accounts for phenomena that other theories have failed to account for, namely the aforementioned mismatches up the clausal spine. The innovation of Rudin's proposal, as he notes, is the focus on individual deleted heads instead of constituents. It is by working in concert that Abels? analysis and Rudin's can complement each other.

Abels does say that a semantic identity condition is needed to supplement his fit condition, and this is intuitively true. Without some kind of supplement enforcing semantic identity at the ellipsis site, Abels' fit condition could generate sentences like the following.

(43) * Kat bought apples, but I don?t know what kind ~~<of oranges she bought>~~.

(44) * Kat bought what kind?

(44) shows that the fit condition predicts (43) to be grammatical but it is nevertheless ill-formed. We can evaluate (43) using Rudin?s identity condition to see what it predicts.

(45) $[_{vP}$ buy $[_{NP}$ oranges $]] \neq [_{vP}$ buy $[_{NP}$ apples $]]$

Since the vPs do not match here, Rudin?s analysis correctly predicts (43) to be ill-formed.

By supplementing Abels' fit condition with Rudin's identity condition, we can correctly predict structurally correct ellipsis sites filled with semantic nonsense to be ungrammatical. Rudin's proposal eliminates problems in Abels' analysis. Does this work the other way around? We can try adding Abels' fit condition into Rudin's proposal. We find that it eliminates our overgeneration problem.

(46) * In this monastery, which monks it?s possible in principle to sing?

(47) * Which monks in this monastery, it?s possible in principle to sing?

When we try to slot the correlate into the antecedent, as Abels describes for sprouting, we find that we cannot do so an be left with a well-formed structure. Our semantic identity condition and Abels' fit condition mutually eliminate each others' overgeneration problems when combined. It may seem as though we are finished, but some questions still remain.

3.3 Using Rudin's identity condition semantically

There is a great deal of value to be gleaned from Rudin?s proposal, and that value may extend even into the previously discussed pseudo-sluicing cases. Rudin cannot enforce identity in pseudo-sluicing cases, since in many cases the copular structure does not match the antecedent. At the same time, without use of a copular clause, we would need to derive an ungrammatical ellipsis site via prohibited movement.

(5) *Ivan tancuva {s njakoi /s njakogo}, no ne znam koi.*
Ivan danced with someone.G with someone.NON-S but NEG know who.G
'Ivan danced with someone but I don't know who.'

(48) *Ivan tancuva {s njakoi /s njakogo}, no ne znam koi beshe tova.*
Ivan danced with someone.G with someone.NON-S but NEG know who.G was that.

'Ivan danced with someone but I don't know who that was.'

Koi beshe tova has no structure-matching correlate as required by Rudin's identity condition, and so would be incorrectly eliminated if we tried to enforce the matching vP condition. I propose a solution that compromises between Rudin's notion of eventive identity and the syntactic problems introduced by enforced isomorphy over eventive cores. Instead of enforcing syntactic identity over eventive cores, we enforce semantic identity. In order to make a reasonable proposal about how to do this, we have to tease apart what the eventive cores share in common semantically. Is there a common pattern that makes the eventive core as easily and sensibly definable semantically as it is syntactically?

Von Fintel and Heim (2011) propose a theory of intensional semantics in their lecture notes that dovetails nicely with the concept of eventive cores as a distinct semantic unit. In their framework, modal verbs are operators that, once combined with covert restrictors corresponding to epistemic, deontic, and circumstantial modality (with which we need not concern ourselves) take as their argument a predicate function that maps from a world or state of affairs (type s) to truth values (type t). Tense operates similarly, taking predicates of the same type as arguments. Such predicates of type <s, t>that serve as potential arguments to modal predicates already instantiated with restrictor functions can be said to represent the same objective content that Rudin identifies as correlated with highest "event-introducing" vP.

The first and foremost advantage of this approach is that we can now generate sentences that rely on copular clauses to be determined licit.

(49) *Nora a parlé à quelqu'un mais je ne sais pas qui* ~~*<c'est>*~~.
Nora has spoken to someone but I NEG know not who ~~<it=is>~~.
'Nora spoke to someone but I don't know who.'

The copular verb here is an anaphor of the original eventive core, we correctly predict this sentence to be grammatical with the correct interpretation. Generating grammatical sluices under this approach does not require an anaphor of the antecedent to be present at the ellipsis site, it merely opens up the availability. At the same time, we can maintain the advantages of Rudin's original proposal wherein modality, tense, and finiteness mismatches are now predicted acceptable in our account, both for ordinary sluices that conform to syntactic identity as well as copular sluices.

(28a) Jess's favorite plant is alive, but she can never be sure for how long ~~<her favorite plant will be alive>~~.

In (28a), we can situate the future tense as a predicate that takes (50) as an argument and returns true if and only if there is a state of affairs (type s) at a time in the future that can be given as an argument to this function and return true.

(50) $\lambda w.[\![$ Jess's favorite plant is alive $]\!]$

This function is identical to the one in the antecedent, but its truth depends on the current world; the content of the antecedent maps to true if and only if the current state of affairs at the time of utterance can be passed as an argument to this function and return true.

Finiteness mismatches can work much the same way, although we rely on anaphora.

(27) Clio chops vegetables every night; she learned how ~~<to chop vegetables>~~ from her father.

In the case of (27), the function in the antecedent is as in (51) and the ellipsis site is as in (52). These may not appear to be identical on the surface, but because PRO is co-indexed with "Clio", they are identical.

(51) $\lambda w.[\![$ Clio chops vegetables $]\!]$

(52) $\lambda w.[\![$ PRO chop vegetables $]\!]$

(53) *Semantic identity condition on sluicing (adapted from Rudin 2019 and Hardt and Rudin, 2019)*

Given a prospective ellipsis site E and its antecedent A, non-pronunciation of the phonological content associated with any head h in E is licit if at least one of the following conditions holds

a. *h* does not originate within the semantic eventive core of E.

b. *h* has a structure-matching correlate i in A.

This identity condition does raise a question. If the syntactic and semantic eventive cores are functionally identical, as they seem from these examples, why do we need to redefine the identity condition along semantic lines? This brings us back to the issue of preposition stranding and the need to account for copular ellipsis sites in order to generate the full set of acceptable sluices. The key here is that in the case where a copular verb is used, the copular verb is an anaphoric reference to the antecedent; the copular verb refers back to the eventive

core in the antecedent without being structurally identical. The two clauses, antecedent and ellipsis site, are semantically identical in the case of anaphora but syntactically distinct. This is the advance of the semantic approach: semantic identity can still be satisfied by a copular clause standing in for a non-structure-matching vP, but syntactic identity cannot.

We can preserve the advantages of Rudin's restricted identity condition and the ways in which it enables us to generate sentences with certain verbal mismatches, with the new added advantage that we can generate copular sluices under the same identity condition as we used to generate "proper" sluices. Then, we combine this condition with fit.

(54) *Structural and identity condition on sluicing* (adapted from Abels 2017, Rudin 2018, and Hardt and Rudin 2019)

Given a potential ellipsis site E with remnant R, its antecedent A, and correlate C, non-pronunciation of the phonological content associated with any head h in E is licit if and only if both of the following conditions hold:

a. Modulo agreement in the antecedent and wh-movement, replacing C by R in the context of A must lead to a syntactically well-formed structure with the right meaning or—for sprouting—adding C into A and making no further changes must lead to a syntactically well-formed structure with the intended thematic interpretation.

b. At least one of the following:

   i. h does not introduce a new eventuality into the semantic eventive core of E.

   ii. h has a structure-matching correlate i in A.

Now, with a fully established condition on sluicing. we can derive some of the previous licit examples, as well as eliminate the illicit ones.

(31a) * In this monastery, it's possible in principle to sing, but the abbot has to specify which monks.

Because sluices must pass both tests in order to be determined acceptable, we can apply them in any order. We will start with the semantic condition. Rudin?s proposed syntactic identity condition does not eliminate this sluice, and neither does the semantic version.

(55) $\lambda w.[\![$ PRO to sing $]\!] = \lambda w.[\![$ monks sing$]\!]$

Since PRO is co-indexed with monks, these eventive cores match. The sluice, however, remains unacceptable. So we turn to the fit condition to see if it is capable of properly determining this sluice to be ungrammatical.

(56) In this monastery (*which monks) it's possible in principle (*which monks) to sing.

We cannot slot "which monks" in anywhere and retrieve a grammatical fragment question. So, we correctly eliminate this sluice. Next, we check the acceptable version of this sluice. We ought to be able to generate it properly.

(18) For monks in this monastery, it is possible in principle to sing, but the abbot has to specify which monks.

First, we check the semantic condition and we get the same results as (55), and the test passes.

(57) $\lambda w.[\![$ PRO to sing $]\!] = \lambda w.[\![$ monks sing$]\!]$

The fit condition is what eliminated the ungrammatical counterpart to this sluice. We check if it also determines this sluice to be ungrammatical.

(58) For *which monks* in this monastery?

Here, what results is a grammatical fragment question. (18) has passed both tests, and our system accurately predicts it to be a grammatical sluice.

So, are we finished? Let us take stock of what we have so far. We have looked at Abels' fit condition, as well as Rudin's syntactic identity condition that we have adapted to apply to pseudo-sluices. In conjunction, these two theories make correct predictions about some of the more problematic sentences for each theory alone. The strength lies in that from the evidence we have seen so far, neither undergenerates, but each overgenerates in complementary ways. There are some open questions with regards to the problematic Icelandic examples introduced above.

4 Conclusion

This paper has proposed a new hybrid condition on sluicing that mixes Abels? syntactically-based fit condition with Deniz Rudin's proposed identity over the eventive core. This proposal makes some interesting and novel predictions, namely by combining the strengths of both of these proposals and using them to complement each other; it is a condition on sluices that is capable of eliminating sentences that would otherwise be respectively problematic for these accounts. There are still a few points of contention and, hopefully, further investiga-

tion. The Icelandic examples that appear to problematize the fit condition deserve further scrutiny, and more information is needed from a greater number and diversity of informants.

It is also worth re-examining Abels' arguments about the syntactic identity account, particularly accounting for the argument that copular clauses should be considered exempt from such an identity condition. If so, is the condition proposed here sufficient to make accurate predictions about the structure and meaning that is permissible in copular sluices? If not, how must we supplement the condition here, or modify it, in order to make our account of copular sluices fully robust? These problems certainly merit more investigation.

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