## Case mismatching in Icelandic clausal ellipsis

In this article, we take a detailed look at clausal ellipsis in Icelandic, a hitherto understudied phenomenon. We focus on case-matching and case-mismatching facts in fragment responses. We argue that although case-matching is the norm, constrained instances of case-mismatching strongly suggest that there must be silent structure in the ellipsis site, and some syntactic identity condition. We outline these patterns in detail, and provide an analysis that assumes a post-syntactic approach to case-marking, and a hybrid identity condition along the lines of Chung (2013).

## 1. Introduction

In clausal ellipsis constructions, the sentential part of an utterance (i.e., IP, S, or TP depending on one's preferred terminology) is not overtly pronounced, but some sub-part of the sentence may be overt. In (1), we have a simple case of sluicing in Icelandic, where the TP of a wh-question is not pronounced, leaving just the wh-phrase hvern 'who.acc' in SpecCP overt. Adopting Merchant's (2001) terminology, the overt wh-phrase is called the 'remnant'.
(1) Jón sá einhvern, en ég veit ekki

John.nом saw someone.acc, but I.nom know not
$\left[\begin{array}{lllll} \\ \text { CP hvern } & \text { ETP Jón sá } & \mathfrak{t}_{i}\end{array}\right]$ ].
[CP who. ACc ${ }_{i}$ [TP John.nom saw $\mathfrak{t}_{i}$ ]]
'John saw someone, but I don't know who.'

Following Merchant (2004), Griffiths \& Lipták (2012), and Weir (2014), among others, fragments receive the same analysis, with the pronounced material undergoing movement to the left periphery prior to TP deletion: ${ }^{1}$

[^0](2) A: Hvern sá Jón?
who.acc saw John.nom
'Who did John see?'

B: $\quad\left[\begin{array}{llll} & \operatorname{Mig}_{i} & \text { €тp Jón sá } & \mathfrak{f}_{i}\end{array}\right]$ !
[CP me.ACC ${ }_{i}$ ETP John.NOM saw $\mathfrak{t}_{i}$ ]]
${ }^{\prime} \mathrm{Me}!^{\prime}{ }^{2}$

In clausal ellipsis, the remnant typically corresponds, in some intuitive sense, to a particular phrase in the antecedent, called the 'correlate.' In (1), the correlate for hvern 'who.acc' is einhvern 'someone.acc' and in (2), the correlate for mig 'me.acc' is hvern 'who.acc'. We will refer to the clause containing the correlate as the 'antecedent clause' and the clause that undergoes ellipsis as the 'ellipsis clause'.

In this paper, we investigate Icelandic clausal ellipsis, a relatively understudied phenomenon, with a special focus on fragment responses. For the most part, Icelandic clausal ellipsis is unexceptional in having the properties we expect from such constructions as found in many other languages. Independent properties of the Icelandic case system, however, shed potentially important light on the analysis of clausal ellipsis. Like most languages with robust case-morphology, Icelandic generally requires the case of a remnant to match the case of the correlate. However, we show that under constrained circumstances, certain kinds of case-mismatches are possible. Investigating when such mismatches are possible, and when they are impossible, will be argued to support the existence of silent syntactic structure at the ellipsis site, as well as a syntactic identity condition on ellipsis (perhaps in addition to a semantic condition). Moreover, we will show how the Icelandic facts support a postsyntactic approach to at least some aspects of morphological case, and will develop an analysis within such an approach. ${ }^{3}$

[^1]
## 2. Background

### 2.1. Case Matching

Ross (1969) was the first to note that in clausal ellipsis, specifically sluicing, the remnant and correlate must match in case. We will refer to this as the ‘Case-Matching Generalization' (CMG). The CMG is detectible in languages that overtly mark case on nominals, illustrated below with a German sluice. German schmeicheln 'flatter' assigns dative case to the correlate, whereas loben 'praise' assigns accusative; in (3a)-(3b) we see that the remnant must bear whichever case its correlate does.
(3) (a) Er will jemandem schmeicheln, aber sie wissen nicht, he wants someone.dat flatter but they know not $\{*$ wer $\quad / *$ wen $\quad /$ wem $\}$. $\{*$ who.nom $/ *$ who.acc /who.dat $\}$
'He wants to flatter someone, but they don't know who.'
(b) Er will jemanden loben, aber sie wissen nicht, he wants someone.acc praise but they know not
$\{$ *wer /wen $/ *$ wem $\}$.
\{*who.nom /who.acc /*who.dat $\}$
'He wants to praise someone, but they don't know who.'
(Merchant 2001: 89)
Merchant (2004) shows the same facts hold for fragments. There has been very little research on Icelandic clausal ellipsis, but in the research that does exist, the same has generally been shown or assumed to hold. In one of the first papers taking a generative approach to Icelandic, Thráinsson (1975) focused on the role of case-matching in Icelandic gapping constructions. Sigurðsson \& Stefánsdóttir (2014) and Sigurðsson et al. (2018) use case-matching in fragment responses to probe the structure of the 'New Impersonal Passive' construction. Ott (2014) and Ott \& de Vries (2016) argue that contrastive left-dislocation and right dislocation in Icelandic and related languages should be analyzed as clausal ellipsis, and the
fact that these constructions show case-matching (or case-connectivity) is part of what is argued to be explained by this analysis.

Case matching effects are robustly attested in languages with overt case marking. Some counterexamples have been uncovered thus far in a few languages. ${ }^{4}$ Ince (2012) notes that Turkish genitive correlates correspond to nominative remnants obligatorily in sluicing. Kim (2015) discusses case-mismatches in Korean, where an expected case suffix can fail to show up only when there is no overt correlate (in what is referred to as 'sprouting' in the ellipsis literature). Vicente's (2015) short survey cites counterexamples attested in Mongolian, Korean, Uzbek, Japanese, German and Chamorro, though it has been argued for some of these, namely Japanese and Uzbek, that what appears to be sluicing is actually a reduced copular clause, so that the relevance of these languages to the status of the CMG is questionable. ${ }^{5}$

The CMG is often assumed to follow from two assumptions: first, that there is silent syntactic structure in the ellipsis clause, as described above, and second, that this structure is identical to the structure of the antecedent clause. Under the assumption that the remnant is extracted from fully present, though unpronounced, syntactic structure, we expect its case to match that of the correlate, since they both share identical base positions at the relevant level of representation (4a)-(4b).
(4) (a) Sie wissen nicht, \{*wer /*wen /wem \} er they know not $\{$ *who.nom $/ *$ who.acc /who.dat $\}$ he schmeicheln will.
flatter wants
(b) Sie wissen nicht, \{*wer /wen /*wem \} er loben they know not $\{*$ who.nom /who.acc /*who.dat $\}$ he praise will.
wants
[4] Here we focus on morphological case. See also Barros (2014) and Thoms (2015), who uncover abstract Case mismatches in English sluices.
[5] The nature of these mismatches is likely different from the mismatches discussed for Icelandic below. Most of them seem to involve the absence of an expected overt case marker, rather than distinct overt case morphology corresponding to a verb that can assign different cases.

However, these two assumptions are at odds with interpretive approaches, which reject the assumption that there is silent structure (Ginzburg \& Sag 2000, Culicover \& Jackendoff 2005, 2012, Barker 2013, Nykiel \& Sag 2012, Jacobson 2016). Such theories have various ways of resolving the interpretation of the remnants, but they generally must stipulate case matching directly, rather than derive it. ${ }^{6}$ For example, Nykiel \& Sag (2012: 196), in an HPSG framework, claim that "a grammatical constraint must dictate directly that there be identity of (category and) case between the remnant and its correlate" (as in Ginzburg \& Sag 2000). Barker (2013), in a Categorial Grammar framework, makes case values part of the syntactic category, and requires that the remnant matches the correlate in case value as part of how it combines syntactically with the antecedent clause; see Jacobson (2016) for a similar mechanism. ${ }^{7}$

As pointed out by Nykiel \& Sag (2012) and Jacobson (2016), silent structure theories that derive case-matching and interpretive theories that encode it directly make different predictions for verbs which can assign more than one case. For example, Jacobson (2016) points out that the Hungarian verb hasonlít 'resemble' may assign sublative or allative case to its object, with no difference in meaning. Silent structure theories, in principle, predict that case-mismatches should be possible, whereas interpretive theories that encode case-matching directly predict that case-mismatches should not be possible. According to Jacobson (2016: 356), mismatches are in fact not possible, confirming the prediction made by

[^2]interpretive theories.
(5) A: Ki-re hasonlít Péter? who-subl resembles Peter 'Who does Peter resemble?'

B: $\quad$ János-ra / *János-hoz \}.
\{ John-subl / *John-all \}
'John.'
(6) A: Ki-hez hasonlít Péter?
who-all resembles Peter
'Who does Peter resemble?'
B: $\quad\{$ *János-ra / János-hoz \}.
\{ *John-subl / John-all \}
'John.'

However, we will show below that Icelandic does tolerate case mismatches in fragments in some cases. This undermines the idea that case-matching-which is certainly the norm in Icelandic-is directly encoded in the way that it is in interpretive approaches. We will show that Icelandic also has instances that disallow case mismatches, much as in the Hungarian facts above. We argue that the nature of when such mismatches are allowed and when they are not allowed supports silent structure approaches to ellipsis, along with a hybrid syntactic and semantic identity condition along the lines of Chung $(2006,2013) .{ }^{8}$

The paper is organized as follows. Section 3 provides a background on casematching in ellipsis, and a basic overview of the Icelandic case system. Section 3 discusses case-matching in Icelandic fragments, and introduces the identity condition that we will adopt. Section 4 discusses case mismatches, and works out when such mismatches are possible and when they are impossible. Section 5 details the analysis of the case alternations and shows how the availability and

[^3]unavailability of mismatching follows from the identity condition first presented in section 3. Section 6 concludes, highlighting the broader implications of the study.

### 2.2. Icelandic Case

In this section we provide a brief overview of the Icelandic case system. Icelandic distinguishes four morphologically distinct cases (nominative, accusative, dative and genitive). The majority of the time, subjects are nominative, direct objects are accusative, and indirect objects are dative (Barðdal 2001), as illustrated in the ditransitive sentence in (7).
(7) Hlynur gaf mér bókina.

Hlynur.nom gave me.dat book.the.acc
'Hlynur gave me the book.'

However, the relationship between case and grammatical role is by no means one-to-one. In addition to the canonical cases given above, subjects can be accusative, dative or genitive; indirect objects can be accusative; and direct objects can be nominative, dative or genitive. ${ }^{9}$ Not all combinations of these are possible. Ditransitives, for example, always have a nominative subject, but may otherwise have dat-acc, dat-dat, dat-gen, acc-dat, acc-gen, or (very rarely) acc-acc objects (Zaenen et al. 1985, Yip et al. 1987, Jónsson 2000). Verbs with dative subjects are generally either intransitive or take a nominative object. Verbs with accusative subjects are generally either intransitive or take an accusative object.

Descriptively, it seems as though different verbs select different case-frames. For example, the verb leiðast 'be bored' takes a dative subject and, optionally, a nominative object. The verb aka 'drive' takes a dative object, while the verb keyra, also 'drive', generally takes an accusative object (although some speakers allow dative, as discussed below). Studies of the verbs involved in case-marking

[^4]patterns beyond the ordinary NOM-(DAT-)ACC pattern reveal various lexical-semantic subregularlities, but also a lot of idiosyncrasy.

There is also a fair amount of variation in certain case-marking patterns, and recent studies have shown that there may be even more variation than previously thought (Árnadóttir \& Sigurðsson 2013, Thráinsson et al. 2015, Eythórsson \& Thráinsson 2017, Jónsson 2017, Nowenstein 2017). Connected to the present study, we will introduce just a few of the well-known cases of case variation. First, Dative Substitution involves a verb that historically took an accusative experiencer subject taking a dative subject instead. ${ }^{10}$
(8) \{ Mig / Mér \} langar að fara.
\{ me.acc / me.dat \} wants to go
'I want to go.'
The choice between cases makes no semantic difference (Jónsson \& Eythórsson 2005: 235-236; Sigurðsson 2012b: 197). There is a lot of both inter- and intraspeaker variation, such that some speakers may find dative ungrammatical with these verbs, whereas others may only find dative grammatical. Many speakers, however, show intra-speaker variation, allowing both cases. (See discussion in, e.g., Svavarsdóttir 1982, Halldórsson 1982, Jónsson 2003, Barðdal 2001, 2011, Jónsson \& Eythórsson 2003, 2005, Eythórsson \& Jónsson 2009, Viðarsson 2009, Ingason 2010, Nowenstein 2012, 2014a, b, 2017, and further discussion below.) The most common Dative Substitution verbs are langa 'want' and vanta 'need'. Other verbs are attested as well, but there is more inter-speaker variation for them.

An interesting kind of Dative Substitution is found with the verbs hlakka til 'look forward to' and kvíða fyrir 'be anxious about'.
\{ Hún / Hana / Henni \} hlakkar til jóla.
\{ she.nom / her.acc / her.dat \} looks.forward to Christmas
'She is looking forward to Christmas.' (Eythórsson 2000: 40)

[^5]In these cases, the verb traditionally took a nominative subject, and people have started to use accusative and/or dative instead. From a diachronic perspective, these cases are interesting in that they involve a rare instance of an oblique subject case replacing a structural nominative (Jónsson \& Eythórsson 2005, 2011). For our purposes, they will turn out to be interesting because speakers may allow three different cases on the subjects of such verbs, allowing us to investigate the nature of case-matching and mismatching in more detail.

Second, Nominative Substitution involves a verb that historically took an accusative theme subject taking a nominative subject instead.
\{ Tröllkonan / Tröllkonuna \} dagaði uppi.
\{ giantess.the.nом / giantess.the.acc \} dawned up
'The giantess was caught by the daylight.' (Eythórsson 2000: 28)
Once again, the choice between cases makes no semantic difference, but there is a lot of inter- and intra-speaker variation. Although both Dative Substitution and Nominative Substitution have some similarities-both involve the loss of traditional accusative subjects, for example, and both involve intraspeaker variation-researchers generally distinguish them as they show somewhat different properties. For example, while Dative Substitution seems to be on the increase, it has been claimed that Nominative Substitution is historically stable variation. Moreover, Dative Substitution seems to involve 'thematic case' (case marking connected with theta-role assignment) replacing 'idiosyncratic case' (case marking connected idiosyncratically with specific verbs), while Nominative Substitution seems to involve 'structural case' replacing idiosyncratic case (Jónsson 2003).

Finally, we note briefly that there is variation in object cases as well. There are many subcases, and they are not all relevant to the study here (see Sigurðsson 2017 for extensive discussion). What is most relevant is that many verbs vary between assigning accusative or dative to their objects (Maling 2002a, b, Jónsson 2009, 2013a). We will discuss such cases in more detail below.

## 3. Icelandic Fragment Responses: Case Matching

There are two main issues in the literature on clausal ellipsis constructions. First, is there unpronounced syntactic structure at (what looks like) the ellipsis site? Second, what is the nature of the identity condition relating the silent (or understood) material to the antecedent clause? Existing approaches to the latter question posit either syntactic identity condition, a semantic identity condition, or a hybrid condition. A syntactic identity condition would say that the syntax of the elided material has to be identical to some aspect of the antecedent clause. A purely semantic identity condition would say that the elided material can be anything, as long as it connects in some semantically defined way to the antecedent clause. A hybrid condition incorporates both syntactic and semantic factors.

It is well known that both solely syntactic and solely semantic identity conditions face significant empirical challenges. Merchant (2001) shows that purely syntactic approaches undergenerate, whereas Chung (2006) shows that purely semantic approaches overgenerate. Various "hybrid" approaches have therefore been proposed, often adopting an overarching semantic identity condition alongside one or more syntactic codicils to reign in overgeneration (Merchant 2005, Chung 2006, 2013, AnderBois 2011, Barros 2014, Weir 2014). In this section, we discuss case matching in Icelandic fragment responses, with an eye toward identifying the relevant identity conditions on ellipsis.

Like in other case-rich languages that have been studied (see references above), fragment responses in Icelandic generally require case-matching. We show this for dative indirect objects in (11), and subjects in (12) (for a nominative subject) and (13) (for a dative subject).
(11) A: Jón gaf mér bókina.

John.nом gave me.dat book.the.acc
'John gave me the book.'
B: $\quad\{*$ Ég / *Mig / Mér $\}$ líka.
\{ *I.nom / * me.acc / me.dat \} too
'Me too.' (I.e. 'He gave it to me too.')
(12) A: $\quad$ Ég $/ * \operatorname{Mig} \quad / *$ Mér $\}$ vil fara.
\{ I.nом / *me.acc / *me.dat \} want go
'I want to go.'
B: \{ Ég / *Mig / *Mér \} líka.
\{ I.nom / *me.acc / *me.dat \} too
'Me too.'
(13) A: $\quad$ *Ég / *Mig / Mér $\}$ leiðist.
\{ *I.nом / * me.acc / me.dat \} bores
'I'm bored.'
B: \{ *Ég / *Mig / Mér \} líka.
\{ *I.nom / *me.acc / me.dat \} too
'Me too.'
The same holds for direct objects, as illustrated in (14) and (15). The (A) examples show that hjálpa 'help' takes a dative object while aðstoða 'assist' takes an accusative object. The (B) examples show that the fragment answers must match the case of the correlate.
(14) A: Jón aðstoðaði mig.

John.nом assisted me.acc
'John assisted me.'
B: \{ *Ég / Mig / *Mér \} líka.
$\{$ *me.nom / me.acc / *me.dat \} too
'Me too.'
(15) A: Jón hjálpaði mér.

John.nом helped me.dat
'John assisted me.'
B: $\quad$ : $*$ Ég / *Mig / Mér $\}$ líka.
\{ *me.nom / *me.acc / me.dat \} too
'Me too.'

Consider these facts from the perspective of a purely semantic identity condition, assuming silent syntactic structure. Following Merchant (2001), Chung
(2013), and others, let us assume that a TP can be elided under focus-assisted mutual entailment. That is, when focused material is replaced by existentially closed variables, the deleted clause and the antecedent clause must be mutually entailing. For example, in (15), (A) means that John helped speaker A, whereas (B) means that John helped speaker B. These of course are not mutually entailing. If we construe the objects as focused material, however, we factor them out, and both sentences have the meaning in (16).

## $\exists \mathrm{x}$. John helped x

The sentences are identical at this level, so they are mutually entailing, and ellipsis is possible. ${ }^{11}$

However, by itself, this does not necessarily explain case-matching. Suppose, for example, that speaker B in (14) responded with dative, with the structure in (17).

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[ me.dat [ John.NOm helped <me.DAT> ]]
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That is, speaker A uses the verb aðstoða 'assist', which assigns accusative case, but speaker B responds with the verb hjálpa 'help', which assigns dative case, and elides the TP. Should this be possible? Certainly the non-elliptical change of verb is possible.

| A: Jón aðstoðaði mig. |  |
| :--- | :--- |
|  | John.nom assisted me.ACC |
|  | 'John assisted me.' |

B: Já, hann hjálpað̌i mér líka.
yes he helped me.dat too
'Yes, he helped me too.'
To the extent that 'assist' and 'help' mean the same thing (see Svenonius 2002 for discussion), if Jón assisted speaker A, it is also true that John helped speaker

[^6]A; speaker B can respond fully naturally that Jón helped him/her as well. This kind of response is a fully natural discourse and relevant to the Question Under Discussion. However, all of that is not enough to license ellipsis of everything but the focus, as in (14). Part of the question hinges on whether (19) and (20) are mutually entailing. Are the sets of people who John helped and the people John assisted distinct sets?
$\exists \mathrm{x}$. John helped x
(20) ヨx. John assisted x

Jacobson (2016) emphasizes that any condition of this sort would have to be based on truth-conditions, and not implicatures or other layers of meaning. She illustrates the point with the following pair.
(21) A: Who did that idiot Bozo invite to the party?

B: Claribel. But I don't agree that Bozo is an idiot.
The fact that speaker B takes issue with the characterization of Bozo as an idiot does not prevent ellipsis from being licensed. In most cases, the distinction between hjálpa 'help' and aðstoða 'assist' is arguably even more subtle. In her discussion the Hungarian verb segít 'help', which gets slightly different meanings depending on the case of the object (related to telicity), Jacobson (2016: 19) suggests that it may be enough, to make the point, to construct truth-conditionally equivalent minimal pairs.

In fact, it has long been noted that Icelandic has many pairs of verbs that mean more or less the same thing but assign different cases to their subjects or objects (Andrews 1982, Zaenen \& Maling 1984). They all pattern like (14) and (15) in fragments. The verbs aka and keyra, both 'drive', take dative and accusative objects, respectively. ${ }^{12}$

[^7](a) Ég ók bílnum. (b) Ég keyrð̊i bílinn.
I.nOM drove car.the.dat
'I drove the car.'
I.nom drove car.the.acc
'I drove the car.'

The two verbs mean the same thing in that they are mutually entailing, so that examples like (23) are contradictions. (Note that Jacobson (2016: 358) makes her argument about case marking with hasonlít 'resemble' using contradiction in this way.)
(23) (a) \#Ég ók bílnum, en ég keyrði hann ekki.
I.nom drove ${ }_{1}$ car.the.dat, but I drove ${ }_{2}$ it.acc not
'I drove ${ }_{1}$ the car, but I didn't drive ${ }_{2}$ it.'
(b) \#Ég keyrð̛i bílinn, en ég ók honum ekki.
I.nom drove ${ }_{2}$ car.the.acc, but I drove ${ }_{1}$ it.dat not
'I drove ${ }_{2}$ the car, but I didn't drive ${ }_{1}$ it.'

As above, speakers can switch between keyra and aka and stay fully coherent, relevant, etc.
(24) A: María ók bílnum.

Mary.nom drove car.the.dat
'Mary drove the car.'
B: Já, hún keyrði rútuna líka.
yes she drove coach.the.acc too
'Yes, she drove the coach too.'

However, $a k a$ 'drive' does not license case-mismatches, despite the existence of a synonymous verb that assigns a different case.
(25) A: María ók bílnum.

Mary.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.'

Thus, if we assume silent syntactic structure, it is not enough to propose a semantic identity condition like focus-assisted mutual entailment. At the very least, it would seem that we need to refer to the lexical content of the verb and make sure it is identical to the antecedent (or directly enforce case-matching, as in Barros 2014 or the interpretive approaches cited above). If we make sure that the verbs are the same, the above facts follow from an ellipsis analysis of fragment responses along the lines of (26) and (27): the remnant is moved to a high position (perhaps [Spec, CP]), and the rest of the sentence is deleted under syntactic identity with the antecedent clause in the question (Merchant 2001, 2004).

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[ me.acc [ Johm.nom assisted <me.Acc> ]]
    \imath \
[me.dat [ John.nom helped <me.daf>]]
    \imath
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Assuming this much, (27) cannot be used to derive dative case in (14B), and (26) cannot be used to derive dative case in (15B). ${ }^{13}$

What kind of identity condition will make sure that the verbs are the same? Here we adapt the limited syntactic identity condition proposed by Chung (2013). ${ }^{14}$
(28) Limited syntactic identity
(a) Argument structure condition: If the remnant is the argument of a predicate in the ellipsis site, that predicate must have an argument structure identical to that of the corresponding predicate in the antecedent clause.
(b) Case condition: If the remnant is a DP, it must be Case-licensed

[^8]in the ellipsis site by a head identical to the corresponding head in the antecedent clause.

In unpacking these, we would first like to point out that perhaps contrary to what one might expect, the Case condition will not derive Icelandic case-matching effects. Chung (2013) makes it clear that the Case condition is intended to apply to abstract Case. It derives, for example, the contrast between (29b) and (30b).
(29) (a) Although it's possible in principle to PRO lose gracefully, it's completely unclear what sort of person loses gracefully.
(b) * Although it's possible in principle to PRO lose gracefully, it's completely unclear what sort of person <loses gracefully>.
(30) (a) In this monastery, it's possible in principle to sing songs after midnight, but you have to know what songs you can sing.
(b) In this monastery, it's possible in principle to sing songs after midnight, but you have to know what songs <you can sing>.

In (29b), the remnant in the ellipsis clause is licensed by finite T, whereas in the antecedent clause, the correlate DP (PRO) is licensed by nonfinite control T. In (30b), however, the remnant in the ellipsis clause is licensed by the verb (or little v/Voice), just the same as in the antecedent clause.

In Icelandic, abstract Case is crucially distinct from morphological case, as has been much discussed (Jónsson 1996, Sigurðsson 2012b, Árnadóttir \& Sigurðsson 2013). ${ }^{15}$ For example, PRO in Icelandic is licensed in similar environment as English, but can be shown by various agreement phenomena to be case-marked (Sigurðsson 1991, 2008, Landau 2003, 2006).

Pað væri hræðilegt að PRO leiðast einum í it would.be terrible to PRO.dat be.bored alone.dat in veislunni.
party.the
'It would be terrible to be bored alone at the party.'
In (31), PRO is marked dative because it is the subject of leiðast 'be bored', as can be seen from the fact that the floating modifier einum 'alone' agrees with it in case. But although its case-marking is determined by the verb (or perhaps an Appl head selected by the verb, as discussed below), it is Case licensed by non-finite control T, leading to it being null PRO.

Now consider examples of the sort discussed by Chung (2013).
(a) Pað er auðvitað hægt að PRO leiðast hér, en pað it is of.course possible to PRO.dat be.bored here but it er alveg óljóst hverjum myndi leiðast hér. is quite unclear who.dat would be.bored here
'It is of course possible to be bored here, but it is quite unclear who would be bored here.'
(b) * Pað er auðvitað hægt að PRO leiðast hér, en pað it is of.course possible to PRO.dat be.bored here but it er alveg óljóst hverjum <myndi leiðast hér>. is quite unclear who.dat would be.bored here intended: 'It is of course possible to be bored here, but it is quite unclear who would be bored here.'

Despite the fact that PRO and the remnant in (32b) get their morphological case (dative) determined by the same head (the verb leiðast 'be bored' or the Appl head it projects), ellipsis is not possible. A straightforward reason why is that this is for the same reason as the English examples above: the sentence does not satisfy the Case condition of (28b). Although PRO and the remnant get their morphological case from the same place, PRO is Case-licensed by non-finite control T, and the remnant is Case-licensed by finite T. This shows that case-matching effects, and the mismatches discussed below, will not derive from the Case condition, and we will not discuss the Case condition further in this paper.

Instead, we will pursue a solution in terms of the argument structure condition in (28a). As worded, it automatically requires that the verbs match in the ellipsis clause and the antecedent clause: there must be a 'corresponding predicate',
which we can assume must be identical. (28a) also derives the impossiblity of several other well-known mismatches (examples taken from Weir 2014: 142-144, Merchant 2013: 82, Chung et al. 2011: 37).
(33) (a) A: Who is sending you to Iraq?

* B: I am being sent to Iraq by Bush.
(b) * They embroidered something onto the tablecloth, but it's not clear with what they embroidered the tablecloth.
(33a) is ungrammatical because the antecedent clause is active and the ellipsis clause is passive (see Merchant 2013 for extensive discussion). (33b) is ungrammatical because the antecedent clause has a different argument structure from the ellipsis clause. The ungrammaticality of mismatches such as these have been taken to motivate the claim that some kind of syntactic identity condition must be involved, if one assumes silent syntactic structure at the ellipsis site.

The wording of the 'Argument Structure Condition' in (28) above leads to the question of what the representation of argument structure is, and what it means for it to be the same or different. In what follows, we will adopt a syntactic approach to argument structure (Pylkkänen 2002, Cuervo 2003, Borer 2005a, b, 2013, Ramchand 2008, Schäfer 2008, Wood 2015). According to this view, different verbs (or verb roots) may appear with different combinations of verbal heads in the VoiceP domain. Having "identical argument structure" thus means having the same such heads, with the same features. This allows us to ground the argument structure condition in more concrete terms, in a way that is inspired by what has come to be known as the 'No New Words' constraint of Chung (2006: her (29)):
(34) No New Words: 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 .

Assuming that the domain of argument structure is VoiceP, and that we want that structure to be identical (as in (28a) above), we can adopt a slightly different
version, which makes no claims about material outside of VoiceP:
(35) Argument Structure Condition ("No New Words" version): Every lexical item contained in VoiceP of the ellipsis clause that ends up (only) in the elided IP must be identical to an item in the VoiceP in the antecedent clause.

This says that argument structure must be identical by stating that an elided VoiceP must reuse the same lexical items-including roots and functional heads-used in the VoiceP of the antecedent clause.

This accounts for the impossibility of the mismatches in (33) above, which use different Voice heads in (33a) and different prepositions and verbal heads in (33b). ${ }^{16}$ We will show below that, when combined with independently motivated analyses of Icelandic case phenomena, an identity condition along the lines of (35) can account for the existence of case-matching and case-mismatching, correctly predicting when each may occur.

## 4. Case Mismatches and Impossible Mismatching

In contrast to the approaches discussed in the previous section, some approaches to fragments do not assume silent syntactic structure. For those approaches, the question is not how to constrain the content of silent structure, but how to specify the properties of the fragment to connect it to the antecedent clause. One way this is done is by specifying case-matching (or something close to it) directly, as in Ginzburg \& Sag (2000), Culicover \& Jackendoff (2005, 2012), Nykiel \& Sag (2012). Another is to connect the fragment syntactically to the antecedent clause, as in Barker (2013) and Jacobson (2016), where case-matching is again directly encoded in the way that such structures are built. The impossibility of mismatching with verbs that assign multiple cases has been taken as an

[^9]argument in favor of this approach. As we will see in this section, however, certain mismatches of exactly this sort are possible in Icelandic. We will argue that this supports silent structure with at least a hybrid identity condition referring to that structure, specifically the Argument Structure Condition as formulated in (35) above. ${ }^{17}$

### 4.1. Case Mismatches

As discussed above, case mismatches are ordinarily not possible in Icelandic fragment responses. We have shown that this holds for subjects, direct objects and indirect objects, regardless of whether the case is structural (as with nominative subjects and accusative objects) or oblique (as with dative subjects and objects). However, recall that some verbs in Icelandic assign more than one possible case to their subjects or objects. This is so for langa 'want', which takes either an accusative subject (standardly) or a dative subject (under Dative Substitution).
\{ Mig / Mér \} langar (líka) að fara. \{ me.acc / me.dat \} wants (too) to go
'I want to go.'
Unlike the Hungarian facts discussed above, the availability of accusative or dative with langa 'want' does make a case mismatch available.

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.'
(38) A: Mér langar að fara. me.dat wants to go
[17] We remain mostly agnostic about the semantic side of the identity condition, and for convenience follow Chung (2013) in assuming something like focus-assisted mutual entailment, as discussed above; see Weir (2014) for detailed discussion and a different semantic identity condition.
'I want to go.'
B: \{ *Ég / Mig / Mér \} líka.
\{*I.nom / me.acc / me.dat \} too
'Me too.'

While we will illustrate most matching and mismatching effects with exchanges along the lines of the above examples, we should point out that such mismatches are by no means limited to them. (39) shows that such mismatches are possible in question-answer pairs and (40a) shows that this is even possible within one sentence. ${ }^{18}$ (40b) shows that such mismatching is not possible with a verb like vilja 'want', which, as illustrated in (12) above, only takes a nominative subject.
(39) A: Hverjum langar að fara?
who.dat wants to go
'Who wants to go?'
B: \{ *Ég / Mig / Mér \}!
\{ *I.nom / me.acc / me.dAt \}
'Me!'
(40) (a) Hana langar að fara, og honum líka. her.acc wants to go, and him.dat too
'She wants to go, and he does too.'
(b) Hún vill fara, og \{ hann / *honum \} líka. she.nom wants go and \{ he.nом / *him.dat \} too
'She wants to go, and he does too.'
The same paradigm is found for other Dative Substitution verbs, such as vanta 'need' illustrated in (41)-(42) below.
(41) A: Mig vantar hníf. me.acc needs knife.acc
'I need a knife.'

[^10]B: \{ *Ég / Mig / Mér \} líka.
\{ *I.nom / me.acc / me.dat \} too
'Me too.'
(42) A: Mér vantar hníf. me.dat needs knife.acc
'I need a knife.'
B: \{ *Ég / Mig / Mér \} líka.
\{ *I.nom / me.acc / me.dat \} too
'Me too.'

We will see another example of a dative/accusative subject alternation below with the verb hlakka til 'look forward to', which we discuss separately because there, the possibility of nominative also comes into play. That is, this is not a fact about just one or two verbs, it is a general fact about what happens with Dative Substitution verbs and other verbs that vary between accusative and dative subjects. ${ }^{19,20}$

A similar dative/accusative mismatch can be found in object position. As mentioned above, some speakers allow keyra 'drive' to take either an accusative or dative object (Jónsson 2009: 209).
(43) María keyrði \{ bílinn / bílnum \}. Mary.nом drove \{ car.the.acc / car.the.dat \}
'Mary drove the car.'
Such speakers allow mismatches of the sort described above.
(44) A: María keyrði bílinn.

Mary.nom drove car.the.acc
'Mary drove the car.'

[^11]B: \{ *Rútan / Rútuna / Rútunni \} líka.
\{ * coach.the.nom / coach.the.acc / coach.the.dat \} too
'The coach too.'

These facts show clearly that case matching is not a surface true generalization, and therefore cannot be stipulated as such. How do we reconcile this with the observation above that Icelandic generally does require case-matching? As a first pass, the data so far seems to suggest a generalization as in (45).
(45) Case Mismatching Generalization (first pass): case-mismatching is possible when the verb in the antecedent clause may assign more than one case.

This would look distinct from the Hungarian case above. However, we will see several ways in which (45) overgenerates for Icelandic as well, leading us to refine the Case Mismatching Generalization and the analysis of it.

### 4.2. Impossible Mismatching

It turns out that it is not enough that a verb can assign two different cases (to the same argument), however. In this section we discuss several ways in which case mismatching is impossible, even when the verb assigns more than one case in principle. The first case we discuss is when the object case makes a semantic difference. We then turn to alternations between nominative and oblique subjects, where there is some speaker variation, despite the absence of a semantic distinction, and we discuss how this supports the claims in this paper.

### 4.2.1. Object case makes a semantic difference

It has long been known that some kinds of case alternations do have semantic consequences. For example, there are distinct classes of verbs which can take either an accusative or a dative object (Sigurðsson 1989, Barðdal 1993, Maling 2002a, Svenonius 2002). For one such class, if the dative is chosen, the object is understood to benefit from the event. Consider the example in (46):

Hún klóraði \{ mig / mér \} she.nom scratched \{ me.acc / me.dat \}
'She scratched me.'

If accusative is chosen, it means she affected me physically, and probably hurt me or damaged my skin. If dative is chosen, it means I benefitted from the event, as if she had scratched me kindly or scratched an itch. With case alternations like this, a case mismatch in fragment answers is not possible. ${ }^{21}$

A: Hún klóraði mig. she.nом scratched me.acc
'She scratched me.'
B: \{ *Ég / Mig / *Mér \} líka.
\{ *I.nom / me.acc / *me.dat \} too
'Me too.'
A: Hún klóraði mér. she.nом scratched me.dat
'She scratched me.'
B: \{ *Ég /*Mig / Mér \} líka.
\{ *I.nom / *me.acc / me.dat \} too
'Me too.'

Another, more subtle example comes from cases discussed by Jónsson (2013a), drawing in part on the references above. Jónsson (2013a) noticed that verbs of contact, like skalla '(hit with one's) head', can take either accusative or dative objects. ${ }^{22}$

Messi skallaði \{ boltann / boltanum \} í netið.
Messi headed $\{$ ball.the.acc / ball.the.DAT $\}$ in net.the
'Messi headed the ball into the net.'
(Jónsson 2013a: 145)

[^12]According to Jónsson (2013a: 154), "While both the accusative and the dative variant assert contact with the object, only the latter variant asserts motion of the object." Thus, a sentence with the dative entails the corresponding sentence with an accusative, but not vice-versa.
(50) (a) Jón skallaði boltann

John.nом headed ball.the.acc
án pess að skalla honum neitt.
without to head it.dat anywhere
'John headed the ball without heading it anywhere.'
(b) * Jón skallaði boltanum (burt) án pess að skalla hann. John.nom headed ball.the.dat (away) without to head it.ACc 'John headed the ball away without heading it.'
(Jónsson 2013a: 155)
Similarly to klóra 'scratch' above, case mismatches with skalla 'head' are not possible (although the contrast is perhaps sharper with klóra 'scratch' than with skalla 'head', as pointed out to us by Jóhannes Gísli Jónsson).
(51) A: Jón skallaði fjólubláa boltanum.

John.nom headed purple ball.the.dat
'John headed the purple ball.'
B: \{ ??Gráa boltann / Gráa boltanum \} líka.
\{ ??gray ball.the.acc / gray ball.the.dat \} too
'The gray ball too.'
(52) A: Jón skallaði fjólubláa boltann.

John.nом headed purple ball.the.acc
'John headed the purple ball.'
B: \{ Gráa boltann / ??Gráa boltanum \} líka.
\{ gray ball.the.acc / ??gray ball.the.dat \} too
'The gray ball too.'

The contrast between Dative Substitution and objects of keyra 'drive', which seem to allow case-mismatches, and the examples in this subsection, which do not,
seems to relate to the fact that in the latter cases, a difference in case assignment correlates with a difference in interpretation, whereas in the former case, it does not. While this may seem to suggest that the identity condition on ellipsis is semantic, the independently proposed syntactic identity condition makes this unnecessary. Specifically, this follows from the Argument Structure Condition, as in (28a), or our revised version in (35). The different meanings, and case patterns connected to them, in fact correspond to different argument structures. These argument structures may stem from a phrase structural difference, so that there is a different tree geometry for, say, dative vs. accusative, as proposed in Jónsson (2013b) and Sigurðsson (2015, 2017). Alternatively, it could be that the dative and accusative variants involve featurally-distinct VoiceP-internal heads as in Schäfer (2008) and Wood (2015).

### 4.2.2. Alternations with nominative

In the previous sections, we have seen possible and impossible mismatches connected with dative and accusative subjects and objects. In this section, we discuss some alternations with nominative subjects. The facts here will undermine a purely semantic identity condition, but are compatible with syntactic identity condition, given independently motivated assumptions about how nominative/oblique alternations work. Importantly, in all of the alternations discussed in this subsection, the difference in case assignment has always been said to make no semantic difference (Eythórsson 2000: 33; Sigurðsson 2009: 266; 2012b: 197,204).

We begin with the verb hlakka 'look forward to', which is interesting because it is a rare case where a traditionally nominative subject verb began to be used with accusative and/or dative for some speakers. ${ }^{23}$
(a) Ég hlakka til að syngja. I.nом look.forward for to sing

[^13]'I look forward to singing.'
(b) \{ Mig / Mér \} hlakkar til að syngja.
\{ me.acc / me.dat \} look.forward for to sing
'I look forward to singing.'

There is a lot of inter-speaker variation with hlakka, even before we get to the question of case (mis)matching in ellipsis. However, one clear fact is that for speakers who allow dative or accusative, the mismatch is possible as indicated earlier.
(54) A: Mig hlakkar til að syngja.
me.acc look.forward for to sing
'I look forward to singing.'
B: \{ Mig / Mér \} líka.
\{ me.acc / me.dat \} too
'Me too.'
(55) A: Mér hlakkar til að syngja.
me.dat look.forward for to sing
'I look forward to singing.'
B: \{ Mig / Mér \} líka.
\{ me.acc / me.dat \} too
'Me too.'

At this point, hlakka simply adds another example of a verb that takes either accusative or dative, with no difference in meaning, and allows mismatching.

When nominative is involved, there is more variation. In the absence of ellipsis, speakers can respond freely with the case of their choice.
(56) A: \{ Mig / Mér \} hlakkar til að syngja.
\{ me.acc / me.dat \} look.forward for to sing
'I look forward to singing.'
B: Ég hlakka líka til að syngja.
I.nom look.forward too for to sing
'I look forward to singing too.'
(57) A: Ég hlakka til að syngja.
I.nom look.forward for to sing
'I look forward to singing.'
B: \{ Mig / Mér \} hlakkar líka til að syngja.
\{ me.acc / me.dat \} look.forward too for to sign
'I look forward to singing too.'
When the response is a fragment, however, some speakers reject nominative in the response when dative or accusative are used initially.
(58) A: \{ Mig / Mér \} hlakkar til að syngja.
\{ me.acc / me.dat \} look.forward for to sing
'I look forward to singing.'
B: \% Ég líka.
I.nom too
'Me too.'

We will refer to two groups of speakers: Group A speakers, who reject the mismatch, and Group B speakers, who allow it. ${ }^{24}$ As we will discuss further below, the existence of both groups of speakers raises interesting issues regarding the identity condition. In short, the existence of Group A speakers seems to support a syntactic identity condition over a semantic one. The existence of Group $B$ speakers will be argued to be compatible with this conclusion. When nominative is used initially, we see a similar picture.
(59) A: Ég hlakka til að syngja.
I.nom look.forward for to sing
'I look forward to singing.'
B: \{ Ég / \%Mig / \%Mér \} líka.
\{ I.nom / \%me.acc / \%me.dat \} too

[^14]'Me too.'

Most speakers accept (59A), so case-matching in the response is generally an option. ${ }^{25}$ As for dative and accusative, we have a similar division between Group A speakers, who disallow the mismatch, and Group B speakers, who allow it. We wish to emphasize here that the Group A speakers under consideration are speakers who generally allow accusative or dative with hlakka, and thus do allow case-mismatches, as described in (54)-(55) above; they simply do not allow such mismatches with nominative.

We find a similar picture with another nominative alternation, known as Nominative Substitution. Nominative Substitution describes verbs that historically took an oblique case-here, accusative-but began for many speakers to be possible in the nominative (Eythórsson 2000, Jónsson 2003, Jónsson \& Eythórsson 2005, Eythórsson \& Thráinsson 2017).
(60) \{ Skútan mín / Skútuna mína \} rak á land. \{ yacht.the my.nom / yacht.the my.acc \} drove on land 'My yacht ran ashore.'
(61) \{Tröllskessan / Tröllskessuna \} dagaði uppi rétt hjá bænum. \{giantess.the.nом / giantess.the.acc \} dawned up right by farm.the 'The giantess froze in the daylight right by the farm.'

In these cases, we again find that in non-elliptical responses, speakers can use whichever subject case they like. We illustrate this with reka 'run ashore'.
(62) A: Skútuna mína rak á land. yacht.the my.acc drove on land
'My yacht ran ashore.'
B: \{ Skútan mín / skútuna mína \} rak líka á \{ yacht.the mine.nом / yacht.the mine.acc \} drove too on land. land

[^15]'My yacht ran ashore too.'
(63) A: Skútan mín rak á land. yacht.the mу.nом drove on land
'My yacht ran ashore.'
B: \{ Skútan mín / skútuna mína \} rak líka á \{ yacht.the mine.nом / yacht.the mine.acc \} drove too on land.
land
'My yacht ran ashore too.'
In elliptical responses, there is variation in whether mismatch is allowed, essentially along the lines discussed above for hlakka 'look forward to'.
(64) A: Skútuna mína rak á land. yacht.the my.acc drove on land
'My yacht ran ashore.'
B: \{ \%Mín / Mína \} líka.
\{ \%mine.nом / mine.acc \} too
'Mine too.'
(65) A: Skútan mín rak á land. yacht.the my.acc drove on land
'My yacht ran ashore.'
B: \{ Mín / \%Mína \} líka. \{ mine.nом / \%mine.acc \} too
'Mine too.'
(66) A: Tröllskessuna dagaði uppi rétt hjá bænum. giantess.the.acc dawned up right by farm.the
'The giantess froze in the daylight right by the farm.'
B: \{ \%Krakkarnir hennar / Krakkana hennar \} líka.
\{ \%children.the.nом her / children.the.acc her \} too
'Her children too.'
(67) A: Tröllskessan dagaði uppi rétt hjá bænum. giantess.the.nom dawned up right by farm.the
'The giantess froze in the daylight right by the farm.'
B: \{ Krakkarnir hennar / \%Krakkana hennar \} líka. \{ children.the.пом her / \%children.the.acc her \} too 'Her children too.'

All speakers allow case-matching, while only some allow nominative/accusative mismatches with Nominative Substitution verbs. Importantly, the case variation has no semantic effect in these cases, whether mismatching is allowed or not. As we discuss below, this casts doubt on a purely semantic identity condition, but is compatible with a syntactic identity condition. We will suggest below that for some speakers, variation in accusative and nominative is grounded in a syntactic difference (despite their being no semantic effect of this syntactic difference), while in other speakers it is not. The availability of case-mismatching is connected with the way that speakers treat nominative/accusative mismatches.

### 4.2.3. Case Mismatching Revised

We have now presented two ways in which our original case-mismatching generalization, presented in (45), overgenerates. First, when a difference in case assignment corresponds to a semantic difference, case-mismatching may not be possible. Second, for some speakers, mismatches involving nominative and oblique may not be possible, despite there being no semantic effect of the case alternation. As we alluded to, we will argue below that for such speakers, the distinction between nominative and oblique subjects is grounded in a syntactic difference, despite there being no semantic effect of this difference. We therefore revise our generalization as follows:
(68) Case Mismatching Generalization (revised): case-mismatching is possible when the verb in the antecedent clause may assign more than one case without any syntactic or semantic difference.

We have already shown how the semantic effects follow from a syntactic identity condition (specifically the Argument Structure Condition). In the next section, we
turn to a detailed analysis of the other case alternations, and show how those facts too follow from such a condition.

## 5. CASE (mis)matching and the syntactic identity condition

In this section, we propose that the constellation of fact presented above supports a syntactic identity condition on ellipsis. There is silent syntactic structure at the ellipsis site, and this structure must be identical, in the relevant respects, to the antecedent clause. First we provide an overview of how a syntactic identity condition derives the facts presented above. We then describe in more detail Dative Substitution, followed by Nominative Substitution.

First, let us repeat the relevant syntactic identity condition from Chung (2013). For reasons discussed above, we do not discuss the Case condition, but focus on the Argument Structure Condition.
(69) Argument structure condition: If the remnant is the argument of a predicate in the ellipsis site, that predicate must have an argument structure identical to that of the corresponding predicate in the antecedent clause.

Adopting a syntactic ("neoconstructivist") approach to argument structure, we reformulated the Argument Structure Condition along the lines of Chung's (2006) 'No New Words' constraint.
(70) Argument Structure Condition ("No New Words" version): Every lexical item contained in VoiceP of the ellipsis clause that ends up (only) in the elided IP must be identical to an item in the VoiceP in the antecedent clause.

A syntactic identity condition such as (28) and (70) derives case-matching as the general case, much as Ross (1969) anticipated. Morphological caseassignment generally reflects either argument structure or Case-licensing. If the argument structure heads and Case-licensing heads must be the same in the ellipsis clause as in the antecedent clause, then the case of the remnant will have to be the
same as the corresponding DP in the antecdent clause. We see this as the basic fact of the system that needs to underlie the account of when mismatching is and is not allowed.

The Dative Substitution facts then suggest suggest that the argument structure is the same, whether the subject is dative or accusative, and that the Case-licensing is identical. The second point is not controversial, and as for the second, we will propose that Dative Substitution alternations not encoded anywhere in the syntax, but are instead post-syntactic. They thus meet the requirements for ellipsis according to the identity condition. However, applying such post-syntactic casemanipulation rules crucially requires the presence of silent syntactic structure.

Finally, the impossibility of mismatch with nominatives for Group A speakers suggests that for such speakers, sentences with nominative subjects have a distinct syntax from those with oblique subjects. In fact, there is independent support for this. Jónsson (2003) has argued that nominative subject experiencers are systematically distinct form oblique subject experiencers. For example, oblique subject experiencers can never passivize, while nominative subject experiencers can passivize at least sometimes. Various authors have argued that accusativesubject constructions actually have a silent external argument present in the syntax (Haider 2001, Platzack 2006, Schäfer 2008, 2012, Wood 2017), which is not (necessarily) present in nominative subject unaccusative constructions. Therefore, we propose that Group A speakers have a genuine syntactic difference correlating with the nominative/oblique distinction, making case-mismatches impossible: the accusative subject variant takes a silent external argument, and the nominative subject variant does not. As for Group B speakers, the simplest claim is that this is syntactic microvariation: Group B speakers do not make the syntactic distinction that Group A speakers do. One can imagine various implementations of this idea, but we will present one specific proposal based on Wood $(2015,2017) .{ }^{26}$
[26] The point is then not to argue that the account below is right and other possible accounts are wrong, just that there is a plausible and independently grounded way of understanding the difference between Group A and B speakers as a matter of syntactic microvariation. For this reason, we outline an alternative account in footnote 32 , based on a different theory.

### 5.1. Dative Substitution

In this section, we flesh out and support the idea that Dative Substitution alternations are not encoded in the syntax. There is a longstanding intuition in work on Icelandic case variation that Dative Substitution involves "thematic lexical Dat case" replacing "idiosyncratic lexical Acc" (Eythórsson \& Thráinsson 2017: 61) (emphasis added). The idea is that people have to memorize, word by word, which experiencer verbs want an accusative subject. With dative experiencers, there is more regular pattern of assigning dative to experiencers of a certain sort. Dative Substitution reflects that pattern. We will first discuss how we derive "thematic lexical" dative, and then turn to "idiosyncratic lexical" accusative.

### 5.1.1. Thematic Lexical Dative

In a syntactic theory of argument structure, experiencers are dative because they are merged in a syntactic position that then corresponds to dative, such as ApplP (Cuervo 2003, McFadden 2004, Wood 2015).


Dative could be assigned by the Appl head to its specifier in the syntax (Sigurðsson 2017). Alternatively, in the spirit of McFadden $(2004,2006)$ and Sigurðsson (2012a, b), there could be a general post-syntactic rule to the effect that dative case is added to a DP base-generated in SpecApplP.

$$
\begin{equation*}
\mathrm{DP} \rightarrow \mathrm{DP}_{\mathrm{DAT}} /[\mathrm{ApplP} \ldots[\mathrm{Appl} \cdot \ldots]] \tag{72}
\end{equation*}
$$

The pattern that many experiencers are dative stems from the ability of Appl to
assign an experiencer role, along with the general postsyntactic rule in (72). ${ }^{27}$ This is a syntactic implementation of the "thematic lexical" dative intuition, the idea that the dative case is somehow connected to the thematic role. Here, it is Appl that is responsible for dative case and the experiencer role.

### 5.1.2. Idiosyncratic Lexical Accusative

Accusative experiencer subjects are subject to a far less "regular" rule (though see Ingason 2010 for some attenuation of this claim), and must be memorized word by word. Following McFadden (2004), suppose we assume that they have the same general syntactic structure as dative experiencers, namely (71). The accusative arises by a lexically specific impoverishment rule that applies after (72) in the morphology.
(73) Case Features
(a) $[+$ INFERIOR,+ OBLIQUE $]=$ "DATIVE"
(b) $[+$ INFERIOR $]=$ "ACCUSATIVE"
(74) Impoverishment Rule
[+OBLIQUE, +inferior] $\rightarrow$ [+INFERIOR] / _ \{langa 'want', vanta 'need', etc. \}

First, the features [+Inferior, +oblique] (=dative) are assigned to a DP in SpecApplP. Then, for some verbs, the impoverishment rule in (74) applies, resulting in the loss of the [+oblique] feature, leading to accusative case. The lexically idiosyncratic nature of accusative experiencer subjects is captured by assuming that this impoverishment rule only applies to a specific, memorized list of verbs.

[^16]
### 5.1.3. Dative Substitution

Under this view, Dative Substitution makes sense in the following way: at a deeper morphological level, accusative experiencers want to be-or even aredative. An extra morphological rule has to apply to make them accusative. But impoverishment rules can be the source of considerable variation (see e.g. Nevins \& Parrott 2007). If or when the impoverishment rule does not apply, it is dative that will surface. Thus, Dative Substitution is not syntactic-it is morphological. This explains why dative/accusative alternations are no problem for a syntactic identity condition. The syntax is exactly the same, with the same Appl head introducing the experiencer. ${ }^{28}$

As a morphological phenomenon, Dative Substitution is sensitive to very specific, somewhat idiosyncratic pressures. As documented by Nowenstein (2012, 2014a, b, 2017), whether DS applies is sensitive to person: 3rd person plural subjects are most likely to be dative, while 1st and 2nd person singular subjects are most likely to show up as accusative. It is also sensitive to morphological form: since masculine third person singular pronouns are syncretic for nominative and accusative, they are more likely to show up as dative (overtly "marking" their oblique status). The role of these factors makes sense, given historical pressures and the "morphologically shallow" nature of DS alternations.

Another kind of data discussed by Nowenstein (2012, 2014a, b, 2017) and Jónsson (2013b) also make sense in terms of an impoverishment analysis. Consider the data in (75). Floating modifiers like sjálf(ur) 'self' typically agree with their subject in case, and this is what we see in (75).

$$
\begin{array}{ll}
\text { (75) (a) Mig sjálfan langar að vita pað. } \\
& \text { me.ACC self.ACC want to know that } \\
& \text { 'I myself want to know that.' }
\end{array}
$$

[^17](b) Mér sjálfum langar að vita pað. me.dat self.dat want to know that
'I myself want to know that.'
(Jónsson 2013b: 13)

However, we find certain mismatches-but generally only in one direction. An accusative subject can show up with a dative floating modifier, but a dative subject cannot show up with an accusative floating modifier.
(76) (a) Mig sjálfum langar að vita pað. me.acc self.dat want to know that 'I myself want to know that.'
(b) ?? Mér sjálfan langar að vita pað. me.dat self.acc want to know that 'I myself want to know that.'
(Jónsson 2013b: 13)
An impoverishment analysis can explain why. If case marking is postsyntactic, agreement should be too (cf. Bobaljik 2008). But then we can ask: should floating modifier agreement take place before, or after impoverishment? In fact there is no intrinsic need to order them-they could apply in either order. The idea that agreement could apply in either order has some general independent support. Arregi \& Nevins (2012: 344) propose that PF agreement (which they call "AgreeCopy") normally takes place before impoverishment rules, but may be deferred until after such rules (where it is sensitive to linear order, accounting for some kinds of closest-conjunct agreement). Nevins (2014) proposes that varieties of Indo-Aryan discussed by Deo \& Sharma (2006) vary in the timing of AgreeCopy and ergative-to-nominative impoverishment. In Standard Puṇe Marathi, agreement precedes case-impoverishment, whereas in Gowari, agreement follows case-impoverishment.

The Icelandic variation is accounted for if we assume exactly this-floating modifier agreement may apply in either order.
(77) (a) No Impoverishment will lead to dative on DP, and dative on modifier, as in (75b).
(b) Impoverishment before agreement will lead to accusative on DP and accusative on modifier, as in (75a).
(c) Impoverishment after Agreement will lead to accusative on DP, but dative on modifier, as in (76a).

Notice that there is no natural way to derive dative on the DP, but accusative on the modifier.

This kind of phenomenon is not restricted to sjálf(ur) 'self'-it applies to various kinds of floating modifiers. Two more examples are floating quantfiers, as in (78), and sem 'as'-phrases, as in (79).

$$
\begin{array}{ll}
\text { (a) lá langar }\{\text { öllum } / \text { alla }\} \text { að fara. }  \tag{78}\\
\text { them.acc want }\{\text { all.DAT } / \text { all.ACC }\} \text { to go } \\
& \text { 'They all want to go.' } \\
\text { (b) } & \text { Peim langar }\{\text { öllum } / * \text { alla }\} \text { að fara. } \\
\text { them.dAT want \{ all.DAT } / * \text { all.ACC }\} \text { to go } \\
& \text { 'They all want to go.' }
\end{array}
$$

(Jónsson 2013b: 13)
(79) (a) Svein langaði sem \{ formanni / formann \} að Sveinn.acc wanted as \{ chairman.DAT / chairman.ACC \} to sampykkja tillöguna.
accept proposal.the
'As chairman, Sveinn wanted to accept the proposal.'
(b) Sveini langaði sem \{ formanni / *formann \} að Sveinn.dat wanted as $\{$ chairman.DAT / *chairman.aCc \} to sampykkja tillöguna.
accept proposal.the
'As chairman, Sveinn wanted to accept the proposal.'
(Jónsson 2013b: 13-14)

The existence of, and nature of the mixing supports the view that DS is a morphological phenomenon. The impoverishment analysis accounts for the lexically idiosyncratic nature of accusative subjects in the first place, the existence/directionality of Dative Substitution, and the kind of mixing we find
in floating modifier agreement. Returning to the main issue, a syntactic identity condition provides an understanding of why case-mismatches are allowed with Dative Substitution: Dative Substitution does not reflect a syntactic distinction, so it does not interfere with a syntactic identity condition.

### 5.2. Nominative/Accusative Alternations

We now turn to alternations between nominative and accusative, and show how the speaker variation we find there is compatible with a syntactic identity condition. This discussion is based on the theory in Wood (2015, 2017). To begin, the analysis of accusative subjects in Wood (2017) takes them to involve a silent external argument clitic, which bears nominative case. ${ }^{29}$ The accusative then moves around the nominative clitic into the subject position.


Wood (2017) argues in favor of a "Dependent Case" analysis of accusative (Marantz 1991/2000, McFadden 2004, Wood 2011). The idea is that if a DP does not get some lexically specified case, such as dative in SpecApplP, then it is generally either accusative or nominative. Given two DPs within a given case domain, the lower DP is accusative and the higher one, if it is not ccommanded by another, non-lexically case-marked DP, will be nominative. (In ECM constructions, however, the higher DP could also be accusative. $)^{30}$

[^18]The question, on this analysis, is what happens when nominative substitution occurs? One way to get nominative would be for the external argument clitic to lose its nом case property. If the clitic is not nominative, then the internal argument will not be accusative.


It would, in this way, become more like the anticausative -st clitic as analyzed in Wood (2014, 2015). In (82b), the -st clitic marks the anticausative use of 'open'. Building on the analysis of marked anticausatives cross-linguistically in Schäfer (2008) and Alexiadou et al. (2015) (among others), Wood $(2014,2015)$ proposes -st is merged in the external argument position, and the internal argument moves to the subject position around it (see Eythórsson (1995), Sigurðsson (2012b), Sigurðsson (2017) for related analyses of the -st clitic).
(a) Hún opnaði hurðina. she opened door.the.acc
(b) Hurðin opnaði-st.
door.the.nom opened-st
'She opened the door.'
'The door opened.'

... open the door.nом...

Sigurðsson (2017) proposes that in the syntax, DPs can be assigned a structural case feature [STR]; this feature is then translated into either nominative or accusative according to a dependent case algorithm. See footnote 32 for an alternative analysis.

Importantly, the -st clitic neither bears case nor conditions accusative case (Wood 2015: 68-69).

If (81) is the analysis of Nominative Substitution sentences, then the syntactic structure of is the same whether the subject is nominative or accusative. Specifically, the argument structure is the same, per (69a), since both take an external argument. Or, drawing on (70), both VoicePs are built from the same lexical items. Assuming that case features are assigned post-syntactically, case features themselves cannot cause a mismatch for the syntactic identity condition. The difference is morphological: in one case, CL gets a morphological case feature, while in the other, it does not. Therefore, we expect case-mismatches in fragment responses with Nominative Substitution just as with Dative Substitution.

However, another option to get nominative is that the external argument clitic is genuinely not present. Instead, VoiceP can either be specifierless or absent altogether. For present purposes, we will assume (following Wood 2015: 152155) that a specifierless Voice would be present.

. . . NOM. . .
In this case, the syntactic structure would be different, depending on whether nominative or accusative surfaces. The VoicePs are built from distinct Voice heads, resulting in the presence or absence of an external argument. Thus, we would expect mismatches in fragment answers to be impossible. ${ }^{31}$

The fact that speakers vary as to whether mismatches with nominative are possible suggest that speakers genuinely vary as to whether they internalize the first or the second option for accusative/nominative variation. Moreover, it is possible that speakers internalize different options for different verbs. Speaker

[^19]variation of this kind is found overtly in other cases, where some speakers may use caseless -st while others use a case-marked reflexive pronoun (see Wood 2015: 192). It also allows for the possibility that even with a given verb, speakers vary in terms of whether they use/allow (80), (81) or (84). The fact that we find such variation, across and within speakers, thus supports the present analysis. (Or, more generally, the claim that nominative/accusative variation is sometimes, but not always, grounded in a syntactic distinction; the point here is to give an explicit idea of what this means.)

Finally, it is important to note that the choice between (80), (81) and (84) does not need to correlate with any semantic distinction. If the present suggestion is on the right track, they must not, because Nominative Substitution has always been claimed to have no semantic effects. The question here amounts in part to whether the clitic in (80) and (81) is more like an expletive or more like a referential pronoun. Wood (2017) (drawing on Schäfer 2008, 2012) suggests that the clitic affects the semantics in two ways: it has its own semantics, referring to "the referentially underspecified agent responsible for forces that are not in human power" (264), and it conditions idiomatic interpretations on the vPs it combines with. The latter is not a problem here, because idiomatic interpretations can be learned in the absence of a clitic. As for the former, it is only a problem here if we assume that this "referentially underspecified agent" cannot be part of the implied meaning without a clitic or pronoun pointing to it. If it cannot, then either (84) is not a genuine option for Nominative Substitution, or, contrary to previous reports, there in fact is some subtle semantic distinction between nominative and accusative subjects with Nominative Substitution. We find neither of these to be particularly likely, so we will assume that either the weather clitic is more like an expletive, or else the "referentially underspecified agent" can become encoded in the meaning of the VoiceP even in the absence of the clitic. ${ }^{32}$

[^20]We now return to the Hungarian facts discussed above that were taken to argue against silent syntactic structure, and in favor of stipulating case-matching directly.
(85) A: Ki-re hasonlít Péter? who-subl resembles Peter 'Who does Peter resemble?'

B: $\quad$ János-ra / *János-hoz \}. \{ John-subl / *John-all \} 'John.'
(86) A: Ki-hez hasonlít Péter? who-all resembles Peter
'Who does Peter resemble?'
B: $\quad$ *János-ra / János-hoz \}.
\{ *John-subl / John-all \}
'John.'

Recall that according to Jacobson (2016: 356), case-mismatching is not possible, and there is no semantic difference in the choice. We have now seen that accusative/nominative alternations, for a subset of Icelandic speakers, matches this description. But we have also seen that the very fact that case-mismatching is disallowed does not mean that case-matching should be directly encoded. The Hungarian facts would follow if there is a syntactic difference between the allative and sublative case-marking options, even if that difference does not make a difference semantically. If, for example, the case-markers correspond to distinct

[^21]postpositions, then the syntax is not identical, and the Hungarian facts follow in the way that the following English data follow:
(87) A: To whom was John talking?

B: * With Mary John was talking
Another possibility is that the distinct case-markers correspond to distinct argument structures (i.e. distinct VoiceP-internal heads), even if there is no detectable semantic difference. Either way, it is clear that the Hungarian data do not argue against silent syntactic structure; there are various factors that can enforce casematching. However, the fact that case-mismatching is possible in some cases does strongly suggest that case-matching cannot be directly encoded as part of how clausal ellipsis works.

## 6. Conclusion

In this paper, we have taken a detailed look at Icelandic fragment responses, focusing on what case-matching and mismatching tell us about the analysis of clausal ellipsis in general. In particular, we have argued that the existence of casemismatches within a system that generally enforces case-matching argues against interpretive approaches to ellipsis that deny the existence of silent syntactic structure and encode case-matching directly.

We examined when mismatches are possible and when they are impossible, and showed that the facts follow from silent syntactic structure plus a hybrid identity condition along the lines of Chung (2013), in particular her Argument Structure Condition. It is not enough to say that case-mismatching is possible when the choice of case makes no difference in meaning, because we find some instances where case-mismatching is not possible, despite the fact that choice of case makes no difference in meaning. We proposed that in such cases, the choice of case nevertheless corresponds to a syntactic distinction (in argument structure), but one that does not affect the semantics.

Finally, we developed our analysis within a framework that crucially assumes
that at least some (but not necessarily all) case-marking is determined postsyntactically, and the overall picture seems to support this perspective (at least in the places where it is crucial to the analysis). If so, then the analysis here not only supports silent structure in the sense generally intended in research on ellipsis, but also "silent structure" in the grammatical architecture, in the sense that there is an articulated mapping from syntax to PF , manipulating abstract features in a step-by-step fashion to derive surface forms from underlying structured representations.

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[^0]:    [1] See Morgan (1973), Hankamer (1971), and more recently Kimura (2007, 2010) and Ott \& Struckmeier $(2016,2018)$ for non-movement approaches, where the fragment is pronounced in-situ, with the rest of the clause undergoing non-constituent deletion.

[^1]:    [2] See Lasnik (2001) and Merchant (2001: 74ff.) on why T-to-C movement does not take place when the TP is elided.
    [3] As we discuss below, our account is compatible with some case-features being assigned in the syntax. We will make it clear below which assumptions about case are crucial for our analysis, and which are adopted for convenience.

[^2]:    [6] Barros (2014) adopts the standard assumption that there is silent structure in ellipsis, but adopts a semantic theory of identity with an additional case-matching stipulation in the spirit of interpretive approaches. The Icelandic facts discussed below would seem to argue against even this view of identity.
    [7] Culicover \& Jackendoff (2012) propose a mechanism of 'Indirect Licensing', which essentially says that fragment DPs are licensed by the material that licenses the correlate. Since they leave it as an open question "precisely how [...] indirect licensing works" (Culicover \& Jackendoff 2012: 338), we will not discuss it in detail here. The analysis discussed below is not in principle at odds with such an idea, but it relies on at least some silent syntactic structure (in the antecedent clause) and a relatively articluted derivational interface between syntax and morphology, both of which are at odds with the overall framework Culicover \& Jackendoff $(2005,2012)$ pursue. We therefore leave it as an open question whether some form of indirect licensing can account for the constellation of facts presented below.

[^3]:    [8] We adopt Chung's hybrid account to show something like the minimal amount of syntax that has to be part of the identity condition. Our analysis, and the facts discussed below, would also be compatible with a stronger, stricter syntactic identity condition.

[^4]:    [9] For present purposes, we can understand the term 'indirect object' as the first object of a ditransitive with two DP objects, and 'direct object' as the second object of a ditransitive with two DP objects (or the sole DP object of a verb that takes one DP object).

[^5]:    [10] This is also sometimes called 'Dative Sickness,' a name which reflects the prescriptive pressures to use the traditional, accusative case. Similarly, Nominative Substitution has been called 'Nominative Sickness.'

[^6]:    [11] Weir (2014) argues that this kind of semantic identity condition is not strong enough, and argues instead of an account based on the Question Under Discussion (QUD) (Roberts 2004). Adopting this would not change the point here, however.

[^7]:    [12] As discussed further below, for some speakers, keyra 'drive' may in fact take either a dative or an accusative object.

[^8]:    [13] In fact, it is generally assumed that having different verbs must prevent ellipsis, so much so, that even when the same verb is used with a different argument structure, it is common to propose that it counts as a different verb for each argument structure it is compatible with (something which research focused on argument structure almost never assumes). Nevertheless, we emphasize this point to set the stage for further discussion of case-mismatches below, where non-elliptical continuations are also relevant.
    [14] Chung's (2013) condition was focused specifically on sluicing; we have changed the language of the condition so that it applies to fragments as well.

[^9]:    [16] See Hale \& Keyser (2002: 241ff.), Svenonius (2002), and Alexiadou \& Anagnostopoulou (2012) (among many others) for syntactic analyses of alternations like (33b) where in addition to having different prepositions, the onto and with variants have different VoiceP-internal functional heads.

[^10]:    [18] Note that although (40) is translated using verb phrase ellipsis, that is not what is going on in the Icelandic examples; in fact, Icelandic does not have verb phrase ellipsis (Thoms 2012).

[^11]:    [19] Below, we will go into detail regarding situations where such mismatching is impossible.
    [20] We focus on these two verbs because Dative Substitution, and more generally the more or less free alternation between dative and accusative, is most common across speakers with them. For other verbs, speakers may vary more, and some may have stronger preferences for one case or another. The pattern, however, is general.

[^12]:    [21] We found one speaker who judged accusative in (48B) as "?" rather than "*". The rest rejected mismatching here.
    [22] Note, however, that not all speakers accept dative in sentences like (49). The tests based on it, therefore, can only be judged by speakers who do accept both dative and accusative.

[^13]:    [23] This is distinct from the Nominative Substitution cases discussed below, where historically accusative-subject verbs began to be used with nominative instead.

[^14]:    [24] There is a third group of speakers, who reject dative/accusative in the first place, and therefore accept mismatching nominative because their grammar does not allow anything else. We set such speakers aside, since this is probably a separate kind of mismatch, having to do with ellipsis licensing across distinct dialects. Interestingly, some speakers report that they would repeat the whole sentence, so as to avoid the mismatch but use the case consistent with their grammar.

[^15]:    [25] We say 'most' because some speakers report that in fact, they find nominative quite unnatural and forced, the product of prescriptive pressures rather than their natural grammars.

[^16]:    [27] For our purposes in this paper, it does not matter with dative is added to a DP in SpecApplP in the syntax or post-syntactically. However, note that this does not prevent DPs in other syntactic positions from being understood as experiencers, in some sense. External arguments in SpecVoiceP can be experiencers (as is probably the case with elska 'love'), as can direct objects in object experiencer constructions (as is probably the case with trufla 'bother').

[^17]:    [28] Note that our analysis here is compatible with the view that all case-features are postsyntactic, but it is also compatible with the view that some case-features are assigned in syntax. What is crucial for us is that accusative experiencer subjects are analyzed as dative-to-accusative impoverishment, and Dative Substitution is the absence of such impoverishment. More generally, our claim is that the distinction between dative and accusative for Dative Substitution verbs is not a syntactic distinction.

[^18]:    [29] See also Haider (2001), Platzack (2006), and Schäfer (2008, 2012) for related proposals, involving a silent external argument of some sort, as well as Sigurðardóttir \& Eythórsson (2017) for possible supporting diachronic evidence in favor of such an argument. See Sigurðsson (2011, 2012b) and Lavine \& Babby (to appear) for analyses that do not involve a silent external argument. We briefly return to Sigurðsson $(2011,2012 b)$ in footnote 32 below.
    [30] The present analysis thus presupposes a post-syntactic, dependent case analysis of the nominative/accusative distinction. It is fully compatible with all case-features being assigned post-syntactically, or with some case-features being assigned in the syntax. For example,

[^19]:    [31] It is also possible that some verbs, such as hlakka 'look forward to', project the experiencer as an external argument in SpecVoiceP when the subject is nominative. With this option too, we expect case mismatches in fragments to be impossible.

[^20]:    [32] An alternative analysis in the same spirit, but with no silent external argument, is available in the theory of Sigurðsson (2011, 2012b). Sigurðsson (2011: 167-168, 2012b) analyzes accusative subjects as being embedded under a special Voice head, Voice ${ }_{\text {fate }}$, which takes no external argument, but which generally preserves the accusative-assigning $v^{*}$ head. Nominative

[^21]:    Substitution involves Voice ente $_{\text {fite }}$ triggering "case-star deletion" at PF, turning $v^{*}$ into v , leading to nominative instead of accusative. This analysis, like (81), predicts mismatches to be possible; the choice between nominative and accusative is entirely at PF. However, it is also possible that some speakers use a different Voice head entirely, such as "expletive" Voice ${ }_{\text {EXPL }}$, which would also lead to nominative. This alternative would require that Voice ${ }_{\text {EXPL }}$ is compatible with the "fate semantics" characteristically associated with Voice Fate. . This possibility is supported by the fact that Sigurðsson (2009: 266,fn25) claims that hrekjast 'be driven' has fate semantics, despite having the -st clitic ordinarily associated with expletive Voice. We emphasize that our general point is that the variation follows if Nominative Substitution corresponds to a genuine syntactic difference for some speakers, but not all.

