Telling Allomorphy from Agreement

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1 Introduction

Recent years have seen an increased interest in the phenomena of allomorphy and suppletion. Following Embick (2010) and Bobaljik (2012), quite a number of papers have discussed these phenomena against the framework of Distributed Morphology. At the heart of the discussions was usually the question about the type of relation between the trigger and the target of allomorphy or suppletion. Most people seem to agree that allomorphy and suppletion (or context-sensitive spell-out more generally) are subject to some notion of locality in the sense that the trigger and the target of allomorphy cannot be arbitrarily far away from each other. Nonetheless, there is still a considerable amount of disagreement about how large the relevant locality domains are and whether they are defined in terms of structural relations or in terms of linear precedence.

Interestingly, the vast majority of papers dealing with the phenomenon are concerned with cases where the trigger and the target of allomorphy are part of the same word. So, we might wonder whether being part of the same word is a necessary condition for a morpheme to trigger allomorphy on another one. Embick (2010) briefly mentions this question and notes that nothing in the theory of Distributed Morphology in general or in his version of it in particular would lead us to expect that allomorphy is restricted to words. But he does not give any examples of allomorphy relations crossing word boundaries.

And indeed, quite a number of syntactic analyses make use of allomorphy rules that take into account information beyond the relevant word boundary. Some famous examples include Emonds (1986), who analyzes the forms of subject pronouns in English as allomorphs licensed by their

position in SpecIP[1] or Abney (1987), who notes that suppletion of pronominal possessors in SpecDP (e.g. *my book* as opposed to **me's book*) must take into account information on D.

Ackema & Neeleman (2003; 2004) give quite a number of phenomena which, as they argue, should receive an analysis in terms of context-sensitive spell-out rather than actual syntactic agreement. The phenomena they discuss include pronoun alternations (cliticizing vs free pronouns) but also certain agreement alternations depending on word order in Dutch or Arabic. To my knowlegde, they were the first to provide for a basic theory of form alternations including information beyond the word level.

Recently, Bobaljik & Harley (2017) discuss examples from the Uto-Aztecan language Hiaki and claim that the pattern of verbal root suppletion found in this language is an instance of 'word-external' allomorphy. Bobaljik & Harley argue in detail that the pattern found in Hiaki should not be derived by means of syntactic agreement but rather by means of context-sensitive spell-out rules of the type used for allomorphy or suppletion. They stress the necessity to distinguish between instances of allomorphy and suppletion on one hand and actual syntactic agreement on the other hand.

In this paper, I add three case studies to this discussion, two of which include information lying outside of the minimal word, thereby substantiating the claims above that allomorphy and suppletion can indeed be sensitive to information outside of its minimal word.[2] The unifying factor of the three case studies in this paper is that all of them have previously been analyzed as instances of syntactic agreement, which I argue is the wrong approach. In all three cases, we will see evidence that an analysis in terms of allomorphy and suppletion is empirically more adequate. Building on these case studies, I will try to show that, even though a differentiation between these two phenomena might be difficult in a given case, they are still fundamentally different with respect to certain diagnostics.

The main contribution of this paper is the attempt to come up with a coherent set of diagnostics to distinguish allomorphy and agreement. Only if we have such diagnostics, we can actually go look for more reliable cases to identify word-external instances of allomorphy and suppletion

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[1] Similar approaches have subsequently been taken by Sobin (1997); Parrott (2009); Weisser (2018b), who also discuss cases of subject pronouns in coordination contexts as well as the notion of linear intervention, etc.

[2] Following the literature of Distributed Morphology, I take the term *word* to mean any X^0-node of a syntactic derivation. X^0-nodes are not necessarily simplex as several syntactic and postsyntactic processes (head-movement, Local Dislocation, etc.) can create complex X^0s.

and actually make significant progress in determining the locality domains for these phenomena.

I will proceed as follows: Each of the three subsections of Section 2 will discuss an instance of allomorphy which has previously been misanalyzed as syntactic agreement. For each of these instances, I will provide arguments that a morphological analysis in terms of allomorphy is preferable. Section 2.1 deals with the alternation of a preverbal particle in Breton. Section 2.2. discusses an alternation of the interrogative complementizer in the Busan dialect of Korean. Section 2.3 discusses two patterns of the well-known facts about complementizer agreement in Dutch and Bavarian German. In Section 3, I will then review six empirical points that served as arguments for an analysis in terms of allomorphy. I will critically review each of these arguments, discuss where it applies and where it does not. In doing so, I hope to arrive at a coherent set of diagnostics to distinguish allomorphy and agreement. Section 4 concludes.

2   Case Studies

In this section, I will present three case studies about cases of context-sensitive allomorphy that have previously been misanalyzed as instances of agreement. Two of these case studies involve cases where the trigger and target are not part of the same word, thereby supporting the claim that the word is not the correct locality domain for allomorphy and suppletion.

For each of these case studies, I will discuss in detail why an analysis in terms of context-sensitive spell-out is to be preferred over an analysis in terms of syntactic agreement. This discussion will pave the way towards Section 3, where we will come up with a coherent set of diagnostics to distinguish between allomorphy and agreement.

2.1   Breton 'Rannigs'

The first case study comes from the Celtic language Breton. Breton clauses are typically analyzed as having a Celtic-typical VSO-structure except for matrix clauses which seem to have verb-second like properties similar to many Germanic languages. The preverbal position in Breton matrix clauses can be occupied by a number of different constituents (see i.a Anderson (1981),Schafer (1995)) and is usually associated with interpretations such as focus, contrastive focus or topic (Schafer (1995); Rezac (2004)).

(1) a. Yannig a lenn   eul levr   bemdez
         Johnny R reads a   book every.day
     b. Eul levr   a lenn   Yannig bemdez
         A   book R reads Johnny every.day
     c. Bemdez   e lenn   Yannig eul levr
         every.day R reads Johnny a   book
         'Johnny reads a book every day.'
     d. An den a varvas a   vuoc'h
         the man R died   his cow
         'The man's cow died.'   Anderson (1981: 31)
     e. Brav   e kavan   ar pezh-c'hoari-se
         beautiful R find.1SG the piece-play-this
         'I find this play beautiful.'
     f. D'ar   merc'hed e kasas   ar pakad-se
         to.the girls   R sent.3SG the package-this
         'He sent this package to the girls.'   Rezac (2004: 476)

In (1a), we have a subject in preverbal position but the same position can also be occupied by the direct object in (1b), an adverb in (1c), a possessor in (1d), a predicative adjective in (1e) or a preposition phrase in (1f). Even verb phrases and bare verbs can be moved to the first position. In this case, the base position of the verb is usually filled with a dummy verb.

(2) a. Kouezhañ a ra   glav
         fall.INF   R do.3SG rain
         'It rains.'   Rezac (2004: 464)
     b. Debriñ krampouezh a raio   Yannig e Kemper hiziv
         eat   crêpes   R will-do Johnny in Quimper today
         'Johnny will eat crêpes in Quimper today.   Anderson (1981: 30)

The element of interest to the discussion is the little particle referred to as the *'rannig-verb'* glossed as R in the examples in (1) and (2). The element is generally claimed to be a part of the verbal complex and always imme-diately precedes the main verb of the clause in verb-second contexts. In verb-initial contexts, the element does not occur.

As can be seen the element shows some variation in form, varying be-tween *a* and *e*. This variation is demonstrably not phonologically condi-tioned. Since it affixes to the verb (*rannig-verb* translates to 'small part of the verb'), we might expect the alternation to track phonological fea-tures of the verb but it clearly does not since we find *a* in (1a) and *e* in (1c),

both with the same verb *lenn*. Similarly, it can be shown that the alternation does not track the phonological features of the element preceding it. Rather, the standard analysis is that the rannig tracks the syntactic category of the element in preverbal position (see e.g. Anderson (1981); Urien (1999); Rezac (2004); Jouitteau (2007) and others). If the element in preverbal position is a nominal category, then the rannig surfaces as *a* and if it is not, it surfaces as *e*.

In (1a), (1b) and (1d), we have a nominal element in preverbal position, namely a nominal subject, direct object or a possessor. In (1c), (1e) and (1f), we have elements in first position that are not nominal: An adverb, an adjective and a preposition phrase. Thus, in the former cases, the rannig surfaces as *a* and in the latter cases it surfaces as *e*.
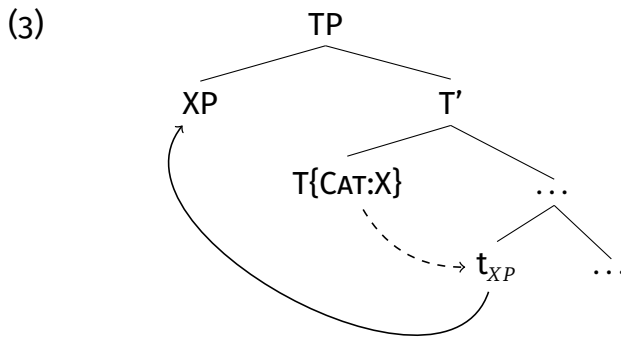
A minor complication comes in when looking at verb fronting constructions such as the ones in (2). Here, apparently, the fronted constituent, i.e. an infinitival verb or verb phrase counts as nominal for the purposes of choosing the rannig. This might seem unusual at first but Jouitteau (2007) argues extensively that infinitival verbs and verb phrases count as nominal for other processes in Breton as well.[3]

So, once we accept that infinitival verbs and verb phrases count as nominal for the purposes of choosing the rannig, we can arrive at a fairly simple generalization to capture the distribution of its forms: The rannig occurs as *a* when it follows a nominal element and *e* elsewhere.

Rezac (2004) analyzes this alternation as an instance of syntactic agreement. Under his analysis, the rannig is the realization of T and probes for a categorial feature of an XP in its complement domain. The syntactic category of X is then copied onto T and the element moved to SpecTP. This is illustrated in (3).[4]

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[3] Note as well that similar facts hold for other Celtic languages where infinival verbs are often called *verbal nouns* such as Welsh Willis 1998 or (Old) Irish (see Guilfoyle (1994) McCloskey (2017)

[4] Throughout this paper, solid arrows indicate movement, dashed arrows indicate syntactic Agree, and dotted arrows indicate that features are relevant to another head in the postsyntactic component.

(3)

$$
\begin{array}{c}
\text{TP} \\
\diagup \quad \diagdown \\
\text{XP} \qquad\qquad \text{T'} \\
\qquad\quad \diagup \quad \diagdown \\
\text{T\{CAT:X\}} \qquad \cdots \\
\qquad\qquad\quad \diagdown \\
\text{t}_{XP} \qquad \cdots
\end{array}
$$

However, there are quite a number of reasons why deriving the alternation of the rannig as the result of syntactic agreement is unsatisfactory and why deriving it as an instance of allomorphy is a better choice. First, we note that syntactic agreement with respect to syntactic category of an element is very uncommon. Elements in the verbal spine are known to probe for ϕ-features of certain arguments but they do not probe for categorial features. Allomorphy on the other hand is frequently subject to categorial distinctions. A nominalizer in English for example takes different forms depending on whether it nominalizes an adjective or a verb.

(4)	sad-ness	(5)	cry-ing
	ADJ-NLMZ		V-NLMZ

Second, we can observe that actual ϕ-agreement in Breton patterns differently. ϕ-agreement in Breton always tracks the subject, regardless of which element moves to the first position. Further, visible ϕ-agreement in Breton is, as is the case in Celtic languages in general, subject to the complementarity effect. This means that agreement is only visible when the trigger of agreement is dropped. This is clearly not the case with the rannig. Crucially, the rannig is *only* overt if its trigger is overt.

Finally, the relation between the rannig and the element in the prefield differs from regular agreement in that it is limited to a specific position, which is obligatorily adjacent. In languages with a certain amount of word order flexibility such as many V2 languages, agreement is typically not limited to a certain position in the tree. Jouitteau (2007) observes the same noting the fact that *"this type of agreement can never be made at a distance, which designs it as a very peculiar Agree relation."*

All of these arguments, some of which are similar in spirit to the ones given by Bobaljik & Harley (2017) for Hiaki, suggest an analysis according

to which the choice of the rannig is an instance of allomorphy. The Vocabulary Items in (6) simply associate a functional head with two allomorphs. The *a*-allomorph is inserted in the context of a nominal element, and the *e*-allomorph is inserted elsewhere. I have abbreviated the functional head they realize as R since the exact locus of the rannig is subject to a bigger debate. Schafer (1995) locates it in C^0 while Jouitteau (2007) assuming a more elaborate architecture of the left periphery assumes the rannig to be a realization of Fin^0.

(6) $R \leftrightarrow$ /a/ /$[_{DP}]$ _
        $R \leftrightarrow$ /e/

However, in order for the Vocabulary Items to derive the correct pattern, the specifier of R must be accessible contextual information when the form for R is inserted.[5]

(7)
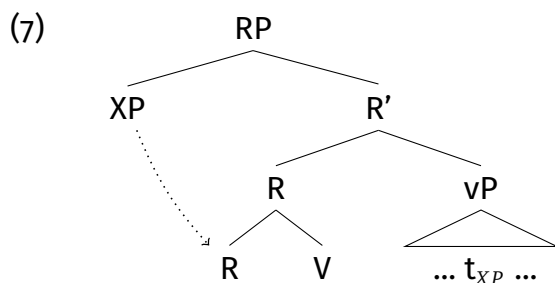
Nothing else needs to be said. There is no need to posit crosslinguistically uncommon ϕ-probes in the clausal spine if Vocabulary Insertion of R can consider featural properties of SpecRP when inserting R.

Also, I would like to note that the element triggering the allomorphy is derived by movement, it necessarily occupies a specifier. Elements inside the complement can never affect the choice of the rannig. Bobaljik & Harley (2017)'s locality condition on context-sensitive spell-out, which excludes specifiers from the set of possible allomorphy triggers alltogether, is clearly incompatible with the pattern at hand.

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[5] Note that we cannot tell whether the allomorphic realization of R^0 is actually sensitive to linear or structural adjacency since both conditions are always met simultaneously. For more discussion see the alternation discussed in Section 2.3, where the distinction between structural and linear adjacency becomes crucial as well as Section 3.2.

2.2 Busan Korean Interrogative Complementizers

The second case study comes from the Busan dialect of Korean, which unlike standard Korean exhibits an interesting alternation in the interrogative complementizer. The following minimal pairs illustrate the attested four-way distinction.

(8)   a.   Ni-ka   chayk-ul   ilk-**na**?
             you-NOM book-ACC read-COMP
             'Are you reading a book?'
       b.   Ni-ka   mwe-lul   ilk-**no**?
             you-NOM what-ACC read-COMP
             'What are you reading?'
       c.   Ce   salam-i   Swumin-i-**ka**?
             that man-NOM Swumin-COP-COMP
             'Is that man Swumin?'
       d.   Ce   salam-i   nwu-∅-**ko**?
             that man-NOM nwu-COP-COMP
   'Who is that man?'   Lee & Barrie (2017: 2)

Traditionally, the four forms are listed as four different complementizers: *-na*, *-no*, *-ka* and *-ko*. But Lee & Barrie (2017) convincingly argue that the forms can be subanalyzed as consisting of two independent alternations, the consonant alternation between *-k-* and *-n-* and a vowel alternation between *-a* and *-o*.

They show that both alternations are governed by completely independent triggers and should thus be analyzed independently of each other. The vowel alternation between *-o* and *-a* encodes whether the question at hand is a wh-content question or a polarity question. *-o* indicates a wh-question ((8b) and (8d)) and *-a* indicates a polarity question ((8a) and (8c)). The consonantal alternation however, independently encodes whether the predicate of the clause is a nominal or a verbal predicate. *-n-* indicates a verbal predicate ((8a) and (8b)) and *-k-* indicates the presence of a nominal predicate ((8c) and (8c)).

The use of the *-k-*-complementizer unsurprisingly also extends to embedded nominalized clauses as can be seen in (9). In other words, nominalized clauses count as nominal for the purposes of complementizer choice.
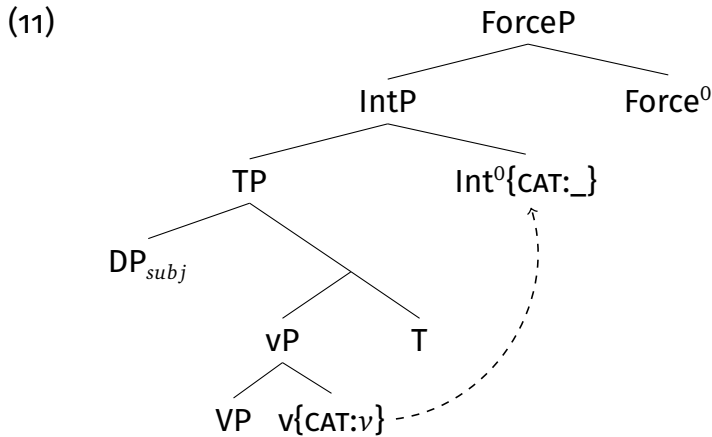
(9) Cinswu-ka   [ni hakkyo-e   ka-nun-∅-**k-a**   (/*-n-a) mwul-ess-ta
Cinswu-NOM you school-LOC go-IRR-NMLZ-K_n-V_{pol} K_v-V_{pol} ask-PAST-DECL
'Cinswu asked (me) whether you were going to school.' Lee & Barrie
(2017: 7)

In order to do justice to their insight that the complementizer in Busan Korean is actually a bimorphemic complex, Lee & Barrie (2017) assume a minimally split CP consisting of the two heads Int^0 and $Force^0$. The vowel alternation is located in $Force^0$ and the consonant alternation is part of Int:[6]

(10)   ForceP
         ┌────────┴────────┐
        IntP   Force
      ┌───┴───┐   │
     IP   Int   *o/a*
     △   │
    ...   *k/n*
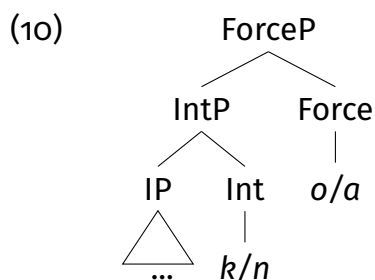
Based on this analysis, Lee & Barrie (2017) assume that the alternation of the Int^0-head arises as the result of AGREE of the Int-head with the syntactic category of the predicate lower in the tree. As in Rezac's analysis of Breton, the probe does not look for a specific feature, any categorial feature will be good enough to value Int^0's probe. The following tree illustrates the derivation proposed by Lee & Barrie (2017):

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[6] The head $Force^0$ is sensitive to whether the question is a polarity question or whether it is a wh-question. This can presumably simply be due to a difference in the head's feature specification itself. Lee & Barrie (2017) assume a more complex derivation according to which $Force^0$ probes for a *wh*-feature in the tree and depending on whether it finds one, it will be spellt out differently. I have nothing to say about the alternation of $Force^0$ as I will limit myself to the consonant alternation of Int^0.

(11)

$$
\begin{array}{c}
\text{ForceP} \\
\diagup \quad \diagdown \\
\text{IntP} \qquad \text{Force}^0 \\
\diagup \quad \diagdown \\
\text{TP} \qquad \text{Int}^0\{\text{CAT:\_}\} \\
\diagup \quad \diagdown \\
\text{DP}_{subj} \\
\quad \diagup \quad \diagdown \\
\text{vP} \qquad \text{T} \\
\diagup \quad \diagdown \\
\text{VP} \quad v\{\text{CAT:}v\}
\end{array}
$$

The Int^0-head probes for a syntactic category feature and, ignoring T for some reason, finds v, whose categorial feature is then copied onto Int^0. Similarly, a nominal feature n of a nominal predicate would have been copied. Upon Vocabulary Insertion, the featural distinction is locally available in Int^0 itself and can thus be referred to by the specification on the vocabulary items.

This analysis certainly works but has a number of severe downsides. First, we again must note that agreement with respect to syntactic category is relatively unusual. In fact, Lee & Barrie (2017) note that their case study and Rezac's study on Breton are the only ones which make use of a probe looking for a syntactic category feature. Second, it is quite unclear why the probing indicated in (11) is able to skip T, and maybe even more importantly, the syntactic category of whatever is in SpecTP. Both elements have syntactic category features that should be able to satisfy the probe on Int. And according to the any definition of Minimality, both elements should definitely be closer to Int and thus bleed AGREE between Int and v. This is especially problematic for the subject position in SpecTP, which is, in the vast majority of cases, presumably filled with a nominal element. This nominal element should then trigger the nominal variant of Int even in cases where there is a verbal predicate below.

Thirdly, we find familiar cases of blocking effects where *any* element intervening in between the nominal predicate and the complementized actually bleeds the insertion of *-k-* into Int. Consider the following examples. In all cases, we have a nominal predicate, hence we would expect Int^0 to be realized with *-k-*. However, since there are various elements intervening in between the copula and complementizer, insertion of *-k-* is blocked and we resort to what seems to be the default marker *-n-*. In

(12), there is an overt tense morpheme intervening in between the copula and the morpheme that realizes Int^0. In the previous examples, we had a zero realization of T, which did not block the occurrence of -*k*-. In (13), we have an evidential marker intervening between the copular and the complementizer and finally, in (14), we have a volitionality marker intervening.

(12) a. Ce salam-i Mincwun-i-yess-**n**-a *(k-a)?
         that man-NOM Mincwun-COP-PAST-COMP$_v$-POL COMP$_n$-POL
         'Do you remember that this man is Mincwun?'
     b. ku salam-i nwu-∅-yess-**n**-o *(k-o)?
         that man-NOM who-COP-PAST-COMP$_v$-Q$_{wh}$ COMP$_n$-Q$_{wh}$
         'Who was that man?'

(13) a. Ce salam-i Mincwun-i-te-**n**-a *(k-a)?
         that man-NOM Mincwun-COP-EVID-COMP$_v$-POL COMP$_n$-POL
         'Do you remember that this man is Mincwun?'
     b. ku salam-i nwu-∅-te-**n**-o *(k-o)?
         that man-NOM who-COP-EVID-COMP$_v$-Q$_{wh}$ COMP$_n$-Q$_{wh}$
         'Who do you think that man is?'

(14) a. Ce salam-i Mincwun-i-keyss-**n**-a *(k-a)?
         that man-NOM Mincwun-COP-VOL-COMP$_v$-POL COMP$_n$-POL
         'Do you think that this man is Mincwun?
     b. ku salam-i nwu-∅-keyss-**n**-o *(k-o)?
         that man-NOM who-COP-VOL-COMP$_v$-Q$_{wh}$ COMP$_n$-Q$_{wh}$
         'Who do you think that man is?'

In order to derive these cases, Lee & Barrie (2017) resort to the stipulation that these heads (overt tense, evidentiality, and volitionality) in fact have a syntactic category feature that blocks AGREE between Int^0 and the copula or the nominal predicate down below. Moreover, all of these heads seem to be syntactically verbal, thereby copying a v-feature onto Int^0. In other words, overt T has a v-feature but covert tense does not. It is clear that this analysis is merely a stipulation that tries to account for a morphological blocking effect by means of syntactic intervention. Again, as in the Breton case, the analysis works, but it makes a number of undesirable stipulations and leaves a number of questions unanswered.

I would like to submit that a morphological analysis where the consonant alternation of the interrogative complementizer in Busan Korean is modelled in terms of context-sensitive spell-out is much more straightforward and captures the attested pattern with far less stipulations. I follow Lee & Barrie (2017)) in assuming that the complementizer is actually a bi-

morphemic complex and the syntactic structure they propose. Unlike in their analysis, I do not assume any agreement probes on Int^0 but simply assume that upon Vocabulary Insertion, the realization of Int^0 is sensitive as to whether it is adjacent to a nominal category. As mentioned in the previous section, allomorphy with respect to syntactic category is very widespread. I thus assume the following entries for the realization of Int^0:

(15)   a. $Int^0 \leftrightarrow k \ / n^0\_$
         b. $Int^0 \leftrightarrow n$

The -k--allomorph is inserted when right-adjacent to a nominal category. I have abbreviated this with the label n trying to capture the natural class between (a) nominal predicates and (b) nominalized verbal predicates. It is possible that future research will reveal a more fine-grained distinction here but I assume that nonetheless there must be a common feature that unifies these two contexts.[7]

The -n--allomorph, which is mainly used with verbal predicates counts as a default exponent, thereby accounting for cases where it occurs with nominal predicates and overt material in between n and Int^0 as in (12),(13),(14). These cases would be linearized as (16) and this linearization would not allow for the insertion of (15a).

(16)   ROOT-n-EVID-INT-FORCE

Abstractly speaking, the case studies from Breton and Busan Korean share a number of properties. In both cases it is the categorical feature (nominal vs non-nominal) which governs the form alternation of a functional head in the verbal spine. And in both cases, the use of the nominal allomorph required linear adjacency to the nominal element in question. The major difference was whether the nominal element triggering the alternation on the functional head is in fact part of the same word or not. But apart from

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[7] A final remark is in order about the presence of a copula in examples like (8c). Here, a copula -*i*- intervenes between the nominal predicate and the complementizer. Crucially, this element may not count as an intervener to disrupt the adjacency between the nominal head and the complementizer. However, note that the copula is almost always phonologically zero and only in few phonologically conditioned cases, it is -*i*-. We might then hypothesize that the copula is always phonologically zero and the -*i*- is inserted as a phonological repair. Following Embick (2010) for more cases where zero allomorphs do not disrupt linear adjacency, we could skip the zero copula for the purposes of adjacency. Another possible solution would be that the copular itself also bears a nominal feature as it only occurs in nominal contexts. This feature could either be inherent on the copula inherited from its complement.

that, the alternations seem to be quite parallel. That suggests that there is no crucial underlying difference between allomorphy withing words and across word boundaries.

2.3 *Complementizer Agreement*

The final case study that I want to highlight in this paper is about the well-known cases of complementizer agreement in certain dialects of Dutch as well as Bavarian German. Complementizer agreement has gained a lot of attention during the early years of this century as at seems to provide evidence for the existence of a ϕ-feature set on C and various modellings of feature inheritance from C to T (see amongst many others Haegeman (1992); Carstens (2003); van Koppen (2005); Richards (2007); Chomsky (2008); Haegeman & van Koppen (2012)). At the same time however, a number of people remarked that complementizer agreement seems to behave fundamentally different with respect to a number of properties and that it looks much more like a surface phenomenon that is to be dealt with on PF rather than in syntax proper (see e.g. Ackema & Neeleman (2004); Fuß (2008); Miyagawa (2009); Fuß (2014)).

I will follow the arguments presented in favor of the second analysis, ultimately arguing that complementizer agreement is not an instance of agreement at all. Rather it is an instance of allomorphy as it shows all the hallmark properties of context-sensitive spell-out: (Linear) Adjacency requirements, insensitivity to hierarchical structure and a very restricted set of alternating forms.

I will not provide entirely new arguments for the PF-approach but I will show how recent discussions about the restrictions on context-sensitive spell-out can nicely derive the attested variation between Dutch and Bavarian German. In Section 3, we will see how the inclusion of complementizer agreement phenomena informs the discussion about the general properties of context-sensitive spell-out.

In the first subsection, I will look at complementizer agreement in some Dutch dialects and provide the general evidence for a treatment of complementizer agreement as a PF phenomenon. In the second subsection, I will then highlight some interesting differences found in Bavarian German. The discussion presented in this section draws heavily on the treatments in van Koppen (2005; 2007; 2012); Haegeman & van Koppen (2012) and Fuß (2014).

2.3.1 Complementizer Agreement in Dutch

The phenomenon of complementizer agreement refers to cases where the complementizer of embedded clauses shows alternations that are sensitive to the ϕ-features of the subject of the clause. Consider the minimal pair in (17). A plural feature on the subject following the complementizer triggers a different form of the complementizer.

(17) a. … dat ik zuinig leef
          that I   frugal live.SG
          'that I live frugally.'
      b. … datt-e   we gewoon lev-e
          that-PL we normal live.PL
          'that we live normally.'   Kartwjik Dutch, Barbiers et al. (2005)

As alluded to in the previous subsection, complementizer agreement was often taken as evidence for either the close relation between T and C or the existence of an independent ϕ-probe on C (see Haegeman & van Koppen (2012) for discussion). Either way, complementizer agreement was assumed to indicate the presence of ϕ-features of the subject on the complementizer in one way or each other. However, it was also noted that complementizer agreement differs from regular ϕ-agreement with respect to quite a number of properties (for a more elaborate discussion of these arguments see the discussion in Fuß (2014)).

First, as pointed out in Zwart (2006) complementizer agreement seems to be crosslinguistically rare. If the relation between T and C or the presence of an independent ϕ-probe constituted a deep property of the universal make-up of clause structure, it would be a mere coincidence that this phenomenon is only attested in a handful of West Germanic dialects.

Secondly, complementizers at least in Dutch or Bavarian German do not exhibit a full paradigm of ϕ-features. Most dialects show only a two-way or three-way distinction. In line with other observations about the inflectional markedness tendencies in Germanic, it is almost always the second person (singular and/or plural) which triggers an agreeing form of the complementizer. Other ϕ-feature combinations usually do not trigger a reflex on the complementizer. As Fuß (2014) notes, if there were really a complete set of ϕ-features on C, there would be no reason why C should not exhibit a proper inflectional paradigm.

(18) Complementizer Agreement in Tegelen Dutch:

Singular		Plural	
1SG	∅	1PL	∅
2SG	-s	2PL	∅
3SG	∅	3PL	∅

van Koppen (2005: 40)

Thirdly, it has been observed by a number of people (see e.g. Ackema & Neeleman (2004); Fuß (2008)) that unlike regular ϕ-agreement, complementizer agreement often requires the subject in question to be linearly adjacent. Different dialects vary as to how strict the adjacency requirement actually is. In some dialects, even a focus marker, which is left-adjoined to the subject, leads to degraded acceptability.

(19) a. ... de-s   / *det doow   morge   kum-s
          that-2SG / that you.2SG tomorrow come-2SG
          '...that you will come tomorrow.'
      b. ... ?*de-s   / det auch doow   morge   kum-s
          that-2SG / that also you.2SG tomorrow come-2SG
          '...that you too will come tomorrow.'   Tegelen Dutch:
          van Koppen (2012)

Under the plausible assumption that the syntactic structure in (19a) and (19b) is comparable at least concerning the position of the subject, it is somewhat mysterious why the complementizer does not show agreement in (19b).
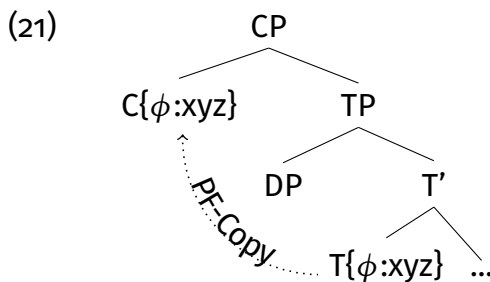
Fourth, it has been noted that unlike regular T-agreement in Dutch, alleged C-agreement shows linearity effects with conjoined subjects. In (20), the first conjunct is second person singular, which is sufficient to trigger the inflected form of the complementizer.

(20) Ich dink de-s   doow en   ich ôs   kenn-e treff-e
      I   think that-2SG you   and I   each.other.1PL can-PL meet
      'I think that you and I can meet.' Tegelen Dutch, van Koppen (2005)

van Koppen (2005) et seq. takes closest conjunct agreement to be an argument for a syntactic account an provides an explanation for the pattern in terms of equidistance. However, more recent treatments of closest conjunct agreement in the world's languages seem to agree that a PF-approach is empirically more adequate (see e.g. Marušič, Nevins & Saksida (2007),Bhatt & Walkow (2013),Marušič, Nevins & Badecker (2015). See Nevins & Weisser (2018) for an overview and some arguments). The point

is that closest conjunct agreement cannot without further ado be taken as an argument against a PF-account. If anything, recent accounts have capitalized on the distinction of syntax and PF to account for linear adjacency effects.

For these reasons, some people including Ackema & Neeleman (2004) and Fuß (2008; 2014) have proposed a PF-account. Fuß (2014) for example proposes an analysis according to which agreement features are subject to a postsyntactic copying operation that copies the set of ϕ-features from T onto C and where it is spellt out given the availability of a vocabulary item.

(21)

```
                          CP
                        /    \
              C{φ:xyz}       TP
                   ⋮        /    \
                 PF-Copy  DP      T'
                      ⋱          /  \
                        T{φ:xyz}   ...
```
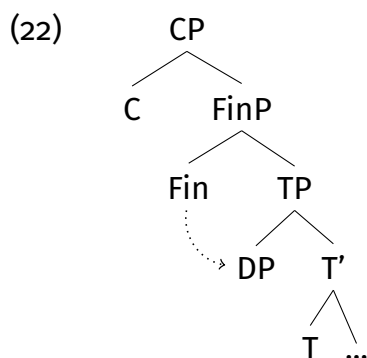
Three comments are in order about this analysis. First, it is not clear what this PF-copying operation is and how it is constrained. The heads T and C are still realized in different positions; hence they do not undergo merger. Secondly, it must be said that this derivation does not help to solve the problem noted above. If the whole set of ϕ-features is copied, it is unclear why C-agreement should have consistently fewer realizations that T-agreement. Thirdly, as Haegeman & van Koppen (2012) point out, we find several cases where T-agreement and C-agreement target different elements. Consider the case of first conjunct agreement in (20) above. Complementizer agreement targets the first conjunct whereas T-agreement signals agreement with the whole conjunction phrase. This difference can hardly be modelled with a ϕ-feature copying mechanism, as Haegeman & van Koppen (2012) rightly point out.

I would like to sketch an alternative in terms of word-external allomorphy which maintains the benefits of Fuß' PF-account and helps to solve these problems. It does not employ a copying operation but rather assumes that the features in the immediate vicinity of the head to be realized can be taken into account for the realization of a head as well. The underlying idea is simple. If we allow for the realization of a head X to be sensitive to features that are located in the immediate vicinity of X (but not on X itself), no need for an adhoc feature copying operation arises. We can

simply say that complementizer agreement is allomorphy of a C-element sensitive to the features either of T or SpecTP.

For the sake of concreteness, I am assuming a minimally split CP, along the lines argued for for German in Mohr (2005); Weisser (2015; 2018a). This allows us to have the heads C itself and C-agreement vary independently of each other. This is necessary since, in most varieties, several different complementizers usually show the same (or similar inflection patterns).

(22)

```
          CP
         /  \
        C    FinP
            /    \
          Fin     TP
            ⋮     /  \
             ↘ DP    T'
                    /  \
                   T   ...
```

By assumption, Fin^0 is usually realized as zero, except when the right kind of ϕ-features are in its immediate context, which in Dutch dialects at least includes SpecTP. In the dialect of Tegelen Dutch, for example, a second person singular feature in SpecTP will trigger the realization /s/, all other combinations will not be pronounced:

(23)   Vocabulary Items for Tegelen Dutch:

    a. Fin^0 ↔ /-s/ / _ [2SG]
    b. Fin^0 ↔ /∅/

The Vocabulary Item in (23a) specifies that the second singular bearing element be linearly adjacent (indicated by the underscore). Such requirements are well-known from allomorphy patterns (see e.g. the Korean data in the previous section) but not necessarily from regular ϕ-agreement. And they straightforwardly derive the cases of intervening focus markers in Tegelen Dutch (see (19)) and the first conjunct agreement patterns in (20). Finally, the linear adjacency requirement straightforwardly derives the difference in targets between C and T. The alternation in C (or, in our

case in Fin^0) is regulated by the adjacency requirement whereas the alternation in T is not. T-agreement is actual agreement in ϕ-features.[8]

Finally, the fact that the realization of Fin^0 cares more about its linear neighbor than about structural positions also potentially predicts that, given the right conditions, an element could trigger complementizer agreement that is not a subject but rather disrupts linear adjacency between the subject and the complementizer. As noted by Haegeman & van Koppen (2012), such a phenomenon is in fact attested with possessor extraction in a very specific construction from West Flemish:

(24)   omdat / omda-n   André en Valère tun juste underen computer
        because / because-PL Andre and Valere then just their   computer
        kapot   was.
        broken was.SG
        'because Andre and Valere's computer had broken down just then.'

Interestingly, complementizer agreement is possible in (24) but not without the two particles *tun juste*.

(25)   omdat   / *omda-n   André en Valère underen computer kapot
        because / because-PL Andre and Valere their   computer broken
        was.
        was.SG
        'because Andre and Valere's computer had broken down just then.'

These kinds of particles are usually treated as adjuncts and should thus not interfere with syntax proper, so it is unclear why the possibility of complementizer agreement is not given in (25). Thus clearly more needs to be said about the syntax of the possessor construction in general and why (25) cannot receive a possessor extraction structure. Nonetheless it is interesting that it does not always seem to be the structural subject which triggers complementizer agreement. Rather, it seems to be about linear closeness rather than about a given position in the tree.

---

[8] As was noted above, different dialects of Dutch differ as to whether rigid adjacency is required to trigger complementizer agreement or not. Other dialects like West Flemish seem to allow for focus markers or even adverbs, etc. to intervene. This parallels the findings that adjuncts can, in some cases, be ignored for the purposes of evaluating adjacency requirements (see e.g. Bobaljik (1995; 1998)). I will discuss this issue in more detail in Section 3.

2.3.2 Complementizer Agreement in Bavarian

In the previous subsection, we saw that an analysis in terms of allomorphy can straightforwardly account for the basic pattern of complementizer agreement and nicely derives linearity effects with intervening focus markers, adverbs and cases of first conjunct agreement. In this section, I want to show that the pattern of complementizer agreement found in Bavarian which differs in a number of significant points from the one found in Dutch, follows from a slightly different notion of allomorphy coupled with independent differences between German and Dutch clause structure.

Crucially, as discussed in the introduction, allomorphy regulated by linear adjacency is only one of the patterns argued for in recent years. Following Bobaljik's seminal work on stem suppletion in comparative and superlative formation of adjectives, many approaches were put forward that try to capture limits on allomorphy in terms of structural closeness rather than linear closeness. Bobaljik's original observation was that linear adjacency does, at least in some cases, not suffice to limit suppletion. He observed that the superlative morpheme never triggers stem suppletion on the adjective even though it is linearly adjacent in quite a number of languages. As a result he formulated the idea that at least certain cases of allomorphy and suppletion are sensitive to features that are relatively local in a structural sense, not in a linear sense.

In the following, I will argue that this is exactly what happens in cases of complementizer agreement in Bavarian. The starting point is the observation that subjects in German - unlike in Dutch (see Zwart (2011)) - do not always move to SpecTP (see e.g. Grewendorf (1989); Diesing (1992)). As a result, I want to argue that, in Bavarian, complementizer agreement is not sensitive to the features of the linearly closest specifier, rather the realization of Fin^0 is sensitive to the features of T. This makes sense since there is usually no intervening subject. This is illustrated in (26):

(26)
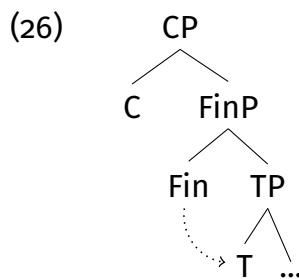
Crucially, Fin^0 being sensitive to the features of T^0 is not about linear adjacency. Since German is head-final in the TP-domain but head-initial in the CP-domain, Fin^0 and T^0 could not be linearized further apart from each other; at least in embedded clauses where there is no T-to-C movement. Still, structurally speaking, T and Fin^0 are local enough for T to trigger context-sensitive spell-out of Fin.

This makes a number of predictions: First, we predict there to be no linear intervention effects since linear order does not play a role in this case of allomorphy. This is borne out. Fuß (2014) notes that the vast majority of speakers of Bavarian do not mind scrambled elements in between the subject and a complementizer showing agreement. In (27), an adverbial phrase and a focus marker linearly intervene between the complementizer and the subject.

(27)   dass-sd   [bei dem Brachdwedda]   seibsd du   in den Biargooadn
        that-2SG in   this splendid.weather even   you in the beer.garden
        geh-sd.
        go-2SG
        'that even you go to the beer.garden in this splendid weather.' Fuß
        (2014)

The second prediction is that, in cases where T is elided in the course of the derivation, Fin finds no features to be sensitive to, and shows no agreement. Cases of this sort are found with Right Node Raising. In (28), we have coordination of two CPs as can be seen from the presence of two complementizers. But due to Right Node Raising, the verb of the first conjunct is deleted along with the inflection on T.

(28)   a. ??[dass-sd du   noch Minga] und [dass da Hans noch Truchtlaching
              that-2SG you to   Munich and that   the Hans to   Truchtlaching
              geh-t]
              go-3SG
        b.   [dass du   noch Minga] und [dass da Hans noch Truchtlaching
              that   you to   Munich and that   the Hans to   Truchtlaching
              geh-t]
              go-3SG
              'that you go to Munich and that Hans goes to Truchlaching.'
              Fuß (2014)

Under the assumption that RNR is in fact deletion of heads under recoverability, we can derive the the contrast in (28). The Fin-head in the first

conjunct does not find a T-head in its local domain which provides the features for Fin to be realized.

Finally, it predicts that unlike in Tegelen Dutch, we do not find cases of closest conjunct agreement. Rather we should find resolved agreement with coordinated subjects. And in fact, unlike in Tegelen Dutch, resolved agreement is indeed possible:

(29) dass-ts [du   und da Hans] noch Minga   geh-ts.
      that-2PL you.SG and the Hans to   Munich go-2PL
      'that you and Hans go to Munich.'   Fuß (2014)

It must be noted though that, somewhat surprisingly under our analysis, first conjunct agreement is also possible.

(30) dass-sd [du   und da Hans] noch Minga   geh-ts.
      that-2SG you.SG and the Hans to   Munich go-2PL
      'that you and Hans go to Munich.'   Fuß (2014)

For these cases, I would like to contend that, occasionally, structurally determined allomorphy can be overridden by a more surface-y linearly determined rule similar to the one proposed for Dutch. In the vast majority of cases, it does not matter whether speakers of Bavarian evaluate the allomorphy rule for Fin^0 on the basis of linear order or structural hierarchy; it is only in cases like (29) and (30) where this makes a difference. And it seems that when evaluating the realization of Fin^0, speakers may be able to choose either option.

Before proceeding to the next section, I briefly want to address the issue of structurally conditioned allomorphy on the basis of the Bavarian complementizer agreement data. In the previous instances of allomorphy, the alternation was either conditioned linearly (Busan Korean or Dutch CA) or we could not tell (Breton). In the case of Bavarian, I have proposed that we need to allow for structurally conditioned allomorphy. But it is clear that allowing for structurally conditioned allomorphy can sometimes blur the distinction between allomorphy and agreement that this paper seeks to diagnose. And as some of the reviewers have pointed out, the Bavarian data could also be derived in terms of agreement as the typical objections we raised in the previous subsections do not carry over to Bavarian. I agree that an analysis in terms of agreement is also possible and therefore the case of Bavarian might be viewed as a borderline case between allomorphy and agreement.

The main argument that I nonetheless think that the Bavarian pattern should be conceived of as allomorphy comes from the order of operations in the Right Node Raising data in (28). What we find is that Right Node Raising of T bleeds complementizer agreement on Fin^0. This is unexpected given the standard architecture of the system if the alternation of the complementizer is due to syntactic agreement. Right Node Raising constructions are typically analyzed as involving ellipsis or multidominance. Ellipsis is typically thought of as postsyntactic deletion. Multidominant structures are by assumption resolved by linearization, which is also a postsyntactic process. But what we see is that these processes (postsyntactic deletion or linearization) can affect the alternation on the complementizer. It thus follows that whatever causes the alternation also happens postsyntactically. In this respect, again, complementizer agreement differs crucially from regular agreement, which, as has been known since Ross (1969) typically survives the deletion of its controller:

(31)   Some people think that there are no such rules but there are/*is
         ~~such rules~~.   Ross (1969:273)

In (31), the in-situ subject in the second conjunct stayed low and was deleted. But nonetheless the verb above the ellipsis site shows plural agreement. This is clearly different from cases of complementizer agreement where the marker disappears if its trigger undergoes ellipsis. An account in terms of allomorphy captures this straightforwardly if we assume that ellipsis (or linearization in a multidominance account) precedes Vocabulary Insertion. An account in terms of syntactic agreement would at least need to make very unusual stipulations about the order of operations of ellipsis (linearization) and syntactic agreement.

To sum up, I argued that the two general patterns of allomorphy and suppletion that have been argued for extensively in the recent literature, i.e. allomorphy based on linear order and allomorphy based on structural hierarchy, are both reflected in the phenomenon of West Germanic complementizer agreement. When combined with the independent properties of the two languages, namely that Dutch obligatorily moves its subjects to SpecTP whereas Bavarian does not, these two patterns of allomorphy map very neatly onto the empirical differences between complementizer agreement in these languages. Dialects like Tegelen Dutch show very strict linearity effects with focus markers and adverbs as well as first conjunct agreement and even intervention effects in the possessor extraction construction. This follows under the assumption that allomorphy of

the Fin-head in the left periphery is determined under linear adjacency. Bavarian on the other hand showed no linear intervention effects with adverbs or focus markers and, in addition, facts involving Right Node Raising showed that complementizer agreement depends on the presence of T in the language. These facts received a straightforward explanation under the assumption that the realization of Fin, in Bavarian, is determined under structural adjacency with T.

3   Towards a set of reliable diagnostics

In this section, I will revisit some of the arguments of the previous discussion from a more abstract perspective so that they can be used as diagnostics for allomorphy or agreement.

3.1   Triggers

Firstly, I would like to submit that, in many cases, agreement and allomorphy can be distinguished on the basis of the trigger of the alternation in question. Agreement is typically restricted to elements with a specific property. This property is usually modelled as to whether a potential goal X has a certain feature or not. With ϕ-agreement for example, this property is often thought to be case marking (following the logic of Bobaljik (2008) and Preminger (2014)). ϕ-agreement targets elements which bear a certain case marker such as nominative case. More abstract notions of agreement, where sequence of tense effects or negative concord are modelled in terms of Agree behave similarly. Negative concord items target elements which have a polarity feature and probes on embedded tense heads naturally target heads with tense features.

Allomorphy, I would like to submit, behaves differently. Allomorphy does not target specific features but rather targets specific positions which may be, as we have seen in the case studies of the previous section, linearly or structurally defined. In other words, allomorphy scans a given position for a certain feature whereas agreement targets elements with a specific type of feature for the feature value.

For this reason, we find that allomorphy often shows linear intervention effects with elements that are of completely different types. Recall the intervention effects in Busan Korean where any kind of element - a tense marker, or a evidential or a volitionality marker - could intervene

between the predicate and the complementizer. With agreement however, we only ever find relativized intervention effects where an element only intervenes if it is sufficiently similar to the target in terms of the feature that was probed for.

It is clear though that not in all cases we can distinguish between the two types of targets. If a feature such as nominative case is uniquely associated with a position in the tree (e.g. SpecTP), then this diagnostic fails to apply since we will never be able to tell whether it is the position that is targeted or the feature.

3.2 *Adjacency*

Adjacency is another diagnostic that is frequently used to distinguish between syntactic agreement and allomorphy (or PF-effects, more generally). If the inclusion of adverbs or adverb phrases, focus markers, any kind of parenthesis affects the alternation on a given head, this is often taken to indicate that we are not dealing with syntactic agreement as such but rather that PF plays its role too (possibly in the guise of allomorphy).

That said, linear adjacency requirements alone are not indicative of PF-effects in general. In a given context, the syntax might simply not provide a possible position for an adverb or an adverbial phrase. In the case of Breton for example, the *rannig* was always immediately adjacent to the element that triggered its form as /a/ or /e/. However, since we do not expect adverbs in between heads and their specifiers, this does not tell us much about whether we are dealing with allomorphy or agreement.

Another question regarding adjacency effects is how strict these effects have to be to serve as a convincing argument for or against an analysis in terms of adjacency. For cases of complementizer agreement, van Koppen (2006) and Haegeman & van Koppen (2012) emphasize that not all dialects of Dutch show the same kind of adjacency requirements. Some dialects such as Tegelen Dutch disallow any kind of material in between the inflected complementizer and the subject, others allow for example focus markers but disallow adverbs.[9]

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[9] Haegeman & van Koppen (2012) also give examples involving topicalized objects in between C and the subject but since embedded topicalization is very marked to begin with, the crucial difference is merely a judgment of double question mark vs starred. Given that relativized adjacency effects indeed should receive an explanation in terms of prosodic domains, I take these examples to be somewhat uninformative since the prosody of a very marked construction is hard to evaluate. Possibly these examples can receive an alternative explanation in terms of parenthesis.

Ackema & Neeleman (2003; 2004) who propose that the domain for context-sensitive spell-out is the prosodic domain, argue that some smaller elements are easier to integrate into a prosodic domain that others. If we pursue this line of argumentation for the cases at hand, we can submit that focus particles can be integrated into a prosodic domain including the complementizer and the subject but full adverbial phrases cannot. The issue might be further complicated by the proposal made by Wagner (2005) that prosodic domains are possibly also recursive entities that are built up bottom-up.

So, in clear cases where the intervention of a non-homogeneous set of elements intervene between the trigger and the target of an alternation and lead to a default realization, it is plausible to believe that we are dealing with instances of allomorphy rather than with actual agreement.

3.3 *Inventory of alternating forms*

Another descriptive difference between agreement and allomorphy seems to be that the latter exhibits a significantly lower inventory of alternating forms. Allomorphs usually show two alternating forms, in some cases three. Agreement alternations often yield complete paradigms referring to different combinations of ϕ-features, which are furthermore relativized to a subset of contexts. Many fusional languages for example employ different sets of agreement forms for different tense or aspect specifications. The same does not seem to be true for allomorphy. In the Breton case, we saw two alternating *rannigs*, indicating whether the element in the prefield is of nominal type or not. The same was true for the complementizer alternation in Korean. With the cases of complementizer agreement, possibly a borderline case, we saw that many dialects only show an alternation in marked person number combinations such as second person singular or plural.[10] In the Bavarian case, we find that second singular and second plural have their distinct forms.

It is not per se clear, why instances of allomorphy show less distinctions that agreement paradigms. Certainly, nothing in the modelling of these two alternations reflects this. In a standard DM-system, for exam-

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[10] The term *marked* here referring to a purely descriptive observation that some Germanic languages seem to treat second person as somewhat special in a morphological sense as, for example indicated by the first-third syncretism in verbal inflection of plural in Standard German. Such a syncretism pattern has been identified as crosslinguistically unusual (see e.g. Corbett (2006); Baerman, Brown & Corbett (2006)).

ple, each inflectional affix is provided by a single Vocabulary Item stored independently in the lexicon. In a similar way, each allomorph is stored as a single Vocabulary Item. The only difference is presumably that allomorphs are distinguished by contextual features whereas inflectional affixes are distinguished by the actual feature content they realize. One may capitalize on this distinction by positing that contextual features are harder to store or learn in the first place.

Nonetheless, the distinction might serve as a simple preliminary diagnostic to distinguish the two operations but, as with all the other diagnostics as well, it is certainly not without counterexamples. As van Koppen (2006) et seq. has shown, there is a great amount of variation between different Dutch dialects some of which show more alternating complementizer forms than others.

3.4   Restrictions on types of features

Another point where allomorphy and agreement diverge is the kind of the features that govern the alternations in question. For agreement, we have a relatively good idea what kind of features play a role in determining the agreement affixes. The straightforward case are of course ϕ-features, which typically govern agreement on verbs or nouns (e.g. in the case of possessor agreement). A more abstract notion of agreement may provide for other kinds of agreement to model non-local depedencies in a clause. An Agree-based theory of negative concord for example might assume that polarity features can be exchanged between certain heads in the clause. The same holds, of course, for Agree-based theories of sequence of tense, etc. But crucially, in all of these cases, it is clear why a head in question probes for certain features.

But with allomorphy, the pattern is certainly less clear. The heads that seemingly encode the alternation are usually not (or not necessarily) the ones that are typically associated with the type of features at hand. While we have reasons to assume that an embedded tense head probes for tense features of a higher clause in order to determine its relative value, it is, for example, not clear why the verb in Breton should probe for the syntactic category of its specifier or why the complementizer in Busan Korean should probe for the syntactic category of the predicate of the clause.

The same, I would like to argue, also holds for the case of complementizer agreement in Dutch. Even though there are a number of attested examples of complementizer agreement out there, complementizers in

Germanic languages are not typically associated with the features of the subjects of their clauses.[11]

Thus, I would like to submit that the type of features that govern a given alternation might serve as a diagnostic to determine whether we are dealing with an instance of allomorphy or with an instance of agreement. As already alluded to in course of the case study about Breton, syntactic category features are well-known to govern allomorphy but do not participate in agreement.

3.5 *Order of Operations*

Further, I want to argue that the order of operations that affect the morphological alternation in question can be used as a diagnostic. In the case of the Bavarian complementizer agreement, we saw that ellipsis of the trigger of the alternation rules makes the alternation disappear. This is not the case with standard subject-verb agreement which typically survives non-realization of its argument due to ellipsis. If operations such as ellipsis which are typically thought to apply postsyntactically affect the alternation, then this suggests that the source of the alternation is very likely postsyntactic too. It is clearly beyond the scope of this paper to propose a list of processes which could serve as a diagnostic for the postsyntactic application of rules since each of the processes in question deserves a paper of its own. The case of ellipsis destroying the context for the complementizer alternation in Bavarian is certainly a robust case since ellipsis is generally thought to be a postsyntactic process. Other processes that one might consider are various head-formation processes (head-movement, lowering or Local Dislocation) which are sometimes analyzes as applying postsyntactically. But clearly more work needs to be done to figure out what counts as a postsyntactic process.

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[11] As the reader presumably knows, following Haegeman (1992) and Chomsky (1995), there are a great number of papers out there that try to argue that the C-projection in the clause is actually typically the host of subject agreement features in the clause and that the reason that we hardly ever see subject agreement on C is due to an intricate system of feature inheritance that percolates these features down to T. Given what I have said in Section 3.3, I would like to argue that this is the wrong approach and the occasional occurrence of ϕ-feature driven alternations on C should be viewed as an exception rather than as a rarely surfacing default.

3.6   Generalizations about Agreement

The final diagnostic that I want to point out in this section concerns the fact that even though agreement seems to have very different properties from language to language, it is often the case that, within a language, agreement behaves very regular, and shows clearly defined properties in terms of direction, targets, etc. Take the case of Breton for example. We have seen that generally agreement with verbs and prepositions only ever surfaces when the trigger of agreeement is morphologically unpronounced. In the Celtic literature, this is sometimes referred to as the complementarity effect. But we also saw that the alternation of the *rannig* actually presupposes an overt trigger. Thus, if the alternation of the *rannig* really were due to agreement, it would violate a very strict rule about agreement of the language. It strikes me as empirically preferable if we manage to derive the alternation as resulting from something other than agreement, thereby maintaining the complementarity effect as a strong principle of agreement in Breton.

A similar point is made by Bobaljik & Harley (2017), who argue that verbal root suppletion governed by plural feature on one of the verb's arguments should not be analyzed as agreement. They cite Durie (1986) who conducted a study on verbal root suppletion and found that the root suppletion is crosslinguistically sensitive to direct objects as well as subjects of intransitives, i.e. root suppletion shows an ergative-absolutive distribution. Crucially this finding is completely independent of the otherwise attested agreement pattern in the language. The related Uto-Aztecan language Huichol for example shows actual ϕ-agreement with subjects and objects, both of which has a nominative-accusative alignment, but still shows ergative-absolutive alignment for suppletion. If both processes were really the result of similar processes, it would be unclear how this difference could be accounted for.

Thus, if agreement is known to be perfectly regular with respect to a certain property but a given alternation violates this regularity, this might indicate that the alternation is actually not due to agreement but rather due to some other process such as allomorphy.

4   Conclusion

The major goal of this paper was to substantiate claims made in the literature that there are cases of context-sensitive spell-out and, more con-

cretely, cases of allomorphy, which are due to a trigger that lies outside of the domain of the word. In other words, we need a to allow for the realization of a morpheme to be sensitive to something outside of its morphosyntactic word. I argue that, if we want to derive these kinds of alternations as the result of syntactic Agree (i.e. as the standard way to derive non-local dependencies in syntax), we are forced to redefine properties of Agree in such a way that making actual predictions about what is possible and what is not becomes virtually impossible.

Thus, I argued that we arrive at greater empirical adequacy if we allow for two different ways how non-local alternations can be modelled. Having two relatively well-defined processes in the grammar to model non-local alternations is, in my view, empirically favorable as opposed to one that must be redefined for every instance of non-locality out there. Thus, building on three case studies from Breton, Busan Korean and Germanic, I proposed a set of diagnostics to distinguish non-local alternations which are the result of syntactic agreement and non-local alternations which are the result of allomorphy.

Syntactic Agree scans hierarchically defined domains of a tree looking for a proper goal to its probe. Features that a head agrees with are typically the ones associated with the semantics of the head itself. Finally, agreement often exhibits a great number of alternating forms and obeys crosslinguistic or language-specific properties of agreement. Allomorphy, I argued, is the sensitivity of a head to a feature in a given position. It typically is only a two-way contrast and the features that trigger allomorphy on a head do not have to be associated with the semantics of that head in any way. Finally, allomorphy does not obey established generalizations on agreement. We should keep these things separate when studying their properties so as not to miss important generalizations about either phenomenon.

Abbreviations

1 = 1st person, 2 = 2nd person, 3 = 3rd person, ACC = accusative, ADJ = adjective, COMP = complementizer, COP = copula, DAT = dative, DECL = declarative, EVID = evidential, INT = interrogative, IRR = irrealis, LOC = locative, NMLZ = nominalizer, NOM = nominative, PAST = past tense, PL = plural, Q = question marker, SG = singular, R = rannig, VOL = volitional

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Competing interests

The author has no competing interests to declare.

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