Licensing imperative subjects without an imperative operator

Evidence from word order in West Germanic imperatives

Astrid van Alem¹

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Abstract

It is often assumed that imperatives contain a covert imperative licenser, such as an imperative operator. The purpose of the operator is to bind the imperative subject, and thereby derive a number of the syntactic properties of imperatives. In this paper, I show, based on variation in V2 imperatives in varieties of Dutch and German, that if there is an alternative way of licensing the imperative subject, presence of an imperative operator is not necessary. I put forth the novel observation that V2 imperatives are only allowed in varieties that have verbal umlaut. I argue that verbal umlaut corresponds to a syntactic encoding of person features on the imperative verb, which can bind the imperative subject. This voids the need for an imperative operator in SpecCP, and gives way to V2 imperatives in V2 languages like Dutch and German. The implication is that a covert imperative licenser is a last resort mechanism, rather than an inherent part of imperative clauses.

Keywords Imperatives · V2 · West Germanic · Umlaut · Person · Microvariation

1 Introduction

Imperative subjects have many properties that we do not see in other clause types. For instance, they are often covert, but canonically refer to the addressee of the utterance, and they can license second person reflexives. Based on these properties, it has often been argued that imperatives contain an imperative licenser, such as an imperative operator, that binds the imperative subject, and assigns the addressee interpretation to it (Potsdam 1998; Portner 2004; Barbiers 2007; Bennis 2007; Zanuttini 2008). The

✉ Astrid van Alem
a.h.j.van.alem@hum.leidenuniv.nl

¹ LUCL, Leiden University, Leiden, The Netherlands

imperative licenser is taken to be obligatory (see in particular Zanuttini 2008; Zanuttini et al. 2012).

In V2 languages like Dutch and German, the imperative operator is thought to take the sentence-initial position of the clause (Barbiers 2007; Bennis 2007). This would block further movement to that position, leading to the expectation that imperatives are always V1, much in line with yes/no-questions, where a question operator occupies the sentence-initial position, obligatorily making them V1.

As observed by Barbiers (2013), the expectation that Dutch and German imperatives are V1 is not always borne out. In fact, there is variation across Standard Dutch, Dutch dialects, and German in whether they allow V2 imperatives, and regarding the kind of elements that can occupy the sentence-initial position. In Standard Dutch, V2 imperatives are always excluded. In German, on the other hand, V2 imperatives are allowed, with no clear restriction on the elements that can be fronted to the sentence-initial position. Eastern Dutch dialects can be said to occupy an intermediate position: V2 imperatives are allowed, but the only elements that can be in the first position are distal demonstrative pronouns. These contrasts are illustrated in (1–3) (parts of these pairs are taken or adapted from Barbiers (2013)).

(1) Standard Dutch

- a. Lees dat boek maar niet!
read that book PRTC not
'Don't read that book!'
- b. *Dat boek lees maar niet!
that book read PRTC not
(intended) 'Don't read that book!'
- c. *Dat doe maar!
that do PRTC
(intended) 'Just do it!'

(2) German

- a. Lies das Buch mal nicht!
read that book PRTC not
'Don't read that book!'
- b. Das Buch lies mal nicht!
that book read PRTC not
'Don't read that book!'
- c. Das mach mal!
that do PRTC
'Just do it!'

(3) Eastern Dutch dialects

- a. Lees da boek maar niet!
read that book PRTC not
'Don't read that book!'

- b. * Da boek lees maar niet!
 that book read PRTC not
 (intended) ‘Don’t read that book!’
- c. Da doe maar!
 that do PRTC
 ‘Just do it!’

The observation that V2 imperatives are allowed raises questions about the assumed imperative operator and its syntactic function. In particular, the question is how imperative subjects are licensed in V2 imperatives, as there is no space for the imperative operator in these clauses. The answer to this question can tell us more about the nature of imperative licensing and the syntax of imperatives in general.

The paper is structured as follows. In Sect. 2, I introduce the novel correlation between verbal umlaut and V2 imperatives, based on a large set of Dutch dialects, and present the relevant patterns in the data. In Sect. 3, I focus on the analysis of verbal umlaut. I show that verbal umlaut cannot be phonological, allomorphy, or agreement, and conclude that verbal umlaut is a case of suppletion. Section 4 turns to the analysis, and shows how the different patterns of verbal umlaut lead to different restrictions on V2 imperatives. In Sect. 5, I discuss an alternative analysis of V2 imperatives by Barbiers (2013), and show that the analysis presented here has better empirical coverage. Section 6 concludes.

2 V2 imperatives and verbal umlaut

In this section I will illustrate the novel observation of a correlation between V2 imperatives and verbal umlaut. Before we go on, a note on terminology is in order.

The term ‘umlaut’ is generally used to refer to stem vowel fronting in a derived or conjugated form. Historically, umlaut results from vowel harmony with a vowel in the derivational or conjugating morpheme; synchronically, however, this vowel has disappeared, and thus also the phonological trigger for the vowel fronting (more on which in Sect. 3). Umlaut is found on both nouns (e.g., with plurals or diminutives) and verbs (with certain inflections). In this paper, I use ‘verbal umlaut’ for stem vowel alternations in the present tense verbal paradigm, that are not phonologically induced.¹ In contrast with the traditional German terminology, I also use the term ‘umlaut’ for *e/i-Wechsel* (‘e/i-change’), which has similar properties and distribution as umlaut (although not the same historical origin). An example of a (sub)paradigm with verbal umlaut is given in (4). In this example, the umlaut is present in the 2P and 3P singular.

¹ This definition excludes stem vowel shortenings in Flemish dialects, since these are triggered when an added suffix creates a consonant cluster, i.e. have a phonological trigger (see e.g., De Vriendt 2003).

(4) Veghel Dutch²

a. Ik geef
<i>I give</i>
‘I give’ | b. Gij gift
<i>you.SG give</i>
‘You give’ | c. Hij gift
<i>he gives</i>
‘He gives’ |
|---|---|--|

As is well known, Dutch does not have verbal umlaut, while German does. Like with V2 imperatives, Dutch dialects take up an intermediate position, with some dialects having verbal umlaut. The crucial observation here is that the dialects that have verbal umlaut are the same as the dialects that allow for V2 in imperatives. In the following, this correlation will be illustrated geographically, numerically, and by additional fieldwork data.

The bulk of the data in this section comes from two large-scale projects on the documentation of variation in Dutch dialects, which resulted in the Syntactic Atlas of the Dutch Dialects (SAND) and the Morphological Atlas of the Dutch Dialects (MAND) (Barbiers et al. 2005, 2008; de Schutter et al. 2005; Goeman et al. 2008) and the online DynaSAND³ (Barbiers et al. 2006) and MIMORE⁴ tools. The SAND contains data on V2 imperatives. Here, I use the data from the two sentences in (5). Note that for most data points, the available data is for either of the two sentences in (5).⁵

- (5) a. Als je echt niet kunt wachten, **dan kom maar**.
if you really not can wait then come PRTC
‘If you really cannot wait, then just come.’
- b. Persoon A vraagt: ‘Zal ik koken?’ Persoon B antwoordt: ‘**Dat doe maar!**’
person A asks shall I cook person B replies that do
maar!
PRTC
‘Person A asks: “Shall I cook?” Person B replies: “Do that!”’

The MAND contains data on verbal umlaut in Dutch dialects. Here, the umlauting verbs *breken* (‘to break’) and *doen* (‘to do’) are used.

The MAND and SAND data are collected in slightly different time spans and use partially different data points. Therefore, it is hard to make a direct comparison for all the dialects. However, the data can be used to illustrate the correlation visually. The map in Figure 1 shows all the data points where we find V2 imperatives or verbal umlaut. It becomes clear immediately that the areas significantly overlap. Note also that the correlation crosses traditional dialect regions (depicted by the shading).

² All unsourced data in this paper is collected by my own fieldwork with native speakers of the dialects.

³ www.meertens.knaw.nl/sand

⁴ www.meertens.knaw.nl/mimore

⁵ The SAND also contains data on V2 imperatives with a fronted full NP or a fronted wh-phrase. These sentences were accepted in (almost) none of the dialects, and were the basis of Barbiers’ (2013) observation that V2 imperatives in Dutch dialects are restricted to distal demonstrative pronouns in the sentence-initial position.

Fig. 1 Geographical correlation verbal umlaut and V2 imperatives

For 183 dialects, there is data available for both verbal umlaut and V2 imperatives (see Table 1). Based on these data, we can give statistical evidence for the correlation between verbal umlaut and V2 imperatives. A chi-square test shows that there is a highly significant association between verbal umlaut and V2 imperatives: $\chi^2(1, N = 183) = 51.4, p < .01$. This means that it is very unlikely due to chance that a dialect has both verbal umlaut and V2 imperatives, or neither.

It is worth zooming in on the cases that behave exceptionally in light of the relation between verbal umlaut and V2 imperatives. First, there are five dialects where we do find V2 imperatives, but that do not have verbal umlaut. One of those dialects is located outside of the core area where we find V2 imperatives, and thus seems to be a false positive for V2 imperatives. For the remaining four dialects, it is possible that the verbs for which we have data (i.e. ‘to break’ and ‘to do’) are not umlauting in these varieties, but other verbs might be. Alternatively, it may be the result of the fact that different speakers have been consulted for V2 imperatives and verbal umlaut, reflecting different idiolects. I will leave a detailed investigation of those dialects for further research. Since this set of dialects makes up such a small proportion of the complete set of data points, I will treat them as noise for the purpose of this paper.

A larger number of dialects (42) have verbal umlaut, but do not allow for V2 imperatives. There are two potential explanations for the exceptional behavior of those dialects. The first is methodological: as noted above, for many dialects there is V2 imperative data available for just one of the two sentences. Since V2 imperatives are optional, the informants may have had a preference (for a variety of reasons) for the non-V2 version, thus underrepresenting the actual distribution of V2 imperatives. Alternatively, as suggested by a reviewer, it might be the case that the relation between

Table 1 Contingency table of V2 imperatives and verbal umlaut

	+ V2 imperatives	– V2 imperatives
+ Verbal umlaut	48	42
– Verbal umlaut	5	88

verbal umlaut and V2 imperatives is unidirectional, i.e. verbal umlaut is a necessary, but not sufficient condition for allowing V2 imperatives. Since adjudicating between these two possibilities requires further research into those dialects, I will leave the matter for further research. In the following, I will assume that all dialects with verbal umlaut allow V2 imperatives. However, should it turn out that the relation is unidirectional, only minor adjustments are required to the proposed analysis, for which see fn. 8.

Additional support for the correlation between V2 imperatives and verbal umlaut comes from fieldwork with dialect speakers from 14 locations in the east of the Netherlands. The locations are the following: Groningen Dutch: Scheemda; Dutch Low Saxon: Stadskanaal, Odoorn, Ootmarsum, Winterswijk, Didam, Zeddam; East Brabantic Dutch: Gemert, Veghel, Bergeijk, Someren; Limburg Dutch: Maasbracht, Tegelen, Heerlen. All 14 dialects have verbal umlaut, and 12 of them allow V2 imperatives with a distal demonstrative pronoun preceding the verb, confirming the picture described above.⁶ Note also that Dutch and German conform to the generalization: Dutch has neither V2 imperatives nor verbal umlaut, while German has both.

Verbal umlaut itself is not a uniform phenomenon. Variation is found in the contexts that trigger verbal umlaut within the present tense paradigm, and in the form of the imperative verb: while the imperative verb is a bare verb stem syncretic with a verb stem in the present tense paradigm in all varieties, it varies in whether the stem vowel is umlauting or not. We find three different patterns, of which the first is as follows: verbal umlaut is present with the 3P singular, and absent on the imperative verb. This pattern is found in the Dutch Low Saxon dialects (cf. map 1), and exemplified in (6).⁷

(6) Zeddam Dutch

<p>a. Ik geef
<i>I give</i>
‘I give’</p>	<p>b. Gij geef
<i>you.SG give</i>
‘You give’</p>
<p>c. Hij gif
<i>he gives</i>
‘He gives’</p>	<p>d. Geef!
<i>give.IMP</i>
‘Give!’</p>

⁶ The exceptions in my data set are Scheemda and Ootmarsum. For Scheemda, the informants note that verbal umlaut is not used anymore by younger speakers of the dialect, and is sometimes omitted by themselves as well. This might be an indication of ongoing language change which has already affected the possibility of V2 imperatives in this variety. It is less clear why Ootmarsum does not adhere to the correlation. However, the SAND reports that V2 imperatives are grammatical in Ootmarsum, indicating that it is present in this variety, but did not come out in the interviews for some reasons.

⁷ Because the MAND only provides data on the present tense paradigm, the data on the imperative verb form is exclusively from my own fieldwork.

Table 2 Summary of the data

Dutch Low Saxon dialects		Groningen and Limburg Dutch	East Brabantic Dutch	German
Umlaut pattern				
1P.SG	A	A	A	A
2P.SG	A	B	B	B
3P.SG	B	B	B	B
IMP	A	A	B	B
V2 imperatives	Only distal deictics	Only distal deictics	Only distal deictics	Yes

In the second pattern, verbal umlaut is present with 2P and 3P singular, and not on the imperative verb (7). We find this pattern in Groningen Dutch and Limburg Dutch.

(7) Heerlen Dutch

- a. Ich gef
I give
'I give'

c. Her gieft
he gives
'He gives'
- b. Doe giefs
you.SG give
'You give'

d. Gef!
give.IMP
'Give!'

In the final pattern, found in East Brabantic Dutch and in German, there is verbal umlaut with 2P and 3P singular, as well as on the imperative verb (8).

(8) Veghel Dutch

- a. Ik geef
I give
'I give'

c. Hij gift
he gives
'He gives'
- b. Gij gift
you.SG give
'You give'

d. Gif!
give.IMP
'Give!'

To summarize this section, the full range of variation is schematically given in Table 2.

3 Verbal umlaut is suppletion

In this section, I discuss the analysis of verbal umlaut. I will conclude that in the synchronic grammar, umlaut is suppletion, meaning that it is inherently specified for

the features it occurs in the context of. I arrive at this conclusion by eliminating other possible analyses, namely that umlaut is the result of a phonological rule, allomorphy, or agreement, and I will show that the suppletion analysis gives us a means to analyse the syncretism between the imperative verb and a present tense verb stem. The ramifications of this conclusion for the analysis of V2 imperatives will become clear in the following section.

We start by considering a phonological explanation of verbal umlaut. Since it is in my definition of verbal umlaut that it is not phonologically induced, this should be a non-starter, and it is easy to show that it is. First, as mentioned in Sect. 2, the original historical trigger for umlaut as vowel harmony with a conjugating morpheme has disappeared. Second, in the synchronic grammar, umlaut is a highly idiosyncratic process. Consider the partial paradigm of the German verb *geben* ‘to give’ in (9). The 3P singular verb is umlauting, while the 2P plural verb is not, despite them having the same inflectional morpheme *-t*. This excludes umlaut as the result of a phonological rule fronting the verb stem vowel in the context of a certain consonant, say a dental.

(9) a. Ich gebe
I give
‘I give’ | b. Er gibt
he gives
‘He gives’ | c. Ihr gebt
you.PL give
‘You give’ |
|---------------------------------------|--------------------------------------|--|

Another argument that umlaut cannot be phonological is that it does not always obtain in equal contexts. For instance, in contrast to *geben*, the minimally different verb *leben* ‘to live’ is not umlauting (10). A truly phonological rule should not be able to distinguish between different verbs when they are phonologically nearly identical. I thus conclude that verbal umlaut is not the result of an operation in phonology.

(10) a. Ich lebe
I live
‘I live’ | b. Er lebt
he lives
‘He lives’ |
|--|--------------------------------------|

The second option to consider is that umlaut is based in morphophonology, specifically the result of an allomorphy rule. I will argue that this analytic possibility also fails, by applying the tests for identifying word-external allomorphy from Weisser (2019), supplemented by the revisions argued for in van Alem (2020). Since the verb stem in verbs with verbal umlaut generally covaries with features of the subject, I will apply the tests based on the hypothesis that the subject is the trigger for allomorphy on the verb stem.

The first property of allomorphy is that it is triggered by elements in a specific linear position. This is not true for verbal umlaut, and easily illustrated with V2 sentences with preverbal or postverbal subjects (11.). The point is that the subject is in different linear positions, but this does not affect umlauting of the verb.

(11) a. Er gibt Maria ein Buch.
he gives Mary a book
‘He gives Mary a book.’ |
|--|

- b. Gibt er Maria ein Buch?
gives he Mary a book
 ‘Does he give Mary a book?’

German

The second property of allomorphy is that it requires linear adjacency between the trigger and the alternating morpheme, here the subject and the verb. This is also quite obviously not true for verbal umlaut, in the case of scrambling or embedded V-final sentences (12).

- (12) a. Gibt die Schlüssel der Junge dem Mann?
give the.ACC keys the.NOM boy the.DAT man
 ‘Does the boy give the keys to the man?’
 b. dass er Maria ein Buch gibt
that he Mary a book gives
 ‘that he gives a book to Mary’

German

A third (more tentative, cf. Weisser 2019; van Alem 2020) diagnostic for allomorphy is that it is triggered by features that are not canonical agreement features, such as person and number. We have seen in much detail (cf. Sect. 2) that verbal umlaut is sensitive to exactly these features, so it also does not pass this test for allomorphy.

Based on results of these diagnostics, I conclude that verbal umlaut is not the result of an allomorphy rule.

The next option to consider is that verbal umlaut is the result of agreement, in particular subject-verb agreement. Under this analysis, umlaut is predicted to have the same properties and distribution as subject-verb agreement. While in a number of cases this is true, in many Dutch dialects there are cases where the correspondence breaks down, and this shows that verbal umlaut cannot be agreement either. The crucial data are cases of ‘position dependent agreement’, i.e. verbal agreement differs depending on its position with respect to the subject. While there is variation in which φ -combinations are affected, it typically happens for 2P singular (cf. van Alem (2018)). The pattern is illustrated for Standard Dutch in (13).

- (13) a. Jij geef-t
you.SG give-AGR
 ‘You give’
 b. Geef jij
give you.SG
 ‘You give’

Most analyses of this phenomenon (for 2P singular) involve a mechanism that blocks or deletes agreement for the feature that distinguishes a 2P from a 1P on the verb in the verb-subject context (e.g., Ackema and Neeleman 2003; Bennis and MacLean 2006; van Alem 2018). In the absence of this feature, first person inflection is realized, rather than second person inflection.

The East Brabant dialects have both position dependent agreement and verbal umlaut for the 2P singular, and thus provide us with a test case to see if verbal umlaut behaves the same as verbal agreement. Specifically, if verbal umlaut is the result of subject-verb agreement, we predict that the verb stem is not umlauting if the 2P

singular inflection is blocked. This prediction is not borne out. Consider the data in (14).

(14) Veghel Dutch

a. Ik geef
<i>I give</i>
'I give' | b. Gij gif-t
<i>you.SG give-AGR</i>
'You give' | c. Gif=de gj
<i>give=2P you.SG</i>
'You give' |
|---|--|---|

In the subject-verb order, the verb agreeing with a 2P singular pronoun has a *-t* affix. In the verb-subject order, there is no overt inflection, as with the 1P singular. Crucially, however, the verb stem retains its umlaut. This shows that the verb stem and the inflection are dissociated, with only the inflection being determined via Agree.

So far, we have seen that verbal umlaut is not the result of a phonological rule, allomorphy, or agreement. The conclusion that suggests itself is that umlaut is a form of suppletion (in particular, 'weak' suppletion, cf. Dressler 1985), where the alternating forms are all stored and are specified for the structural contexts in which they can occur. This idea fits well with the properties of verbal umlaut that were problematic for the other approaches, such as its idiosyncratic nature, and its independence from syntactic factors such as word order and agreement. In addition, analysing verbal umlaut as suppletion provides us with a straightforward way of explaining the syncretism between the imperative verb and a stem form from the present tense inflection paradigm. In order to understand this point, we need some background.

As argued for by Caha (2009, 2018), competition for insertion of the sort that is imposed by the conclusion that verbal umlaut is suppletion, and that therefore both stem forms are stored with their context, requires phrasal spell-out. For various reasons, phrasal spell-out is incompatible with an insertion mechanism that obeys the subset principle, where the morpheme that is inserted contains a subset of the features that are spelled out. For instance, allowing both gives way to spelling out a whole sentence with a single morpheme, as long as that morpheme contains a subset of the features of the whole phrase. The problems disappear when, instead of the subset principle, the superset principle is adopted: the morpheme that is inserted corresponds to a *superset* of the features that are spelled out (see Starke 2010). The conclusion that verbal umlaut is suppletion is therefore only analytically meaningful if the assumption is adopted that spell-out inserts lexical items that are supersets, not subsets, of syntactic structures.

The syncretism between a verb stem in the present tense inflectional paradigm and the imperative verb can now be captured by the assumption that all nodes involved are part of the same functional spine. In particular, I propose the following structure for imperative verbs, which can at the same time be viewed as the lexical entry of the imperative verb:

(15)

In this entry, V determines the type of verb to be used; φ determines the context of where this verb is used; and IMP determines if the verb can be used as the imperative verb. IMP sits on top of φ since not all umlauting verbs are imperatives. A consequence of this move is that all imperative verbs (in languages with verbal umlaut) must be syntactically specified for φ -features. In non-imperative contexts, the syntactic structure will not contain the IMP node, but the lexical entry can still be used because of the superset principle. In the next section we will see the consequences of these conclusions, in particular the conclusion that the imperative verb in languages with umlaut is specified for φ -features, for the different patterns of V2 imperatives.⁸

4 Analyzing V2 imperatives

In a nutshell, the analysis of variation in V2 imperatives is as follows. I follow the idea that imperative subjects need to be bound by an element that assigns the addressee interpretation to it; the formal implementation is that the imperative subject has uninterpretable second person features that need to be checked (cf. Zanuttini et al. (2012)). In Sect. 3, I concluded that imperative verbs in varieties with verbal umlaut are specified for the person features that determine their form. My proposal is that the features on the imperative verb can bind the imperative subject, either fully (in which case the sentence-initial position is free for any element to move to), or partially (in which case elements can move to the sentence-initial position just in case they provide the other part required for binding the imperative subject). This voids the need for an imperative operator.

4.1 Dutch Low Saxon dialects

I will start by looking at the Dutch Low Saxon dialects. First, recall that in the Dutch Low Saxon dialects, V2 imperatives are restricted to having a distal demonstrative pronoun in the sentence-initial position (SpecCP). This is illustrated in (16). In addi-

⁸ Returning to the possibility that the relation between verbal umlaut and V2 imperatives is unidirectional (cf. Sect. 2), the analysis would need to be adjusted as follows. Instead of the imperative verb and the non-imperative stem it is syncretic with being stored under the same lexical entry, there are two lexical entries (that accidentally correspond to the same phonological form): the non-imperative stem contains the V and φ nodes, while the imperative verb contains the IMP node only. As a result, when using the imperative verb, no φ -features end up in C, and this will block V2 imperatives (the underlying analysis will be discussed in detail in the following section). While this adjustment raises some questions (e.g., why would a speaker choose to create two lexical entries for one phonological form?), the mechanism itself seems to be independently necessary (cf. fn. 9), making it a viable possibility.

tion, only 3P singular verbs are umlauting, and the imperative verb is not ((6), repeated as (17)).

(16) Didam Dutch

- a. Den doe mor es aan.
that do PRTC PRTC on
‘Put on that one.’
- b. *Da kuukske nem mor niet.
that cookie take PRTC not
(intended) ‘Don’t eat that cookie.’

(17) Zeddam Dutch

- a. Ik geef
I give
‘I give’
- b. Gij geef
you.SG give
‘You give’
- c. Hij gif
he gives
‘He gives’
- d. Geef!
give.IMP
‘Give!’

I assume that person features are organized in a geometry (Harley and Ritter 2002), given in (18). The representation of each of the persons is given in (19–21). Given these assumptions about the representation of person features, we can make a distinction between non-umlauting and umlauting verbs in Dutch Low Saxon dialects by referring to the [Participant] feature. In particular, the non-umlauting verb form is specified as [Participant], while the umlauting verb form is underspecified for all person features. Because the [Participant] feature dominates the [Addressee] feature in the geometry, [Addressee] can be left unspecified, and the [Participant] verb form will be used for both 1P and 2P.

(18)

(19) 1P

(20) 2P

(21) 3P

φ

In Sect. 3, I argued that the syncretism between the imperative verb and a verb stem can be analyzed by assuming that the specification for using a verb as an imperative sits on top of the verbal structure that determines its distribution in the present tense paradigm. In the Dutch Low Saxon dialects, the imperative verb thus has the entry in (22).

(22)

This means that the imperative verb has the ability to interact with and bind the imperative subject: when it Agrees with the subject, it can provide it with a person feature, namely [Participant]. The question is now what it means to be a second person, the required specification for imperative subjects. If we look at (19–21), we can see that 2P is specified as [Participant] and [Addressee]. In order to successfully bind the subject, we still need the [Addressee] feature.

In Dutch Low Saxon dialects, only distal demonstrative pronouns can occur in SpecCP. It is generally recognized that in deictic systems, the anchor typically coincides with the speech act participants (Imai 2003). As a means of formalizing this, it has been argued that spatial and temporal deixis are (partially) represented by the same feature system as the speech act participants, i.e. person (Barbiers 2013; Harbour 2016; Ackema and Neeleman 2018). It thus seems likely that the distal demonstrative that is in SpecCP of V2 imperatives is able to contribute person features to the clause. To formalize this, I follow the spirit of the proposals by Barbiers (2013) and Harbour (2016). The Dutch demonstrative system makes a distinction between objects (and times, locations, etc.) in proximity of the speaker and those at a distance from the speaker. Barbiers (2013) formalizes this as both second person pronouns and distal demonstratives being specified by the feature [Distal]; for Harbour (2016), it means that second persons and distal demonstratives are [— Author]. In the feature system I am using here, this translates into the distinction made by presence or absence of the feature [Addressee]: proximity to the speaker corresponds to the absence of [Addressee], while distance from the speaker corresponds to the presence of [Addressee]. I will therefore assume that distal deictics are specified as [Addressee].

Returning to imperatives, we can now see why in Dutch Low Saxon dialects, only distal pronouns are allowed in SpecCP: the imperative subject needs to be bound by the features [Participant] and [Addressee]. The imperative verb in C has a [Participant] feature. The distal deictic in SpecCP has an [Addressee] feature. The imperative subject is bound by both features. This is sufficient to derive imperative force, without making recourse to an imperative operator.

4.2 Groningen Dutch and Limburg Dutch

We will now continue by looking at Groningen Dutch and Limburg Dutch. Recall from Sect. 2 that these varieties only allow distal deictics in SpecCP in imperatives, illustrated in (23). Verbs are umlauting with 2P and 3P singular, but imperatives are not (24).

(23) Maasbracht Dutch

- a. Dan kom moar ens aan.
then come PRTC PRTC by
 ‘Then just drop by.’
- b. *Dè vriedag gef moar ’n feestje.
that Friday give PRTC a party
 (intended) ‘Have a party on that Friday.’

(24) Heerlen Dutch

a. Ich gef
 <i>I give</i>
 ‘I give’ c. Her gieft
 <i>he gives</i>
 ‘He gives’ | <ul style="list-style-type: none"> b. Doe giefs
 <i>you.SG give</i>
 ‘You give’ d. Gef!
 <i>give.IMP</i>
 ‘Give!’ |
|--|---|

Of interest regarding the person specification is the non-umlauting 1P stem, since the imperative verb is syncretic with this form. Given the person specifications in (19–21), I again assume that the 1P verb form is specified for [Participant], and that the entry for this verb is as in (25). In contrast to the Dutch Low Saxon dialects, the Groningen and Limburg Dutch varieties also have a stem form specified for 2P. This will block insertion of the [Participant] form with 2P (more on this in the next subsection).

(25)

In parallel with the Dutch Low Saxon dialects, Groningen Dutch and Limburg Dutch allow only deictics in SpecCPs of imperatives. We can now see why: the imperative

subject is bound by the [Participant] feature of the verb. In order to receive a full interpretation, it still needs to be bound by an [Addressee] feature. Distal deictics are specified for precisely this feature. Therefore, when a distal deictic moves to SpecCP, it can bind the imperative subject together with the imperative verb, resulting in imperative force, without making reference to an imperative operator.

4.3 German and East Brabantic Dutch

The final set of varieties to be discussed are German and East Brabantic Dutch. As shown in Sect. 2, these varieties have an umlaut pattern where 2P and 3P singular verb stems are umlauting, and imperative verbs are as well. The example paradigm (8) is repeated in (26).

(26) Veghel Dutch

<p>a. Ik geef
<i>I give</i>
‘I give’</p>	<p>b. Gij gift
<i>you.SG give</i>
‘You give’</p>
<p>c. Hij gift
<i>he gives</i>
‘He gives’</p>	<p>d. Gif!
<i>give.IMP</i>
‘Give!’</p>

Somewhat surprisingly, V2 imperatives are not parallel in German and East Brabantic Dutch. While in German, there are no restrictions on the types of elements that can occur in the sentence-initial position in imperatives (see (2) above), in East Brabantic Dutch this is restricted to distal deictics, much like the other Dutch varieties, and illustrated in (27). This contrast between German and East Brabantic Dutch will be discussed below in more detail.

(27) Bergeijk Dutch

- a. Daar goa moar es heen.
there go PRTC PRTC to
 ‘(You should) go there.’
- b. * Op die stoel goa moar zitte.
on that chair go PRTC sit
 (intended) ‘Sit on that chair.’

First, however, we will look at the feature specification of the imperative verb. Unlike 1P and 2P, there is no feature that can refer to both 2P and 3P, to the exclusion of 1P. In order to capture the distinction between 1P on the one hand, and 2P and 3P on the other hand, we must therefore assume that all three stems are fully specified. There is additional empirical support that this must be the case. In some varieties of East Brabantic Dutch, there are verbs that make a three-way contrast between stems, in addition to verbs that make the normal two-way contrast based on umlaut. I give here an example from Gemert Dutch:

(28) Gemert Dutch

a. Ik gaow
<i>I go</i>
'I go'	b. Gij got
<i>you.SG go</i>
'You go'
c. Hij gè
<i>he goes</i>
'He goes'	d. Go!
<i>go.IMP</i>
'Go!'

This type of paradigm provides empirical evidence that all stems correspond to fully specified entries. Note also that the imperative verb is syncretic with the 2P stem. I therefore conclude that the imperative verb in German and East Brabantic Dutch has the following lexical entry:

(29)

Given that the imperative verb has a full set of 2P features, it should be able to bind the imperative subject and assign a 2P interpretation to it by itself, without imposing featural requirements on the element that precedes the imperative verb. The prediction would then be that anything can precede the imperative verb, as long as it forms one constituent. When we look at German, this prediction is borne out: in German, V2 imperatives do not show restrictions on the elements that can occur in the sentence-initial position. This is fully compatible with the idea that the imperative verb binds the subject in the imperative, voiding the need for an imperative operator, and thus leaving open the SpecCP position, that can then be targeted by movement.

East Brabantic Dutch dialects, however, do not conform to the prediction that is made based on the feature specification of the imperative verb. In particular, while we expect no restrictions on which elements can be fronted in imperatives, in East Brabantic Dutch only distal deictics can occur in the sentence-initial position.

Note that East Brabantic Dutch dialects behave parallel to the other Dutch varieties discussed in this paper, i.e. the Dutch Low Saxon dialects and Groningen Dutch and Limburg Dutch. In both cases, the restriction to distal deictics was imposed by the absence of an [Addressee] feature on the verb that could bind the subject. It thus seems likely that the solution for the East Brabantic Dutch dialects can be found in a similar vein.

I propose that the relevant factor that determines the contrast between German and the East Brabantic dialects is to be found in position dependent agreement, which was briefly discussed in Sect. 3. In the most common case of position dependent agreement, the verb inflects like a 1SG verb when it Agrees with a 2SG pronoun in verb-subject word order (30).

(30) Standard Dutch

a. Ik geef
<i>I give</i>
'I give' | b. Jij geef-t
<i>you.SG give-AGR</i>
'You give' | c. Geef jij
<i>give you.SG</i>
'You give' |
|---|---|---|

This type of position dependent agreement is found in East Brabantic dialects (among many others) (see example (14) in Sect. 3), but not in German. In the analyses by Bennis and MacLean (2006) and van Alem (2018), position dependent agreement is the result of a difference in probing features on the heads T and C, in which the verb is spelled out in subject-verb and verb-subject word orders respectively (Zwart 1997). In particular (abstracting over labels), C only has a [Participant] probe for person, but no [Addressee] probe. When unvalued [Participant] gets valued by Agreeing with a 1P or 2P pronoun, it is interpreted at Morphology as a first person by default. As a result, when the verb is spelled out in C, it inflects as a 1P verb. In contrast, T has a full set of features, so when the verb is spelled out in T, it agrees as expected (in this case, as a 2P verb). This leads to the position dependent agreement paradigm.

The bigger conclusion that we can draw from these accounts of position dependent agreement is that the [Addressee] feature is not legible to C in dialects where C does not have an (unvalued) version of that feature itself. Let us assume that this also holds for the [Addressee] feature of the imperative verb in East Brabantic. C does have a [Participant] feature, so [Participant] of the imperative verb is legible. Recall now that imperative subjects need to be bound by a full set of second person features, i.e. [Participant] and [Addressee]. Since only [Participant] is legible on C, only this feature can Agree with the pronoun and partially bind it. In order to get full binding of the subject, [Addressee] is still required. Distal deictics are equipped with precisely this feature, so when they move to SpecCP of imperatives, they can also partially bind the subject. The imperative verb and the distal deictic fully bind the imperative subject, in parallel with the other Dutch varieties that allow for V2 imperatives but where this is restricted to the fronting of distal deictics. The patterns of V2 imperatives in German and East Brabantic Dutch thus also follow from the analysis in which the imperative subject is (partially) licensed by features on the verb, making fronting to the sentence-initial position in imperatives possible.

So far, we have seen how V2 imperatives are derived when the imperative verb is derived from an umlauting paradigm. The question is what happens to imperatives with plain, non-umlauting verbs, as imperatives with these verbs exhibit the same distribution regarding V2 imperatives as umlauting verbs. German poses us with an additional related question: a set of verbs in German does not use the umlauting stem as the imperative, but instead use the non-umlauting stem (similar to Groningen and Limburg Dutch). However, this does not impose restrictions on the elements that can

take the first position in the clause in imperatives. The solution I suggest, and that will solve both issues, is that it is the most highly specified imperative verb that will serve as a ‘model’ for all imperative verbs in the language (see Barbiers (2007) for a similar approach). In the course of language acquisition, the child learns that a substantial portion of the imperative verbs in their language is able to formally license the imperative subject, wholly or partially. They will then extrapolate this knowledge to other verbs; it is a reasonable and economic assumption that all imperative verbs have the same morphosyntactic properties. Because the model imperative licenses imperative subjects, all other imperative verbs will be able to do this too.

4.4 Interim conclusion

In the preceding section, we have seen examples from varieties of West Germanic where the imperative subject can be fully bound by features on (overt) elements in the projections dominating it. This leads to the option of having V2 imperatives. This result not only voids the need for a dedicated imperative operator, but shows that the imperative operator *cannot* always be there. Since the West Germanic varieties under discussion are strict main clause V2 languages, there is no room for the imperative operator in V2 imperatives. I therefore conclude that claims that every imperative contains a dedicated imperative operator (e.g., Zanuttini 2008) cannot be correct.

On the other hand, it also does not seem likely that an imperative operator is never present. In all varieties under discussion, V1 imperatives are also allowed. I assume that imperatives are V1 when there is no element in the clause that is marked with a topic feature that drives movement to SpecCP. This feature is also responsible for topicalization in declaratives. In the absence of movement to SpecCP, an imperative operator can be present, and in fact must be present when the verb cannot bind the subject completely, as is the case in all Eastern Dutch dialects. In Standard Dutch, it even appears to be the case that the imperative operator must always be present: Standard Dutch lacks umlaut, so it is a reasonable assumption that the imperative verb is just a verb stem, without any specification for person. Therefore, the imperative verb is unable to bind any features of the subject. This means that all the work is to be done by the element in SpecCP. This element is likely to be an imperative operator of some sorts. Since an overt topic in SpecCP cannot be equipped with a full set of features that bind the imperative subject, all such derivations will crash. Instead, only the derivations with an imperative operator in SpecCP survive in Standard Dutch, which is why Standard Dutch imperatives are always V1.⁹

The conclusion that presents itself is that the presence of imperative specific material is a last resort mechanism that can supply what is needed in order to get imperative force, if this material is not already present in the derivation. Interestingly, a similar conclusion is arrived at by Kaur (2020a, b) based on data from the Indo-Aryan language

⁹ One might wonder why the one unique imperative verb in Standard Dutch (*wees* ‘be’) does not license V2 imperatives. In fact, it follows from the theory presented here that it cannot. The form *wees* is indeed unique to imperatives, i.e. it is not used as a stem anywhere else in the paradigm. This means that *wees* is merely specified as IMP, not for person features. Since IMP can be regarded as an instruction for which form is to be inserted, but does not have to say anything about the formal licensing of imperative subjects, the actual imperative subject licenser needs to come from elsewhere, namely SpecCP, blocking V2 imperatives.

Punjabi. In Punjabi, there are two types of imperatives: a standard imperative with imperative-specific morphology on the verb, and an allocutive imperative, in which the imperative-specific morphology is absent, but where a (non-clause-type specific) allocutive agreement marker is present. Kaur observes that across clause types, the allocutive marker can only occur when there are no other person features in the C-T domain. For the allocutive imperative, this means that dedicated imperative material specified for second person features, meant to license the imperative subject, also cannot be present. Instead, she argues that the imperative subject is licensed by the second person (Addressee) features that trigger the allocutive agreement. In other words, Punjabi is another language in which the imperative subject can be licensed by ‘using’ features that are part of the structure for independent reasons. If this is the case, imperative specific material can or need not be present, much like what I concluded for West Germanic. Thus, while the surface manifestations are quite different, both in Punjabi and West Germanic we see the abstract mechanism that is involved in imperative licensing at work. This mechanism uses features that are independently present in the clause (as the result of allocutive agreement in Punjabi and umlaut in West Germanic), supplemented by imperative-specific material if necessary.¹⁰

5 Alternative analysis: Barbiers (2013)

Barbiers (2013) provides an analysis of the contrasts in V2 imperatives that differs from the one presented in the current paper. In this section, I will discuss his analysis, and show that it makes some incorrect predictions that mine does not.

Barbiers starts from the observation that German allows V2 imperatives, and that Eastern Dutch dialects do too, but restricted to distal deictic pronouns in the sentence-initial position. He furthermore notes that some German verbs have a unique imperative verb due to umlaut. This is illustrated with *geben* ‘to give’ in (31). Note that Barbiers considers the stem plus inflections to be the relevant form.

(31) German

a. Ich gebe	b. Du gibst
<i>I give</i>	<i>you.SG give</i>
‘I give’	‘You give’

¹⁰ Sjeff Barbiers (p.c.) (see also Barbiers (2013)) suggests that instead of insertion of an imperative operator, it might be the case that the subject moves to SpecCP in order to get licensed (for instance via interaction with an AddresseeP in the spirit of Sigurðsson (2011), at the same time blocking further movement to SpecCP. As far as I can see, this account and my analysis do not make different predictions. I have chosen to frame my analysis in terms of an operator in order to keep in line with the mainstream of imperative analyses, and because it allows for a uniform type of licensing of imperative subjects, namely through binding by features in CP. Regardless of the exact implementation, the take-away message of the analysis is that whatever sort of imperative-specific material is inserted in SpecCP, or lands there through imperative-specific movement, this operation is syntactic, blocking further movement to SpecCP, and has a last-resort character.

c. Er gibt
he gives
 ‘He gives’

d. Gib!
give.IMP
 ‘Give!’

In the spirit of many earlier proposals, he proposes that imperatives need to be marked as 2P in the CP. For German, he argues that the unique German imperative verb is specified as [2P]. When it moves to C, it can successfully mark the CP as [2P], leaving SpecCP free for other elements to move to.

For Eastern Dutch, he shows that there is a certain overlap between varieties that allow V2 imperatives and varieties that have subject clitic doubling of 2P in verb-subject word orders, illustrated in (32), where *de* is the clitic double of the subject.

(32) Veghel Dutch

a. Gij gif-t
you.SG give-AGR
 ‘You give’

b. Gif=de gij
give=2P you.SG
 ‘You give’

Barbiers decomposes 2P as [Person] and [Distal]. The idea is then that in the varieties with subject doubling, the clitic double, which has the feature [Person], incorporates into the declarative verb, marking it as [Person]. While in imperative clauses there is no overt subject doubling of the 2P subject, Barbiers proposes to extend the process that happens in declaratives to imperatives, with the result that imperatives in these varieties are also, covertly, marked as [Person]. In order to mark the imperative CP as 2P, the feature [Distal] is still required, and this can be supplied via a distal deictic pronoun, deriving the restricted nature of V2 imperatives in the varieties with subject doubling.

The analysis proposed by Barbiers overlaps to a certain extent with the analysis put forth in this paper. In particular, both analyses take into account contrasts in form that are induced with umlaut in German, and the analyses converge on the idea that marking of the imperative as 2P results from the combined force of the verb and the distal demonstrative in Eastern Dutch dialects. There are several empirical and theoretical reasons why I believe the current analysis is more attractive, though.

Starting with the empirical issues, Barbiers’ analysis both over- and undergenerates. It overgenerates, as all North-Brabant dialects have subject doubling of 2P pronouns of the type in (32), yet only the eastern varieties allow V2 imperatives. It also undergenerates, as partial subject incorporation is only found in the Brabant dialects. However, V2 imperatives are found also far outside of this area (see map 1). Barbiers claims that for some of those varieties, there is reason to believe that there is abstract subject doubling and subsequent incorporation. Since none of those varieties actually show subject doubling, this explanation seems far-fetched to me. In addition, the reliance on covert operations (both subject doubling in varieties outside of the area with overt subject doubling, as well as the extension of subject doubling to imperatives) makes for an untestable theory.

As shown in Sect. 2, the split between varieties that allow V2 imperatives and varieties that do not is almost exactly identical to the split between varieties with and

without umlaut; in particular the Brabantic dialects are interesting in this respect, as both properties show the same distribution, dividing a dialect area that is otherwise considered to be fairly uniform in two parts. The proposed correlation thus reaches a higher level of empirical adequacy than Barbiers' (2013) correlation.

The East Brabantic dialects themselves pose another issue. As shown in Sect. 2, the umlaut pattern in East Brabantic Dutch and German is identical. This means that also in East Brabantic Dutch, the imperative verb is a unique form. Given Barbiers' reasoning, this would mean that this form is specified as 2P inherently, and thus that it would allow for V2 imperatives without any restrictions on the fronted element. As established by Barbiers, this is not the case.

As illustrated in much detail in the previous sections, the analysis proposed in the current paper does not face the empirical problems that the analysis by Barbiers faces. In particular, the current analysis derives all patterns of V2 imperatives, and only those. While Barbiers recognizes the relevance of umlaut for accounting for the pattern in German, I have shown that umlaut correlates with V2 imperatives in the whole language area, and I argued that umlaut is the relevant factor for accounting for V2 imperatives in all varieties. This allowed me to provide a uniform account of the variation in V2 imperatives. As such, the current analysis is an extension of Barbiers (2013) and makes the analysis more precise.

6 Conclusion

This paper looked at variation in V2 imperatives in varieties of West Germanic. Given the idea that imperatives contain a high-clausal operator that binds the imperative subject, it is surprising that German and varieties of Dutch allow V2 imperatives, as the operator should block elements from occurring in the pre-verbal position of these strict V2 languages. I started out by illustrating that the possibility of V2 imperatives correlates with having verbal umlaut. I then showed that verbal umlaut cannot be the result of a phonological rule, allomorphy, or agreement, and concluded that it is suppletion. As a consequence, the verb stems that are used as imperatives in varieties with umlaut are specified for person features. I argued that the combination of the features on the imperative verb and the features on the element in the pre-verbal position can bind the imperative subject, and showed that this correctly derives the variation in V2 imperatives.

The implication of the analysis is that not all imperatives need an imperative operator. Instead, I concluded that the imperative operator is a last resort mechanism, inserted when there is no other source of features that can bind the imperative subject. In West Germanic, these features can come from the imperative verb and the element in SpecCP. Evidence from Punjabi (Kaur 2020a, b) shows that it can also come from allocutive agreement. These results call for a more flexible approach to imperative licensing than previously assumed, in particular one where the interaction with features that are expressed in the clause independently from its imperative status is taken into account.

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