Life of Phi: Phi-features in West Germanic and the syntax-morphology interface

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CHAPTER 4

V2 imperatives and φ-features across clause types*

4.1 Introduction

In this chapter, I discuss the final case study of the dissertation. The phenomenon that I focus on is word order in imperatives in (varieties of) Dutch and German. In some of those varieties, verb second (V2) word order is allowed in imperatives, in addition to a standard verb first (V1) word order (cf. Barbiers, 2013). Both word orders are illustrated in (1) with examples from Veghel Dutch, a Dutch dialect.

(1) a. Die pruuf mar is!
that taste.IMP PTCL PTCL
'Taste that one!'

b. Pruuf die mar is!
taste.IMP that PTCL PTCL
'Taste that one!' Veghel Dutch

It is surprising that the V2 word order in imperatives is allowed in some continental West Germanic languages. Imperatives are often assumed to have an operator in the sentence-initial position that blocks movement to that position. Because of the strict V2 nature of main clauses in continental West Germanic languages, the expectation is that imperatives in these varieties are obligatorily V1. In order to account for the V2 word order in imperatives, I start with the novel observation that all varieties that allow

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for V2 imperatives of the type in (1b), also have verbal umlaut in the verbal paradigm. Based on the properties of verbal umlaut, I argue that verbal umlaut is suppletion conditioned by φ-features. Building on the analysis of V2 imperatives by Barbiers (2013), I propose that the φ-features on the imperative verb, and φ-features on the sentence-initial constituent, can license the imperative subject. As a result, no operator is needed in the sentence-initial position, and this position can be filled by another constituent. The consequence of this analysis is that the imperative subject can be licensed without making recourse to a special imperative operator in Spec,CP. Instead, φ-features on lexical elements are used for the purpose of licensing the imperative subject. Furthermore, these features control which elements can and cannot move to the sentence-initial position in imperatives.

The chapter is organised as follows. I start by introducing the data on V2 imperatives in different varieties of West Germanic in section 4.2.1, and I outline the questions raised by these data for the syntax of imperatives in section 4.2.2. In section 4.3, I introduce the correlation between verbal umlaut and V2 imperatives, and I discuss the patterns of verbal umlaut that are found across the relevant West Germanic varieties. I then argue that verbal umlaut is suppletion, conditioned by φ-features on the different verbal stem forms. In section 4.4, I turn to the analysis of V2 imperatives. I start by discussing φ-features on the imperative verb, and then move on to the actual analysis of the V2 word order in imperatives in the different varieties, arguing that the imperative subject can be licensed by φ-features on the imperative verb and on the sentence-initial element. In section 4.5, I discuss the analysis of allocutive imperatives in Punjabi by Kaur (2020), which shows striking parallels to West Germanic imperatives in terms of licensing the imperative subject. In section 4.6, I discuss two alternative analyses of V2 imperatives, and show that my approach overcomes the empirical and theoretical issues with these analyses. Section 4.7 concludes.

4.2 V2 imperatives

4.2.1 Data and properties

This section illustrates the word order patterns in imperatives that we find in varieties of West Germanic, specifically in standard Dutch, standard German, and eastern Dutch dialects. The data and observations are based on Koopman (2007) and Barbiers (2007, 2013).

In all varieties under discussion, imperatives are typically V1. That is, a neutral imperative that does not have a special discourse structure is V1. Examples of these imperatives are given in (2). Note that a typical imperative has a covert *pro* subject, and throughout this chapter, I will focus exclusively on imperatives that have a covert subject.

(2) a. Lees dat boek maar niet!
read.IMP that book PTCL not
'Don't read that book!' Standard Dutch

b. Lies das Buch mal nicht!
read.IMP that book PTCL not
'Don't read that book!' Standard German

c. Lees da boek maar nie!
read.IMP that book PTCL not
'Don't read that book!' Eastern Dutch dialects (cf. Barbiers, 2013, p. 5)

In addition to the canonical V1 imperative, German imperatives can be V2. This is illustrated in (3) (see also Reis & Rosengren, 1992). Similar sentences in standard Dutch and eastern Dutch dialects are ungrammatical, as illustrated in (4).

(3) a. Das Buch lies mal nicht!
that book read.IMP PTCL not
'Don't read that book!'

b. Nun kauf mal das Buch [...]
now buy.IMP PTCL that book
'Buy that book now!' Standard German (cf. Barbiers, 2013, p. 5)

(4) a. * Dat boek lees maar niet!
that book read.IMP PTCL not
'Don't read that book!'

b. * Nu koop maar dat boek!
now buy.IMP PTCL that book
'Buy that book now!' Standard Dutch

c. * Da boek lees maar nie!
that book read.IMP PTCL not
'Don't read that book!' Eastern Dutch dialects (Barbiers, 2013, p. 5)

d. * Nou werk maar weer dur!
now work.IMP PTCL again through
'Continue working now!' Someren Dutch

In eastern Dutch dialects, there is one exception to the generalisation that V2 imperatives are not allowed: as Barbiers (2013) observes, in these varieties V2 imperatives are grammatical if the initial element is a distal demonstrative pro-form, as in the examples in (5). The standard Dutch equivalents of these sentences are ungrammatical, see (6).

(5) a. Da / die lees maar nie!
that / those read.IMP PTCL not
'Don't read that/those!'

b. Dan ga maar naar de gemeente!
then go.IMP PTCL to the municipality
'Then go to the municipality!'

c. Daar reken maar niet op!
there count.IMP PTCL not on
'Don't count on that!' Eastern Dutch dialects (Barbiers, 2013, p. 14)

(6) a. * Dat lees maar niet!
that read.IMP PTCL not
'Don't read that/those!'

b. * Dan ga maar naar de gemeente!
then go.IMP PTCL to the municipality
'Then go to the municipality!'

c. * Daar reken maar niet op!
there count.IMP PTCL not on
'Don't count on that!' Standard Dutch

Because the term 'eastern Dutch dialects' is quite unspecific, I will now illustrate which varieties fall under this label, using the DynaSAND (Barbiers et al., 2006). I will base the illustration on the two sentences in (7).[1] For most varieties that are documented in the DynaSAND, data are available for only one of the two sentences in (7). The reason for this is that these two sentences were part of separate stages of the data collection: (7a) was part of the written questionnaire, whereas (7b) was part of the spoken questionnaire.

(7) a. Als je echt niet kunt wachten, **dan kom maar**.
if you really not can wait then come PTCL
'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 PTCL
'Person A asks: "Shall I cook?" Person B replies: "Do that!"'

When we map the varieties where at least one of the sentences in (7) is considered acceptable, as in figure 4.1, we can see that V2 imperatives only occur in the eastern part of the Netherlands. From north to south, the areas where V2 imperatives are accepted are Groningen and the rest of the Dutch Low Saxon area, and east Brabant and Limburg, where Low Franconian dialects are spoken. Because these areas are not part of the same dialect subgroup, I will continue to refer to them as eastern Dutch dialects, following Barbiers (2013).

Let us move on to the syntactic properties of V2 imperatives. It can be shown that the V2 word in imperative is the result of movement of the sentence-initial constituent, instead of e.g. failure of movement of the imperative verb. The first argument is that the initial constituent in V2 imperatives is interpreted as topic (Koopman, 2007) or focus (Schwager, 2008). This suggests that the constituent moves to a position in the left periphery in the clause, on a par with topic or focus movement to Spec,CP in West Germanic declarative clauses, illustrated with examples from standard Dutch in (8) ((8b) contains a focus particle to force the focus interpretation).

[1] The DynaSAND also contains data on V2 imperatives where the sentence-initial element is a full NP, or a wh-phrase. These sentences were not accepted in (almost) any of the dialects, and were the basis of Barbiers' (2013) observation that V2 imperatives in Dutch dialects are restricted to distal demonstrative pro-forms in the sentence-initial position.

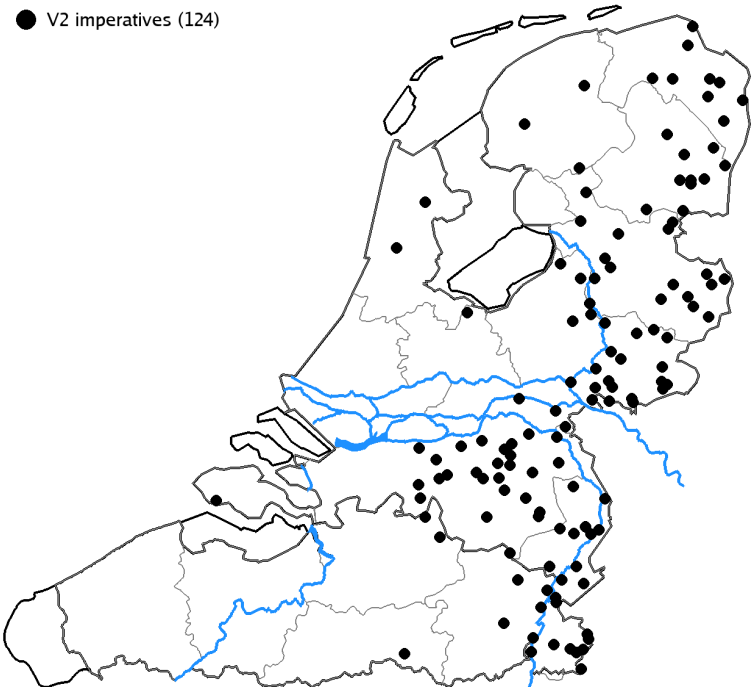


Figure 4.1: Varieties with V2 imperatives (fronting of distal demonstrative pro-forms)

(8) a. Dat boek heb ik niet gelezen.
that book have I not read
'That book I haven't read.'

b. Ook DAT boek heb ik nog niet gelezen.
also that book have I not yet read
'Also that book I haven't read yet.' Standard Dutch

The second argument that shows that V2 imperatives involve movement of the sentence-initial element comes from complex V2 imperative clauses. Reis and Rosengren (1992) show that in German, the V2 word order in imperatives is not restricted to simplex clauses. If the V2 imperative contains an embedded clause, then the sentence-initial element can be a constituent that has undergone long-distance movement from the embedded clause. An example is given in (9); the fronted NP *den Fritz* is an argument of the embedded verb 'to visit'. This clearly shows that the sentence-initial constituent in the V2 imperative has undergone movement.

(9) Den Fritz versprich mir bitte, dass du nie wieder besuchen wirst.
the Fritz promise.IMP me please that you never again visit will
'As for Fritz, please promise me that you will never visit him again.'
(Reis & Rosengren, 1992, p. 80)

When the sentence-initial constituent in a German V2 imperative is a wh-phrase, it must originate in the embedded clause. This is illustrated in (10). Example (10a) involves short movement of the wh-phrase *wen* to the left periphery of the imperative; this is ungrammatical. However, if the wh-phrase originates in the embedded clause of the imperative, wh-movement to the sentence-initial position of the imperative is fine, as illustrated in (10b).[2]

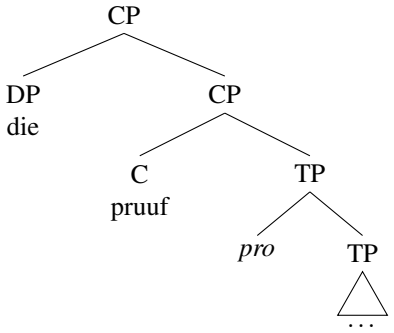
(10) a. * Wen benenne als meinen Nachfolger.
whom nominate.IMP as my successor

b. Wen sag mir doch mal gleich dass Peter als deinen Nachfolger
whom tell.IMP me PTCL PTCL right.away that Peter as your successor
benennen wird.
nominate will.
'Tell me right away who Peter will nominate as your successor.'
(Reis & Rosengren, 1992, p. 86)

Based on these arguments, I conclude that V2 imperatives have the same structure as standard imperatives, but in addition have movement of a constituent to the left periphery. Following Bennis (2007), the imperative verb is in C. The fronted constituent is in Spec,CP. The structure of a V2 imperative is depicted in (11).

(11) a. Die pruuf mar is!
that taste.IMP PTCL PTCL
'Taste that one!' Veghel Dutch

b.



4.2.2 Questions for the syntax of imperatives

On the surface, imperatives differ substantially from declaratives and interrogatives. For instance, word order in imperatives often differs from that of declaratives and interrogatives (in particular in relation to clitics and negation), and in many languages,

[2] According to Reis and Rosengren (1992), (10a) is ungrammatical because a clause cannot be imperative and interrogative at the same time; this problem does not arise in (10b), because here the embedded clause is interpreted as the interrogative.

imperative verbs have impoverished morphology (see van der Wurff, 2007 for an overview of the properties of imperatives). Furthermore, the subject in imperatives is generally covert, but it is canonically interpreted as an addressee. The imperative subject also has the ability to license second person reflexives, as illustrated in (12) (Zanuttini, 2008). Because of these special properties, the syntax of imperatives has received a considerable amount of attention in the literature.

(12) Wash yourself! (Zanuttini, 2008, p. 187)

An influential proposal regarding the syntax of imperatives, in particular focusing on the imperative subject, is formulated by Zanuttini (2008) and Zanuttini et al. (2012). They argue that imperatives contain a dedicated functional projection, the Jussive Phrase, which projects instead of CP. The Jussive Phrase differs from the normal CP in that it contains an operator that is specified for person features (second person features in imperatives). The operator binds and Agrees with the subject, which enables sharing of the person features on the operator with the (underspecified) subject of imperatives. This accounts for the special behaviour of the subject in imperatives, for instance that it is interpreted as an addressee. This proposal is in line with many other proposals that imperatives contain a special operator that interacts with the subject (Potsdam, 1998; Portner, 2004; Barbiers, 2007; Bennis, 2007). Crucially, the Jussive Phrase and the operator it introduces are proposed to be obligatory components of the structure of imperatives. According to Bennis (2007) and Zanuttini (2008), the imperative operator resides in the specifier of the phrase that codes the sentence as imperative (JussiveP for Zanuttini, CP for Bennis).

This proposal makes a specific prediction regarding imperatives in V2 languages like Dutch and German. If the imperative operator sits in the specifier of the highest projection (which I will refer to as CP from here on), this would prevent movement of a constituent to that position. Because the imperative verb sits in C, this predicts that no element can precede a verb in imperative, as illustrated in (13).

(13) OP_{IMP} lees dat boek maar niet!
read that book PTCL not
'Don't read that book!' Standard Dutch

This state of affairs is comparable to the situation in yes-no questions, that are always V1, since a yes-no operator is assumed to be in the specifier of CP, as illustrated in (14).

(14) a. $\text{OP}_{\text{YES/NO}}$ heb je gedanst?
have you danced
'Did you dance?'

b. Gisteren heb je gedanst.
yesterday have you danced
'Yesterday you danced.' (not: 'Did you dance yesterday?) Standard Dutch

In this light, it is surprising that eastern Dutch dialects and German do allow for V2 imperatives, as described in section 4.2.1. In particular, we can raise the question

of how the imperative subject is licensed in V2 imperatives, as there is no space for an imperative operator in Spec,CP. In other words, is there an alternative way of licensing imperative subjects? In this chapter, I argue that there is, which means that the operator in Spec,CP (or Spec,JussiveP) in imperatives cannot be obligatory.

4.3 Verbal umlaut

Before we get into the analysis of V2 imperatives in West Germanic, this section demonstrates that there is a correlation between V2 imperatives and verbal umlaut. I also show that varieties differ regarding which verbs exhibit umlaut. Then, I show that umlaut should be treated as suppletion conditioned by φ-features in West Germanic.

4.3.1 The correlation between V2 imperatives and verbal umlaut

In this section, I demonstrate the correlation between V2 imperatives and verbal umlaut: if a variety allows for the V2 word order in imperatives, it has verbal umlaut in some of its verbal paradigms. Before I do so, a note on terminology is in order.

The term 'umlaut' is generally used to refer to stem vowel fronting in a derived or inflected form. Historically, umlaut results from vowel harmony with a vowel in the affix; synchronically, however, this vowel has disappeared, and thus also the phonological trigger for the vowel fronting (more on this in section 4.3.3). Umlaut can be found both with nouns (e.g. with plurals or diminutives) and verbs (with certain inflections). In this chapter, I use 'verbal umlaut' for stem vowel alternations in the present tense verbal paradigm, that are not phonologically induced in the synchronic grammar.[3] 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 a similar distribution as umlaut (although not the same historical origin) (cf. Bendjaballah, 2014). An example of a (sub)paradigm with verbal umlaut is given in (15). In this example, there is umlaut with 2SG and 3SG. Throughout this chapter, I represent the phonological properties of umlaut roughly using Dutch orthographic conventions, based on my fieldwork or the data in the databases I consulted. What is relevant is that a variety has umlaut, but not what the exact phonological properties of the alternations are, so the approximate representation suffices for the purposes of this chapter. I also focus exclusively on the singular forms in the paradigm, because plural forms do not exhibit umlaut.

(15) a. ik geef
I give

b. gij gift
you give

c. hij gift
he gives

Veghel Dutch

Standard Dutch does not have verbal umlaut, but standard German does, as illustrated in (16) and (17). The GTRP contains data on verbal paradigms in Dutch dialects,

[3]This definition excludes stem vowel shortenings in Flemish dialects, since these are triggered when a suffix creates a consonant cluster, i.e. have a phonological trigger (see e.g. De Vriendt (2003) on Brussel Dutch).

based on which we can determine whether Dutch dialects have verbal umlaut. For this, I use the verbs *breken* ('to break') and *doen* ('to do'). Examples (18) and (19) illustrate verbal umlaut in two Dutch dialects.

(16) a. ich fahre — I drive
b. du fährst — you drive
c. er fährt — he drives
Standard German

(17) a. ich helfe — I help
b. du hilfst — you help
c. er hilft — he helps
Standard German

(18) a. ik doo — I do
b. ie doot — you do
c. hee dat — he does
Ruurlo Dutch (GTRP)

(19) a. ich breek — I break
b. doe briks — you break
c. hee brik — he breaks
Reuver Dutch (GTRP)

When we depict all Dutch dialects with verbal umlaut for 'to break' and/or 'to do' on a map, as in figure 4.2 (next page), we find that verbal umlaut is attested mostly in dialects in the east of the Netherlands. Figure 4.2 also depicts the locations where V2 imperatives are allowed according to the DynaSAND, and it is clear that this area overlaps to a great extent with the area where we find verbal umlaut. This suggests a potential correlation between V2 imperatives and verbal umlaut.

Because the GTRP and the DynaSAND contain data from different sets of dialects, it is hard to check for all the dialects whether the correlation between V2 imperatives and verbal umlaut holds. For 183 dialects, the databases contain data on both verbal umlaut and V2 imperatives, and we can use these dialects to give statistical evidence for the correlation. The values for each of these dialects are given in table 4.1. 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 provides further support in favour of the correlation that is suggested by the geographical distribution of verbal umlaut and V2 imperatives.

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 5 dialects where we do find V2 imperatives, but that do not have verbal umlaut. One of those dialects

Table 4.1: V2 imperatives and verbal umlaut

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

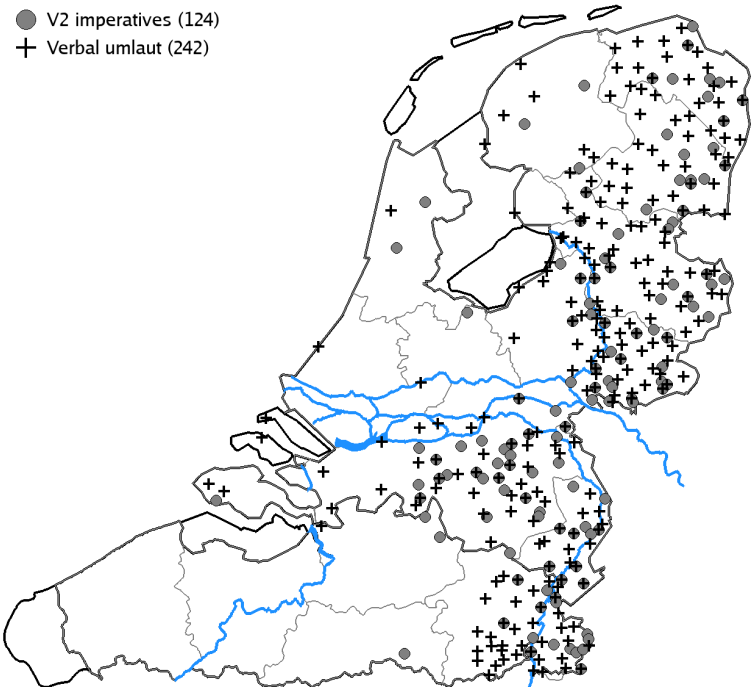


Figure 4.2: Varieties with verbal umlaut and V2 imperatives

(Sneek Frisian) is located outside of the main area where we find V2 imperatives. It therefore seems likely that this variety, like other Frisian varieties, does not have V2 imperatives, but that it shows up in the DynaSAND because the V2 imperative was erroneously judged as grammatical. For the remaining 4 dialects (Arendonk Dutch, Nijmegen Dutch, Maasbree Dutch, and Hamont Dutch), it is possible that the verbs that are in GTRP (i.e. 'to break' and 'to do') are not umlauting, but other verbs might be. Another point to take into consideration are the varying sources of the data: the data in the DynaSAND and GTRP were collected in different time spans, and from different speakers. It is possible that the dialects that behave exceptionally do not adhere to the correlation between V2 imperatives and verbal umlaut because the language has been undergoing change, or because the idiolects of the speakers that provided the data differ on this point. 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 not consider them problematic for the correlation between V2 imperatives and verbal umlaut.

A larger number of dialects (42) have verbal umlaut, but do not allow for V2 imperatives. There are two potential explanations for the exceptional behaviour of these dialects. The first is again methodological: as noted in section 4.2.1, for many dialects we only have data on V2 imperatives for just one of the two sentences that

are part of the DynaSAND. The V2 word order in imperatives is always optional, and requires the initial constituent to be interpreted as a topic or focus. During elicitation, the topical or focal nature of the fronted constituent might not have been clear to the informants, leading them to reject the sentence, or the informants may have had a preference for the V1 imperative for some other reason.

Another possibility is that the relation between verbal umlaut and V2 imperatives is unidirectional, i.e. verbal umlaut is a necessary, but not sufficient condition for allowing V2 imperatives. Testing this would require further research into these 42 varieties that have verbal umlaut but not V2 imperatives, which is a task I will leave for future work. In the remainder of this chapter, I will focus on the dialects with verbal umlaut that allow for V2 imperatives.

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 listed and depicted in figure 4.3. In each of these locations, I administered a grammaticality judgement task looking at V2 imperatives with different types of sentence-initial elements. The sentences were prerecorded by a native speaker of the dialect and played to 2–3 native speaker informants, who were asked to judge whether the sentence could occur in their dialect on a 5-point Likert scale. The informants were 55 years or older, grew up speaking the local dialect, and reported to be proficient in the local dialect. In 12 locations, V2 imperatives with fronted distal demonstrative pro-forms were accepted by the informants; fronting of other types of elements was generally rejected.[4] Various examples will be given in section 4.4.2. I also administered a translation task for five verbal paradigms, to assess whether these varieties have verbal umlaut. The verbs are *gaan* ('to go'), *helpen* ('to help'), *geven* ('to give'), *werken* ('to work'), and *stoppen* ('to stop'). The verbs *gaan*, *helpen*, and *geven* are known to exhibit umlaut in varieties of Dutch (see DynaSAND and GTRP). The verbs *werken* and *stoppen* typically do not exhibit umlaut and were included to collect data on agreement suffixes in non-umlauting contexts. All varieties have verbal umlaut with at least one of the verbs *gaan*, *helpen*, and *geven*. The picture that arises from the fieldwork data is thus similar to the corpus data: dialects that allow for V2 imperatives also have verbal umlaut. The two dialects for which the inverse does not hold are Scheemda Dutch and Ootmarsum Dutch. That is, the dialects of Scheemda and Ootmarsum have verbal umlaut, but not V2 imperatives. For Scheemda Dutch, the informants noted that verbal umlaut appears to be disappearing from their dialect: according to them, younger speakers do not use it anymore. The informants themselves also were not consistent in their use of verbal umlaut. This might point to ongoing language change regarding verbal umlaut, which has already affected the possibility of V2 imperatives in this variety. It is less clear why V2 imperatives are not allowed in Ootmarsum Dutch according to my fieldwork. In fact, the DynaSAND reports that V2 imperatives are grammatical in Ootmarsum Dutch. I leave a further investigation into this discrepancy for future work, and conclude that the overall picture is that varieties with verbal umlaut allow for V2 imperatives.

[4]There is some variation in this domain, but because of the lack of clear generalisations, I will not go into this variation here; see van Alem (2017) for a more detailed discussion of these data.

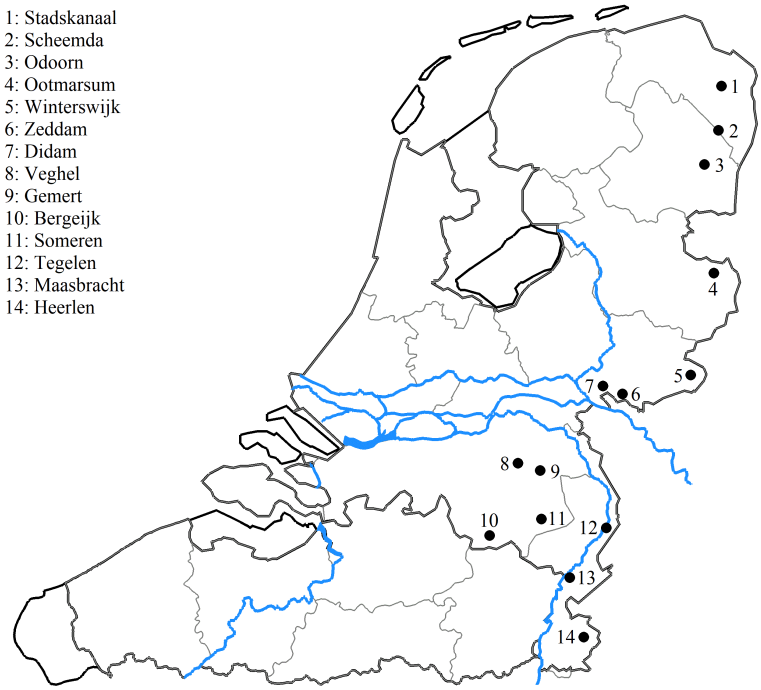


Figure 4.3: Fieldwork locations

To summarise this section: I have illustrated, based on geographical distribution, statistical analysis, and fieldwork data, that there is a strong relation between V2 imperatives and verbal umlaut in Dutch dialects. The relation also holds in standard Dutch and standard German: standard Dutch does not have verbal umlaut and does not allow for V2 imperatives, while standard German has both. The correlation holds on the level of the language, not on the level of the sentence: in the relevant varieties, an imperative can be V2 even if the imperative verb is not part of an umlauting paradigm, but only as long as the variety has umlaut in some of its verbal paradigms.

4.3.2 Variation in verbal umlaut

In this section, I zoom in on the variation we find in verbal paradigms with umlaut in Dutch dialects and German. There is variation in the contexts that trigger verbal umlaut within the present tense paradigm, and in the form of the imperative verb: while in all varieties, the imperative verb is a bare verb stem that is syncretic with a verb stem from the present tense paradigm, there is variation in whether the imperative verb exhibits umlaut or not.

In the data from the eastern Dutch dialects and German, three patterns can be

identified.[5] In the first pattern, we find verbal umlaut with 3SG in the present tense paradigm, and no umlaut on the imperative verb. This pattern is found in Ootmarsum, Winterswijk, Zeddam, and Didam, or in other words, the Dutch Low Saxon varieties in my data set. An example is given in (20).

(20) a. ik geef
I give
b. gij geef
you give
c. hij gif
he gives
d. geef!
give.IMP
Zeddam Dutch

The second pattern is characterised by verbal umlaut with 2SG and 3SG in the present tense paradigm, and the absence of verbal umlaut on imperative verbs. In the Dutch language area, we find this pattern in Stadskanaal, Scheemda, Tegelen, Maasbracht, and Heerlen. The first two varieties are part of the Groningen Dutch area, whereas the latter three are dialects of Limburgian. A subset of German verbs also show this pattern. See (21) and (22) for an illustration.

(21) a. ich gef
I give
b. doe gief-s
you give-AGR
c. her gief-t
he give-AGR
d. gef!
give.IMP
Heerlen Dutch

(22) a. ich fahr-e
I drive-AGR
b. du fähr-st
you drive-AGR
c. er fähr-t
he drive-AGR
d. fahr!
drive.IMP
Standard German

In the final pattern, 2SG and 3SG verbs in the present tense paradigm exhibit umlaut, as well as the imperative verb. We find this pattern in East Brabantic varieties (Veghel, Gemert, Bergeijk, and Someren) and in the other subset of German verbs with umlaut. It is illustrated in (23) and (24).

(23) a. ik geef
I give
b. gij gif-t
you give-AGR
c. hij gif-t
he give-AGR
d. gif!
give.IMP
Veghel Dutch

(24) a. ich geb-e
I give-AGR
b. du gib-st
you give-AGR
c. er gib-t
he give-AGR
d. gib!
give.IMP
Standard German

To summarise, the full range of variation regarding verbal umlaut and V2 imperatives in West Germanic is schematically given in table 4.2.

[5] Since the DynaSAND and GTRP do not contain systematic data on the morphology of imperative verbs, the generalisations regarding imperatives verbs are based exclusively on the fieldwork data.

Table 4.2: Summary of the data

	Dutch Low Saxon dialects	Groningen Dutch & Limburgian	East Brabantic Dutch	German
Umlaut				
1SG	−	−	−	−
2SG	−	+	+	+
3SG	+	+	+	+
IMP	−	−	+	−/+
V2 imperatives	distal pro-forms	distal pro-forms	distal pro-forms	no restrictions

4.3.3 Verbal umlaut is suppletion

In this section, I discuss the analysis of verbal umlaut. I start by considering three possible analyses of verbal umlaut: umlaut as the result of a phonological rule, word-external allomorphy, or Agree. Based on the properties of verbal umlaut, I conclude that none of these analysis are correct. Instead, I propose that umlaut is the result of lexically conditioned suppletion. More specifically, I propose that verbs with umlaut correspond to two (or more) lexical items that are specified for the person features that determine in which context the different forms occur. This analysis also provides us with a means to analyse the syncretism between the imperative verb and a present tense verb stem. This conclusion will have important consequences for the analysis of V2 imperatives, which will be discussed in the next section.

I 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. As mentioned in section 4.3.1, historically umlaut was the result of vowel harmony with a vowel in an affix. In the synchronic grammar, this vowel has disappeared, so synchronically, umlaut is not the result of vowel harmony. Furthermore, in the synchronic grammar, umlaut is a highly idiosyncratic process. Consider the partial paradigm of the German verb *geben* 'to give' in (25). The 3SG verb exhibits umlaut, while the 2PL verb does not, even though these verbs are inflected with the same affix *-t*. Based on these data, we can exclude that umlaut is the result of a rule that fronts the verb stem vowel in the context of (a certain phonological feature on) *-t*.

(25) a. ich geb-e
I give-AGR

b. er gib-t
he give-AGR

c. ihr geb-t
you.PL give-AGR
Standard German

Another argument against umlaut being the result of a general phonological process is that highly similar contexts vary in whether they exhibit umlaut or not. For instance, in contrast to *geben*, the minimally different verb *leben* 'to live' does not exhibit umlaut (26). A 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.

(26) a. ich leb-e
I live-AGR

b. er leb-t
he live-AGR

Standard German

The second analysis I consider is that umlaut is the result of a morphophonological process, in particular of word-external allomorphy. I will evaluate this analysis using Weisser (2019)'s diagnostics for identifying word-external allomorphy, supplemented with the revisions argued for in van Alem (2020). Since the form of the verb stem varies depending on the features of the subject, I will apply the tests based on the hypothesis that the subject is the trigger for allomorphy.

The first diagnostic for allomorphy concerns the linear position of the trigger and the target of allomorphy. The idea is that allomorphy is triggered by elements that are in a specific linear position with respect to the target. In other words, the trigger has to precede or follow the target. Applied to verbal umlaut, this would mean that verbal umlaut is triggered when the subject (the trigger) is in a specific linear position with respect to the verb (the target). Verbal umlaut does not pass this diagnostic. In the sentences in (27), the position of the trigger and the target vary: in (27a), the trigger precedes the target; and in (27b), the trigger follows the target. Yet in both examples, the verb exhibits umlaut. The linear position of the trigger is thus not relevant for umlaut.[6]

(27) 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?'

Standard German

The second diagnostic for allomorphy is that it requires linear adjacency between the trigger and target. In the case of verbal umlaut, this would mean that the subject and the verb have to be linearly adjacent. This also is not the case for verbal umlaut, as the examples in (28) illustrate. In (28a), the accusative direct object has scrambled to a position in between the verb and the subject, disrupting the linear adjacency between these elements. In the embedded clause in (28b), the verb is in the final position, and therefore far removed from the subject. In both cases, the verb still exhibits umlaut, demonstrating that linear adjacency between the verb and the subject is not a requirement for verbal umlaut.

[6]The sentences in (27) are derivationally related to each other, meaning that in the underlying representation of (27b), the verb is followed by a copy of the subject. If copies can also be triggers for allomorphy, the examples in (27) would pass the diagnostic for allomorphy based on linear position of the trigger and the target. However, it is generally assumed that traces cannot be triggers for allomorphy. For instance, Ackema and Neeleman (2004) propose the following order of operations at PF: first, the syntactic structure is linearised. Then, copies are deleted. Finally, context-sensitive allomorphy rules apply. Assuming that this order of operations is correct, the examples (27) show that verbal umlaut is not triggered by an allomorphy rule.

(28) 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 Maria a book gives
'that he gives a book to Maria.' Standard German

A third property of allomorphy that Weisser (2019) identifies, is that it is typically triggered by features that are not canonical agreement features, such as person and number. I have demonstrated in much detail (cf. section 4.3.2) that verbal umlaut is sensitive to exactly those features. This is in line with the outcome of the other diagnostics, and I conclude that verbal umlaut is not triggered by a word-external allomorphy rule.[7]

This brings us to the next analytical possibility, according to which verbal umlaut is the result of Agree between the verb and the subject. Under this analysis, umlaut is predicted to have the same properties and distribution as inflectional affixes that are inserted as the result of subject-verb agreement. While in a number of cases this is true, in Dutch dialects we find cases where the correspondence between subject-verb agreement and verbal umlaut breaks down. This shows that verbal umlaut cannot be the result of subject-verb agreement either. The crucial data are cases of position dependent agreement, which was the topic of Chapter 2 of this dissertation. With position dependent agreement, verbal inflection varies depending on the word order of the verb and the subject. An illustration of the pattern is given in (29). Chapter 2 argues that in cases like (29), the agreement morpheme in the verb-subject word order is the 1SG morpheme, instead of the 2SG (elsewhere) morpheme.

(29) a. jij geef-t
you give-AGR

b. geef-Ø jij
give-Ø you

Standard Dutch

East Brabantic dialects have both position dependent agreement and verbal umlaut with 2SG. This allows us to test if verbal umlaut shows the same alternation as subject-verb agreement in the different word orders. If verbal umlaut is the result of subject-verb agreement, the prediction is that the verb stem shows a similar alternation as the affix that attaches to the verb: in the verb-subject word order, the verb stem should look like the 1SG stem, and thus not exhibit verbal umlaut. This prediction is not borne out. Consider the data in (30).

[7] Weisser (2019) proposes three more diagnostics to distinguish between allomorphy and agreement. Two of those (i.e. the size of the inventory of alternating forms, and whether the alternation obeys the regularities of agreement in a given language) are more suitable for identifying agreement. The remaining diagnostic states that if an alternation is bled by post-syntactic operations, it is most likely post-syntactic as well. I have not been able to find a context that can be used to test whether a post-syntactic operation that affects the subject (e.g. ellipsis) bleeds verbal umlaut.

(30) a. ik geef-Ø
I give-Ø

b. gij gif-t
you give-AGR

c. gif-Ø=de gij
give-Ø=2P you

Veghel Dutch

In the subject-verb order, the verb inflects with a *-t* suffix when it agrees with a 2SG subject. In the verb-subject order, a verb that agrees with a 2SG subject does not show overt inflection; this corresponds to the 1SG inflection (cf. 30a).[8] Crucially, however, the vowel of the verb stem is not affected in this context. The verb stem keeps the same vowel as in the subject-verb word order. This shows that verbal umlaut behaves differently from the subject-verb agreement. Because the latter is the result of Agree between the verb and the subject, the former cannot be. In other words, verbal umlaut is not triggered by Agree.

So far, I have demonstrated that verbal umlaut is not the result of a phonological rule, word-external allomorphy, or Agree. Instead, I suggest that verbal umlaut is suppletion (in particular, weak suppletion). This proposal can account for the properties of verbal umlaut, such as its idiosyncratic nature, and its independence from syntactic factors such as word order and agreement. Because under the suppletion approach, every stem form corresponds to an independent entry in the mental lexicon, it is unpredictable which verbs exhibits umlaut and which ones do not. And because verbal umlaut is lexical, it is not predicted to be sensitive to other lexical items.

Evidence that the idea that verbal umlaut is suppletion is on the right track comes from Bendjaballah (2014). Bendjaballah argues that umlaut 'marks a morphosyntactic feature' (p. 62), which she calls [F]. My proposal is that [F] is in fact a short-hand for φ-features. The main argument that Bendjaballah provides in favour of the idea that verbal umlaut is marked with a morphosyntactic feature is that verbal umlaut and 3SG agreement are in complementary distribution with some verbs in standard German. Example (31) illustrates that the verb *fechten* 'to fence' has two forms for 3SG: (31a) exhibits umlaut, (31b) does not. Importantly, only the version that does not exhibit umlaut contains an overt inflectional affix.

(31) a. er ficht
he fences

b. er fecht-et
he fence-3SG

Standard German (Bendjaballah, 2014, p. 61)

Limburgian dialects show a similar contrast. The 3SG form of verbs that do not exhibit umlaut require the presence of an overt inflectional affix (32a,b), whereas the 3SG form of verbs that do exhibit umlaut do not inflect with an affix (32c,d).

[8] See Chapter 2 for arguments that *de* should be treated as a clitic.

(32) a. ich werk
I work

b. her werk-t
he work-3SG

c. ich help
I help

d. her hulp
he help

Limburgian

What the German and Limburgian data show is that verbal umlaut can prevent the insertion of a suffix that spells out agreement features, here 3SG. This shows that verbal umlaut plays an active role in the morphosyntax. This follows under the suppletion analysis of verbal umlaut, according to which the different stem forms of an umlauting paradigm are separate items in the mental lexicon, and have a φ-feature specification. When such a stem is inserted in the syntactic structure, it is already specified for φ-features. The absence of the 3SG suffix on the verbs in (31a) and (32d) can be accounted for as follows. The verb agrees with the 3SG subject, and gets valued as 3SG. If the verb stem exhibits umlaut, the stem itself already realises 3SG features. The suffix is redundant in this context, and need not be inserted. If the verb stem is a regular, non-umlauting stem, it does not spell out any features. In this case, the 3SG features the verb acquired through agreement will be spelled out with the 3SG suffix.[9]

The proposal that verbal umlaut is marked with φ-features also allows us to model where umlaut occurs in a verbal paradigm. I showed in section 4.3.2 that where umlaut occurs is subject to cross-linguistic variation: in some varieties, only 3SG verb stems exhibit umlaut, whereas in other varieties, both 2SG and 3SG verb stems do. There is also variation in whether the imperative verb exhibits umlaut. If umlaut were determined by a yet unidentified feature, such as [F], the presence of that feature would need to vary arbitrarily between varieties, in order to give rise to this type of variation. Φ-features, on the other hand, are part of the morphosyntax anyway. If umlauting and non-umlauting stems can be distinguished by different sets of φ-features in different varieties, this variation can be captured straightforwardly. I therefore conclude that stems that are part of a paradigm that exhibits umlaut are stored in the mental lexicon with a specification for φ-features, that can be different in different varieties.

In section 4.3.2, I also showed that the imperative verb is always syncretic with a stem form of the present tense paradigm. I propose that this syncretism is not accidental, but that the imperative verb is in fact borrowed from the present tense paradigm. Importantly, in varieties with umlaut, this means that the imperative verb will be specified for the same φ-features that determine the distribution of the stem in the present tense paradigm. In the next section, I show what these specifications are and how they affect the word order in imperatives.

[9] In addition to the pattern in (31), where verbal umlaut is in complementary distribution with the 3SG suffix, there are many German verbs where both verbal umlaut and an inflectional suffix need to be present in 2SG and 3SG contexts. I take these cases to involve multiple exponence, i.e. both the stem and the suffix express φ-features (Caballero & Harris, 2012). A similar pattern is found with some German nouns. For example, in *Würm-er* 'worms', both umlaut and the suffix express the feature plural.

4.4 Analysing V2 imperatives

With the background about imperatives and verbal umlaut in place, we can now turn to the analysis of V2 imperatives in West Germanic languages. In a nutshell, the analysis is as follows. Following Zanuttini (2008) and Zanuttini et al. (2012), I assume that imperative subjects need to be bound by and Agree with second person features; these binding and Agree operations license the imperative subject and assign the addressee interpretation to it. In the previous section, I concluded that imperative verbs in varieties with verbal umlaut introduce φ-features into the structure. Building on Barbiers (2013), I propose that the features on the imperative verb can bind and Agree with the imperative subject, either fully or partially. If the imperative verb is specified for the complete set of second person features that license the imperative subject, the sentence-initial position (Spec,CP) remains open for another element to move to, resulting in V2 imperatives without restrictions on the fronted constituent. In case the imperative verb is specified for only a part of the second person features that license the imperative subject, V2 imperatives are possible as long as the fronted constituent can provide the other part of the second person features; this results in a restriction on the type of element that can be fronted in V2 imperatives (cf. Barbiers, 2013). An important consequence is that, in these cases, there is no need for an imperative operator in the left periphery to bind the imperative subject.

Before discussing how this works for each of the varieties in more detail, I will make explicit which features imperative verbs are specified for in each variety, and which other elements can contribute to licensing the imperative subject.

4.4.1 Feature specifications of imperative verbs and distal proforms

Zanuttini (2008) and Zanuttini et al. (2012) argue that the subject in imperatives need to be bound by second person features. Assuming binding under Agree (e.g. Kratzer, 2009), the main binder for the imperative subject is the imperative verb in C, when C Agrees with the subject. Assuming Spec-Head Agree under binding as well (see again Kratzer, 2009), the element in Spec,CP is also a potential binder. In this section, I consider what features the imperative verb and the elements in Spec,CP can be specified for.

Recall that varieties differ regarding the cells in the verbal paradigm that exhibit umlaut, and regarding umlaut on the imperative verb. In the previous section, I argued that verbal umlaut is the result of suppletion conditioned by φ-features. For this reason, the imperative verb comes with an inherent specification for φ-features in varieties with verbal umlaut.

In Chapter 2, I argued that the syntactic representation of φ-features is as in (33): φ-features are privative and organised in a feature geometry. In table 4.3, I have given the feature representation of the singular persons based on the feature geometry in (33).

(33)

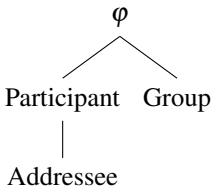


Table 4.3: Representation of φ-features in syntax

Features	Syntactic representation
1SG	[PART]
2SG	[PART] [ADDR]
3SG	

Based on these assumptions about φ-features, we can now establish the feature specification of the verb stems in a paradigm with umlaut, and the imperative verb. Starting with the Dutch Low Saxon dialects, recall that these dialects have verbal umlaut for 3SG, and that the imperative verb does not exhibit verbal umlaut (cf. (20), repeated as (34)). We can distinguish between 3SG and the other persons using the feature [Participant]: 1SG and 2SG are specified for the feature [Participant], but 3SG is not. I conclude that the non-umlauting stem is specified for [Participant], and that the umlauting stem is fully underspecified for person features (as per table 4.3), as illustrated in (35). Because the non-umlauting stem form is used as the imperative verb, the imperative verb comes with the [Participant] specification too.

(34) a. ik geef
I give

b. gij geef
you give

c. hij gif
he gives

d. geef!
give.IMP

Zeddam Dutch

(35) a. geef: [PART]
b. gif:

All other varieties have verbal umlaut for 2SG and 3SG. The Groningen Dutch and Limburgian pattern is illustrated in (36) (repeated from (21)), and the German and East Brabantic pattern is illustrated in (37) (repeated from (23)).

(36) a. ich gef
I give

b. doe gief-s
you give-AGR

c. her gief-t
he give-AGR

d. gef!
give.IMP

Heerlen Dutch

(37) a. ik geef
I give

b. gij gif-t
you give-AGR

c. hij gif-t
he give-AGR

d. gif!
give.IMP

Veghel Dutch

Based on the feature specifications in table 4.3, there is no natural grouping of 1SG on the one hand, and 2SG and 3SG on the other hand, because there is no feature that distinguishes between these sets of persons. [Participant] distinguishes 1SG and 2SG from 3SG, and [Addressee] distinuishes 2SG from the other two persons. To account for the umlaut pattern in Groningen Dutch and Limburgian, and in German and East Brabantic, we therefore have to assume there are three independent lexical items, that are each fully specified for φ-features.

In fact, there is empirical evidence that in varieties where 2SG and 3SG verb forms exhibit umlaut, we need to distinguish between three stem forms. In some East Brabantic dialects, there are verbs that make a three-way contrast between stem forms, in addition to 'normal' verbs with umlaut that make a two-way contrast. This is illustrated for Gemert Dutch in (38).

(38) a. ik gaow
I go

b. gij go-t
you go-AGR

c. hij gè
he goes

d. go!
go.IMP

Gemert Dutch

The three-way contrast can only be captured if there are three lexical items that are fully specified for φ-features. I assume that this extends to verbs that do not overtly show a three-way contrast. Umlauting verbs in Groningen Dutch and Limburgian, and German and East Brabantic, thus correspond to three lexical items with the feature specifications illustrated in (39).

(39) a. gaow: [PART]
b. go: [PART] [ADDR]
c. gè:

The groups of varieties differ in which stem is used as the imperative verb. In Groningen Dutch and Limburgian, the 1SG stem is used as the imperative verb (cf. section 4.3.2 and (36)). This means that the imperative verb in these varieties is specified for [Participant]. In German and East Brabantic, the umlauting verb stem is used as the imperative verb. Since both the 2SG and 3SG stems are umlauting, we can ask the question of which of those two is used as the imperative verb. The verbs with a three-way contrast, such as (38), provide an answer: this example shows that the 2SG stem is used as the imperative verb. I therefore conclude that German and East Brabantic imperative verbs are specified for [Participant] and [Addressee].

The second class of elements that can contribute to licensing imperative subjects are the elements that are in Spec,CP. In German, there are no clear restrictions on which elements can be in Spec,CP in imperatives. However, the Dutch dialect data suggest a special role for distal demonstrative pro-forms, such as *that* and *then*. In fact,

while full NPs are generally not thought to be specified for φ-features, this is different for deictic pro-forms. It is generally recognised that in deictic systems, the anchor typically coincides with the speech act participants (Imai, 2003). In recent years, this has been formalised by using person features to represent spatial and temporal deixis as well. For example, Barbiers (2013) decomposes the persons as consisting of the features [Person] plus [Neutral], [Proximal], or [Distal]; according to him, deictic pro-forms are also specified for [Neutral], [Proximal], or [Distal]. A more radical proposal is pursued by Harbour (2016) and Terenghi (2021). They argue that all person and deictic systems are made up of the features [± Participant] and [± Author], that combine in varying orders with a φ- or spatial root. According to this analysis, the whole range of cross-linguistic variation in systems of person and deixis can be derived this way. A similar idea is proposed by Ackema and Neeleman (2018), who use the deictic features [Distal] and [Proximal] to derive the different persons. What all these analyses have in common is that distal pro-forms and second person pronouns have a feature in common (the exact feature depends on the specific analysis). In the feature system that I am using in this thesis, [Addressee] is the defining syntactic feature for second person. Building on the works that relate person to deixis, I take the feature [Addressee] to be shared with distal pro-forms. In other words, distal pro-forms like *that*, *there*, and *then*, are specified for the feature [Addressee]. This means that, if the distal pro-form is in an Agree relation with the imperative subject, the pro-form can partially license the imperative subject.[10]

4.4.2 Deriving V2 imperatives

In this section, I discuss how V2 imperatives are derived in the different groups of language varieties. The analysis is based on the idea that imperative subjects need to be licensed through Agree with second person features (i.e., [Participant] and [Addressee]) (Zanuttini, 2008; Zanuttini et al., 2012). Potential licensers with φ-features are the imperative verb in C, and the element in Spec,CP, that interact with the subject due to Agree between C and the subject, and indirectly due to Spec-Head Agree in the CP.

I will start by looking at the Dutch Low Saxon varieties. In these varieties, V2 imperatives are allowed when a distal pro-form is fronted, but not with other types of fronted constituents. Some representative examples are given in (40) and (41).[11]

(40) a. Den doe mor es aan!
that do.IMP PTCL PTCL on
'Put on that one!'

[10] Barbiers (2013) brings up the question if full NPs containing a distal demonstrative pro-form, such as *dat boek* ('that book'), can contribute features to CP (or in my case: the imperative subject). I follow his approach that in those cases, the distal demonstrative is too deeply embedded; specifically, a distal demonstrative inside a full NP cannot c-command out of that constituent, blocking an Agree or binding interaction with CP or the subject.

[11] All examples of V2 imperatives contain one or more discourse particles; these particles are very common in imperatives in general and seem to facilitate fronting in imperatives (cf. Barbiers, 2013). As they do not play any role in the analysis, I will not comment on them further and just gloss them as 'particle'.

b. * Da kuukske nem mor niet!
that cookie take.IMP PTCL not
'Don't eat that cookie!' Didam Dutch

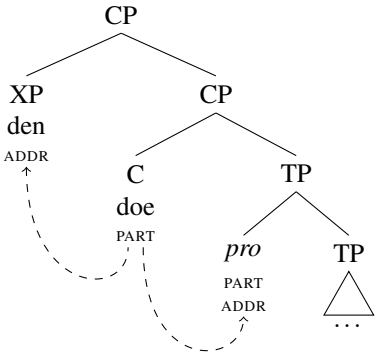
(41) a. Den koop moar nie!
that buy.IMP PTCL not
'Don't buy that one!'

b. * Dizze kiek moar us!
this look PTCL PTCL
'Watch this one!' Zeddam Dutch

In Dutch Low Saxon, 3SG verbs exhibit umlaut. The imperative verb does not exhibit umlaut. Based on this pattern, I concluded in section 4.4.1 that the Dutch Low Saxon imperative verb is specified as [Participant]. The imperative subject needs to Agree with second person features, i.e. [Participant] and [Addressee]. Because of the [Participant] specification on the imperative verb, the imperative verb Agrees in the [Participant] feature with the imperative subject. However, to get to a full second person interpretation, the imperative subject still needs to Agree with the feature [Addressee]. As I argued in the previous section, distal pro-forms are specified for the feature [Addressee]. When the distal pro-form moves to Spec,CP, it can establish an (indirect) Agree relation with the subject, due to Spec-Head Agree in CP and Agree between C and the subject. From its position in Spec,CP, the distal pro-form can thus Agree in the feature [Addressee] with the subject. Together with the [Participant] feature on the imperative verb, this licenses the imperative subject. This is schematically represented in (42), with arrows indicating Agree relations. The licensing configuration involving the distal pro-form results in the V2 word order in Dutch Low Saxon imperatives, and the restriction to distal pro-forms as the initial constituent: other constituents are not specified for [Addressee], and thus prevent the subject from being fully licensed. A V2 imperative that does not have a distal pro-form, but a different constituent in Spec,CP is therefore ungrammatical. In V1 imperatives, I assume that the imperative operator is inserted into Spec,CP as a last resort, and that the operator licenses the imperative subject.

(42) a. Den doe mor es aan!
that do.IMP PTCL PTCL on
'Put on that one!' Didam Dutch

b.



I will now turn to the derivation of V2 imperatives in Groningen Dutch and Limburgian. Like the Dutch Low Saxon dialects, these varieties allow for V2 imperatives with fronted distal pro-forms. Other types of fronting are not allowed, as illustrated in (43) for Limburgian, and in (44) for Groningen Dutch.

(43) a. Dan kom moar ens aan!
then come.IMP PTCL PTCL by
'Just drop by then!'

b. * Dè vriedag gef moar 'n feestje!
that Friday give.IMP PTCL a party
'Throw a party on that Friday!' Maasbracht Dutch

(44) a. Den kom mar-s langs!
then come.IMP PTCL-PTCL along
'Just drop by then!'

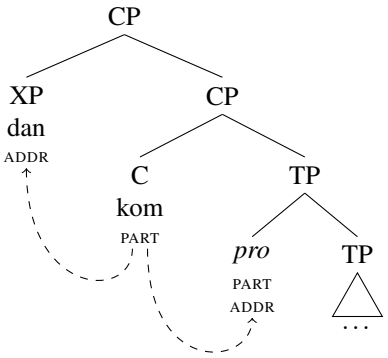
b. * Mie geef mar appelsap!
me give.IMP PTCL apple.juice
'Give me apple juice!' Stadskanaal Dutch

In Groningen Dutch and Limburgian, we find verbal umlaut with 2SG and 3SG, but the imperative verb does not exhibit verbal umlaut. In section 4.4.1, I concluded that this indicates that the imperative verb is specified for the feature [Participant]. This means that licensing the imperative subject in Groningen Dutch and Limburgian proceeds in the same way as in the Dutch Low Saxon dialects: the imperative verb can Agree with the imperative subject in one part of the required second person features (i.e. [Participant]). For full licensing, the imperative subject also needs to Agree with an element that has the feature [Addressee]. Distal pro-forms in Spec,CP can Agree with the subject in this feature, by first Agreeing with the verb, which subsequently Agrees with the subject; see the schematic representation in (45). The result is that

V2 word orders in Groningen Dutch and Limburgian imperatives are allowed, but that the initial element can only be a distal pro-form. If a different constituent is fronted to Spec,CP, the imperative subject cannot be licensed, resulting in ungrammaticality. V1 imperatives are possible, because in that case, an imperative operator in Spec,CP licenses the imperative subject.

(45) a. Dan kom moar ens aan!
then come.IMP PTCL PTCL by
'Just drop by then!' Maasbracht Dutch

b.



The final varieties to discuss are German and East Brabantic. East Brabantic is similar to the other varieties in terms of V2 imperatives: only fronted distal pro-forms are allowed in imperatives, as illustrated for two East Brabantic dialects in (46) and (47). German is crucially different: in German, V2 imperatives do not show any restrictions on which restrictions can be fronted (48) (repeated from (3)).

(46) a. Daar goa moar es heen!
there go.IMP PTCL PTCL to
'Go there!'

b. * Op die stoel goa moar zitte!
on that chair go.IMP PTCL sit
'Sit on that chair!' Bergeijk Dutch

(47) a. Dan goa mar erpels schille!
then go.IMP PTCL potatoes peel
'Go and peel potatoes then!'

b. * Dizze week doe better oew best!
this week do.IMP better your best
'Try harder this week! Someren Dutch

(48) a. Das Buch lies mal nicht!
that book read.IMP PTCL not
'Don't read that book!'

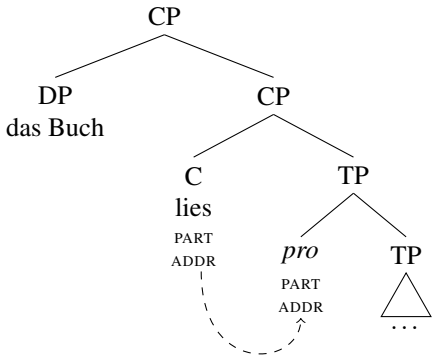
b. Nun kauf mal das Buch [...]
now buy.IMP PTCL that book
'Buy that book now.' Standard German (cf. Barbiers, 2013, p. 5)

Both East Brabantic and German have verbal umlaut for 2SG and 3SG, and verbal umlaut on the imperative verb.[12] In the previous section, I concluded that these imperative verbs are specified for [Participant] and [Addressee], or in other words, a full set of second person features. The prediction is thus that the imperative subject, that needs to be licensed by second person features, is able to acquire those features through Agree with the imperative verb alone. This means that there is no requirement on what can move to Spec,CP, and that there should not be any restrictions on the initial element in V2 imperatives.

For German, this prediction is correct: German does not have restrictions on the sentence-initial constituent in V2 imperatives. The syntactic representation for licensing imperative subjects in German is given in (49). The imperative verb is specified for second person features and licenses the imperative subject through Agree. Spec,CP is free for other elements to move to.

(49) a. Das Buch lies mal nicht!
that book read.IMP PTCL not
'Don't read that book!' Standard German (cf. Barbiers, 2013, p. 5)

b.



East Brabantic does not adhere to the prediction: in East Brabantic, only distal pro-forms may be fronted in imperatives. I propose that the reason for the different behaviour of East Brabantic has to be sought in a different phenomenon, namely position dependent agreement. German does not have position dependent agreement, while East Brabantic does, as illustrated in (50) and (51) (repeated from (30)).

[12] For German, only a subset of imperative verbs has umlaut, and I will come back to this at the end of this section.

(50) a. du gib-st
you give-AGR

b. gib-st du
give-AGR you

German

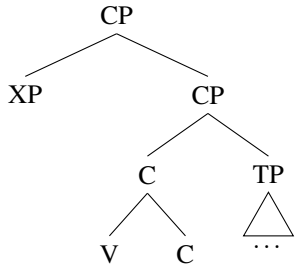
(51) a. gij gif-t
you give-AGR

b. gif=de gij
give=2P you

Veghel Dutch

I argued in Chapter 2 that position dependent agreement is the result of a defective φ-Probe in C. The East Brabantic pattern of position dependent agreement was analysed as resulting from a C Probe that has unvalued [Participant] and [Group] features, but no unvalued [Addressee]. The result of C being a defective Probe is that C cannot Agree for the feature [Addressee]. I propose that this also affect the visibility of the features on the imperative verb for the purpose of Agree with the subject. The reasoning is as follows. The imperative verb moves from V (via intermediate heads) to C; assuming head adjunction as the output of head movement (e.g. Travis, 1984; Vicente, 2007; Roberts, 2010), the structure in C is minimally as in (52).

(52)

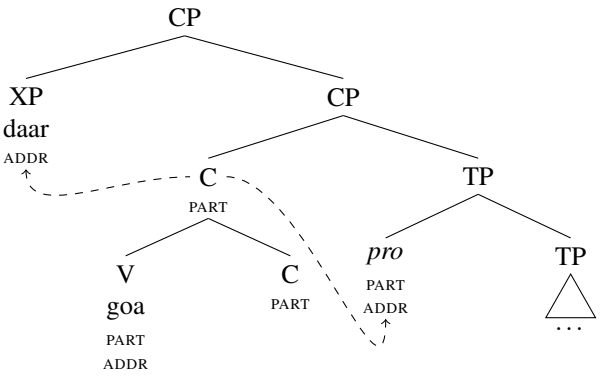


Because V is embedded under C, it cannot by itself Agree with any material outside of C; Agree with V is mediated through C. C, however, is a defective Probe, and does not have an unvalued [Addressee] feature. My proposal is that the absence of an unvalued [Addressee] feature on C causes the [Addressee] feature on the verb to be invisible to the structure outside of the head adjunction structure in C. The [Participant] feature on V is visible, because C also has a [Participant] feature that can be valued by the [Participant] feature on V. For the purposes of licensing the imperative subject, the East Brabantic verb is thus treated in the same way as the imperative verbs in the other Dutch varieties with V2 imperatives: the imperative verb can, mediated by C, Agree with the subject for [Participant]. The subject also needs to Agree with the feature [Addressee] for full licensing. This is possible when the element in Spec,CP is a distal pro-form: C Agrees with the distal pro-form in Spec,CP through Spec-Head Agreement, and with the subject through standard downwards agreement. Because both the subject and the distal pro-form are in an Agree relation with C, the [Addressee] feature

of the distal pro-form can value the [Addressee] feature of the subject.[13] The result is that V2 imperatives in East Brabantic are allowed only with fronted distal pro-forms. The structure is given in (53).

(53) a. Daar goa moar es heen!
there go.IMP PTCL PTCL to
'Go there!' Bergeijk Dutch

b.



The Dutch Low Saxon varieties also have a defective φ-Probe in C. As argued in Chapter 2, in these varieties C only Probes for [Participant]. However, since the verb only has a [Participant] feature as well, C's defective nature does not have an effect on subject licensing in imperatives by the imperative verb.

In summary, I showed that the V2 imperatives in different varieties of Dutch and in standard German can be fully derived based on the verbal umlaut paradigms. The imperative verb in languages with umlaut contributes to licensing the imperative subject, because the imperative verb is specified for person features. If the imperative verb can license the imperative subject on its own, Spec,CP remains open for movement. This results in V2 imperatives without restrictions on the sentence-initial constituent, as in German. If the imperative verb only partially licenses the imperative subject, the element in Spec,CP has to contribute to licensing of the imperative subject as well, and this restricts elements that can move to that position to distal pro-forms, as in eastern Dutch dialects.

A question I have not addressed is how the V2 word order is licensed in imperatives with non-umlauting verbs. It is not the case that the V2 word order is only allowed when the imperative verb is part of a verbal paradigm with umlaut; as long as a variety has some verbs with umlaut, it allows for V2 imperatives. German poses us with an additional related question: as we have seen, a set of German verbs does not use the umlauting stem as the imperative, but the non-umlauting stem. However, this does

[13] I assume that the visibility of features on the element in Spec,CP is not affected by the Probing features on C, either because Spec-Head Agree is more of a 'sharing' or unification operation (cf. Kratzer, 2009), or because the distal pro-form c-commands the subject by itself.

not affect the possibility of having V2 word order 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). The intuition is that when a child acquires their language, they learn that a substantial part of the imperative verbs in their language are able to license the imperative subject, fully or partially, because these verbs are specified for φ-features. They will then extrapolate (or overgeneralise) 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 is able to licenses imperative subjects, all other imperative verbs will be able to do this too. In the German case, the umlauting verb that seems to determine V2 imperatives is more highly specified than the non-umlauting verb; it is thus more informative, and will be used as the 'model' verb for German imperatives.

4.4.3 Interim conclusion

This section discussed the analysis of V2 imperatives in varieties of West Germanic. The main proposal is that the imperative subject can be licensed by features on lexical elements in the CP, specifically the imperative verb in C, and topicalised constituents in Spec,CP. If the imperative subject is licensed this way, there is no need for an imperative operator in Spec,CP that licenses the imperative subject. This means that Spec,CP is empty in these imperatives, and that this position can be targeted by movement. This results in the V2 word order in imperatives.

On the other hand, we cannot do away with the imperative operator entirely. In all the varieties that I discussed, V1 imperatives are also allowed. This is particularly noteworthy for the Dutch varieties, because the imperative subject in these varieties requires the presence of a distal pro-form in Spec,CP to be fully licensed. In V1 imperatives in these varieties, we therefore need an operator in Spec,CP for full licensing of the imperative subject. Even more so, in standard Dutch, there is no way to license the imperative verb using lexical items, because standard Dutch does not have umlaut, and therefore its imperative verbs are not specified for φ-features. Instead, every standard Dutch imperative needs an operator to license the subject. This explains why standard Dutch only allows V1 imperatives: the imperative operator always fills Spec,CP, blocking movement to that position.[14]

Based on these results, I conclude that insertion of the imperative operator in Spec,CP is a last resort solution to licensing the imperative subject. If the subject cannot be licensed by lexical material, the imperative operator will be used. What this means is that imperatives do not inherently have a special syntax. Instead, imperatives

[14] 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* in indeed unique to imperatives, i.e. it is not used as a stem anywhere else in the paradigm. This means that *wees* is specified as IMP, but 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 Spec,CP, blocking V2 imperatives also when using this unique imperative verb.

use the same lexical and syntactic building blocks as other clause types. But in imperatives, these building blocks can show different interactions. For instance, inherent φ-features on verbs, that play little to no functional role in declaratives and interrogatives, perform a crucial syntactic function in imperatives by licensing the imperative subject. Furthermore, they control what type of elements can move to Spec,CP in imperatives.

In the next section, I will show that licensing of the imperative subject without an imperative operator is not just found in West Germanic. I discuss the analysis of allocutive imperatives in Punjabi by Kaur (2020), who shows that in these imperatives, the allocutive marking licenses the imperative subject. This shows that it is a more general phenomenon that imperatives use independently present lexical or functional material to gain imperative force.

4.5 Imperatives beyond West Germanic: Allocutive imperatives in Punjabi (Kaur, 2020)

In a recent paper, Kaur (2020) looks at the syntax of allocutive imperatives in Punjabi (Indo-Aryan). She starts by showing that Punjabi has two types of imperatives. The first is a plain imperative, in which the imperative verb inflects for features of the subject according to an imperative-specific paradigm. This imperative is illustrated in (54), where the verb shows singular or plural agreement, depending on the number feature of the subject (addressee). The second imperative is an 'allocutive' imperative. In the allocutive imperative, the verb is suffixed with a unique morpheme *(e)yaa*. Crucially, instead of regular imperative agreement, this imperative expresses allocutive marking. An example is given in (55). The allocutive imperative is morphologically plural, but can be used both with singular and plural addressees.

(54) a. kitaab paRh-∅
book read-IMP.2SG
'Read the book!' (to a singular addressee)

b. kitaab paRh-o
book read-IMP.2PL
'Read the book!' (to a plurality of addressees) (Kaur, 2020, p. 7)

(55) kitaab parheyaa je
book read ALLOC.PL
'Read the book!' (to a honorific addressee (SG/PL)) (Kaur, 2020, p. 9)

Kaur shows that allocutive marking does not only appear in imperatives in Punjabi, but also in other clause types, as illustrated in (56). In Punjabi, there are two verbal elements in the clause: the main verb, that agrees for number and gender, and a clause-final auxiliary, that inflects for person and number (see (57)). As (56) shows, allocutive marking is also expressed in a clause-final position. In the present tense, allocutive marking blocks the realisation of the clause-final auxiliary, compare (57) with (56a). In the past tense, the auxiliary and allocutive agreement co-occur, as in (56b).

(56) a. o billii paaldaa je
3SG.NOM cat.F.SG raise.HAB.M.SG ALLOC.PL
'He raises cats.'

b. o billii paaldaa sii je
3SG.NOM cat.F.SG raise.HAB.M.SG be.PST.3SG ALLOC.PL
'He used to raise cats.' (Kaur, 2020, p. 18)

(57) o billii paaldaa e
3SG.NOM cat.F.SG raise.HAB.M.SG be.PRS.3SG
'He raises cats.' (Kaur, 2020, p. 16)

There is an important restriction on the distribution of allocutive marking: allocutive marking cannot be used in clauses that would express first or second person agreement on the auxiliary. In (58), the auxiliary inflects for first person plural. Example (59) shows that it is not possible to replace the auxiliary with the allocutive marker.

(58) asii / tusii billii paalde aaN / o
1PL.NOM / 2PL.NOM cat.F.SG raise.HAB.M.PL be.PRS.1PL / be.PRS.2PL
'We / you raise cats.' (Kaur, 2020, p. 16)

(59) * asii / tusii billii paalde je
1PL.NOM / 2PL.NOM cat.F.SG raise.HAB.M.PL ALLOC.PL
'We / you raise cats.' (Kaur, 2020, p. 17)

Based on this pattern, Kaur concludes that in Punjabi, every clause can host exactly one instance of first or second person agreement; in (56), the allocutive marker expresses second person agreement. In (58), the auxiliary expresses first person agreement. In (59), both the (suppressed) auxiliary and the allocutive marker express person, and this causes ungrammaticality.

Kaur argues that this pattern can be understood if Punjabi has a unique person Probe in every clause. There are two ways to value this Probe. First, the Probe can Agree with a first or second person subject, resulting in agreement on the auxiliary (58). The second option is that the Probe Agrees with a syntactically represented Addressee (following Miyagawa, 2017). This leads to allocutive marking. Both first or second person agreement, and allocutive marking, are thus due to agreement with the same Probe. For this reason, first or second person agreement on the auxiliary and allocutive marking cannot be present at the same time; they depend on the same Probe which can only be valued once.

The one-Probe analysis has an important implication for imperatives. In the plain imperative, the verb shows imperative-specific inflection. Kaur proposes that this results from a person Probe that is marked as imperative (formalised as the Jussive head, cf. Zanuttini, 2008; Zanuttini et al., 2012). Allocutive imperatives show allocutive marking; this requires a different Probe that leads to allocutive marking. Because of the one-Probe restriction, the special imperative Probe must be absent in the allocutive imperatives. Still, the allocutive imperative is an imperative; so its imperative nature cannot depend on the presence of imperative specific material such as the Jussive head.

If allocutive imperatives in Punjabi do not contain dedicated imperative material, how does the subject get licensed in these imperatives? The idea that Kaur puts forward is that the Probe in allocutive imperatives Agrees with both the subject of the imperative and the syntactically represented Addressee. When the Addressee values the features of the Probe, the features of the Addressee will also be shared with the subject. The proposal is that this is what licenses the imperative subject in allocutive imperatives.

This mechanism of licensing the imperative subject in Punjabi allocutive imperatives shows many similarities to the mechanism of licensing the imperative subject in V2 imperatives in West Germanic. In both cases, the features that are used to license the imperative subject are not exclusively part of imperatives; rather, they show up in all clause types in the form of allocutive marking or umlaut, but are put to use in a special way in imperatives. And, crucially, both cases do not rely on the presence of dedicated imperative material. Both in Punjabi and in West Germanic, there are empirically motivated arguments against the presence of special imperative material: in Punjabi, this is the one-Probe restriction, and in West Germanic, it is V2 word order. Finally, this excursion into Punjabi shows that languages can employ completely different and language-specific means for licensing imperative subjects, but on an abstract level, these mechanisms are highly similar, involving an interaction between the imperative subject and second person features that are introduced in the clause as part of the lexical items or the morphosyntactic properties of a language.

4.6 Alternative analyses

4.6.1 Barbiers (2013)

The first alternative analysis of the contrasts in V2 imperatives in West Germanic I will discuss is by Barbiers (2013) (see also Barbiers, 2007). Barbiers starts from the observation that German allows V2 imperatives, and that eastern Dutch dialects do too, but only with distal pro-forms 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 (60). Note that Barbiers considers the stem plus inflectional morphology to be the relevant form.

(60) a. ich gebe
I give

b. du gibst
you give

c. er gibt
he gives

d. gib!
give.IMP

Standard German

In spirit with many earlier proposals, he proposes that imperatives need to be marked as second person 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 second person, leaving Spec,CP free for other elements to move to.

For the eastern Dutch dialects, Barbiers (2013) shows that there is a certain overlap between varieties that allow V2 imperatives and varieties that have subject clitic doubling of second person pronouns in verb-subject word orders. A Brabantic example is given in (61) (cf. (30)), where *de* is the clitic double of the subject.

(61) a. gij gift
you give

b. gif=de gij
give=2P you

Veghel Dutch

As already mentioned in section 4.4.1, Barbiers (2013) decomposes second person into the features [Person] and [Distal]. He proposes that the clitic double *de* is specified for a partial set of these features, in particular only the feature [Person]. The idea is then that in the varieties with subject doubling, the clitic double incorporates into the declarative verb, marking it as [Person]. While in imperative clauses there is no overt subject doubling of the second person 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 second person, the feature [Distal] is still needed, and this can be supplied via a distal pro-form, 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 developed in this chapter. In particular, both analyses take into account the fact that German has umlaut and that this can affect the form of the imperative verb, and the analyses converge on the idea that marking of the imperative as second person results from the combined force of the verb and the distal pro-form in dialects of Dutch. There are several empirical and theoretical reasons why the current analysis is more attractive, though.

Starting with the empirical issues, Barbiers' analysis both over- and undergenerates, as there is not a perfect match between the Dutch varieties that allow V2 imperatives and the varieties that have subject clitic doubling of second person pronouns. As can be seen in figure 4.4 (which, for clitic doubling, includes varieties with complementiser agreement for 2SG, which I argued to be clitic doubling in Chapter 3), the whole Frisian language area has clitic doubling, but does not allow for the V2 word order in imperatives.[15] In addition, dialects in the Low Saxon area do not have subject clitic doubling, but do allow V2 imperatives.

Barbiers is aware of the undergeneration issue regarding the Dutch Low Saxon varieties, and suggests that some varieties have abstract clitic doubling and subsequent incorporation. However, in the absence of empirical evidence, it seems impossible for such a system to be acquirable, so this is not a tenable solution. The correlation between verbal umlaut and V2 imperatives that I observed in section 4.3.1 shows a much greater overlap in terms of the geographical distribution, and thus reaches a

[15] Barbiers does not consider Frisian to be a clitic doubling language, so these varieties are not problematic in his original proposal.

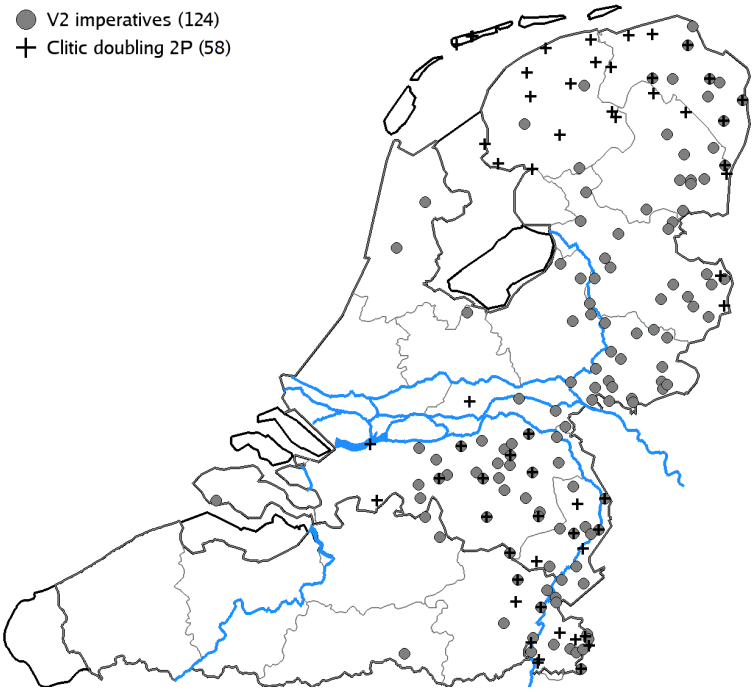


Figure 4.4: V2 imperatives and clitic doubling of 2P (DynaSAND)

higher level of empirical adequacy than the correlation between V2 imperatives and clitic doubling.

The Brabantic dialects present another issue for Barbiers' (2013) analysis. As shown in section 4.3.2, the umlaut pattern in East Brabantic and German is the same; as a consequence, the East Brabantic imperative verb has a unique form. In Barbiers's analysis, this means that the East Brabantic imperative verb is inherently specified for second person features, and that it would allow for V2 imperatives without any restrictions on the type of elements that can be fronted. East Brabantic only allows for fronting of distal pro-forms, however. Although this problem could be solved using a similar solution as I have opted for in section 4.4.2, as it stands, it is a problem for Barbiers' analysis of the contrasts in V2 imperatives in West Germanic.

As illustrated in much detail in the previous sections, the analysis that I proposed in this chapter does not face the undergeneration issue that the analysis by Barbiers faces: the current analysis derives all patterns of V2 imperatives. While Barbiers recognises 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.

4.6.2 Koopman (2007)

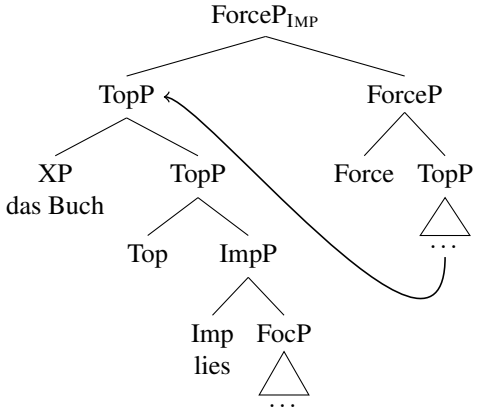
A different approach to V2 imperatives is argued for by Koopman (2007), who specifically looks at the contrast between Dutch (no V2 imperatives) and German (V2 imperatives are allowed). Her analysis is embedded in the more general decomposition of the left periphery by Rizzi (1997, 2001) into the projections in (62).[16]

(62) [Force [Top [Int/Imp/Decl [Foc [Top [Fin [...]]]]]]]

Koopman (2007) proposes that in Dutch imperatives, Force attracts the projection containing the imperative verb (ImpP) to Spec,ForceP, which results in typing the clause as an imperative. Because ForceP is the highest projection, It also causes the verb to be in a position that precedes potential hosts for constituents that move to the left periphery, such as Topic and Focus. Furthermore, Koopman assumes a strict Doubly filled COMP filter (cf. Koopman, 1996). Because of this filter and clause typing in ForceP, V2 imperatives are blocked: First, there can be no element in Spec,ImpP (in Spec,ForceP). Imp hosts the imperative verb, and presence of an element in Spec,ImpP would violate Doubly filled COMP. Second, if a larger phrase in which ImpP is embedded is attracted to Spec,ForceP, the clause cannot be typed because ImpP is too deeply embedded; this excludes movement of e.g. TopP, which can contain an overt topic, to Spec,ForceP. This movement operation is illustrated in (63). The V1 effect in Dutch imperatives is thus derived without making recourse to an imperative operator (in contrast with the assumption in this chapter).

(63) a. Das Buch lies mal nicht!
that book read.IMP PTCL not
'Don't read that book!' Standard German (Barbiers, 2013, p. 5)

b.



(cf. Koopman, 2007, p. 176)

In contrast to Dutch, V2 imperatives are allowed in German. Koopman proposes that German has a less restrictive clause typing requirement, which does allow clause

[16] Instead of the Int/Imp/Decl projection, Rizzi (2001) exclusively speaks of IntP, but Koopman (2007) proposes that this position hosts clause-typing elements more generally.

typing by a projection that is embedded in another projection; clause typing by Imp is therefore allowed in the structure in (63). This way, she derives that German topics can occur to the left of the imperative verb.

However, as I have discussed before, not only topics can occur in the left periphery of imperatives; contra Koopman (2007), according to Schwager (2008), foci are also allowed (64). This is unexpected under Koopman's approach to V2 imperatives: foci are lower in the left periphery than the imperative verb (62), so they should never be able to occur as the initial constituent in the imperative.

(64) DAS gib mir mal züruck!
that give me PTCL back
'Give me THAT back!' German (Schwager, 2008, p. 557)

The intermediate status of V2 imperatives in dialectal Dutch also does not seem to follow straightforwardly under Koopman (2007)'s analysis. In order to account for the grammaticality of V2 imperatives with a distal pro-form as the sentence-initial element, we would need to assume that a TopP with a distal pro-form in its specifier behaves differently than a TopP with another type of constituent in its specifier. There is no evidence that this is the case.

The final issue with Koopman (2007)'s analysis concerns the locus of variation. To explain the contrast between Dutch and German imperatives, Koopman proposes that imperatives in these languages differ in their clause typing restrictions: in Dutch imperatives, a clause typer cannot be embedded, whereas in German imperatives it can. This type of variation is not restricted to cross-linguistic variation; in order to account for V2 word order in declaratives, a structure like (63) must be allowed in declaratives in both languages. This means that the clause typing requirement in Dutch varies across clause types. Within Minimalist syntax, this is an unattractive move, as it seems to require parametrisation of basic syntactic operations and locality. Ideally, the configuration that is required to achieve clause typing can be derived from basic syntactic operations and principles, and it is thus unlikely to find variation in this domain. Although Koopman's analysis can dispense with the imperative operator, the assumption of such an operator does not violate core assumptions about syntax, which is why I think it is preferable.

4.7 Conclusion

In this chapter, I investigated the V2 word order in imperatives in varieties of West Germanic, with a focus on the variation between dialectal Dutch (V2 imperatives allowed with fronted distal pro-forms) and German (all V2 imperatives allowed). Given the hypothesis that imperatives contain a phrasal operator in Spec,CP, the V2 word order in West Germanic imperatives is surprising: because of the strict V2 nature of continental West Germanic languages, presence of an operator in Spec,CP should block movement to that position, resulting in V1 word order in imperatives.

I observed that there is a correlation between verbal umlaut and V2 imperatives; all varieties that allow V2 imperatives have verbs with umlaut. Based on a detailed

look at verbal umlaut, I concluded that verbal umlaut is the result of suppletion, discarding potential alternative analyses that are based on phonology, allomorphy, and Agree. I argued that the conclusion that verbal is suppletion implies that an umlauting verb corresponds to two lexical entries that are specified for person features in the mental lexicon. When such a stem is used as an imperative verb, it brings along those person features. Following Zanuttini (2008) and Zanuttini et al. (2012), I assumed that the imperative subject needs to be licensed via Agree with second person features: [Participant] and [Addressee]. Building on Barbiers (2013), I proposed that the person features on the imperative verb can (partially) license the imperative subject. In Dutch Low Saxon varieties and in Groningen and Limburg Dutch, the stem used as the imperative verb has the person feature specification [Participant]. The imperative verb can therefore partially license the imperative subject. The [Addressee] feature can come from a distal pro-form in Spec,CP, that is inherently specified as [Addressee]; this results in the V2 word order with a distal pro-form in the sentence initial position. In East Brabantic, the imperative verb is specified as [Participant] and [Addressee], but the [Addressee] feature cannot interact with the subject because the C head is a defective Probe (cf. Chapter 2). The [Addressee] feature can come from a distal pro-form in Spec,CP, again resulting in V2 word order with the restriction that the sentence initial element is a distal element. In German, the imperative verb is also specified as [Participant] and [Addressee]. These features can license the imperative subject, voiding the need for an operator in Spec,CP. Instead, Spec,CP remains open for other elements to move to, resulting in the possibility of a V2 word order in German imperatives.

I showed that licensing of the imperative subject by material that is not specific to imperatives is an option that is more generally available cross-linguistically, by looking at allocutive imperatives in Punjabi (Kaur, 2020). Punjabi allocutive imperatives differ from standard imperatives in that they do not have imperative specific verbal agreement, but allocutive agreement. I discussed the analysis by Kaur (2020), who argues that in allocutive imperatives, the imperative subject is licensed because of the presence of the allocutive agreement. The parallel to the analysis of V2 imperatives in West Germanic is that the imperative subject is licensed by something (verbal umlaut, allocutive agreement) that occurs also in other clause types. Furthermore, verbal umlaut and allocutive agreement are not just licensers of imperative subjects, but have different functions elsewhere in the syntax. On an abstract level, V2 imperatives in West Germanic and allocutive imperatives in Punjabi illustrate that imperative subjects can be licensed by non-imperative specific material. Finally, I considered two alternative analyses of V2 imperatives in West Germanic by Barbiers (2013) and Koopman (2007), and highlighted some empirical and theoretical issues that are overcome in my approach.

This chapter shows that φ-features on lexical (and functional) elements can be used to license the imperative subject, if the lexical items and the subject are the right structural configuration. When φ-features on lexical items are sufficient for subject licensing, there is no need for an imperative operator in Spec,CP. I argued that in West Germanic, φ-features on verbal stems can contribute to imperative subject licensing. Morphologically, these features trigger verbal umlaut. This proposal accounted for

the properties and distribution of verbal umlaut in these languages. In addition the φ-features on the verb, φ-features on distal demonstrative pro-forms can license the imperative subject. As a result, only distal pro-forms can move to the sentence-initial position of the imperative. That means that φ-features can restrict which elements undergo movement in imperatives.