

Doubling by movement within and from PP in Alemannic German^{*}

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1 Introduction

In this paper, we examine the morpho-syntax of certain pronouns in Alemannic German, spoken in and around Switzerland. Specifically we discuss a type of pronoun, termed *R-pronoun* in van Riemsdijk (1978)'s study of Dutch, which also exists in German (see Abels (2012) and references therein). Unlike typical nominal elements in standard German, R-pronouns precede prepositions (1a) and can be extracted from PP (1b):

(1) *Standard German R-pronouns*

a. *R-pronoun in PP*

Ich ess [_{PP} **da**-von/mit/...]
I eat PRON-of/with/...
'I eat with / (some) of this'

b. *R-pronoun extraction from PP*

Da₁ ess ich [_{PP} *t*₁ von]
PRON eat I of
'This, I eat (some) of'

Similar facts are found in Alemannic, though with a difference: for this variety, use of an R-pronoun in PP (2a) or extraction of it from PP (2b) require the appearance of another morpheme, whose form is *de*. We gloss this as 'DBL' for 'double':

(2) *Alemannic R-pronouns*¹

a. *R-pronoun in PP*

I iass [_{PP} do*(**de**)-vo]
I eat PRON-DBL-of
'I eat (some) of this'

b. *R-pronoun extraction from PP*

Do₁ iass i [_{PP} *t*₁ *(**de**)-vo]
PRON eat I DBL-of
'This, I eat (some) of'

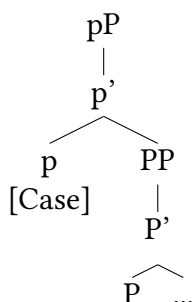
^{*}Thanks to Josef Bayer, Miriam Butt, Deniz Özyildiz, George Walkden, as well as participants of the Syntax Colloquium at the University of Konstanz and of Incontro di Grammatica Generativa 48. This work will also be presented at Generative Linguistics in the Old World 46 and West Coast Conference on Formal Linguistics 41. The data reported here is based on the judgments of David Diem, a native speaker of the Alemannic dialect of western Austria.

¹Many of our Alemannic examples use the preposition *vo*, 'of', which often yields a partitive interpretation, as indicated in the translations.

As we will show, in isolation the morpheme *de* is an R-pronoun meaning ‘it’, though this morpheme does not have any semantic contribution in examples like the above. Our goal in this paper is to argue that this redundant *de* can be understood as ‘doubling’, via the spell-out of a trace of PP-internal movement. Similar ‘doubling’ is likely possible in non-standard German more generally (Fleischer 2002), though here we focus on Alemannic, in which this doubling is obligatory in several contexts.

We argue that these Alemannic facts fit a theory in which PPs are dominated by a ‘little p’, which is responsible for assigning case to nominals in PP (van Riemsdijk 1990; Rooryck 1996; Koopman 2000; Svenonius 2003).²

(3) *PP dominated by pP*



Specifically, we will propose that case-assignment by pP triggers movement of R-pronouns, and thus doubling, prior to any other movement involving R-pronouns. We will also show that the distribution of doubles is limited by *haplology*—the avoidance of sequences of adjacent identical syllables/morphemes. Additionally, we will provide an explicit account of this doubling using Distributed Morphology (Halle and Marantz 1993, a.o.) along with a copy theory of movement (Chomsky 1995; Nunes 2004).

2 The basic patterns

We first describe the basic facts we analyze using the pronoun *do* (‘this/here’) and the P *vo* (‘of’), and discuss others later.³ From this point onward, unless otherwise indicated all data shown in this presentation is from Alemannic German. Typically, an Alemannic R-pronoun can stand alone straightforwardly:

(4) *Basic R-pronoun*

Min hus isch **do**
 my house is here
 ‘My house is here’

²Posting a distinction between P and the head responsible for assigning case to PP-internal elements allows some these works to account for phenomena such as pseudo-passivization from PP: by retaining P but omitting the case-assigning pP, A-movement of the DP that is the complement of P is possible, as in sentences like ‘*This bed was slept in.*’

³The Alemannic *do* has a proximal interpretation, unlike its cognate *da* in standard German, which is distal. In Alemannic a distal interpretation is conveyed by another R-pronoun, *döt*, which is a cognate of standard German *dort*. We discuss this further in section 4 below.

However, when focused, the R-pronoun can be accompanied by a second morpheme *de*:⁴

(5) *R-pronoun with focus*

Min hus isch **do-de**
 my house is here-DBL

‘My house is HERE’

Furthermore, when in a PP an Alemannic R-pronoun must always co-occur with *de*. R-pronouns never occur in a PP without the doubler (with one exception we explain in section 3.2 below).

(6) *R-pronoun in PP must have ‘de’*

I iass [_{PP} **do-*(de)**-vo]
 I eat PRON-DBL-of

‘Of this, I eat (some)’

As previewed above, in isolation this *de* is an R-pronoun meaning ‘it’:

(7) *Typical R-pronoun ‘de’*

I iass [_{PP} **de**-vo]
 I eat PRON-of

‘I eat (some) of it’

It is for this reason that we take examples like (5) and (6) above to involve doubling: such examples appear to involve two pronouns, only one of which is actually interpreted.

PP examples with doubling like (6) above can be subjected to further syntactic modification. One possibility is to extract the pronoun from PP, as we have already seen:

(8) *R-pronoun extraction from PP*

Do₁ iass i [_{PP} t₁ ***(de)**-vo]
 PRON eat I DBL-of

‘This, I eat (some) of’

Alternatively, it is also possible to move the R-pronoun and pied-pipe the PP along with it:

⁴Specifically, if *de* is present the R-pronoun is necessarily focused in examples like (5), but it is also possible for the R-pronoun to be focused without *de*. We will develop an analysis in which this *de* is derived by movement (though in (5) a very short one, see section 3.3). If our analysis is correct, then what we are seeing here is that focus on the R-pronoun can, but does not have to, involve movement. This is analogous to the fact that a focused element in English can remain in situ (with prosodic emphasis), or overtly move:

- (i) a. I don’t like those cookies, but I really like these cookies!
- b. I don’t like those cookies, but these cookies, I really like!

(9) *Pied-piping of PP with movement of R-pronoun*

[Do *(de)-vo]₁ iass i t₁
PRON DBL-of eat I

‘Of this, I eat (some)’

These patterns contrast with the behavior of more typical DPs, which follow P, and cannot be extracted from it, though pied-piping of DP along with P is permitted:

(10) a. *DP in PP*

I iass [_{PP} vo deam Brot]
I eat of this bread

‘I eat (some) of this bread’

b. *No DP movement from PP*

* [Deam Brot]₁ iass i [_{PP} vo t₁]
This bread eat I of

‘This bread, I eat (some) of’

c. *Pied-piping with PP*

[_{PP} Vo deam Brot]₁ iass i t₁
Of this bread eat I

‘(Some) of this bread, I eat’

In the next section, we will provide an analysis that accounts for all of the above facts.

3 Analysis

Here we will first discuss why movement from PP is banned for typical DPs in German, following the analysis in [Abels \(2003, 2012\)](#). From that basis, we will then introduce the pP proposal, show how this facilitates an analysis of the doubling pattern in PPs, and then extend this analysis to the facts about focus shown above. We will also consider a variety of other relevant predictions along the way.

3.1 Why extraction from PP is usually banned: Phases versus anti-locality

Above we saw that R-pronouns can be extracted from PP, but typical DPs cannot. While the data we just showed is from Alemannic, the same contrast is known for German more generally, as well as Dutch ([van Riemsdijk 1997](#); [Abels 2003, 2012](#)). In (11) below we see some examples illustrating the well-known lack of DP extraction from PP for standard German:

(11) *Standard German*

a. *DP in PP*

Ich esse von diesem Brot
I eat of this bread

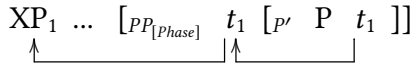
‘I eat (some) of this bread’

b. *No movement of DP from PP*

* [Diesem Brot]₁ esse ich von *t*₁
 This bread eat I of
 ‘This bread, I eat (some) of’

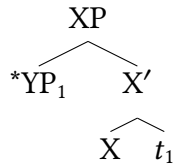
Abels argues that the inability of usual DPs to exit PP (in German and other languages) emerges from the interaction of two factors. First, PP is a *phase* (Chomsky 2000, 2001), so any movement from PP would have to pass through its specifier, as schematized in (12).

(12) *Schema: Movement from PP must pass through spec-PP*



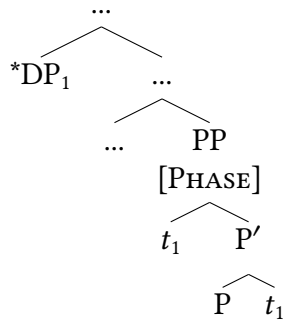
Second, there is a ban on movements that are too short—*anti-locality*—which prevents movement from complement to specifier of the same phrase:

(13) *No movement from complement to specifier of the same phrase*



When these constraints are combined, they predict the impossibility of extracting the complement of PP. Correspondingly, assume that typical German DPs originate in the complement of P, and thus follow it, given the head-initiality of P. If such DPs are complements of PP, they are predicted to be immobile. Any movement of such a DP out of PP must pass through spec-PP, since PP is a phase, but this position is inaccessible for them because movement from complement to specifier of PP is banned by anti-locality:

(14) *PP phasehood + anti-locality = no P-stranding*



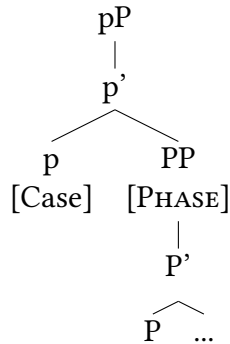
Thus we derive the usual ban on P-stranding in German. The analysis applies equally to standard German and Alemannic. Next, we build from this analysis in order to account for the R-pronoun doubling facts.

3.2 Doubling of R-pronouns by raising to pP

Unlike usual DPs in German, we have seen that R-pronouns can be extracted from PP, and also uniquely precede the P that they merge with. Abels argues that R-pronouns in PP involve the inclusion of an additional phrase in PP, in a way that facilitates R-pronoun extraction without

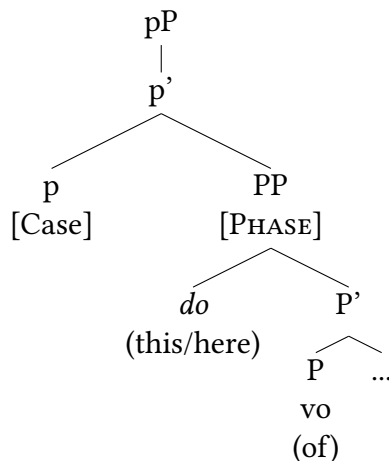
violating anti-locality.⁵ For our doubling analysis of Alemannic, we will adopt a structurally simpler proposal: that R-pronouns are externally merged in the specifier of the PP phase, rather than its complement. However, our doubling analysis requires us to posit that PPs involve an additional layer. Specifically, as previewed above, we will hypothesize that PPs are dominated by a pP, which is responsible for the assignment of case to PP-internal elements. Along with this, we will also maintain Abels proposal that PP is a phase.

(15) *PP phase dominated by pP*



As mentioned, we assume that R-pronouns are externally merged in the specifier of PP:⁶

(16) *PP dominated by pP, R-pronoun merged in spec-PP (incomplete derivation)*



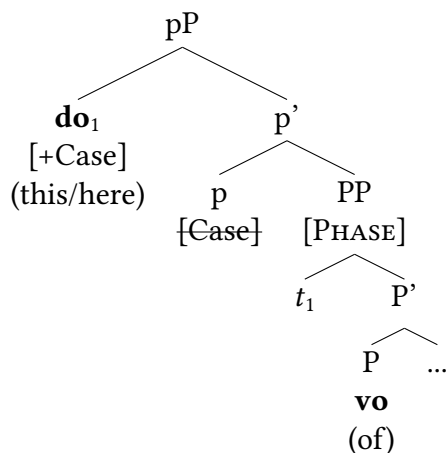
We propose that after this, little p attracts the R-pronoun to its specifier upon assigning it case (this is accusative or sometimes dative case in German).

⁵Specifically, Abels posits a phrase between the R-pronoun and PP that he terms *DRP*, so-called due to facts about the realization of R-pronouns in Dutch and German. He also posits that similar structure, though always silent, facilitates extraction from PP in P-stranding languages like English and Norwegian. One might similarly propose that PP is not a phase in such languages, as [Abels \(2003\)](#) does.

⁶It is also conceivable that a special rule of linearization orders P to the right when its complement is an R-pronoun. However, positing that R-pronouns are simply left-leaning complements does not capture the difference in extractability between R-pronouns and usual DPs, since under this analysis we would incorrectly predict R-pronouns to be frozen in PP by anti-locality.

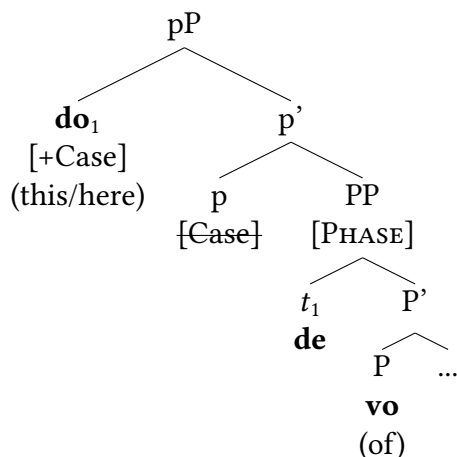
Another option, that is compatible with our analysis, is that R-pronouns are adjuncts of PP. As long as they are not complements, their extractability is correctly predicted.

(17) *R-pronoun receives case and moves to spec-pP (incomplete derivation)*



Importantly, we argue that in Alemannic, the trace left behind by this movement of the R-pronoun is spelled-out by the morpheme *de*, giving rise to doubling. This doubling is essentially a form of resumption, since outside of doubling constructions, *de* is an R-pronoun meaning ‘it’.

(18) *R-pronoun trace in spec-PP pronounced as doubling (completed derivation)*



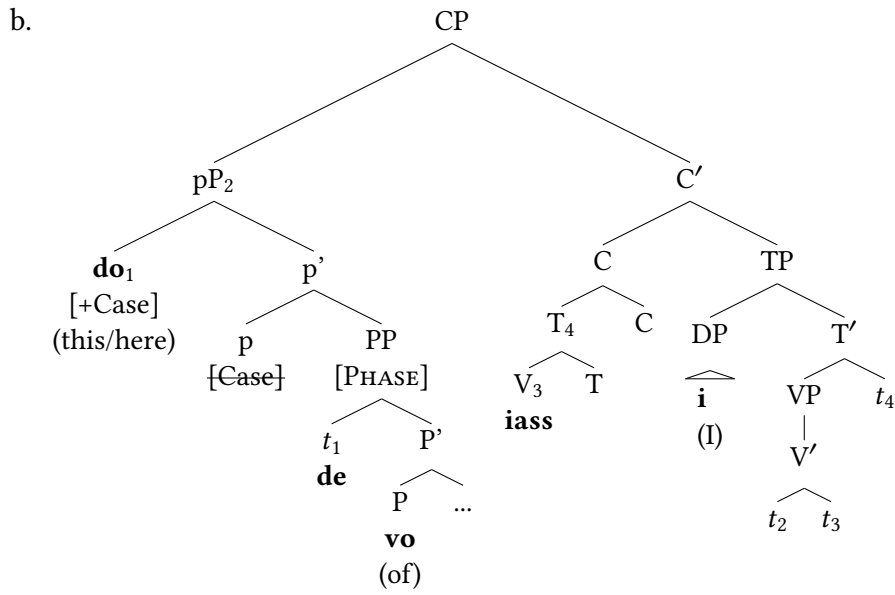
Typical DPs which are born in the complement of PP, by contrast, cannot be attracted by pP and are not doubled, since they are frozen in place by the phase versus anti-locality conflict described above.⁷

The derivation illustrated by (16-18) above is obligatory whenever an R-pronoun is in a PP. After structures like (18) above are derived, it is possible to move the R-pronoun further, either pied-piping pP along (19) or stranding it below (20). In these examples such movement targets spec-CP, and occurs with V to C movement, given the V2 syntax of (Alemannic) German:

(19) *Pied-piping of pP*

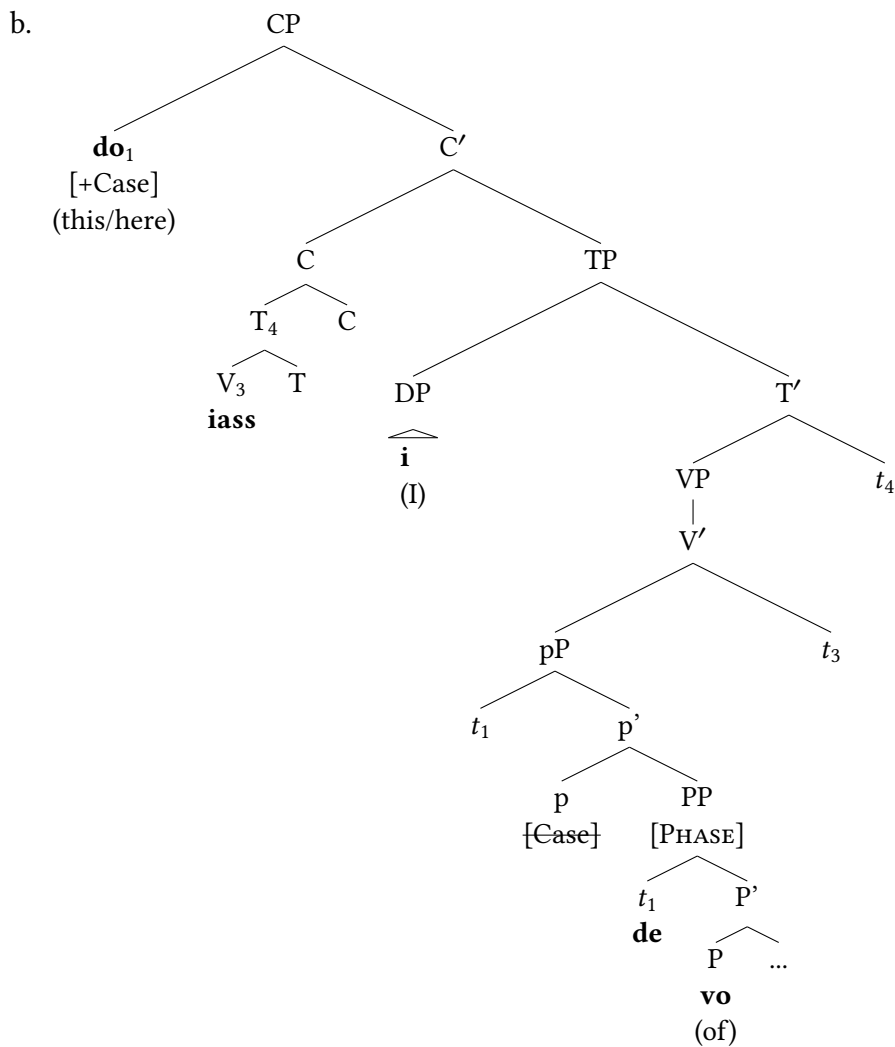
- a. [**Do** *(**de**)-vo]₁ iass i t₁
 PRON DBL-of eat I
 ‘(Some) of this, I eat’

⁷If p cannot access a DP in the complement of the PP phase in order to attract it, in principle we would also expect p to be unable to assign it case, which would presumably cause a crash. However, if case assignment is mediated by Agree (Chomsky 2000, 2001) and Agree is unlike Move in not being subject to the Phase Impenetrability Condition (Bošković 2007), then p can in fact assign such a DP case despite being unable to trigger its movement.



(20) *R-pronoun extraction from pP*

- a. **Do**₁ iass i [_{PP} t₁ ***(de)**-vo]
 PRON eat I DBL-of
 'Of this, I eat (some)'



In summary, after obligatory movement of the R-pronoun to spec-pP, which causes doubling, further movement of the R-pronoun may either pied-pipe or strand the pP.⁸ However, notice that in the above tree, extraction of the R-pronoun from spec-pP creates a second trace, which conceivably might also be realized as *de*, resulting in ‘tripling’. Such examples are not possible, however:

(21) *No double ‘de’*

Do iass i (***de**)-**de**-vo
 PRON eat I DBL-DBL-of

‘This, I eat (some) of’

We argue that this is ruled out by *haplology*, which penalizes sequences of adjacent identical morphemes/syllables. Though see also section 3.4 below, where we show that doubling in intermediate positions seems to be independently ruled out. As we will show below, other R-pronouns in Alemannic must also be doubled when in a PP, not just *do*, with one exception: The R-pronoun *de* cannot be doubled.

(22) *No doubling of ‘de’*

I iass **de**-(***de**)-vo
 I eat PRON-PRON-of

‘I eat (some) of it’

This is what we expect, if haplology constrains the distribution of doubling.

3.3 Doubling without PP

We have shown above that, when focused, an R-pronoun can be doubled even when not in a PP, as the following example demonstrates again:

(23) a. *Basic R-pronoun*

Min hus isch **do**
 my house is here

‘My house is here’

⁸This account also makes correct predictions about contexts with coordinated PPs. If we coordinate two PPs below pP, the R-pronoun in each will move and be united in spec-pP via Across-The-Board movement (Ross 1967, a.o.). Both traces of such movement in spec-PP will be realized as doubling. After this, it is possible to either extract the R-pronoun from pP (ia), or pied-pipe the entire pP structure containing the R-pronoun to a higher position (ib):

- (i) a. Luag, an riesiga Löffl us Schoggi! **Do** easse-mr jetz [**de-mit** und **de-vo**].
 Look, a giant spoon from chocolate PRON eat-we now DBL-with and DBL-of
 ‘Look, a giant spoon made out of chocolate! We eat with it, and of it.’
 b. Luag, an riesiga Löffl us Schoggi! [**Do de-mit** und **de-vo**] easse-mr jetz.
 Look, a giant spoon from chocolate PRON DBL-with and DBL-of eat-we now
 ‘Look, a giant spoon made out of chocolate! With it and of it, we eat.’

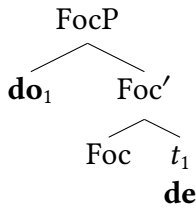
b. *R-pronoun with focus*

Min hus isch **do-de**
 my house is here-DBL

‘My house is HERE’

To account for this, we will adopt the proposal of Syed (2015) that a nominal phrase can be immediately dominated by a focus projection (FocP), which triggers movement of focused material. Specifically, we argue that when FocP immediately dominates the R-pronoun, it moves to spec-FocP, and that the trace of this movement is realized as doubling:⁹

(24) *Doubling by focus movement*



The FocP as a whole, containing the R-pronoun, can then undergo further movement:

(25) *Movement of focused R-pronoun*

Do-de₁ isch min hus *t*₁
 here-DBL is my house

‘My house is HERE’

In examples with PPs, we saw that R-pronoun can be extracted, stranding the doubling morpheme *de* below. The same is not possible in PP-less doubling examples, however:

(26) *Pronoun movement cannot strand doubling morpheme when there is no PP*

* **Do**₁ isch min hus [*t*₁ **de**]
 here/there is my house DBL

‘My house is HERE’

We suggest that this is because *de* is a bound morpheme, which is unable to stand alone, though this problem does not arise when *de* is next to a stranded P.

3.4 Doubling only targets the R-pronoun’s original position

If movement must successive-cyclically pass through the edge of phases, and if CP is a phase, we would expect examples that move an R-pronoun from an embedded CP to allow pronunciation of the R-pronoun’s intermediate trace in spec-CP. However, this is not possible, as (27) below shows. Example (27a) provides an acceptable example with an R-pronoun in PP, but no other relevant movement. In (27b), we see acceptable cross-clausal pied-piping of PP with the R-pronoun. In (27c), we see cross-clausal extraction of the R-pronoun, and the unacceptability of doubling in the edge of the embedded CP.

⁹This FocP we posit here appears analogous to the QP of Cable (2010), which dominates constituents that participate in A’-movements, and sometimes also motivates movement within those constituents prior to A’-movement of the material that QP dominates. The relevant constituent involved in these Alemannic patterns need not undergo further movement, however, though it can, as in (25).

- (27) a. *R-pronoun in PP in embedded clause*
 Du heasch gseit [dass i do-de-vo iass]
 you have said that I PRON-DBL-of eat
 ‘You said that I eat (some) of this’
- b. *Pied-piping movement out of embedded clause possible*
 Dodevo₁ heasch du gseit [t₁ dass i t₁ iass]
 PRON-DBL-of have you said that I eat
 ‘You said that I eat (some) of this’
- c. *R-pronoun extraction possible, but no doubling in spec-CP*
 Do heasch du gseit [t₁ (*de) dass i t₁ de-vo iass]
 PRON have you said DBL that I DBL-of eat
 ‘You said that I eat (some) of this’

We might suspect that this is due to a Doubly Filled Comp Filter violation. However, Alemannic does not have the Doubly Filled Comp Filter (Bayer 2015), so such an explanation is not possible:

- (28) *No Doubly Filled Comp Filter in Alemannic*

Du heasch gfroget [**wo** **dass** i iass]
 You have asked where that I eat
 ‘You asked where I eat’

Overall, it appears that only the base position of the R-pronoun is ever subject to doubling. We set this puzzle aside for now.

4 A morphological account of the doubling

Above we have mainly shown examples that use the pronoun *do* (‘this/here’), involving doubling by *de*. We have also so far only used the preposition *vo* (‘of’). All the patterns shown above can be replicated with the other R-pronouns *döt* (‘that/there’) and *wo* (‘what/where’), as well as with other prepositions. We see this below in (29), which shows preposition pied-piping, (30), which demonstrates preposition stranding, and (31), which shows PP-less focus doubling:

- (29) *Various pronouns and prepositions: Pied-piping movement*
- a. [Do/döt **de**-vo/mit/för]₁ iass i t₁
 PRON DBL-of/with/for eat I
 ‘(Some) of/with/for this/that, I ate’
- b. [Wo **de**-vo/mit/för]₁ iass i t₁
 PRON DBL-of/with/for eat I
 ‘(Some) of/with/for what did I eat?’

(30) *Various pronouns and prepositions: Pronoun extraction*

- a. Do/döt₁ iass i [t₁ **de**-vo/mit/för]
PRON eat I DBL-of/with/for
'This/that, I ate (some) of/with/for'
- b. Wo₁ iass i [t₁ **de**-vo/mit/för]
PRON eat I DBL-of/with/for
'What did I eat (some) of/with/for?'

(31) *PP-less focus doubling*¹⁰

- a. Min hus isch [**do/döt**]-**de**
my house is here/there-DBL
'My house is HERE/THERE'
- b. [**Do/döt**]-**de**₁ isch min hus t₁
here/there-DBL is my house
'My house is HERE/THERE'

Notice that all of these pronouns, *do*, *döt*, and *wo*, are doubled by the morpheme *de*. Recall that in isolation, *de* is interpreted as 'it'—likely the semantically weakest possible R-pronoun. Cross-linguistically, it is typical for doubling phenomena to involve reduced/un-marked elements. For instance, [van Urk \(2018\)](#) analyzes instances of full DPs doubled by pronouns, and [Landau \(2006\)](#) shows that verb doubling in Hebrew results in an infinitive. Thus it is not surprising that in Alemannic, different pronouns are doubled by a morpheme that normally represents a less-marked pronominal option.

This analysis can be implemented in Distributed Morphology ([Halle and Marantz 1993](#)), which posits that syntactic nodes are assigned their morpho-phonological form post-syntactically, based on a list of Vocabulary Insertion (VI) rules. For example, the following VI rules can describe R-pronoun doubling in Alemannic, provided we grant a few additional morphological assumptions that we describe next:¹¹

(32) *The VI rules for R-pronouns and doubling in Alemannic*

- a. [RPRONOUN, 3SG, PROXIMAL] ↔ do ('this/here')
- b. [RPRONOUN, 3SG, DISTAL] ↔ döt ('that/there')
- c. [RPRONOUN, 3SG, WH] ↔ wo ('what/where')
- d. [RPRONOUN, 3SG] ↔ de ('it')

In this set of rules, all R-pronoun forms are specified for the features [RPRONOUN, 3SG], though *do*, *döt*, and *wo* have additional features as well (32a-c), while *de* does not (32d). This makes

¹⁰It is not possible to double the *wh*-R-pronoun *wo* in examples like (31), however, as (i) shows:

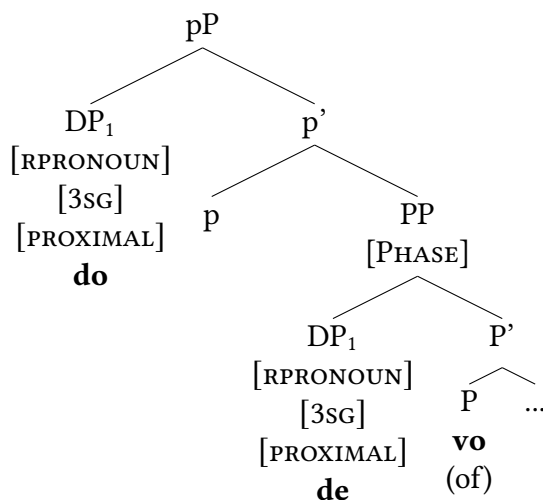
- (i) ***Wo**-(***de**)₁ isch min hus t₁?
where-DBL is my house
'Where is my house?'

If *wh*-phrases are inherently focused (see [Rizzi \(1997\)](#), for instance) then the problem in the above example may be the presence of redundant extra focus. Notice that *wo* does occur with doubling in PP examples like (29b) and (30b) above, where following our analysis doubling occurs for an independent reason: case-driven pP-internal movement, rather than focus.

¹¹For concreteness these VI rules make explicit reference to a feature '[RPRONOUN]', which is obviously stipulative, though it is necessary to syntactically distinguish R-pronouns and usual pronouns/DPs in some way.

concrete the intuition that the R-pronoun *de*, which means ‘it’, is relatively un-marked and under-specified. The *Subset Principle* of Distributed Morphology requires a syntactic node to be realized by the VI rule that matches as many of that node’s features as possible. Thus, while *de* matches a sub-set of the features of all R-pronouns, the more specific VI rules for the forms *do*, *döt*, and *wo* must usually be used when applicable. To implement doubling, we adopt the copy theory of movement (Chomsky 1995; Nunes 2004; van Urk 2018), for which movement leaves behind not traces, but full-fledged syntactic copies. We propose that when an R-pronoun moves, its lower copy can be realized as *de* via the VI rule in (32d), since this rule fits a sub-set of the features that all R-pronouns bear:

(33) *Doubling via pronunciation of lower copy*



However, if pronunciation of such lower copies is permitted (rather than the usual total silencing of them), we must ask why such lower copies are not always assigned exactly the same form as the highest copy formed by movement (*do/döt/wo*). We suggest that this is due to the general tendency for additional pronounced copies to take on a relatively impoverished form, as mentioned above with reference to Landau (2006) and van Urk (2018).

5 Other accounts of German doubling and accounting for dialectal variance

Hein and Barnickel (1990) analyze similar facts in Swabian German (a related variety) and also pursue what is essentially a doubling analysis. Their analysis applies Optimality Theory (Prince and Smolensky 2004) to syntax, and thus hypothesizes that syntactic derivations are governed by a set of ranked violable constraints. Specifically, their analysis relies on six constraints, which they rank differently for German dialects that do and do not have doubling. It is beyond the scope of this paper to debate the validity of Optimality-Theoretic syntax, though such theories can certainly achieve at least capable of empirical adequacy. In this respect, however, we suggest that our analysis is potentially simpler. All we must say to account for the dialectal variation is that in only some varieties of German, an R-pronoun’s lower copy (or lowest, see section 3.4) can be spelled-out.

6 Conclusion

We have analyzed data about the doubling of R-pronouns in Alemannic German. Building on Abels account of the differing properties of usual DPs and R-pronouns in German, we have argued that these facts fit a theory in which PPs involve an additional phrasal layer. We identified this layer as a case-assigning pP, which triggers movement of PP-internal nominals when possible. In reality this is only possible for R-pronouns, whose PP-internal traces are resumed by a pronoun that normally means ‘it’, yielding doubling. That a less-marked element is recruited to achieve doubling converges with previous findings about doubling phenomena cross-linguistically.

References

- Abels, Klaus. 2003. *Successive-Cyclicity, Anti-locality, and Adposition Stranding*. Doctoral dissertation, University of Connecticut.
- Abels, Klaus. 2012. *Phases: An Essay on Cyclicity in Syntax*. Berlin: De Gruyter.
- Bayer, Josef. 2015. Doubly-Filled Comp, wh head-movement, and derivational economy. In *Representing structure in phonology and syntax*, ed. Marc van Oostendorp and Henk van Riemsdijk. Mouton de Gruyter.
- Bošković, Željko. 2007. On the Locality and Motivation of Move and Agree: An Even More Minimal Theory. *Linguistic Inquiry* 38:589–644.
- Cable, Seth. 2010. *The Grammar of q: Q-particles, wh-movement, and pied-piping*. Oxford University Press.
- Chomsky, Noam. 1995. *The minimalist program*. MIT Press.
- Chomsky, Noam. 2000. Minimalist Inquiries. In *Step by step: Essays on Minimalist Syntax in Honor of Howard Lasnik*, ed. Roger Martin, David Michaels, Juan Uriagereka, and Samuel Jay Keyser, 89–155. MIT Press.
- Chomsky, Noam. 2001. Derivation by Phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz. MIT Press.
- Fleischer, Jürg. 2002. *Die syntax von pronominaladverbien in den dialekten des deutschen*. ZDL-Beiheft 123. Wiesbaden: Franz Steiner Verlag.
- Halle, Morris, and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In *The View From Building 20*, ed. Ken Hale and Samuel Jay Keyser, 1–52. MIT Press.
- Hein, Johannes, and Katja Barnickel. 1990. Replication of R-pronouns in German dialects. In *Zeitschrift für sprachwissenschaft* 37, 171–204. Mouton De Gruyter.
- Koopman, Hilda. 2000. Prepositions, postpositions, circumpositions, and particles. In *The syntax of specifiers and heads*, ed. Hilda Koopman, 204–260. London: Routledge.
- Landau, Idan. 2006. Chain resolution in Hebrew V(P) fronting. *Syntax* 9:32–66.
- Nunes, Jairo. 2004. *Linearization of chains and sideward movement*. Cambridge, MA: MIT Press Linguistic Inquiry Monographs.
- Prince, Alan, and Paul Smolensky. 2004. *Optimality Theory: Constraint interaction in Generative Grammar*. Oxford: Wiley-Blackwell.
- van Riemsdijk, Henk. 1978. *A case study in syntactic markedness: The Binding Nature of Prepositional Phrases*. Lisse: The Peter de Ridder Press.
- van Riemsdijk, Henk. 1997. Push chains and drag chains: Complex predicate split in Dutch. In *Scrambling*, ed. Shigeo Tonoike, 7–33. Tokyo: Kurosio.

- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar. handbook in generative syntax*, ed. Liliane Haegeman. Dordrecht: Kluwer.
- Rooryck, Johan. 1996. Prepositions and minimalist case marking. In *Studies in comparative Germanic syntax*, ed. Höskuldur Thráinsson, Samuel David Epstein, and Steve Peter, 226–256. Dordrecht: Kluwer.
- Ross, John. 1967. *Constraints on variables in syntax*. Doctoral dissertation, MIT.
- Svenonius, Peter. 2003. Limits on p: filling in holes vs. falling in holes. *Nordlyd* 31:431–445.
- Syed, Saurov. 2015. Focus-movement within the DP: Bangla as a novel case. In *Proceedings of the 32nd West Coast Conference on Formal Linguistics*, ed. Ulrike Steindl, Thomas Borer, Huilin Fang, Alfredo García Pardo, Peter Guekguezian, Brian Hsu, Charlie O’Hara, and Iris Chuoying Ouyang, 332–341. Somerville, MA: Cascadilla Proceedings Project.
- van Urk, Coppe. 2018. Pronoun copying in Dinka Bor and the copy theory of movement. *Natural Language and Linguistic Theory* 36:937–990.
- van Riemsdijk, Henk. 1990. Functional prepositions. In *Unity in diversity*, ed. Harm Pinkster and Inge Genee, 229–241. Dordrecht: Foris.