



# Adverbial reinforcement of demonstratives in dialectal German

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## ABSTRACT

In the German dialects of Rhine and Moselle Franconian, demonstratives are reinforced by locative adverbs *do/lo* 'here/there' in order to emphasize their deictic strength. Interestingly, these adverbs can also appear in the intermediate position, i.e., between the demonstrative and the noun (e.g. *das do Bier* 'that there beer'), which is not possible in most other varieties of European German. Our questionnaire study and several written and oral sources suggest that reinforcement has become mandatory in demonstrative contexts. We analyze this grammaticalization process as reanalysis of *do/lo* from a lexical head to the head of a functional Index Phrase. We also show that a functional DP-shell can better cope with this kind of syntactic change and with certain serialization facts concerning adjoined adjectives.

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In colloquial Standard German, the only difference between definite determiners (1a) and demonstratives is emphatic stress in demonstrative contexts (1b).

- (1) a. Kannst du **die** Frau SEHen?  
Can you DET woman see  
'Can you see the woman?'
- b. Kannst du **DIE** Frau sehen?  
Can you DEM woman see  
'Can you see this woman?'

Due to this functional overload, locative adverbs such as *da/dort* or *hier* 'there, here' help to reinforce the deictic strength of the demonstrative determiner. This kind of reinforcement is common in many Germanic and Romance languages (see Brugè 1996; Bernstein 1997; Putnam 2006; Roehrs 2010). The position of these adverbs in colloquial Standard German is restricted to peripheral positions, i.e. preceding the determiner (2a) or following the noun (2b). The intermediate position between determiner and noun yields an ungrammatical construction (2c).

- (2) a. Gib mir **da das** Bier.  
give me ADV DEM beer  
'Give me that beer (there).'
- b. Gib mir **das** Bier **da**.  
give me DEM beer ADV
- c. \*Gib mir **das da** Bier.  
give me DEM ADV beer

Similar to Putnam's (2006) observations on Pennsylvania German, in the transition area between the German dialects of Rhine Franconian and Moselle Franconian,<sup>1</sup> the position of locative adverbs *do/lo* is not restricted to peripheral positions (3a, b). Additionally, they can appear between the demonstrative and the noun (3c). Rhine Franconian uses the phonetic variant *do* of Standard German *da*, while Moselle Franconian has established the lexical variant *lo*. Both variants, however, derive from the same Early New High German form *allda* 'there'.

- (3) a. *Moselle Franconian* (Fox 1955: 27)  
weil kommt **lo die** dreckig Kurwel dazeschen  
now comes ADV DEM dirty basket between  
'Now this/that damn basket is getting in the way.'
- b. *Moselle Franconian* (Braun & Peter 1999: 57)  
Awwer [...] wat machschde da mét **der** Hónd **lòò?**  
but what make.you then with DEM dog ADV  
'But what are you going to do with this/that dog then?'
- c. *Rhine Franconian* (Lang 2011: 25)  
Fier all die wo unner **der doo** Hitz stöhne  
for all those who under DEM ADV heat moan  
'For all of those who suffer from this/that heat.'

In contrast to Girth & Michel (2008: 205) who state that the intermediate position is on the decline, we posit, on the basis of abundant evidence (see below), that this position has become mandatory in the transition area between Rhine and Moselle Franconian and that peripheral positions cease to be used in demonstrative contexts. Dialectal texts, grammar books, audio recordings and informants show that speakers use *DEM+do/lo+N* in the same contexts in which the Standard German demonstrative equivalent *dies-* 'this/that' applies (see Rauth & Speyer 2018: 46–47). Thus, a new complex demonstrative has been grammaticalized in the area between Rhine and Moselle Franconian. This assumption is also supported by the fact

<sup>1</sup> By speaking of Rhine and Moselle Franconian we henceforth refer to the transition area between the two dialects where the intermediate position of *do/lo* is grammatical.

that peripheral positioning of *do/lo* is mostly interpreted as a separate locative or temporal adverbial, which is not a part of the demonstrative.

In the present paper, we present data from a preliminary questionnaire study conducted in 2019 in order to identify the exact area where speakers use the new demonstrative (Section 2). We explain the emergence of  $DEM+do/lo+N$  as a typical instance of grammaticalization involving the neutralization of semantic features of the locative adverb as well as an increase of bondedness between the demonstrative and *do/lo* (Section 3). As for the structural analysis, we act on the assumption that the lexical head *do/lo* has been reanalyzed as the head of a functional projection denoting deictic indexing (Section 4). Finally, we argue that the emergence of the new demonstrative can best be accounted for by the DP-hypothesis (Section 5).

## 2 QUESTIONNAIRE STUDY

In the course of a project in which we are going to investigate the syntactic peculiarities of the Rhine and Moselle Franconian varieties spoken in the border region of Germany, Lorraine and Luxembourg, we conducted a questionnaire study as a pretest. The questionnaire was sent to 121 townships, which are evenly distributed over the area of investigation. Ideally, six participants for each township were asked to complete the questionnaire, of which three should be over 60 years old, and three under 30 years old. This was done in order to trace possible changes in apparent time (see Labov 1994). The questionnaires were regionalized and there were three versions of the instructional text (German, French, Luxembourgish). Thus, the questionnaire came in seven versions (Southern Rhine Franconian: one version with French and one version with German instruction text; Moselle Franconian: one version with French and one version with German instruction text; Luxembourgish: one version with Luxembourgish instructional text). So far, we have received completed questionnaires from 36 townships, which are situated mostly in the German state of Saarland and the French department of Moselle, as well as one township in Luxembourg. Furthermore, only a subset of the expected six questionnaires per township has been received. The study is based on these questionnaires.

We decided to use multiple question types in the questionnaire. The tasks range from different types of judgment elicitation (selecting the best variant; rating variants on a 4-point-scale) to puzzles, cloze tests, descriptions of single pictures or of picture sequences. Our questionnaire also included questions regarding many other linguistic phenomena of Rhine and Moselle Franconian, which, at the same time, served as filler questions for the reinforced demonstratives. In that respect we follow the example of the project *Syntax Hessischer Dialekte* (SyHD, 'Syntax of Hessian Dialects'). The investigators involved in SyHD had good results with this broadness of tasks, so we are expecting good results for our project as well (see Fleischer, Kasper & Lenz 2012). One reason which guided us in making this decision was that the tasks address different aspects of language: While acceptability judgments pertain to competence, the actual performance is targeted by tasks such as picture descriptions. Thus, in order to gain a more complete picture, the inclusion of different tasks is necessary. This point was already behind the procedure in the SyHD project, to which we refer in this respect (Fleischer, Kasper & Lenz 2012). However, in analyzing the data from the pretest questionnaire, we noted that the picture description task is often prone to being misunderstood by the participants.

In this questionnaire, we tested the problem at hand with several different types of questions. One was acceptability judgment tasks (2 items) on a 4-point scale of clauses containing a noun phrase in the form  $DEM+do/lo+N$  and one in the standard form  $DEM+N+do/lo$  (example in [Figure 1](#)). Value 1 stands for 'completely natural', 2 for 'not completely natural', 3 for 'relatively unnatural, but still marginally acceptable', 4 for 'completely unnatural'.<sup>2</sup>

The other tasks included a word scramble (1 item) in which the participants had to put the parts of the noun phrase – the determiner, the *do/lo* and the noun –, into the order most natural for them, and picture descriptions (2 items) in which the production of a deictic noun phrase was elicited (examples in [Figures 2, 3](#)).

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2 In the case of identical values for two or more variants of the clauses, informants have to choose their preferred variant by checking the box *am besten* 'best'.

20. Wir haben verschiedene Varianten von Sätzen in Gruppen zusammengestellt.

→ *Bewerten Sie bitte, wie natürlich für Sie die einzelnen Varianten in Ihrem Dialekt klingen, indem Sie die Noten ankreuzen.*

Die Noten erklären sich folgendermaßen:

1	<i>klingt völlig natürlich</i>
2	<i>klingt nicht ganz natürlich, aber geht schon</i>
3	<i>klingt ziemlich unnatürlich, geht aber zur Not schon noch</i>
4	<i>klingt völlig unnatürlich</i>

→ *Kreuzen Sie bitte zusätzlich an, welche Variante Sie **am besten** finden, wenn alle Varianten eines Satzes dieselbe Note bekommen haben.*

	1	2	3	4	am besten
7a Die Fraa woar vor ennem Joar schwanger.	<input type="checkbox"/>				
7b Die Fraa is vor ennem Joar schwanger gewähn.	<input type="checkbox"/>				
8a Der Dokda doo kann Ihne sischa weidahelfe.	<input type="checkbox"/>				
8b Der doo Dokda kann Ihne sischa weidahelfe.	<input type="checkbox"/>				

Figure 1 Acceptability judgement on a 4-point scale.

3. Hannelore und Walter sind im Kaufhaus, weil sie neues Geschirr kaufen möchten. Gleich zu Beginn sieht Hannelore schöne Tassen, die ihr gut gefallen, aber leider etwas teurer sind. Nachdem sie eine halbe Stunde vergeblich weiter gesucht haben, sind sie schließlich wieder bei den schönen Tassen vom Anfang gelandet und Hannelore sagt:

→ *Bitte vervollständigen Sie den Satz mit den Wörtern in den Boxen. Schreiben Sie den ganzen Satz in der Reihenfolge auf, die in Ihrem Platt/Dialekt am natürlichsten klingt:*

Eisch käfen jetzt doch

Tase

lo

die

.....

Figure 2 Word scramble task.

19. Uff dem Bild is e Fraa un e Sessel.



→ *Veillez écrire ce que la femme vient de dire sur cette photo en complétant la phrase dans votre dialecte:*

..... is bequem.

Figure 3 Picture description.

The acceptability study showed a clear area in which the use of the variant  $DEM+do/lo+N$  was judged as grammatical (Figure 4), sometimes even better than the standard variant  $DEM+N+do/lo$  (Figure 5). In the maps in Figures 4 and 5, the older and younger age groups were combined in order to increase the data set. The colors used in Figure 4 correspond to mean judgment values. The available scale 1.0 to 4.0 was divided into four parts; each part was assigned a color following a traffic light arrangement (1.0 to 1.749: dark green; 1.75 to 2.49: light green; 2.5 to 3.249: yellow; 3.25 to 4.0: red). The colors in Figure 5 reflect a heat map design. The numbers in Figure 5 are calculated by the formula  $s - d$ , where  $s$  = mean value of the standard  $DEM+N+do/lo$  variant, and  $d$  = mean value of the dialectal  $DEM+do/lo+N$  variant. The larger the difference between the mean judgment values of the  $DEM+do/lo+N$  variant to the  $DEM+N+do/lo$  variant was, the darker the color. Red stands for preference of the dialectal  $DEM+do/lo+N$  variant, blue for preference of the standard  $DEM+N+do/lo$  variant.

Not only are judgments for the variant  $DEM+do/lo+N$  relatively good (Figure 4) in this area, but in the same area, the variant  $DEM+do/lo+N$  is judged even better than the standard  $DEM+N+do/lo$  (Figure 5).

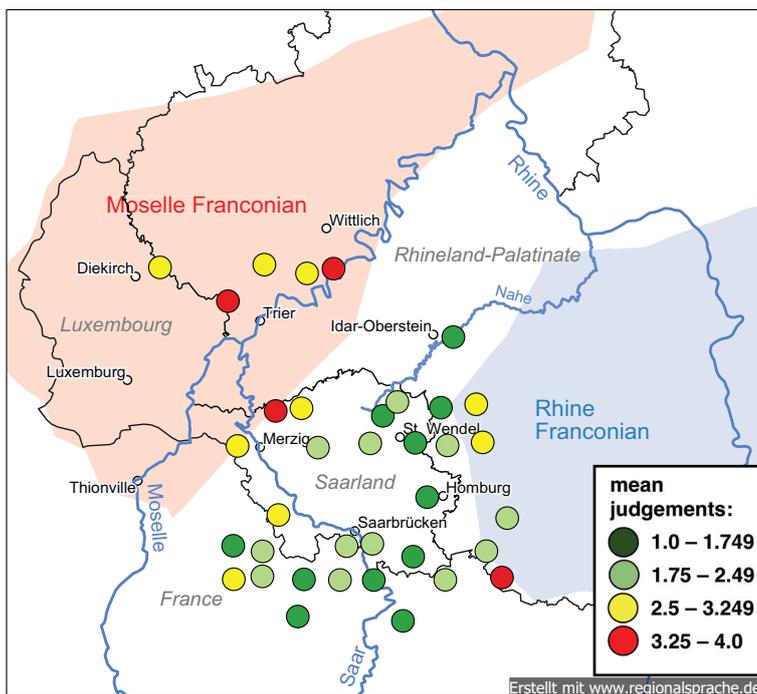


Figure 4 General acceptance of the  $DEM+do/lo+N$ -construction.

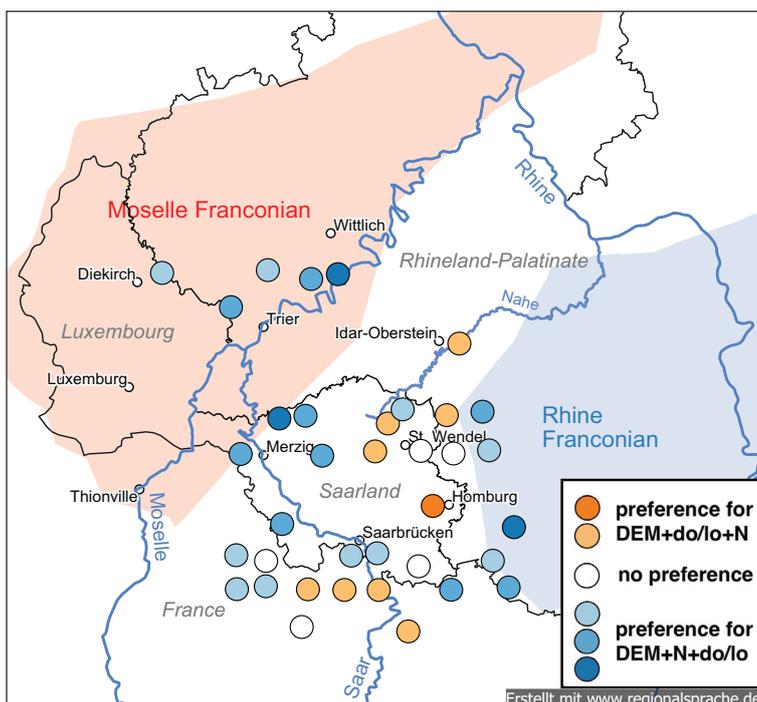
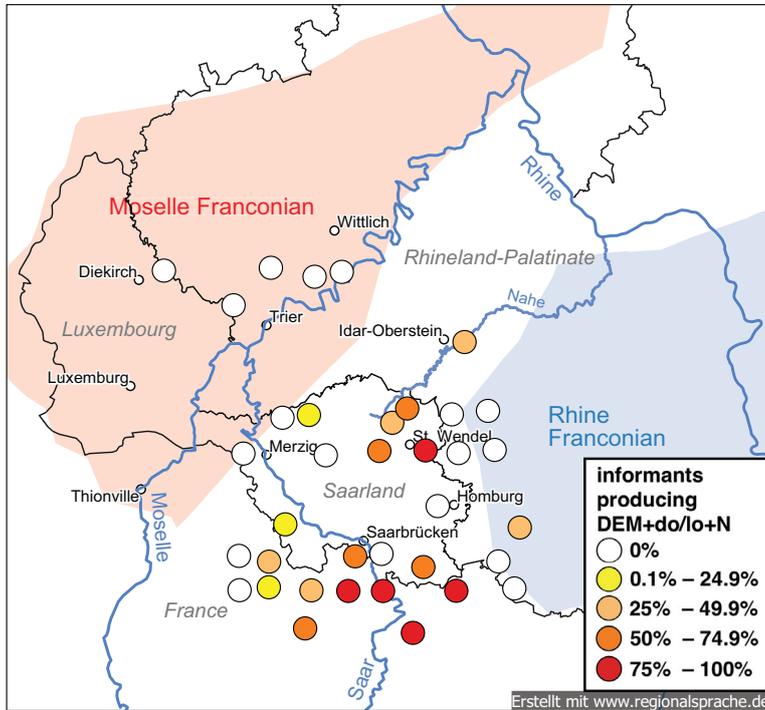
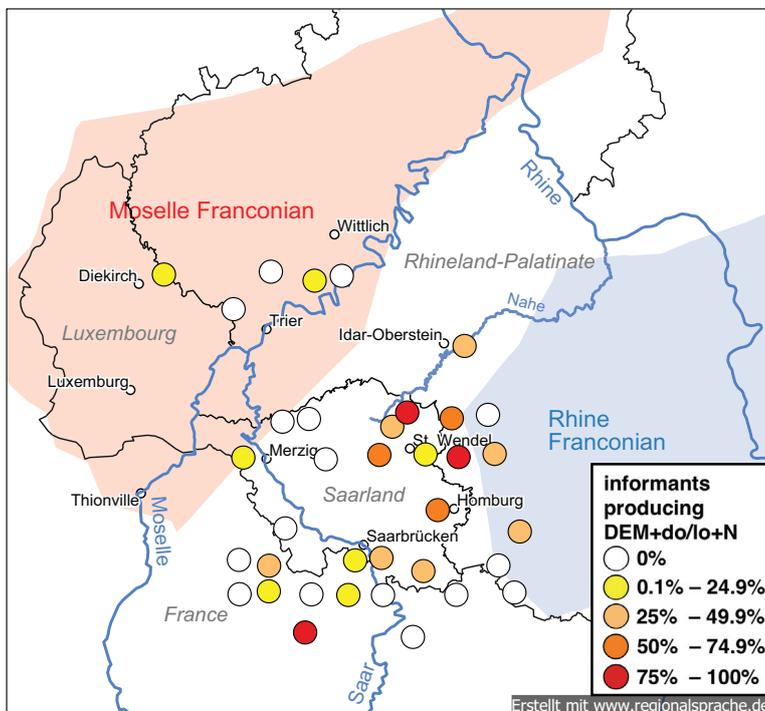


Figure 5 Difference in judgements between the variants  $DEM+do/lo+N$  and  $DEM+N+do/lo$ .

The other tasks reflected a similar distribution. In **Figure 6**, the percentage of producing the DEM+do/lo+N variant in the word scramble task is given, in **Figure 7** likewise the percentage of producing the DEM+do/lo+N variant in the picture description task. In these maps, the colors correspond to different percentages of answers. If more than 75% of the informants produced the DEM+do/lo+N variant, the color red was chosen; dark orange corresponds to 50% to 74.9%; light orange to 25% to 49.9%; yellow to 0.1% to 24.9%. If no informant in a given township produced the variant, that township was marked in white.



**Figure 6** Production of the DEM+do/lo+N-variant, word scramble task.



**Figure 7** Production of the DEM+do/lo+N-variant, picture description task.

Production tasks in general are not as reliable as judgment tasks, since other factors that cannot be controlled may potentially play a role.<sup>3</sup> Taking this into account, we still see a surprisingly good overlap with the areas from the judgement task. Interestingly, the variant was produced

<sup>3</sup> Apart from completely misreading the picture stimulus, one potential factor may be that informants produce irrelevant data, i.e. a construction other than the demonstrative DP (see Fleischer, Kasper & Lenz 2012: 19). We tried to minimize irrelevant answers by predetermining as much context of the expected answer as possible (e.g. the predicate *is bequem* 'is comfortable' in Figure 3).

spontaneously in the description task even in townships in which the acceptability judgments were poor, e.g. in the northern part of the area of investigation.

In general, we can say that the  $DEM+do/lo+N$  variant is the preferred variant in the eastern parts of the transition area in Saarland and Lorraine, but that it is at least marginally possible in most other regions of the investigation area. This can be interpreted in such a way that this construction has been fully grammaticalized as the common way to express demonstrative force in the transition area.

An interesting point is that the area in which the  $DEM+do/lo+N$  variant is preferred reaches across the border into Lorraine. This indicates either that the origin and spread of this variant predates the political separation of Lorraine and the Saarland, that is: World War I, or that the interchange between Lorraine and the Saarland was always so easily manageable that these two regions remained homogenous as a dialect area.

### 3 THE EMERGENCE OF A NEW DEMONSTRATIVE

Once the expressive force of a grammatical item is insufficient due to phonetic erosion or formal ambiguity, this item is often reinforced or replaced by a lexical item. For instance, the preverbal particle *ne* used to be the only means of coding sentence negation in Classical Latin. *Ne* has been phonetically weakened and therefore frequently accompanied by the numeral *oenum* ‘one thing’. The prevalent juxtaposition with *ne* made it possible for both items to merge into the new strengthened negative marker *non* (< *noenum*). This process of reinforcement is commonly explained as an act of grammaticalization: The lexical item *oenum* is desemantized by reducing its interpretable (semantic) features in order to acquire a second function, i.e. emphasizing the negative expressivity of the existing negation marker *ne*. As soon as the syntagma *ne oenum* is generally used to express sentence negation, an increase of bondedness between the two items is set in motion. As a result, *ne* and *oenum* are merged (univerbated) into the single word *noenum* and, again, successively weakened to the new negative marker *non* (see Jespersen 1917: 7; Lenz 1996: 183f.; Heine 2003: 579; Lehmann 2015: 24–26, 157–161).

The emergence of the new demonstrative  $DEM+do/lo+N$  can be seen as an instance of grammaticalization very similar to the case of Latin *non* (see Girth & Michel 2008: 211–213; Rauth & Speyer 2018: 53–56). Prior to the grammaticalization process, Rhine and Moselle Franconian determiners *der/die/das* ‘the.M/F/N’ (and those of many other varieties of German) are formally ambiguous, simultaneously serving as both (i) the definite and (ii) the demonstrative determiner. The mere difference between both functions is emphatic stress in demonstrative contexts. In contrast to other German varieties which use lexical alternatives like *dies-er/-e/-es* ‘this-M/F/N’ (in Standard German and Low German dialects) or *sell-er/-i/-es* ‘the.same-M/F/N’ (in Central and Upper German dialects) to compensate the functional overload of *der/die/das*, such alternatives are not available in the transition area of Rhine and Moselle Franconian (see Schirmunski 2010: 538). Due to this lack of formal and functional distinctiveness, speakers of Rhine and Moselle Franconian formally strengthen their demonstrative by using locative adverbs. However, there is a crucial difference between the reinforcement of *ne* by *oenum* and the demonstrative by *do/lo*: As example (2c) reveals, the intermediate position of *do/lo* (i.e. direct adjacency of  $DEM+do/lo$ ) is not acceptable in Standard German and in most other dialectal variants of European German, whereas reinforcement of Latin *ne* has never been subject to word order restrictions (see Schwegler 1990: 152–153). We therefore need to assume that intermediate *do/lo* originally was not a valid variant in Rhine and Moselle Franconian either. Consequently,  $DEM+do/lo+N$  cannot be considered as the initial point for formal grammaticalization. Instead, a variant allowing for  $DEM$  and *do/lo* being juxtaposed in all variants of German, including Standard German (4a), is the pronominal use of the demonstrative:

- (4) a. *Standard German*  
 Kennst du **den da**?  
 know you DEM ADV  
 ‘Do you know this/that one.’

- b. *Rhine Franconian* (Lang 2011: 157)  
**Das doo** iss jedds mei Zahnarzt.  
 DEM ADV is now my dentist  
 ‘Now, this/that is my dentist.’
- c. *Moselle Franconian* (Braun & Peter 1999: 39)  
 Jees, Mamma, wat wòòr **dat lòò** awwer e klääner Nécklääsje!  
 Jeez mom what was DEM ADV PTCL a small St Nicholas  
 ‘Jeez, mom, this/that St Nicholas was a small one!’
- d. *Standard German*  
 Mama, **das (??da)** war aber ein kleiner Nikolaus!  
 mom DEM ADV WAS PTCL a small St Nicholas  
 ‘But mom, that was a small St Nicholas!’

As the adverbs *do/lo* carry a semantic feature of locative indexing, obligatory reinforcement is first expected to occur in situational demonstrative contexts where the referent of the DP is physically present and can be pointed at. This is the case in (4b), where the cellphone is ringing with a special ringtone. By *das doo*, the speaker refers to the audible ringtone which tells him that his dentist is calling. As a next step, *do/lo* lose their need for a physically present referent so that they are compatible with non-situational contexts of demonstratives. Such a case is illustrated in (4c): A 12-year-old boy disguised as St Nicholas has already left the room where the other children anaphorically referring to him by *dat lòò* are located. Additionally, (4c) illustrates that the dialectal reinforcers *do/lo* even appear in contexts where the reinforcer *da* would be banned or at least feel very odd in the (colloquial) Standard German equivalent (4d).

As a next step, the highly frequent use of the syntagma *DEM+do/lo* gives rise to the formal part of the grammaticalization process, namely the initiation of the coalescence of *DEM* and *do/lo*. Right after the loose juxtaposition where the adverb is prosodically more prominent than the demonstrative, grammaticalized *do/lo* is cliticized to the demonstrative. As a result, *do/lo* should be prosodically subordinated under the accent of the adjacent determiner and form a phonological word together with it (see Lehmann 2015: 157). In fact, it is not clear if this stage of coalescence has already been obtained. Steitz’s (1981: 113–116) dialect grammar of Saarbrücken (Rhine Franconian) states that the demonstrative is regularly strengthened by *do*, and the syntagma bears initial-stress if the physically present referent is distal (‘dɛ:r.dɔ:), while final-stress corresponds to a proximal referent (dɛ:r.’dɔ:). He clarifies the advanced coalescence status of *DEM+do/lo* by consistently writing it in one word. Bonner’s (1986: 134) grammar of Neunkirchen challenges Steitz’s functional analysis by saying that he fails to take into account the contextual variability of deictic expressions. However, we can observe from the above-mentioned dialect grammarians that there actually is an initially stressed variant of *DEM+do/lo*, whatever the function of the variable stress may be. The former locative adverb, thus, is currently changing its status from a juxtaposed to an encliticized demonstrative particle. Further evidence for an advanced status of coalescence can be seen in instances where both the demonstrative and the clitic are inflected:

- (5) a. *Moselle Franconian* (Lehnert & Augustin 1950: 36)  
**Den Lo’en** kann mer ach wärtes trinken  
 DEM.ACC.SG ADV.ACC.SG can one also on.workdays drink  
 ‘One can drink this/that one on workdays, too.’
- b. *Moselle Franconian* (MRhSA audio recordings at Bosen, Püttlingen and Überherrn)  
 Er soll mit **dem lo’n** Woon fohn.  
 he shall with DEM.DAT.SG ADV.DAT.SG car drive  
 ‘He ought to drive this/that car/wagon.’
- c. *Rhine Franconian* (spontaneous utterance of informant, 2018)  
**Den do’ne** kennd isch da empfehle.  
 DEM.ACC.SG ADV.ACC.SG could I you recommend  
 ‘I could recommend you this/that one.’

Since adverbs in German are non-inflectional, the examples in (5) suggest that *do/lo* have changed their categorial status. While inflected *lo* in (5a) and (5b) seem to behave like adjectives with weak inflectional morphemes (*den Lo'en* ↔ *den gut-en* ‘the good one’), *den do'ne* in (5c) rather behaves like a determiner, since it bears a strong inflectional morpheme, by analogy with the form of the simple demonstrative *den-ne* (‘this.ACC.SG’) in Rhine Franconian. Whatever the new status of *do/lo*, they most certainly do not act as typical adverbs anymore.

Once the coalescence of DEM and *do/lo* is strong enough to be reanalyzed as a composite demonstrative, its use is extended from pronominal to adnominal contexts. The earliest (written) attestation of the adnominal use we found in our text corpus (see [Table 1](#) for Rhine Franconian and [Table 2](#) for Moselle Franconian) is from a Rhine Franconian text of the year 1900:

TEXT	ADNOMINAL		PRONOMINAL	TOTAL
	PERIPHERAL	INTERMEDIATE		
Claus 1900	5	5	0	10
Jantzer 1933	2	3	18	23
Lang 2011	0	11	20	31

**Table 1** Written attestations of reinforced demonstratives in Rhine Franconian.

TEXT	ADNOMINAL		PRONOMINAL	TOTAL
	PERIPHERAL	INTERMEDIATE		
Fox 1924	17	0	24	41
Lehnert & Augustin 1939	35	0	27	62
Braun & Peter 1999	20	2	28	50

**Table 2** Written attestations of reinforced demonstratives in Moselle Franconian.

- (6) *Rhine Franconian* (Claus 1900: 15)  
 In **dem do** Punkt bin ich ganz mit'm Franzel einverschtanne.  
 in DEM ADV point am I fully with.the Franzel agreed  
 ‘In this/that respect I fully agree with Franzel.’

The construction *in dem do Punkt* is used five times by the main protagonist of the text. Since there are no other instances of DEM+*do/lo*+N, it is likely that it functions as a special stylistic element of the main protagonist. Dialect grammarians of the early 20<sup>th</sup> century neglect to mention the reinforced demonstrative, with one crucial exception: Lehnert’s (1926: 115) dialect grammar of Diefflen (Moselle Franconian) states that speakers putting *lo* in the intermediate position (*der lo Monn* ‘this/that man’) may appear odd. Thus, DEM+*do/lo*+N must have been familiar to speakers of Rhine and Moselle Franconian at the turn of the century, but still seems to be stigmatized in a certain way. One generation after Claus (1900), the text of Jantzer (1933) reveals three lexically different instances of DEM+*do*+N for Rhine Franconian, while in Moselle Franconian texts Fox (1955 [1924]) and Lehnert & Augustin (1950 [1939]) *lo* is restricted to peripheral positions. As for adnominal demonstratives in recent Rhine Franconian (Lang 2011), *do/lo* is only attested in intermediate position. There actually are three instances of peripheral *do/lo*, but these function as temporal adverbs:

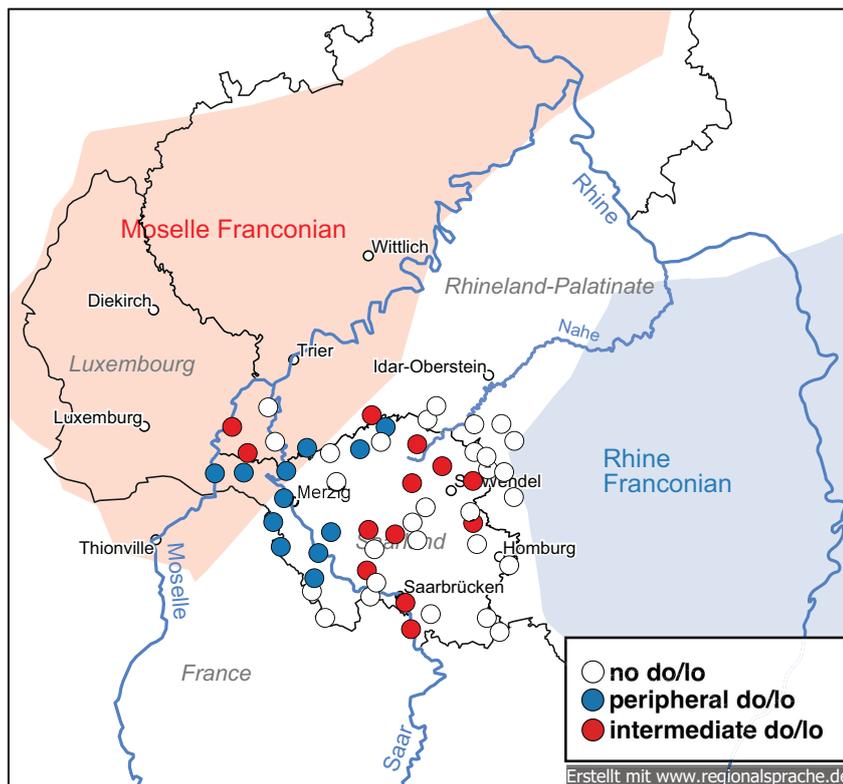
- (7) *Rhine Franconian* (Lang 2011: 128)  
 Auserdem fangd **do die** Olympiade [...] aan.  
 moreover begins ADV DET Olympics PTCL  
 ‘Moreover, the Olympic Games will begin at that time.’

Modern Moselle Franconian (Braun & Peter 1999) finally also reveals two instances of DEM+*do/lo*+N, but in contrast to Rhine Franconian, peripheral *do/lo* is still a highly frequent alternative.

Apart from the adnominal use, reinforced demonstrative pronouns constitute a large portion of the attestations found in our text corpus, with the exception of Claus (1900). DEM+*do/lo* represents at least two-thirds of the reinforced demonstratives in Rhine Franconian, and about

50 % in Moselle Franconian. Overall, the use of locative adverbs *do/lo* increased in both dialects, as the numbers of attestations in the text corpus show.

In order to fill the data gap in the second half of the 20<sup>th</sup> century, we analyzed audio recordings of the *Mittelrheinischer Sprachatlas* (MRhSA, ‘Middle Rhine linguistic atlas’, see Schmidt et al. 2008ff.), which have been collected in the 1980s. A younger (about 35 years old) and an older (about 65 years old) generation of informants translated Standard German words or sentences into their dialect. Girth & Michel (2008) looked into the translations of the sentence *Hast du den Mann gekannt?* ‘Did you know that man?’ and found that Rhine Franconian speakers solely used the disyllabic form *denne Mann* (‘DEM.ACC.SG man’) without reinforcing it by *do*, while Moselle Franconian informants only produced demonstratives with a peripheral reinforcer. They concluded that DEM+*do/lo*+N is on the decline, which is contrary to our observations of modern spoken Rhine and Moselle Franconian. Apparently, disyllabic *denne* is an exception to the predominant similarity as it formally differs from the definite article *de(n)* in Rhine Franconian and thus does not need to be reinforced.<sup>4</sup> Instead, we analyzed the translations of the sentence *Er soll mit dem Wagen fahren!* ‘He should drive that car!’ produced by speakers living in the German federal state of Saarland. The results are given in **Figures 8** and **9**. A serious disadvantage of translation tasks is the possible influence of the originally presented sentence. Thus, the high number of demonstratives missing *do/lo* (white circles) in both figures could be traced back to the non-reinforced demonstrative in Standard German. As for the reinforced demonstratives, both figures reveal a division of the state of Saarland into two parts: The western part preferably uses peripheral positions of *do/lo*, while the eastern part seems to constitute the core region of the new demonstrative.<sup>5</sup> These findings are in line with the results of our recent questionnaire study (see Section 2).

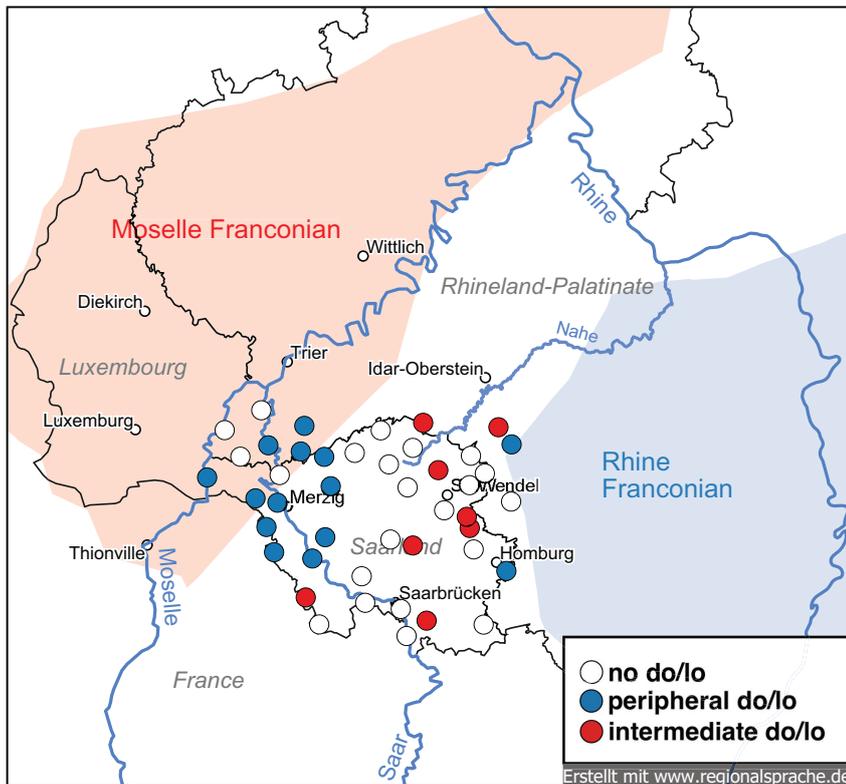


**Figure 8** Translations of *Er soll mit dem Wagen fahren* from MRhSA (older generation, ~65 years old).

The data from the older generation of informants also include two types of intermediate reinforcement by lexical items other than *do/lo*: (i) three tokens of reinforcement by *hei* ‘here’ (for instance, recorded in Falscheid, Moselle Franconian: *dem hei Wöön*), and (ii) one token of reinforcement by *sell* ‘the same’ (recorded in Hoof, Rhine Franconian: *dem sell’e Waan*). As

<sup>4</sup> It is the only case of formal difference of the demonstrative and the definite article. However, *denne* recently seems to be reinforced by *do* as well for the sake of a uniform inflectional paradigm of the new demonstrative (see example 8 for an illustration).

<sup>5</sup> Comparing Figures 8 and 9, attestations of intermediate *do/lo* (i) decrease from 13 (older generation) to 8 (younger generation) and (ii) cease to appear in Moselle Franconian. However, the core region of DEM+*do/lo*+N remains stable.



**Figure 9** Translations of *Er soll mit dem Wagen fahren* from MRhSA (younger generation, ~35 years old).

the latter seems to be an isolated case, we discuss the former reinforcement by *hei* in more detail. Since most Germanic languages differentiate between a proximal and a distal locative adverb, it might be expected that reinforcement of the demonstrative be possible with each of the two adverbs. In colloquial Norwegian, for instance, the demonstrative *den* is compatible with both proximal *her* and distal *der* (see Julien 2005: 116). This also holds true for Moselle Franconian, which actually provides four locative adverbs: proximal *hei* and *lei* (both ‘here’, from Early New High German *allhier*), and distal *do* and *lo* (both ‘there’, from Early New High German *allda*) (see Lehnert 1926: 119, 203). The free choice between several locative adverbs could be the reason for the considerably later attestation of intermediate reinforcement in Moselle Franconian. As for Rhine Franconian locative adverbs, there is only a differentiation between proximal *hie* ‘hier’ and distal *do* ‘there’. However, *do* can be used for both proximal and distal referents and is thus by far more frequent than *hie*. This could have been the promoting factor for the early emergence of a new formally strengthened demonstrative in Rhine Franconian. As a consequence, the recently rising occurrence of intermediate reinforcement by *lo* in Moselle Franconian might be influenced by the advanced state of grammaticalization in neighboring Rhine Franconian.

Further evidence for an early attestation of Rhine Franconian  $DEM+do/lo+N$  is that the construction was taken across the ocean: Putnam (2006: 172) points out that contemporary Pennsylvania German provides two reinforcer constructions:

- (8) *Pennsylvania German* (Putnam 2006: 172)
- a. **der do** mann  
 the here man  
 ‘this man’
  - b. **seller datt** mann  
 that there man  
 ‘that man’

The reinforcer construction in (8a) strikingly reminds of the Rhine Franconian equivalent discussed in this paper. The demonstrative *seller* in (8b) is also very common in many modern High German dialects. It is therefore worth mentioning that the German variety spoken by the religious community of the Amish as well as by many descendants of immigrants coming to the United States during the 19<sup>th</sup> century is crucially influenced by the Rhine Franconian dialect of the Palatinate region (“Pfalz”), which served as a koiné dialect for the different immigrant

groups of German origin (see Ammon 2015: 383–384). It seems to be quite likely that Rhine Franconian speaking immigrants brought the developing intermediate reinforcement of the demonstrative with them. While the coalescence of DEM+do/lo has currently reached the status of cliticization by still inflecting DEM, the youngest generation of Pennsylvania German speakers introduce a phonologically combined variant of (8b) (*selldatt mann* ‘that man’) without exhibiting any inflectional morphology (see Putnam 2006: 170–171). Consider that the development of the Standard German demonstrative *dies-er/-e/-es* also started out from an inflecting DEM reinforced by *sê* and eventually developed into an invariable stem and an inflecting (former) reinforcer.<sup>6</sup> Thus, the next step on the grammaticalization path for Rhine and Moselle Franconian DEM+do/lo might also be mono-inflection at the end of the new demonstrative as well as an invariable stem. In contrast to Pennsylvania German, there is still no evidence for that in Rhine and Moselle Franconian. In concordance with Pennsylvania German (see Putnam 2006: 168–170), however, the insertion of additional modifiers such as numerals (9a) or adjectives (9b,c) is restricted to the position between DEM+do/lo and N in Rhine and Moselle Franconian.

(9) *Rhine Franconian* (spontaneous utterances of informants, 2018)

- a. Guck, uff **denne do zwo** Seide steht’s.  
 look on DEM ADV two pages stands.it  
 ‘Look, it’s on these/those two pages.’
- b. Wenn mir **denne do ganze** Kram getrunken hann.  
 once we DEM ADV whole stuff drunk have  
 ‘Once we have drunk all of this/that stuff.’
- c. **Das do verlängerte** Wochenende war doch mo scheen!  
 DEM ADV extended weekend was PTCL once nice  
 ‘This/that long weekend has been really nice!’

To conclude this section, the new Rhine and Moselle Franconian demonstrative pronoun DEM+do/lo can occur in all semantico-pragmatic contexts where the occurrence of the Standard German equivalent *dies-er/-e/-es* is common as well. The former adverbs do/lo are currently changing their categorial status from juxtaposed to encliticized demonstrative particles. At the latest since the beginning of the 20<sup>th</sup> century, the coalescence between DEM and do/lo is sufficiently advanced to be extended to the adnominal use. As a formally reinforced demonstrative, it must precede noun-modifying numerals and adjectives.

#### 4 REANALYSIS OF DESEMANTICIZED DO/LO AS A FUNCTIONAL HEAD

In the present section, we first briefly outline earlier approaches to the structural analysis of simple demonstratives and demonstrative reinforcement in Germanic and Romance languages and try to identify potential shortcomings of these approaches. We then propose our own structural analysis of the diachronic emergence of the new demonstrative DEM+do/lo in Rhine and Moselle Franconian as a result of a common grammaticalization path.

In recent generative research on nominals, demonstratives and definite articles are commonly considered to differ with respect to their structural status: Demonstratives are regarded as phrasal elements that occupy specifier positions, whereas definite articles are classified as functional heads (see, for example, Giusti 1993; Brugè 1996; Bernstein 1997). Three reasons for structurally distinguishing demonstratives from definite articles are that (i) both can co-occur in many languages, (ii) demonstratives can be used pronominally, i.e. they function as an independent DP, and (iii) demonstratives share properties of adjectives such as similar inflection patterns or similar syntactical positions (see Bernstein 1997: 92–93). The base position of demonstratives is assumed to be in the specifier of a functional projection between

<sup>6</sup> The demonstratives of many Germanic languages trace back to the univerbation of a stem and a reinforcer. As for German *dies-er/-e/-es* ‘this-M/F/N’, the Germanic demonstrative \*þo lost its deictic force and was reanalyzed as the Old High German definite article *dēr/diu/da* ‘DET.M/F/N’ (see Oubouzar 1992; Kraiss 2014). At the same time, the former demonstrative was strengthened by the deictic particle *sê*, which yielded the reinforced Old High German forms *dēse/dēsiu/diz* ‘this-M/F/N’. Although the particle *sê* originally was indeclinable, early attestations of the new demonstrative in Old High German already show inflexion on both DEM and *sê* or even just on *sê* (see Wilmanns 1899: §429.2; Wilmanns 1909: §205; Lander 2015: 38–41). Today, the Standard German (proximal) demonstrative consists of the invariable stem *dies-* (with *-s-* being the remainder of *sê*) and its associated inflectional morphemes.

DP and the lexical NP. For instance, Brugè (1996) shows that Spanish demonstratives can occur in prenominal as well as in postnominal position. She therefore base generates the demonstrative in the specifier of a functional FP (Spec,FP) which is situated between several intermediate functional phrases hosting adjectives and the lexical NP (see Brugè 1996: 10). The postnominal position is obtained by movement of the noun into the head of a higher functional phrase, while the demonstrative stays in situ. Prenominal demonstratives, in turn, move from Spec,FP to Spec,DP and thus appear to the left of the noun. Regardless of whether the demonstrative is prenominal or postnominal, Brugè's (1996: 8) demonstratives in Spec,FP must always move to Spec,DP in order to check uninterpretable referentiality features of D. In case the demonstrative appears prenominally, this movement is carried out overtly at PF, while postnominal demonstratives covertly move to Spec,DP at LF.

As for demonstrative reinforcement in Spanish, Brugè (1996: 24) assumes that demonstratives like *este* 'this' and reinforcers like *aquí* 'here' are in a predicational-like relation established and dominated by the preposition *de* 'of'. The demonstrative and the reinforcer can stay in situ at PF, which yields the word order in (10a). Alternatively, *este* can rise to Spec,DP and *de aquí* stays in situ at PF, which gives us (10b).

- (10) Spanish (Brugè 1996: 20–21)
- a. el libro **este de aquí**.  
 DET book DEM of ADV  
 'the book this of here'
  - b. **este** libro **de aquí**  
 DEM book of ADV  
 'this book of here'
  - c. \***este de aquí** libro  
 DEM of ADV book  
 'this of here book'

However, as can be observed in (10c), Spanish reinforcers can never move to Spec,DP along with their demonstratives. This is unexpected since both demonstrative elements are dominated by the same phrase and share the same interpretable features (see Brugè 1996: 23–24). They should therefore be able to jointly move to Spec,DP in order to validate the respective uninterpretable features in D. This joint movement should at least be considered possible for Germanic languages if the analysis aims to cover intermediate reinforcers such as Rhine and Moselle Franconian DEM+do/lo+N.

- (11) a. Spanish (adapted from Brugè 1996: 22)  
**este** libro (**\*de aquí**) viejo (**de aquí**) de sintaxis (**\*de aquí**)  
 DEM book of ADV old of ADV of syntax of ADV  
 'this old book here about syntax'
- b. German (adapted from Brugè 1996: 45)  
**dieses** schöne Buch (**hier**) von Hans (**\*hier**)  
 DEM pretty book ADV of Hans ADV  
 'this pretty book here of Hans'

Furthermore, Brugè (1996: 21) considers reinforcers as indicators for the base position of prenominal demonstratives. Example (11a) shows that *de aquí* is restricted to the same position as the postnominal demonstrative *este* would be (cf. 10a), i.e. between postnominal adjectives (*viejo* 'old') and postnominal PP-attributes (*de sintaxis* 'about syntax'). She then intends to expand this structural analysis of a low base position to languages that do not allow for postnominal demonstratives. As for Standard German, she claims that postnominal reinforcers such as *hier* 'here' are also restricted to a position higher than postnominal PP-modifiers (11b) (see Brugè 1996: 45, ex. 84c). This judgement is clearly wrong. German reinforcers can appear either before or after PP-modifiers of the noun. In our opinion, it is an economically more expensive operation to base generate German demonstratives in a low position where they can never occur, only to oblige them to always move up to Spec,DP at PF. Why not base generate German demonstratives in Spec,DP directly and adjoin possible postnominal reinforcers to the position they appear in?

This would also be a less costly option for Spanish demonstratives: (i) Prenominal demonstratives represent the unmarked case, while postnominal ones are preferably used in colloquial speech and restrict the nominal to a depreciatory meaning (see Brugè 1996: 1, fn. 3). We would expect a demonstrative in its base position to provide a neutral meaning as well. (ii) Brugè (1996: 8) explains the fact that postnominal demonstratives in Spanish must be accompanied by a prenominal definite article by proposing a Last Resort operation: The definite article must be inserted into D in order to validate its uninterpretable  $\varphi$ -features and make the relevant features visible at PF. Apparently, the covert movement of the demonstrative to Spec,DP at LF is not sufficient for this validation, while the overt movement can validate the  $\varphi$ -features. If we simply assume that cases like (10a) consist of the definite DP *el libro* and the adjoined DP *este de aquí* (see also Roehrs 2010: 255, fn. 32), neither the Last Resort insertion of the definite article nor the movement of the demonstrative to Spec,DP at PF or LF is necessary. The features of the first DP are validated by the definite article in D, the ones of the second DP by the demonstrative in Spec,DP.

The next approach we will focus on here is Roehrs (2010), who also proposes an analysis that copes with pre- and postnominal demonstratives in Germanic and Romance languages. He identifies four types of reinforced demonstratives: In type 1, a reinforcer is added after the demonstrative, but before adjectives and the head noun ( $_{\text{DEM REINF Adj N}}$ ). This type, for instance, can be found in non-standard English (12a), Pennsylvania German (12b), Eastern Norwegian (12c) as well as in Swedish, Danish, Icelandic and Yiddish (see Roehrs 2010: 265). Rhine and Moselle Franconian also provide this kind of reinforced demonstratives (12d). Romance languages do not exhibit type 1 reinforcement.

- (12) a. *Non-standard English* (Bernstein 1997: 101)  
**this here** big house
- b. *Pennsylvania German* (Roehrs 2010: 226)  
**seller datt** grosse mann  
DEM ADV big Mann  
 ‘that tall man’
- c. *Eastern Norwegian* (Roehrs 2010: 231)  
**den herre** klokka  
DEM ADV watch  
 ‘this watch’
- d. *Rhine Franconian* (informant, 2018)  
**das do** verlängerde Wocheend  
DEM ADV extended weekend  
 ‘this/that long weekend’

In type 2 of demonstrative reinforcement, the reinforcer precedes the demonstrative and is thus located at the very beginning of the DP ( $_{\text{REINF DEM Adj N}}$ ). This type is attested, among others, in Afrikaans (13a), Yiddish (13b), and colloquial Standard German (2a). Rhine and Moselle Franconian also provide a preceding reinforcer (13c). Again, type 2 reinforcement is not found in Romance languages.

- (13) a. *Afrikaans* (Roehrs 2010: 226)  
**hier-die** mooi meisie  
ADV-DEM pretty girl  
 ‘this pretty girl’
- b. *Yiddish* (Roehrs 2010: 227)  
**ot der** guter man  
ADV DEM good man  
 ‘this good man’
- c. *Moselle Franconian* (Fox 1955: 27)  
**lo die** dreckig Kurwel  
ADV DEM dirty basket  
 ‘this/that dirty basket’

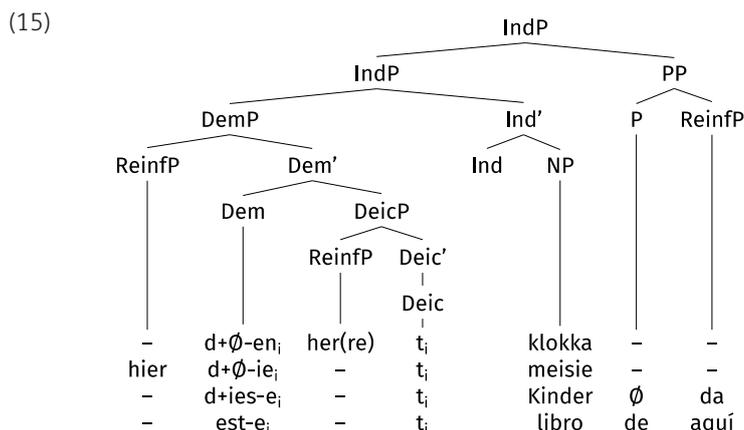
The third possibility is to insert the reinforcer at the very end of the DP after the head noun. Hence, demonstrative and reinforcer put the rest of the nominal in brackets ( $_{\text{DEM Adj N REINF}}$ ).

This type 3 applies to German (14a), Dutch (14b), Rhine and Moselle Franconian (14c), French (14d) as well as Icelandic and (possibly) English (see Roehrs 2010: 265). Germanic languages and French reinforce by adverbs, while Spanish (10b) has reinforcer-PPs.

- (14) a. *Standard German*  
**diese** braven Kinder **da**  
DEM well-behaved children ADV  
 ‘these well-behaved children’
- b. *Dutch* (Roehrs 2010: 254)  
**dat** mooie plaatje **daar**  
DEM pretty picture ADV  
 ‘that nice picture’
- c. *Moselle Franconian* (Braun & Peter 1999: 29)  
**dat** schbassich Geschbann **lòò**  
DEM funny team ADV  
 ‘this/that funny team’
- d. *French* (Bernstein 1997: 98)  
**ce** livre jaune **ci**  
DEM book yellow ADV  
 ‘this yellow book’

Type 4 reinforcement is restricted to Romance languages Spanish and Catalan. The crucial difference is that both the demonstrative and the reinforcer appear after the head noun and D must be filled by the definite article (10a), as has already become clear within the discussion of Brugè’s approach.

Types 1, 2 and 3 of demonstrative reinforcement require three different positions for reinforcers inside the DP. Roehrs (2010: 240–244) therefore proposes that demonstratives are formed compositionally, consisting of (i) a lexical deictic part carrying an interpretable referentiality feature hosted in the head of a projection called Deictic Phrase (DeicP), (ii) a functional definite marker with an interpretable definiteness feature hosted in a functional Demonstrative Phrase (DemP), and, if available, (iii) an agreement suffix. In case of the Standard German demonstrative *d+ies-er/-e/-es*, the deictic part *-ies-* is hosted in DeicP. The deictic part can also be null ( $\emptyset$ ) in case there is no such overtly audible part in a demonstrative like in the stressed variant of German *d+Ø-er/-ie/-as*. The definite marker *d-* is located in the head of DemP. Demonstratives are formed by raising the deictic part from Deic to the definite marker in Dem, where *+ies-* or *+Ø-* incorporates *d+* yielding the complex formes *d+ies-* or *d+Ø-*. The specifiers of DeicP and DemP, then, provide free positions for reinforcements of types 1 and 2. Reinforcers of type 1 occupy Spec,DeicP and follow the demonstrative (12), while type 2 reinforcers are located in Spec,DemP and thus precede the demonstrative (13). As for type 3, Roehrs (2010: 254–255) right-adjoins a PP that contains the reinforcer to IndP in order for the reinforcer to follow the head noun (14). While in Romance languages the head of PP can be filled by an overt preposition, Germanic type 3 reinforcers obviously do not exhibit a preposition. The head of PP is therefore assumed be null in Germanic. The structure for reinforcement of types 1–3 is given in (15). Finally, the compositional demonstrative in DemP is moved to Spec,DP in order to check D’s uninterpretable definiteness and referentiality features.



The structure of type 4 reinforcers in Spanish and Catalan differ from type 3 with regard to the position of the noun and the demonstrative as well as the obligatory co-occurrence of the definite article. In order to appear postnominally, the demonstrative stays in situ (i.e. in Spec,IndP), while the noun moves up to an additionally merged functional phrase (YP) dominated by DP. Roehrs (2010: 229, 236) follows Brugè in that the definite article is inserted as a Last Resort operation.

We would like to point out three problematic aspects of Roehrs' analysis: (i) Why is type 1 reinforcement not possible in Standard German (2c) and Dutch, if Spec,DeicP is a principally available landing site for reinforcers? Do languages that rule out type 1 differ structurally from languages allowing for type 1? (ii) Is it legitimate to split up a synchronically simplex morpheme like German *dies-* into a bipartite demonstrative whose parts cannot occur on their own? If we took the diachronic development consistently seriously, we would have to assume that, for instance, the German negative particle *nicht* 'not' is also still complex today (and consists of the negative marker *ne* and the noun *Wicht* 'dwarf, wight'). (iii) Roehrs (2010: 256) claims that Spanish demonstratives like *este* are not split up and can either stay in Deic or move to Dem, depending on whether they are marked for topic or focus. But, from a diachronic point of view, it would be consistent to also split up *este*, since it traces back to the Latin demonstrative *is* combined with the pronoun-like (or particle-like) element *\*-to-* (see de Vaan 2008: 310).<sup>7</sup>

The third approach to the structure of demonstratives discussed here is that of Leu (2015). He proposes that demonstratives and definite adjectival phrases are structurally alike (see Leu 2015: 12, 43). Therefore, he assumes demonstratives to consist of a strong inflecting definite marker and a silent or non-silent deictic adjective.

- (16) a. *Colloquial Standard German* (Leu 2015: 14)  
 d-ér THERE Tisch  
 DEF-AGR ADJ table  
 'this/that table'
- b. *Rhine Franconian*  
 d-er do Tisch  
 DEF-AGR ADJ table  
 'this/that table'
- c. *Standard German*  
 dies<sub>i</sub>-er t<sub>i</sub> Tisch  
 ADJ-AGR (ADJ) table  
 'this/that table'
- d. *Standard German*  
 schön<sub>i</sub>-er t<sub>i</sub> Tisch  
 nice-AGR (ADJ) table  
 'nice table'

The non-reinforced colloquial German *dér* in (16a) is an example for demonstratives that are composed of a definite marker *d-*, followed by a strong agreement marker *-er*, and an additional non-pronounced (silent) adjective represented by *THERE*. The adjective can also be pronounced (non-silent) as in Rhine Franconian *der do Tisch* (16b). What we have called an intermediate demonstrative reinforcer so far is thus seen as an overtly realized adjectival stem. According to Leu (2015: 22, 43–45, 71–72, 87), the Standard German demonstrative stem *dies-* is treated like an adjectival stem with a preceding unpronounced definite marker. Compare (16c) and (16d). In both cases, the definite marker is not merged and therefore the deictic adjective *dies-* and the regular adjective *schön* move up to the left periphery and take the agreement marker with them.<sup>8</sup> As for peripheral reinforcers, Leu (2015: 19) looks into the case of Afrikaans *hier-die* (see 13a). The inverted order of the definite marker and the deictic adjective is achieved by movement of the adjective to the left of the definite marker.

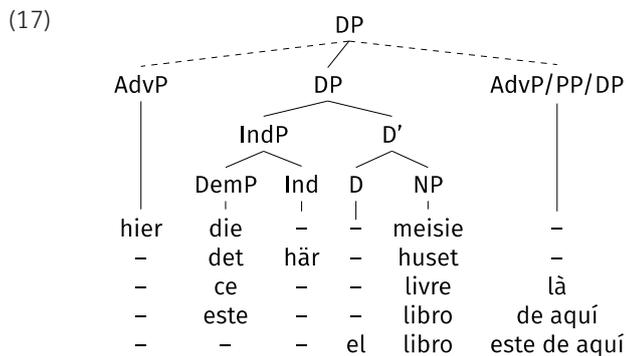
<sup>7</sup> German *dies-* also traces back to a Germanic demonstrative *\*to-* and a reinforcing element *sē*, which we will discuss in further detail below.

<sup>8</sup> However, agreement paradigms of *dies-* and strong adjectives do not fully match in Standard German: Compare *dies-es* t<sub>i</sub> *Schritt-es* 'DEM-GEN.SG.M step-GEN.SG.M' and *schnell-en* t<sub>i</sub> *Schritt-es* 'fast-GEN.SG.M step-GEN.SG.M.'

Regarding demonstrative reinforcement, Leu's (2015) approach focuses on the representation of intermediate reinforcers that can be realized as non-silent deictic adjectives. Locative adverbs such as Rhine and Moselle Franconian *do/lo* are treated as lexical heads of an adjective phrase, the corresponding determiners (definite markers) occupy the specifier of the extended adjectival projection. Following Leu's analysis, we can only speak of demonstrative reinforcement if more than one reinforcer is present, since the first reinforcer is a formal part of the demonstrative.

However, (i) it remains unclear how, on the one hand, Romance demonstratives like Spanish *este (de aquí)* fit into the picture. Prenominal demonstratives could either be treated like German *dies-*, which means that they actually are deictic adjectives with a missing definite marker. Or they are analyzed as definite markers followed by a categorically silent deictic adjective, since PP-reinforcers like *de aquí* can never occur prenominally in Romance. On the other hand, Spanish postnominal demonstratives can be accompanied by reinforcers. Is it possible to analyze a PP like *de aquí* as a non-silent deictic adjective? (ii) While the status of German *dies-* as a deictic adjective without a definite marker is plausible from a synchronic perspective, the historic development forces us to question Leu's view. As has already been pointed out in Section 3, the form of the Standard German demonstrative stem *dies-* is the result of the historical reinforcement of the Old High German simple demonstrative *dër/diu/daz* by the deictic element *sê* (see Lander 2015: 38–41). By means of Leu, *sê* can be treated as a non-silent deictic adjective preceded by the definite marker *d-ër*. In order for the definite marker to become an integral part of the deictic adjective *-sê-* (today *-ies-*), it must have changed its categorial status, while in the English cognate *th-is* the definite marker has not changed its status.

After having outlined several approaches to the analysis of demonstrative reinforcement, we propose a somewhat simplified structure which, leaving out the details for the moment, can cope with Germanic and Romance demonstrative reinforcement:



As against most other recent analyses, we do not consider the movement of the demonstrative from a lower base position to Spec,DP necessary. In Germanic, the demonstrative can never occur postnominally. In Romance, the unmarked position of the demonstrative is also always prenominal. We therefore claim that the base position of prenominal demonstratives is in Spec,DP.

The demonstrative pronoun itself carries an interpretable identifiability feature as well as a feature of locative indexing and projects a Demonstrative Phrase (DemP), which in turn is situated in the specifier of a functional Index Phrase (IndP) (see example 15 and Roehrs 2010). On the one hand, the indexing feature must be of a rather neutral (or unspecified) nature in order to be suitable for physically present referents (e.g. *table, car*), abstract referents (e.g. *rage, love*) and anaphoric contexts. This feature can validate its uninterpretable counterpart situated in the head of IndP, which can be, depending on the pragmatic context, specified for the three different kinds of referents. Additionally, Ind can be overtly filled by a reinforcer, which we will elaborate down below. On the other hand, the identifiability feature is the main reason why the demonstrative is merged in Spec,DP. It satisfies the uninterpretable identifiability feature in D.

Regarding postnominal demonstratives in Romance, we claim that these can be analyzed as additional DP-adjuncts, since the primary DP is already validated by the definite article in D (see 10a). The different order of postnominal demonstratives, reinforcers, adjectives and nominal complements (see 11a and Brugè 1996) can also be achieved by extraposition to the right

periphery, i.e. optional adjunction of a certain element to the outer DP-layer. A similar process is well known from German embedded sentences, where the finite verb usually comes last, but several constituents can be extraposed to the right of the verb in order to facilitate the interpretation of the sentence.

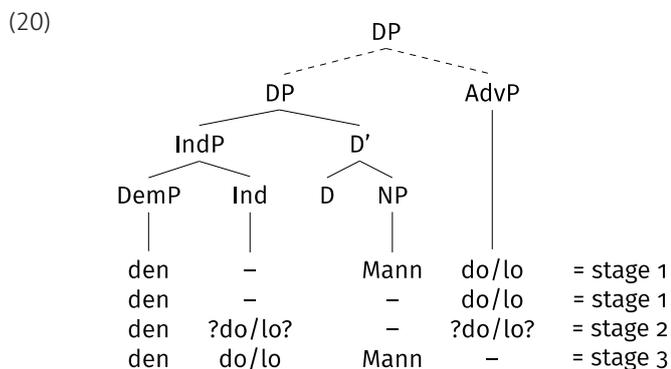
Except for intermediate reinforcers occupying the head of IndP, we assume that (peripheral) reinforcers do not constitute an integral part of the demonstrative. They are thus loosely adjoined to the left or right of the outer DP-layer. This takes into account the different syntactic behavior of peripheral and intermediate reinforcers. The former can be modified by intensifiers like fully lexical adverbs (18a, 19a,b), while the latter cannot (18b, 19c) (see Roehrs 2010: 260):<sup>9</sup>

- (18) *English* (Roehrs 2010: 260)  
 a. this book **right here**  
 b. this (**\*right**) **here** book

- (19) *Rhine Franconian* (informant, 2020)  
 a. **genau do** das Buch  
 exactly <sub>ADV</sub> <sub>DEM</sub> book  
 b. das Buch **genau do**  
 c. das (**\*genau**) **do** Buch

We now focus on modeling the grammaticalization process of Rhine and Moselle Franconian <sub>DEM</sub>+*do/lo* as well as German *dies-*. Unfortunately, the reinforcement of *dies-* took place in a time period prior to Old High German (presumably Proto Northwest Germanic, see Lander 2015: 14) from which we do not have any written attestations. But if we take into account the recent reinforcement process in Rhine and Moselle Franconian, we can reconstruct the historical change by looking into the contemporary data of these dialects.

First, we observed a stage in which Rhine and Moselle Franconian demonstratives can be reinforced by *do/lo* occupying the peripheral positions by either preceding the demonstrative or following the noun. In terms of Roehrs' (2010) classification and our structural proposal, *do/lo* has been adjoined to the left (type 2) or the right of the DP (type 3). However, the head of IndP (type 1) cannot have been a possible landing site for *do/lo* because the intermediate position was still ungrammatical in this early stage and lexical items cannot occupy functional heads without syntactic and/or semantic change. We therefore propose that, in order to get to type 1, reinforcers have to undergo a process of grammaticalization: In the pre-grammaticalization stage, the locative adverbs *do/lo* constitute the head of a lexical AdvP which is loosely adjoined to the outer DP-layer. This stage 1 is illustrated in (20) by the first and second line *den Mann do/lo* 'DEM man ADV' and *den do/lo* 'DEM ADV'. While being in the state of an adjunct, *do/lo* still bear a specific indexing feature that requires a physically present referent.



Second, as we have already stated in Section 3, in the adnominal use <sub>DEM</sub>+N+*do/lo* the reinforcers cannot be mistaken for being permanently adjacent to <sub>DEM</sub>, i.e. to be mistaken for occupying the head of IndP. Therefore, the structural reanalysis must have resulted from a highly frequent use of <sub>DEM</sub>+*do/lo* in pronominal contexts, where demonstratives and reinforcers are juxtaposed and no noun is intervening.<sup>10</sup> Stage 2 (third line) in (20) illustrates that *den* 'DEM' and *do/lo* 'ADV'

<sup>9</sup> We thank an anonymous reviewer for bringing this important difference to our attention.

<sup>10</sup> Reanalysis is defined as a structural reinterpretation of an ambiguous linear order of morphemes or lexemes (see Hopper & Traugott 2003: 50–52).

are always juxtaposed in pronominal use, both as head of an adjoined AdvP or head of the functional IndP.

Third, certain bridging contexts provide an ambiguous reading where the indexing feature is neutralized, i.e. the presence or absence of a physical referent which can be pointed at is negligible (see example 4b in Section 3). As a consequence, *do/lo* are reduced to the meaning of abstract indexing and their categorial status as a fully lexical item is weakened. This kind of semantic reduction represents a typical case of grammaticalization, which often results in reanalysis from a lexical to a functional head (see Roberts & Roussou 2003; van Gelderen 2007: 279, 286). Thus, the neutralized semantic feature of *do/lo* suggests that the former fully lexical adverb is now base generated as head of a functional phrase and constitutes an integral part of the demonstrative construction (see stage 3 in example 20).<sup>11,12</sup> Standard German reinforcers cannot occupy the head of the functional IndP because no reanalysis has taken place, which explains why the intermediate position of *da* in (2c) is ungrammatical.

Fourth, instances of double inflection on the demonstrative and the reinforcer in Rhine and Moselle Franconian (5b) can be explained by assuming that *do/lo* in the head of IndP start to agree with the noun. Since our proposal does not provide separate agreement phrases that the demonstrative has to cross in order to take up inflexion morphemes, morphological inflexion is not restricted to either the demonstrative stem in DemP or the reinforcer in Ind, but can also affect both elements. Moreover, we recognize that certain instances of *do/lo* could also have been reinterpreted as adjectives (5a) which have a different underlying construction (compare Standard German *hie-s-ig* ‘here-S-ADJ’ and *dort-ig* ‘there-ADJ’). However, we do not consider double inflection to be an independent phase on the grammaticalization path.

A further development which can be observed in languages where there seem to be two intermediate reinforcers is not yet attested in Rhine and Moselle Franconian. For instance, in Eastern Norwegian (21a) and Pennsylvania German (21b) reinforcers can appear twice:

- (21) a. *Eastern Norwegian* (Leu 2015: 33)  
**den herre her** klokka  
 DEM ADV ADV watch  
 ‘that watch’
- b. *Pennsylvania German* (Roehrs 2010: 242)  
 mit **selldatt datt** grosse mann  
 with DEM.ADV ADV tall man  
 ‘with that tall man’

In Eastern Norwegian, the second reinforcer could either be analyzed as an indeclinable adjective or as an adverb left-adjoined somewhere inside NP. Leu (2015: 33) states that (21a) can only occur in locative and not in anaphorical contexts, which is why the functional head of IndP is not a possible landing site for Norwegian *her* ‘here’. But since (21a) does not represent the standard or unmarked use of demonstratives in Eastern Norwegian, rarely found doubling phenomena like *herre her* should not lead to more functional structure than is generally needed. By contrast, if Pennsylvania German double reinforcement in (21b) actually was compatible with abstract referents or anaphoric contexts, this could be evidence for the next step on the grammaticalization path: The head of IndP has again been structurally reanalyzed, but this time as part of the adjacent head of DemP, which is the demonstrative stem itself. Thus, the demonstrative stem and the reinforcer have been fused (coalescence), and the head of IndP is available again for a newly reanalyzed item expressing abstract indexing.<sup>13</sup>

<sup>11</sup> The claim that reinforcers occupy the head of a functional phrase has already been made by Bernstein (1997: 100).

<sup>12</sup> In Swedish, Norwegian, and English, the indexing features of the locative adverbs do not seem to be as fully neutralized as Rhine and Moselle Franconian *do/lo*, since there are two items specified for proximal (e.g. English *the here*) and distant (e.g. English *the there*) referents which have been reanalyzed as the head of IndP. At least in Swedish, however, there seems to be a difference between proximal and distant heads of IndP: While *den här* ‘this’ can be used for physically proximal referents and for anaphoric contexts, *den där* ‘that’ is restricted to physically distant referents (see Holmes & Hinchcliffe 2013: 175–176). Thus, *här* should be semantically more reduced than *där*.

<sup>13</sup> Putnam (2006: 174–175) also considers Pennsylvania German *selldatt* a morphologically fused functional head.



on the clausal level structurally differs from that on the nominal level, but there would also be more problems to be solved than problems avoided. Admittedly, the analysis in (20) which we proposed for the postnominal position of grammaticalized *do/lo* containing an overt noun can quite easily be converted into a structure dominated by a superior NP. The demonstrative in IndP occupies the specifier of NP. AdvP is right-adjoined to the NP projection so that their adjacent position in pronominal use can initiate the reanalysis of *do/lo* as the head of IndP. However, this raises the general question whether NP is equipped with multiple specifiers which contain functional projections for all kinds of determiners, or whether NP has just one single specifier and other determiners are adjuncts.

Another problem is how the superior NP can possibly cope with the grammaticalization when no overt noun is present. As we have pointed out in Section 4, not the construction containing a noun, but only the pronominal use can serve as a source for the increase of bondedness between DEM and *do/lo*. One possible analysis would be a silent N, while the higher N'-level is spelled out (see Salzmann 2020). Thus, we would have to stipulate that a maximal projection can exist without its head, or that phonetic deletion at PF can target parts of a projection instead of deleting the whole projection. Following Fanselow & Ćavar (2002: 82–84), partial deletion requires the existence of at least two copies of the projection in question, as is the case for split-DPs. Thus, a partial deletion of the NP is not licensed. Another way of dealing with the pronominal use of the demonstrative is to assume a non-embedding DP, i.e. the whole NP is silent or non-existing. For this purpose, DP should be able to project and inherit the characteristics of an NP in order to host a functional IndP in its specifier.

Second, the insertion of additional modifiers in Rhine and Moselle Franconian such as numerals (23a) or adjectives (23b) is restricted to the position between DEM+*do/lo* and the noun. This also holds for Pennsylvania German, where the reinforced demonstrative must precede noun-modifying adjectives (see Putnam 2006: 168–170).

(23) *Rhine Franconian* (spontaneous utterances of informants, 2018)

- a. Guck, uff **denne do zwo** Seide steht's.  
 look on DEM ADV two pages stands.it  
 'Look, it's on those two pages.'
- b. Wenn mir **denne do ganze** Kram getrunk hann.  
 once we DEM ADV whole stuff drunk have  
 'Once we have drunk all of that stuff there.'

Taking the problems of the syntactic change aside, a superior NP can explain the serialization facts if we assume that adjectives cannot be adjoined between specifiers, i.e. between DP, IndP, or projections for other determiners. Adjectives can thus only occur beneath the specifier level of NP. The fact that nothing can intervene in the group of specifiers means that the NP is divided into two parts: one upper part where grammatical items exclusively occupy several specifiers, and another lower part containing lexical items which is open for modification by other lexical material. This partition is actually very similar to the DP-hypothesis, the difference being that a superior functional shell naturally limits the mobility of adjectives, while the NP-hypothesis can only provide an impassable hidden threshold for adjectives.

In sum, we opt for the DP-hypothesis in order to explain the diachronic emergence of the new demonstrative DEM+*do/lo*(+N). A superior NP can only cope with the phenomenon of strengthened demonstratives via questionable stipulations. The functional DP-shell certainly does not cover all questions either, but it seems to provide answers in a more straightforward way which are in line with similar processes of syntactic change such as grammaticalization phenomena on the clausal level.

## 6 CONCLUSION

Adverbial reinforcement of demonstratives is a common phenomenon in Germanic languages. While the reinforcing locative adverbs usually either precede the demonstrative or follow the noun, the intermediate position is mostly restricted to colloquial or dialectal varieties. In the German dialects of Rhine and Moselle Franconian, the highly frequent reinforcement of demonstratives by locative adverbs *do/lo* in pronominal contexts has led to a grammaticalization

process including (i) a generalization of the adverbs' meaning (desemanticization) and (ii) an increase of formal bondedness between the demonstrative and the adverbs. The newly formed demonstrative DEM+*do/lo*, then, extended its use to the adnominal context and has become mandatory in demonstrative contexts in the transition area of Rhine and Moselle Franconian. We argue that this grammaticalization process leads to a structural reanalysis of the adverbs from an adjoined lexical AdvP to the head of a functional Index Phrase (IndP). Only in this stage, demonstrative reinforcers can be used in anaphorical contexts where there is no physically present referent.

## ABBREVIATIONS

The following abbreviations and glosses are used in this article: ACC = accusative, ADJ = adjective, ADV = adverb, AdvP = adverb phrase, AGR = agreement, DAT = dative, DeicP = deictic phrase, DemP = demonstrative phrase, DEM = demonstrative, DemP = demonstrative phrase, DET = determiner, DP = determiner phrase, DIM = diminutive, F = feminine, GEN = genitive, IndP = index phrase, M = masculine, N = neuter, N = noun, NP = noun phrase, PTCL = particle, PP = prepositional phrase, REINF = reinforcer, ReinFP = reinforcer phrase, SG = singular.

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## COMPETING INTERESTS

The authors have no competing interests to declare.

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