Sentential Negation in North-eastern Gallo-Romance dialects: insights from the Atlas Linguistique de la France

Heather Burnett

▶ **To cite this version:**

Heather Burnett. Sentential Negation in North-eastern Gallo-Romance dialects: insights from the Atlas Linguistique de la France. Journal of French Language Studies, 2019, 29 (2), pp.189-207. 10.1017/S0959269519000218 . hal-02262477

HAL Id: hal-02262477
https://hal.science/hal-02262477

Submitted on 2 Aug 2019

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Sentential Negation in North Eastern Gallo-Romance Dialects: Insights from the *Atlas Linguistique de la France*[*]

Heather Burnett

Laboratoire de Linguistique Formelle (CNRS-Université Paris Diderot)

Abstract

This paper argues that data from the Atlas Linguistique de la France (ALF, Edmont and Gilliéron, 1902-1910) can shed light on the fine-grained syntax of sentential negation in the Oïl dialects spoken in North Eastern France, Belgium and Switzerland. The Gallo-Romance dialects spoken in this area possess a larger variety of negative structures than those found in (Standard) French: in addition to *ne...pas*, *ne* can be followed by negations *mie*, *pont* or even appear alone. Although the dialects under study are highly endangered, I show how we can use syntactic data 'hidden' in the ALF to study their syntactic patterns. I present a quantitative study of variation in sentential negation in authentic transcriptions and French translations of the 22 negative data points in the ALF at 150 points in France, Belgium and Switzerland (N=2989). I show that the *pont* form is significantly more frequent in negative constructions with 'weak NPs' (de phrases) and that there is a significant correlation between dropping of secondary negation and the ability of the secondary negation *mie* to be realized as an enclitic *-m*. This study supports Dagnac (2018)'s conclusion that the ALF is an invaluable tool for the study of syntactic microvariation in France. **200 words**

1. Introduction

[*] I would like to thank audiences at the University of Vienna and Université Paris Sorbonne Nouvelle, Julie Auger, Guylaine Brun-Trigaud, Hilda Koopman, Fabio del Prete, Juliette Thuillier, and especially Anne Dagnac for their helpful comments. This research was undertaken in the context of the *SyMiLa* project, funded by the Agence Nationale de la Recherche (ANR-12-CORP-0014).

This paper presents some new results exploring the fine-grained patterns of syntactic variation found in the endangered Gallo-Romance languages spoken in France. It presents another application of the methodology of the *SyMiLa* project (https://blogs.univ-tlse2.fr/symila/), one of whose aims is to exploit understudied syntactic data in the Atlas Linguistique de la France (ALF) (Edmont and Gilliéron, 1910) for the construction of formal linguistic theory (see Dagnac, 2018, for a description of this research program). The main proposal in this paper is that data from the ALF can shed light on detailed morpho-syntactic properties of sentential negation in the Oïl dialects spoken in the northeast of France which have not yet been described.

In modern spoken French (for example, in the Parisian dialect), sentential negation is typically expressed using a negative adverb *pas* which can optionally co-occur with a preverbal particle *ne* (1).

(1) Je (*ne*) t'ai *pas* vu.

I ne you.have not seen

'I didn't see you.'

Given that negation systems vary significantly across the Oïl dialects[1], we would like to know how the negation systems of the dialects spoken in the North East of France (along the border of France and Belgium) fit into this picture. As with most of the Oïl dialects, there has been very little study of the highly endangered languages spoken in this area, particularly of their morpho-syntactic patterns (although see Remacle, 1952; Tuaillon, 1975; Dagnac, 2018). Some

[1] See Guilliot and Becerra-Zita (in press) for Gallo and Marie (2012) for Normand in the North West, and Dagnac (2015) for Picard in the north.

of the best data that we have for this area come from Brunot and Bruneau (1912)'s 166 recordings of the *patois* spoken in the Ardennes mountains, which were made in June-July 1912 in the context of the *Archives de la parole* project. This study was the first French dialectological study to use both the phonograph and the automobile, and it produced both audio recordings (available at https://gallica.bnf.fr/html/und/enregistrements-sonores/archives-de-la-parole-ferdinand-brunot-1911-1914) and phonetic and French transcriptions such as the one shown in Figure 1 (available at https://gallica.bnf.fr/ark:/12148/bpt6k128002m).

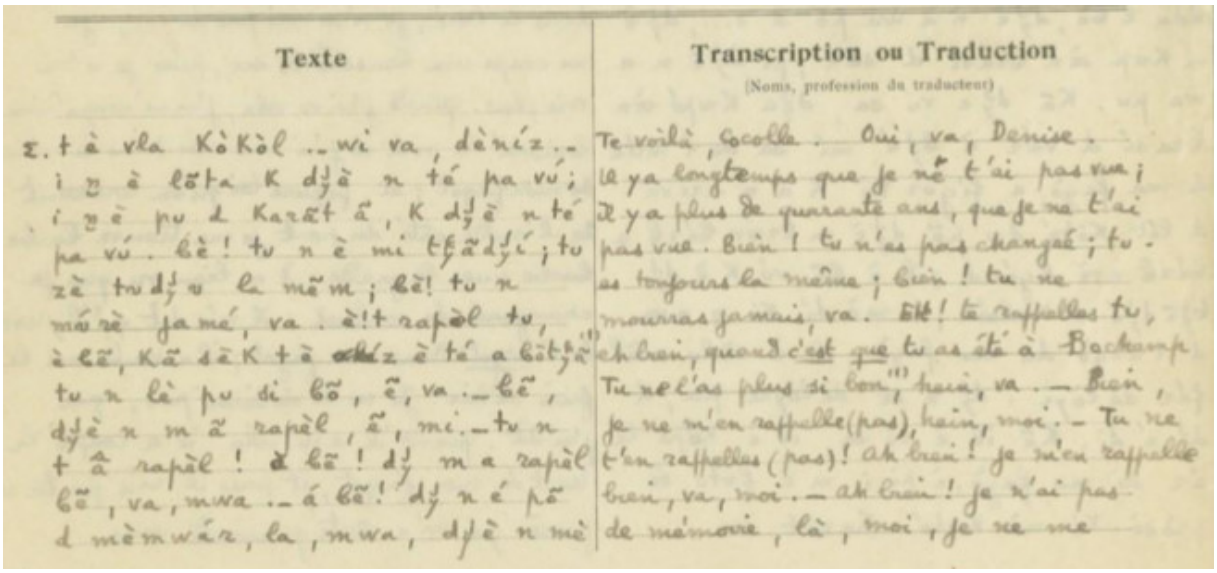


Figure 1: Transcriptions of *Fâcheuses aventures avec douaniers et garde-forestiers*, collected by Brunot and Bruneau (1912). Source: gallica.bnf.fr

The speaker in Figure 1 tells a story about how she was smuggling goods across the Belgian border and was stopped by customs guards. In the course of this short passage, she uses negative sentences with four realizations of sentential negation, shown in (2). (2-a) is the French model with *ne...pas*; (2-b) shows negation being expressed with the secondary negative adverb *mie*; in (2-c), the secondary negation is *pont*; and (2-d) shows no secondary

negation at all in the phonetic transcription of the dialect (note that *pas* appears in parentheses in the French translation).

(2) a. il y a longtemps que je **ne** t'ai **pas** vu. *ne…pas*

'It has been a long time that I haven't seen you.'

b. tu n'es **mie** changée *ne…mie*

'You haven't changed.'

c. je n'ai **pont** de mémoire *ne…po(i)nt*

'I don't have any memory.'

d. je **ne** m'en rappelle *ne…*

'I don't remember'

(2) shows that, in contrast to Parisian French, where all the negations would be expressed by *ne...pas* or just *pas*, sentential negation in North Eastern dialects is both complex and involves variation. This variation give rise to a number of questions for a couple different areas of Romance linguistics: Firstly, from the perspective of formal syntactic typology, we would like to know which syntactic structures should be associated with (2-a)-(2-d) and to what extent those structures coincide with those found in other Romance languages/dialects. Secondly, from the perspective of language variation and change, we would like to know which linguistic and/or social factors condition the use of these different structures; in other words, what makes a speaker choose to use one of the structures in (2) over the others?

When we are studying languages with a robust number of speakers, we usually go about answering these questions by doing an in-depth grammaticality or felicity judgment study with speakers that have the relevant grammatical systems and/or looking at the distribution of these forms in a large sociolinguistically annotated corpus. Unfortunately, these avenues of inquiry are not possible for the variety currently under study. The Gallo-Romance languages are highly endangered and access to native speakers is currently very limited, particularly in the North of France. Furthermore, as far as I am aware, there are practically no usable corpora of naturalistic speech from this area; even Brunot and Bruneau (1912)'s set of recordings is not very large and, at the time of writing, it is not easily downloadable or transcribed. This paper argues that we can address these methodological challenges and provide at least partial answers to our syntactic and variation questions through data that is 'hidden' in the *Atlas Linguistique de la France* (Edmont and Gilliéron, 1910). This article therefore provides further evidence of the potential of the ALF to contribute to research in formal syntax and language variation and change, and therefore of the importance of the *SyMiLa* project.

This article is laid out as follows: in section 2, I discuss the potential of treating the ALF as an oral corpus and the challenges associated with doing so. Then in section 3, I give a quantitative study of secondary negations in North Eastern dialects. I first present some areal properties of the negation systems, and then zoom in on a case study of the variable syntax of negation in a variety spoken in and around the Lorraine region. Finally, section 4 concludes with a discussion of the perspectives for this line of research for future discoveries concerning the syntactic patterns of the endangered and extinct Gallo-Romance dialects and languages.

2. The ALF as an oral corpus

From 1897-1901, Edmond Edmont, under the supervision of Jules Gilliéron, travelled around France interviewing dialect speakers. Edmont asked speakers in 639 locations all over France (and parts of Belgium, Switzerland and Italy) to translate thousands of French words into their local dialects (see Brun-Trigaud et al., 2005, for more about the ALF). The translations, transcribed in Rousselot-Gilliéron phonetic notation, are represented on maps where the translations are geographically situated at the location of the speaker(s) on the map. The entire atlas is available for browsing at http: //ligtdcge.imag.fr/cartodialect4/ .

Edmont presented the speakers with a word or a sentence, which we will call a *stimulus*, and then recorded the response. Rather than trying to painstakingly get the translation that corresponded most closely to the French sentence, Edmont recorded what the speaker produced in the moment, what he calls, "l'inspiration, l'expression première de l'interrogé, une traduction de premier jet" (*Notice de l'ALF*, p.7). The ALF is most famous for its maps of individual lexical items, and, indeed, the vast majority of the dialectological work using this atlas focuses on lexical patterns and phonological patterns observed from pronunciations of lexical items (see, for example, Eckert, 1985, Temple, 2000; Brun-Trigaud et al., 2005; Goebl, 2003, among many others). However, Edmont also asked speakers to translate 181 full sentences. Thus, as observed by Dagnac (2018), these 181 sentences hold great potential for syntactic data.

Of course, only a small portion of these 181 sentential stimuli are negative: 22 to be exact. These French stimuli are shown in Table 1, along with the maps on which the French negative expressions occur. Since it is not feasible to display whole translated sentences for 639 points on a single map, many of the 181 sentences were cut up into smaller expressions that were the topic of their own maps. In the context of the *SyMiLa* project, the full 181 sentential stimuli

were reconstructed by Guylaine Brun-Trigaud, who was a collaborator on this project (see http://symila.univ-tlse2.fr/alf).

With 22 negative stimuli and 639 points, there could be, in principle, up to 14 058 negative productions in the ALF. In reality, there are significantly fewer negative translations. This is because a fair number of stimuli, such as *Personne ne me croit*, *Je n'ai pas osé le lui dire* and *N'aie pas peur*, are not translated by all speakers. Additionally, some stimuli are not translated as negative by some speakers. For example, this is the case of *Elle n'est plus entière* 'She/it was no longer whole', which was translated as *elle est cassée* 'she/it was broken' by speaker 133 (Courcelles-sur-Blaise).

Sentential stimulus	Map
Quand il fait du vent, le roseau plie, mais ne rompt pas.	0896
Si nous ne mangeons pas nos prunes, elles se moisiront bientôt.	0806
On l'a attaché à un poteau pour qu'il ne puisse pas courir dans le pré.	0896
J'ai cru qu'ils ne viendront pas.	0897
Elle n'est plus entière.	0900
Je ne pouvais ni avancer ni reculer.	0901
Deux minutes après, il ne bougeait plus et il commençait à être raide.	0900
Il fait si chaud, par ce temps, on ne peut pas dormir.	1093
Dans ce pays, il n'y a pas de source. Rien que des puits.	0089
Je ne peux pas perdre, ça c'est sûr.	1082
Il faudrait être aveugle ou fou pour ne pas trouver ça laid.	0898
Celui ci, il est bon, mais il ne vaut pas le mien.	1352

Ils feront ce qu'ils voudront, moi je ne les aide pas.	0012
Tu me trouves vieilli. Tu ne vois donc pas que tu es aussi vieux.	1409
Pourquoi ne vous mariez vous pas? Vous trouverez bien quelqu'un qui vous ira.	0817
Il faut que nous ayons la patience et que nous soyons bien bons pour ne pas nous plaindre.	0898
Nous ne le revîsmes plus.	1152
Je n'ai pas osé le lui dire.	1650
Le blé est mûr, mais l'avoine n'est pas encore mûre.	0899
N'aie pas peur.	0101
Des pommes, nous n'en aurons guère.	0673
Personne ne me croit.	1665

Table 1 : Negative stimuli in the *Atlas Linguistique de la France*

3. Secondary Negations in North Eastern France

Because this area of France is particularly understudied, in this paper, I will focus on what the negative stimuli in the ALF can tell us about the form and distribution of secondary negations in North Eastern France and bordering Belgium and Switzerland. In particular, we will look at the negative productions at points numbered 1-199, which cover French territory in Lorraine Romane, Champagne, Bourgogne and Alsace. This dataset is composed of data from 150 points and contains 2989 negative productions. The ALF points covered in this study are shown on the map in Figure 2, which was created using the software QGIS (QGIS Development Team,

2015).

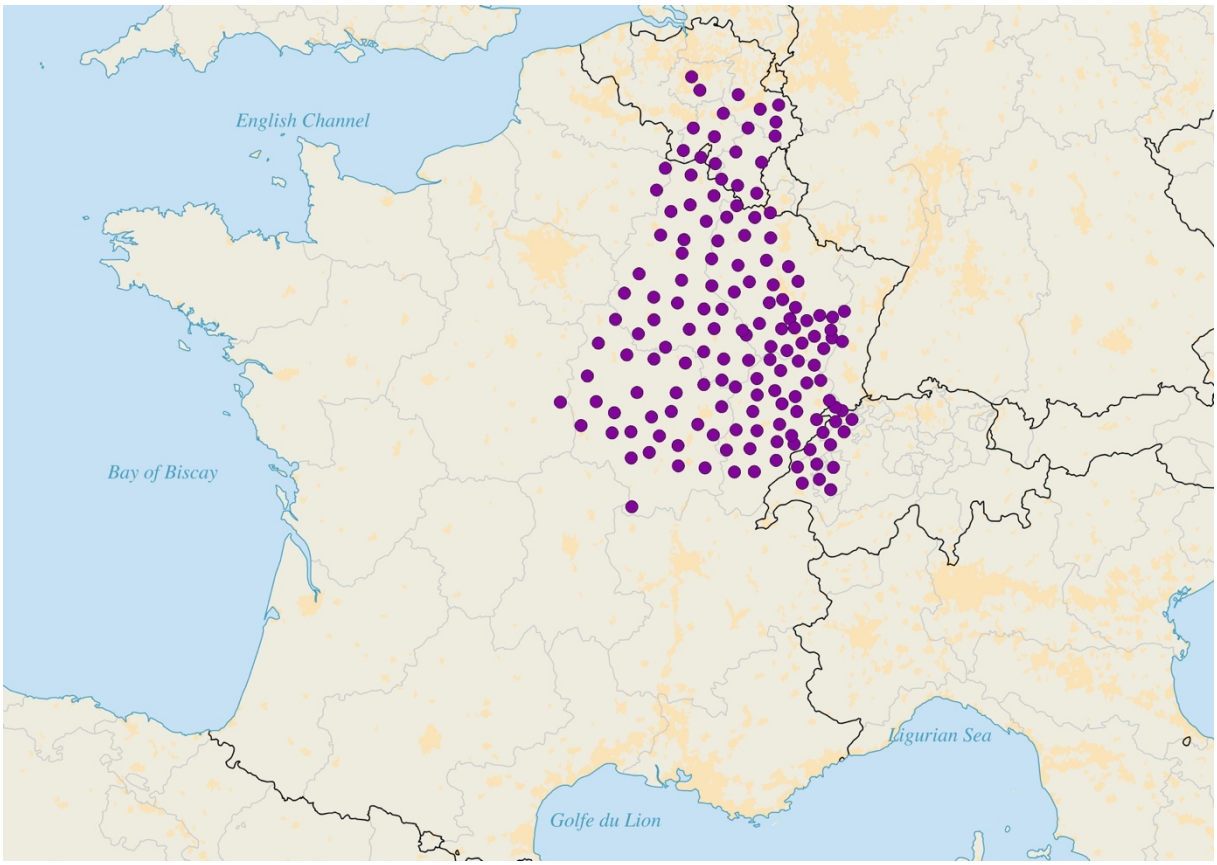


Figure 2: Area covered by the present study (points 1-150)

Figure 3 shows a representation of the entire dataset according to the shape of the secondary negation. It was created by overlaying transparent symbols representing the secondary negations in the 22 negative stimuli, or as many as were translated at the particular point. Thus, very dark consistent shapes indicate very little variation in the data at those points.

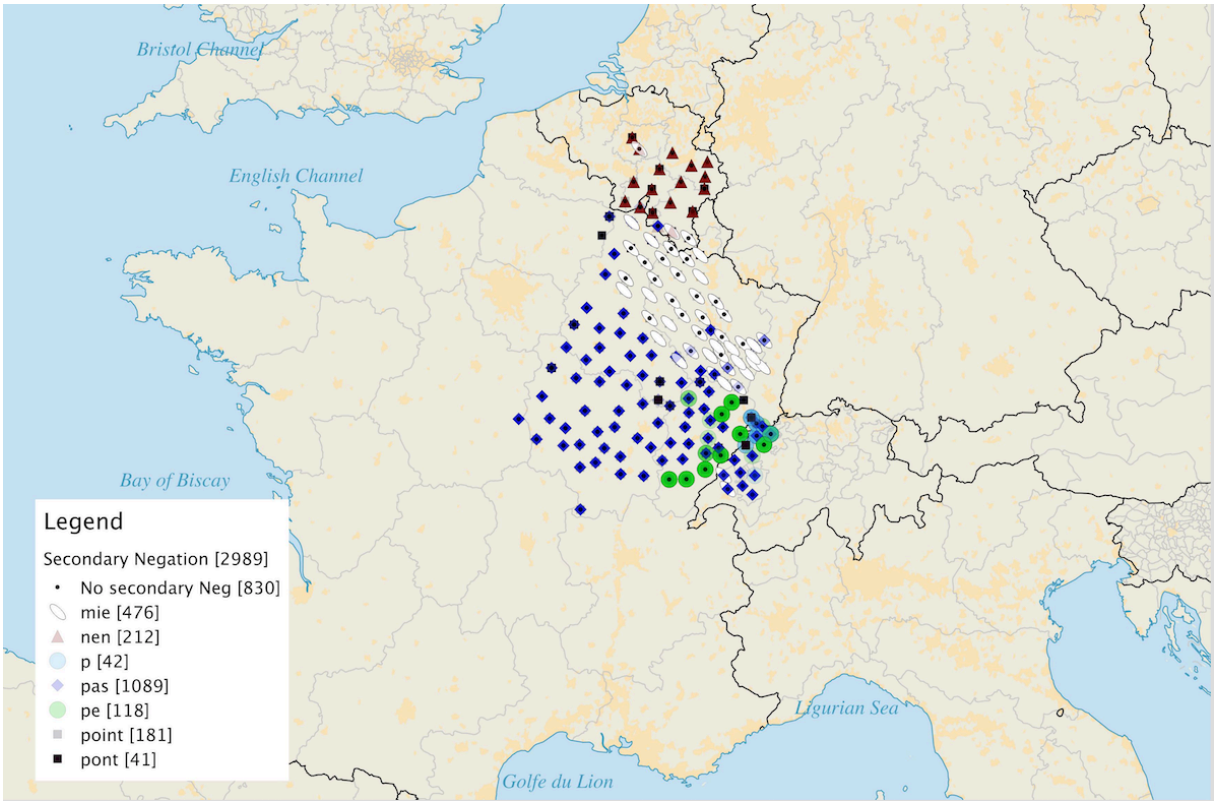


Figure 3: Forms of secondary negation(s) in entire dataset (points 1-150)

From this map, we can see that there is a large amount of variation both within a single geographical area and across geographical areas, and that different secondary negations are clustered in different areas. For example, although the French form *pas* appears smattered throughout the whole dataset, undoubtedly due to the fact that the French stimuli feature *pas*, *pas* is the dominant variant in the southern part of the area, well represented in the center of France and the west of Switzerland. The marker *point* and its variant *pont* (see Dagnac, 2018) are also found across the territory. The South East also features some forms like *pe* and the reduced form *p*. The dominant variant in Belgium is *nen*, and large portions of the North Eastern French part of the relevant area favour *mie*.

Unfortunately, a corpus of dialect translations is not ideal for doing either formal morpho-syntax or sociolinguistics (see Cornips, 2002; Baiwir and Renders, 2013, for more discussion).

Corpus linguistics has not traditionally been the preferred methodology for most theoretical syntacticians, since the lack of judgements of ungrammaticality is problematic for precisely identifying which set of expressions of the language should be analyzed. Likewise, the complex syntactic structures that often interest syntacticians tend to be rare in natural speech; therefore, in order to get enough data to study syntax, we often have to pool data from different speakers in the corpus, which could be problematic if these different speakers have different internal grammars (Barbiers, 2009). In the ALF, speakers of different dialects from different regions clearly have different grammars, so the question of how to meaningfully group speakers together to study them arises. In order to address these challenges, I propose to group together speakers who behave the same way with respect to the grammatical phenomenon that is being studied. In this case, we will group together speakers whose grammars coincide in the expression of negation. More specifically, I will present a detailed case study of grammars of speakers who use only *mie* as secondary negations[2]. The ALF points with *mie*-only speakers are shown in the map in Figure 4.

[2] The notion of a grammar that I am assuming here is very broad: simply a set of lexical items and rules that combine these items into more complex expressions, i.e. the one from formal language theory (see Hopcroft et al., 2013). The results I present are consistent with many different views of the nature of structure building rules (whether they are categorical or probabilistic etc.), and, consequently, I take no stand on the issue of how variation should (not) be represented in the grammar.

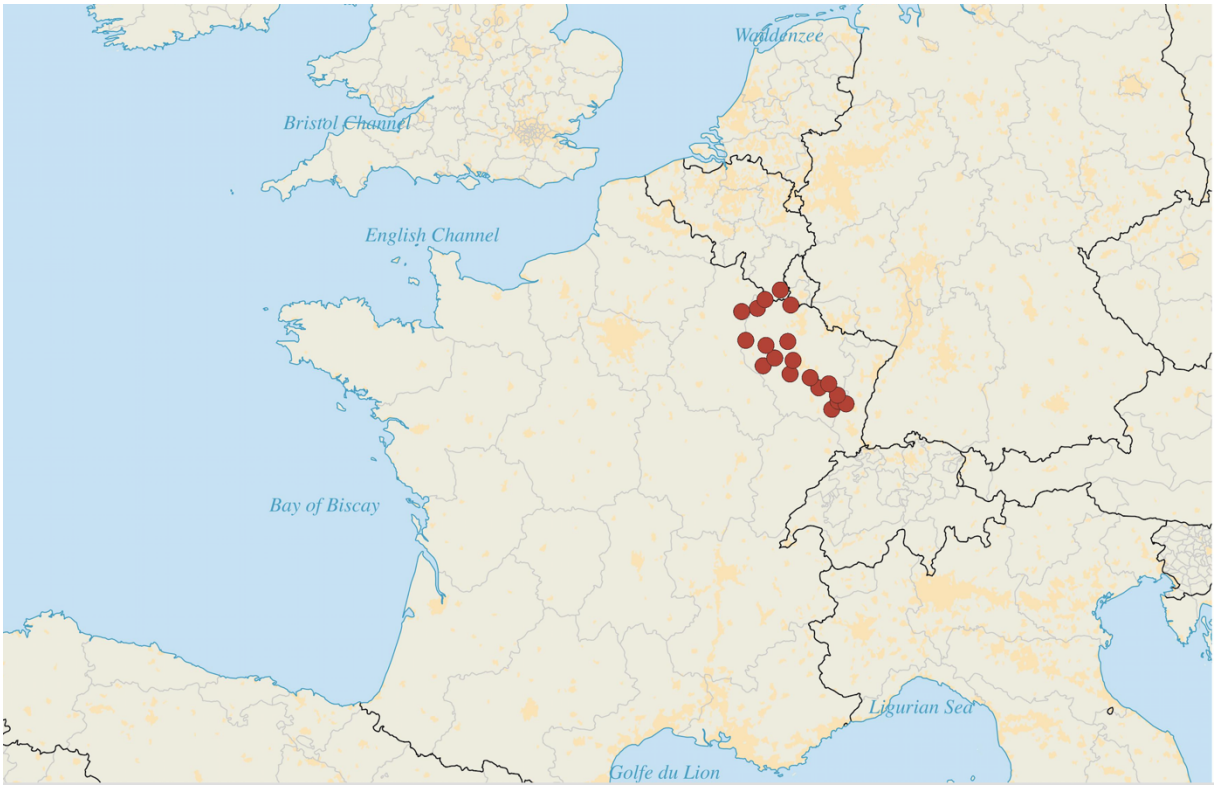


Figure 4: Points where the sole negation is *mie*

Dialect atlases are also challenging sources of data for sociolinguistic analysis. Firstly, rather than the collection of naturalistic speech, the ALF corpus was obtained through translation tasks. Therefore, we expect to see a *repetition effect*, i.e. the standard construction will be translated literally into the local dialect (Cornips, 2002). Secondly, although the *Notice* of the ALF provides some social information about the speakers consulted at each point, much of this information is opaque. For example, some points in the ALF represent data from multiple speakers with different sociolinguistic profiles: point 132 (Poissons, Haute-Marne), for instance, represents translations from a 72 year old *vieillard* and his 25 year old seamstress grand-daughter, people who have very different sociolinguistic profiles (Chambers and Trudgill, 1998). Likewise, some of the information, such as occupation, is incomplete for some speakers. In order to address these challenges, I propose to analyze only data produced by

single speakers, for whom we have age, gender and geographical location information. From the dataset above, this corresponds to points associated with 122 single speakers yielding 2434 negative productions. Furthermore, we will take the repetition effect into account when interpreting the data. In particular, since all the stimuli are in Parisian French, the repetition effect should render the translations closer to French. In other words, in the ALF data, we should find:

1. Higher rate of *ne* preservation than in naturalistic speech.

2. Higher rate of *pas* use (vs *mie*) than in naturalistic speech.

3. Higher rate of use of secondary negations than in naturalistic speech.

Since we do have recordings by Brunot and Bruneau (1912) it should be possible to check how the ALF lines up with the language in them, if these recordings ever become more accessible for detailed research.

3.1 Areal properties

Before diving into the detailed study of *mie* grammars, we should take a moment to observe some grammatical properties of the whole area. First, as shown Table 2, we see that, in this part of France, the use of a secondary negation is almost excluded when the sentence contains a negative indefinite.

	No negation	*mie*	*nen*	*p*	*pas*	*pe*	*po(in)t*	Total
No negative indefinite	134	476	212	42	1079	118	222	2283
Negative indefinite	696	0	0	0	10	0	0	706

Total	830	476	212	42	1089	118	222	2989

Table 2: Negative concord in the ALF (North East)

In other words, negative concord is limited to a couple of examples of *pas…ni…ni* 'neither...nor', shown in Figure 5, and a few examples of *pa me*[3] 'no more'. These results therefore suggest that negative concord is not a robust grammatical phenomenon in north-eastern Gallo-Romance dialects, or at least not as robust as it is on Occitan territory (see Dagnac, 2018).

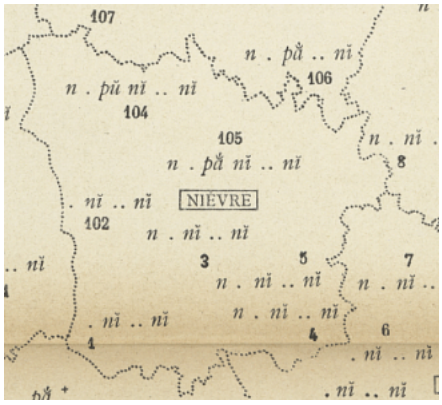


Figure 5: Submap of *Je ne pouvais ni avancer ni reculer* (map 0901)

Another source of variation in postverbal negation markers is the sentence with the *de* indefinite: *Dans ce pays, il n'y a pas de source* 'In this land, there are no springs.' As shown in Figure 6, the marker *point* is favoured across most of the territory, even in areas where the principal marker is *mie*. This result is perhaps not particularly surprising, given that many studies of Old/Middle French (Parisian dialect) have suggested that *point* was favoured in

[3] In fact, it is not clear from the limited data that we have whether or not the expression *pa me* in Switzerland (eg. points 60, 70) is actually two separate words *pa* (negation) and *me* 'no more' or whether it is a single word.

partitive constructions (Marchello-Nizia, 1979; Martineau, 2009), and Bruneau (1949), and Remacle (1952) reports that Wallon *point* is limited to partitive constructions. Although *il n'y a pas de source* is not technically a partitive construction, it is possible that its association with the *de* phrase causes it to favour the more quantificational *point* (see also Pollock, 1989, for a version of this claim for French).

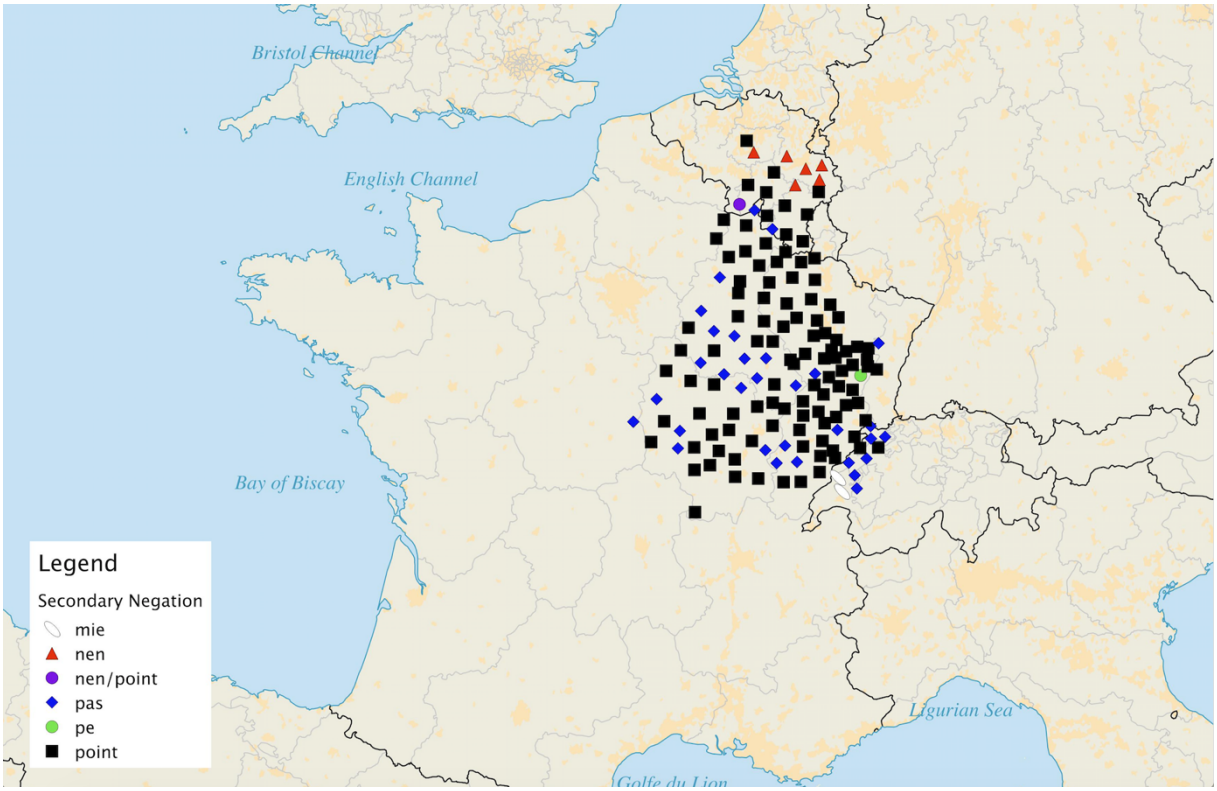


Figure 6: Secondary negations in *Dans ce pays, il n'y a pas de source* (map 0089)

We can oppose the map of the *de* phrase sentence (Figure 6) with one of all the other sentences, shown in Figure 7.

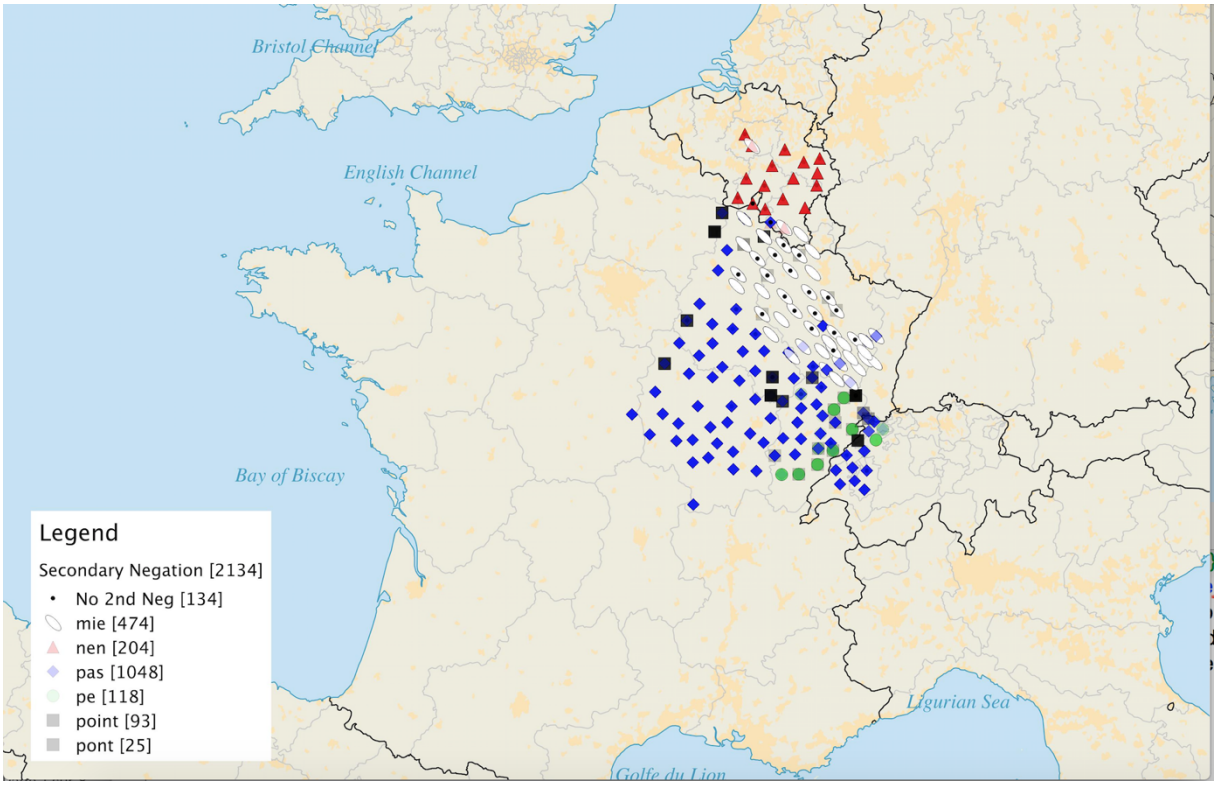


Figure 7: Secondary negations in sentences without the *de* phrase

Some speakers in this area of the ALF have the same form for both sentential negation and *de* phrase quantification: for example, the speaker at point 3 uses *pas* for all negative sentences. Likewise, speaker 191 uses *nen* for everything, and speaker 169 does the same thing with *point*. Some speakers with variable systems use one of the variants for the *de* phrase sentence: for example, 109 varies between *pas* and *point* for sentential negation, while using *point* for the *de* phrase sentence. Finally, many speakers have a form that is distinct from any secondary negation for the *de* phrase sentence: The speaker at point 1 uses *pas* in other negative sentences, but *point* in the *de* phrase sentence; 77 uses *mie* for negative sentences and *point* for *de* phrase; 49 varies between *mie* and *pas*, but uses *point* with the negative *de* phrase; and 50 uses *pas* for negative sentences, but *mie* with the *de* phrase. This suggests that the structure of negation in the sentence with the *de* phrase distinct from other occurrences of secondary negation in the corpus. Because it behaves differently from other negative

sentences in the corpus, we exclude the stimulus with the *de* phrase from our case study on *mie* grammars.

3.2 Case study: *mie* grammars

In the last portion of this paper, we will take a closer 'vertical' look at one more or less cohesive group of speakers: those who only use *mie*. There are 19 speakers like this in our ALF subcorpus. They are 4 women and 15 men, with ages ranging from 20-70. One speaker is from Belgium, two are from Champagne, one is from Alsace and the remainder (15) are from Lorraine (recall Figure 4). Speakers in this area are almost categorical users of the preverbal *ne* (only 7/281 omissions), which suggests that *ne* still has negative semantics in this dialect (see Godard, 2004). I therefore propose that, similar to Italian *non*, it occupies a negative phrase between CP and TP which, following Zanuttini (1997), I call NegP_1.

In order to investigate the syntax of the secondary negation *mie*, we will take advantage of the observation by researchers using the cartographic approach (Cinque, 1996, 1999; Zanuttini, 1997, among others) that we can use ordering with respect to adverbs to diagnose the syntactic position of secondary negation markers. Research in this tradition has shown that there exist rigid ordering relations between adverbs within the languages of the Romance family. For example, as discussed in (Zanuttini, 1997: 64), the Italian adverb *già* 'already' obligatorily precedes the adverb *piu* 'no more' (3-a), and, when we look at the neighbouring Romance language French, we see exactly the same ordering between the cognates *déjà* and *plus* (3-b).

(3) a. Non hanno ricevuto già piu nulla. (Italian: *piu > gia)

'Already they weren't receiving anything anymore.'

b. Ils n'ont déjà plus rien reçu. (French: *plus > déjà)

'Already they weren't receiving anything anymore.'

Using adverb ordering as a diagnostic, Cinque and Zanuttini argue in favour of the existence of a syntactic position for a higher postverbal negation, which Zanuttini (1997) calls $NegP_2$. This position is occupied by negative expressions that precede *già/déjà* or *ancora/encore* 'yet' and their cognates. As shown in (4)-(6), this class includes Italian *mica*, Piedmontese *pa* and French *pas*.

(4) a. Non hanno mica già chiamato Italian

b. Ils n'ont pas déjà appelé French

'They haven't already called' (*già/déjà > mica/pas) (Cinque, 1999: 5)

(5) A l'e pa già andait a ca'. Piedmontese

'He hasn't already gone home.' (*già > pa) (Zanuttini, 1997 : 70)

(6) a. Non l'ho mica ancora letto. Italian

b. Je ne l'ai pas encore lu. French

'I have not read it yet. ' (*ancora/encore > mica/pas) (Cinque, 1999 : 9)

Zanuttini (1997) argues in favour of a second postverbal negation position, which she calls $NegP_3$, which is occupied by expressions that follow *già/déjà* or *ancora/encore* and their cognates. As shown in (7), this class includes Piedmontese *nen*, among other elements.

(7) a. *A l'e nen già andait a ca'. Piedmontese

Intended: 'He hasn't already gone home.' (Zanuttini, 1997: 70)

b. A l'avia già nen salutami cul di la.

'Already on that day he had not greeted me.' (Zanuttini, 1997: 71)

The ALF contains one stimulus with French *encore*: *Mais l'avoine n'est pas encore mûre*. Additionally, speaker 154 gives a translation of *mais il ne vaut pas le mien* using the adverb *kor*. Therefore, in our corpus, we have 20 productions with negation and the adverb *(en)cor(e).* The position of *mie* with respect to the adverb in these productions in shown in Table 3, and the relevant region of the map for this sentence is shown in Figure 8.

Position	**# speakers**
Post adverbial *mie*	4
Pre adverbial *mie*	1
Enclitic *-m*	15

Table 3: Position of *mie* in sentences with *(en)core*

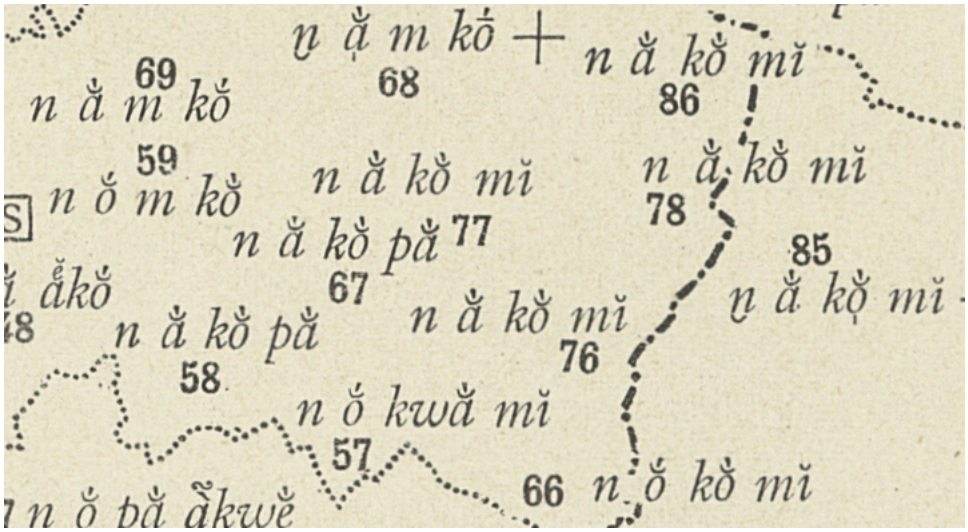


Figure 8: Partial submap from the ALF of *-m (en)core mie* (map 0899)

Although non-clitic *mie* largely follows *(en)core*, suggesting it is in *NegP*$_3$ position, what is most striking in Table 3 and Figure 8 is the frequent encliticization of *mie*. This pattern has been observed in the *Atlas Linguistique de la Champagne et de la Brie* (ALCB) (Bourcelot, 1966), where it is described as follows: *mie* becomes a reduced clitic *-m* when the finite verb ends in a vowel. We know that *-m* forms a cluster with the finite verb because it is not separated from it by any expression in our data, and it even appears higher than the class of highest postverbal adverbs, which include *donc* 'so' (Cinque, 1996; Zanuttini, 1997). This can be seen in map 1409, which translates the relevant part of *Tu ne vois donc pas que tu es aussi vieux que moi* 'So don't you see that you are as old as I am'. As shown in Figure 9, enclitic *mie* precedes *donc*; whereas, the non-cliticized version follows it.

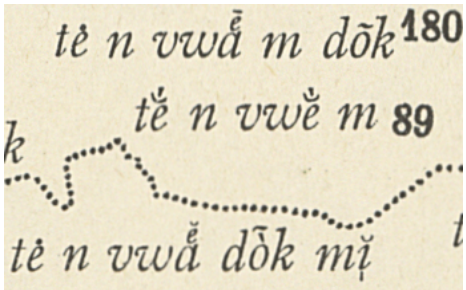


Figure 9: Partial submap from the ALF of *vois donc pas* (map 1409)

Although it is described as obligatory in the ALCB, encliticization appears to be optional in the ALF, as shown by two productions by speaker 154, both in the context of *ako* 'yet' (8).

(8) a. l'awen n'o-m ako moy (speaker 154)

the oat n'is-n't yet ripe

'The oats are not yet ripe.'

b. mais i ne vaut mie ako l'mey (speaker 154)

but it ne worth not yet the'mine

'But it is not yet worth mine.'

Contrary to what is reported in the ALCB, not only is encliticization optional, but speakers also vary in their rates of cliticization. Table 4 shows that some speakers never cliticize; whereas, for some, the rate of cliticization is as high as 73%[4].

Speaker	Clitic	Non-clitic	% cliticization
68	5	7	42
76	0	13	0
78	0	15	0

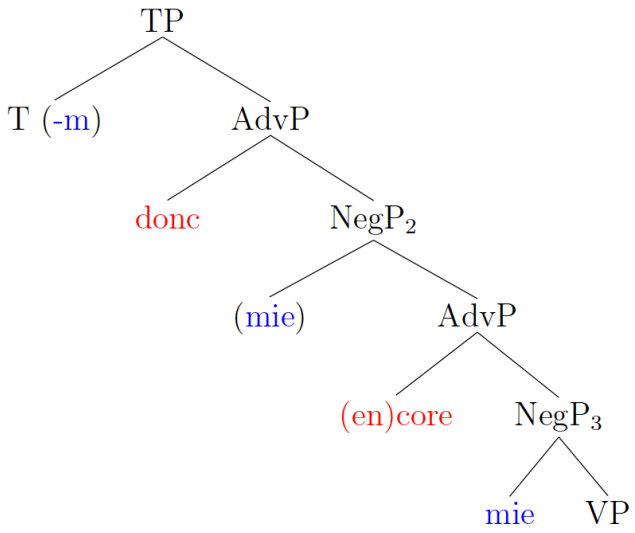
[4]Note that the finite verb in some of the productions ends in a consonant, so according to the ALCB, encliticization would not be possible. However, since the description of this process in the ALCB was not completely correct for the ALF data, I have included sentences with verbs with final consonants in the rate of cliticization, to verify this aspect of the ALCB's proposals.

85	0	15	0
86	0	14	0
89	5	5	50
143	7	5	58
150	6	5	55
153	8	3	73
154	7	4	64
155	8	5	62
160	8	4	67
162	8	3	73
163	8	3	73
165	9	3	75
166	7	3	70
175	9	4	70
181	9	4	70
182	5	5	50

Table 4: Rate of cliticization for *mie* only speakers in the ALF

Given that, as shown in Table 3, when *mie* is not cliticized, it mostly follows *(en)core*, I propose that it is located in the $NegP_2$ position, following Zanuttini, although, for speaker 154, it may vary with the $NegP_3$ position. Thus, the dominant syntactic structure for sentential negation is shown in (9), with *mie* raising to T in encliticization.

(9) Proposed syntactic structure for *mie*



3.2.1 *Mie* drop

Although all the speakers in the ALF use secondary negation at least some of the time, *mie* can optionally be omitted, as shown in the examples in (10) from speaker 173.

(10) a. je ne peux-m pet (speaker 173)
I ne can-n't lose
'I can't lose.'

b. on ne peut dromen (speaker 173)
one ne can sleep
'one can't sleep.'

Examples of variation in the omission (or 'drop') of *mie* are shown in Figure 10, where speakers 86 and 78 preserve the *mie*, but speakers 68 and 87 drop it in the translation of the stimulus *on ne peut pas dormir*.

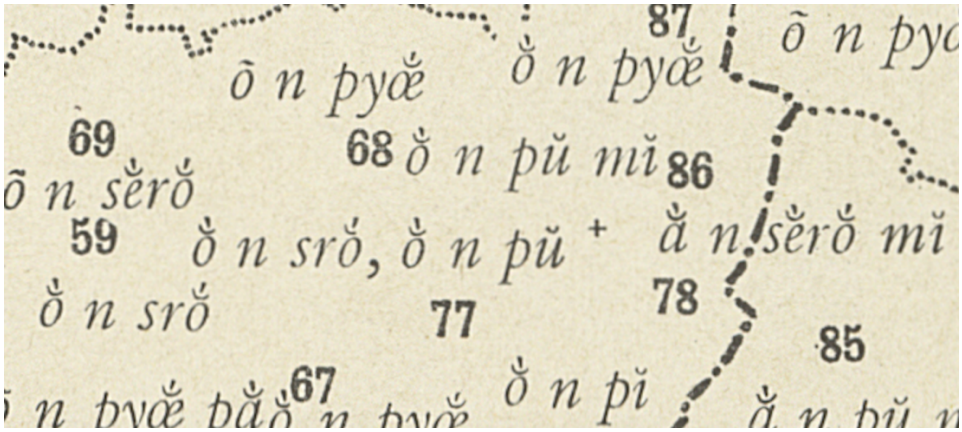


Figure 10: Partial submap from the ALF of *on ne peut pas* (map 1083)

Given that *mie* can sometimes appear as a clitic, it is tempting to attribute '*mie* drop' solely to the weak phonological status of this clitic *-m*. While it is probable that the clitic's reduced phonological status plays a role in its deletion, an argument that the phenomenon also has a syntactic aspect comes from the fact that the *mie* drop process is, in fact, syntactically restricted in the ALF. In particular, much like the infrequent occurrences of sentences with bare *ne* in French (Muller, 1991; Godard, 2004), the absence of the secondary negation is limited to utterances composed of a modal verb such as *pouvoir* or *savoir* when it selects an infinitive, as shown in Table 5.

Clause type	No secondary negation	Mie	Total
Finite monoclausal	0	172	172
Infinitival monoclausal	0	38	38
Infinitival biclausal	52	19	71
Total	52	229	281

Table 5: *Mie* drop in *mie*-only grammars

The optionality of *mie* drop and its syntactic restriction raises questions about its source (is it structural or social?) and its nature (why do we find this syntactic restriction?). In order to contribute to answering these questions, I ran statistical analyses to determine whether factors related to syntactic structure (like the *mie* encliticization rate in Table 4) and social factors (speaker age and gender in the ALF *Notice*, and their administrative location) condition the presence or absence of *mie*. More specifically, I built generalized linear mixed effects models in R (R Core Team, 2016) with a logit function, using the *lme4* package (Bates et al., 2014), with the ALF point (N=19) as a random effect and age (continuous), gender (m/f), location (Lorraine/Alsace, Champagne-Ardennes or Belgium) and *mie* cliticization rate as fixed effects. The linguistic factor (cliticization) and the three social factors (age, gender and location) were the only sociolinguistic factors available, given the sparseness of the data. The *Notice* sometimes provides more social information, such as profession, but this is not given for all speakers in the sample. The results of the statistical analyses (fixed effects) are shown in Table 6. We can see from this table that none of the social factors were significant.

Factor	**Estimate**	**Std. Error**	**z value**	**Pr(>|z|)**
(Intercept)	3.452439	1.1657060	2.962	0.00306 **
Degree of cliticization	-0.0336953	0.0116585	-2.890	0.00385**
Gender (male)	-0.1951873	0.6244815	-0.313	0.75462
Age	0.0008208	0.0141803	0.058	0.95384
Location (Champagne)	0.1674623	0.9785044	0.171	0.86411
Location (Lorraine)	0.1026527	0.8127357	0.126	0.89949

Table 6: Results of statistical analyses (fixed effects). Intercept: Female speaker from Belgium

The main result from Table 6 is that the higher the rate of *mie* cliticization across all sentences, the less likely speakers will pronounce *mie* in biclausal sentences. In other words, the more likely a speaker is to cliticize *mie* onto the finite verb, the more likely they will simply omit it with an infinitive (11). The relationship between *mie* cliticization and *mie* drop is shown in Table 7.

(11) a. Mais il ne vaut-m le mien → On ne peut dormir

b. Mais il ne vaut mie le mien → On ne peut-m/mie dormir

Degree of *mie* cliticization	**% *mie* drop**
0	2
42	14
50	55
55	21
58	14
62	19
64	31
67	29
70	22
73	26
75	25

Table 7 : Relation between *mie* cliticization and drop

Why do we find speakers who favour *mie* encliticization also favour *mie* drop? Since *mie* drop is limited to a very particular syntactic context (modal verbs selecting infinitival constructions), a reasonable hypothesis is that there is something about the structure of the embedded non-finite clause that is blocking *mie* cliticization onto the upper finite verb. Sadly the data from the ALF is still very limited, and, given the highly endangered status of the language, it will be very difficult to test different syntactic hypotheses in great detail. Nevertheless, I believe that a possible line of analysis lies in the relationship between the omission of the secondary negation and the phenomenon of clitic climbing. As shown in Figure 11, in contrast to regions covered by the ALF, clitic climbing in infinitival constructions is not generally blocked in North Eastern France: in the sentence *Il faut les y mener deux fois par jours* 'One must bring them there two times per day', the order is always *faut les* rather than *les faut*, which is an order attested in the center of France.

Figure 11: Submap of ***Il faut les y*** (*mener deux fois par jour*) (map 0535

Thus a possible hypothesis for the relationship between *mie* cliticization and *mie* drop would be the following: in biclausal sentences, *mie* can be generated either in the higher or in lower clause. If it is generated in the lower clause and cliticization does not apply, then *mie* surfaces in the lower clause. If, however, it is generated in the lower clause and cliticization applies,

then, because of the ban on clitic climbing, *mie* is simply unpronounced. This being said, this hypothesis is certainly not the only one possible; indeed, as mentioned above, secondary negation *pas* can sometime drop with modal verbs in dialects that do not have negative enclitization. However, investigating this question further would require new fieldwork studies with the remaining dialect speakers, so I leave it to future work.

4. Conclusion

In this paper, I argued that 'hidden' syntactic data from the *Atlas Linguistique de la France* can be used to investigate the syntactic structure of negation in endangered North Eastern Gallo-Romance dialects. I argued that, for speakers who only use *mie*, this expression is generated as a lower postverbal negation marker, similar to Piedmontese *nen*, although for some speakers, it may be variably generated as a higher postverbal negation marker (like Piedmontese *pa*). In this way, the structure of negation in North Eastern French Gallo-Romance dialects shows important similarities to the structure of negation to closely-related Italian dialects like Piedmontese. Finally, statistical analyses of quantitative patterns of *mie* cliticization and *mie* drop suggest that there is a relation between these two processes, although pinning down exactly what this relationship is would require deeper work with native speaker consultants. Nevertheless, given that the ALF data has revealed a number of complex qualitative and quantitative grammatical patterns, I believe it could be used in future studies to identify empirical phenomena that merit further study and to diagnose grammatical relationships between these phenomena. I therefore conclude, following Dagnac (2018), that it is an invaluable tool for the study of the syntax of endangered Romance languages of France.

References

Baiwir, E. and Renders, P. (2013). Les atlas linguistiques sont-ils des corpus? *Corpus*, 12:27-37.

Barbiers, S. (2009). Locus and limits of syntactic microvariation. *Lingua*, 119(11):1607– 1623.

Bates, D., Maechler, M., Bolker, B., Walker, S., et al. (2016). *lme4: Linear mixed-effects models using eigen and s4*. R package version, 1(7):1–23.

Bourcelot, H. (1966). *Atlas linguistique et ethnographique de la Champagne et de la Brie*. Editions du CNRS, Paris.

Brun-Trigaud, G., Le Dû, J., and Le Berre, Y. (2005). *Lectures de l'Atlas Linguistique de la France de J. Gilléron et E. Edmont*. Du temps dans l'espace. CTHS, Paris.

Bruneau, C. (1949). La négation en wallon namurois. In *Mélanges de philologie romane et de littérature médiévale offerts à Ernest Hoepffner par ses élèves et ses amis*, pages 45–52. Les belles lettres, Paris.

Brunot, F. and Bruneau, C. (1912). *Archives de la parole: enquête dans les Ardennes*. Bibliothèque nationale de France, Gallica.

Chambers, J. K. and Trudgill, P. (1998). *Dialectology*. Cambridge University Press, Cambridge.

Cinque, G. (1996). The antisymmetric programme: Theoretical and typological implications. *Journal of Linguistic*s, 32:447–464.

Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press, Oxford.

Cornips, L. (2002). Variation between the infinitival complementizers om/voor in spontaneous speech data compared to elicitation data. In Barbiers, S, Cornips, L., and van der Kleij, S., editors, *Syntactic Microvariation*, pages 75-96. Meertens Institute, Amsterdam.

Dagnac, A. (2015). 'Pas','mie','point' et autres riens: de la négation verbale en picard. In Pitar, M. and Goes, J., editors, *La négation: Études linguistiques, pragmatiques et didactiques*, pages 129–152. Artois Presse Université, Artois.

Dagnac, A. (2018). SyMiLa and the Atlas linguistique de la France: A tool for the study of Gallo-Romance syntax. *Glossa: a journal of general linguistics*, 3(1):85.

Eckert, P. (1985). Grammatical constraints in phonological change: Unstressed* a in Southern France. *Orbis*, *31* : 169-189.

Edmont, E. and Gilliéron, J. (1902-1910). *Atlas linguistique de la France*. Champion, Paris.

Godard, D. (2004). French negative dependency. In Corblin, F. and de Swart, H., editors, *Handbook of French Semantics*, pages 351–389. CSLI Publications, Stanford.

Goebl, H. (2003). Regards dialectométriques sur les données de l'Atlas linguistique de la France (ALF): Relations quantitatives et structures de profondeur. Estudis Romànics, 25: 60–117.

Guilliot, N. and Becerra-Zita, S. (in press). Negative Concord and Sentential Negation in Gallo. In *Romance Languages and Linguistic Theory 2016* : selected papers from Going Romance 2016. John Benjamins.

Hopcroft, J., R. Motwani, and J. Ullman. (2013). *Introduction to automata theory, languages, and computation*. (3rd edition). Pearson, Boston MA.

Marchello-Nizia, C. (1979). *Histoire de la langue française aux XIVe et XVe siècles*. Bordas, Paris.

Marie, E. (2012). *Dictionnaire normand français: d'après un inventaire des usages en Cotentin*. OREP editions, Bayeux.

Martineau, F. (2009). Modeling change : a historical sociolinguistics perspective on French negation. In Kawaguchi, Y., Durand, J., and Minegishi, M., editors, *Corpus and Variation in Linguistic Description and Language Education*. pages 159-178. John Benjamins, Amsterdam.

Muller, C. (1991). *La négation en français*. Librairie Droz, Geneva.

Pollock, J.-Y. (1989). Verb movement, universal grammar and the structure of IP. *Linguistic Inquiry*, 20:365–424.

QGIS Development Team (2015). *QGIS Geographic Information System*. Open Source. Geospatial Foundation.

R Core Team (2016). *R: A Language and Environment for Statistical Computing*. R Foundation for Statistical Computing, Vienna, Austria.

Remacle, L. (1952). *Syntaxe du parler wallon de La Gleize*, volume 3. Librairie Droz, Geneva.

Temple, R. A. (2000). Old wine into new wineskins. A variationist investigation into patterns of voicing in plosives in the Atlas Linguistique de la France. *Transactions of the Philological Society*, *98*(2), 353-394.

Tuaillon, G. (1975). Analyse syntaxique d'une carte linguistique: Alf 25: 'ou` vas-tu?'. *Revue de linguistique romane*, 39(153-154):79–96.

Zanuttini, R. (1997). *Negation and Clausal Structure: a Comparative Study of Romance Languages*. Oxford University Press, Oxford.

6391 words