

Final Devoicing in French

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Regards croisés sur la phonologie du français contemporain

‘Parisian’ French

- ▶ Contrast before sonorants: a[d]mirer, ca[d]enas, a[k]né, o[s]mose, a[t]las, pa[t]elin
- ▶ Obligatory devoicing before voiceless obstruents: distin[kt]tif (distin[g]uer), su[pt]ropical (su[b]alpin), pro[ʃt]er (pro[ʒ]), a[ps]or[ps]ion (absor[b]er), la[ts]us (par[de]sus)
- ▶ Optional voicing before voiced obstruents: ane[gd/kd]ote, a[gd/kd]uc, dé[zv/sv]ant, a[ʃv/*ʒv]er

Outline of talk

- ▶ In a famous paper, Wetzels and Mascaró (2001) claim that this is evidence for active [-voice] in French
- ▶ We will provide an alternative, OT analysis which is based on:
 - ▶ Privative [voice]
 - ▶ The idea that Parisian French has Final Devoicing
 - ▶ but this constraint is representationally more refined than usually assumed
- ▶ Crucial evidence will come from French dialects which do have Final Devoicing

Structure of talk

Standard French

Final Devoicing

Licensing by Position revisited

Two northern dialects

Walloon

Vimeu Picard

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Final Devoicing

- ▶ Catalan:
 - ▶ *gris* 'grey (M)' - *grizə* 'grey (F)'
 - ▶ *gos* 'dog (M)' - *gosə* 'dog (F)'
- ▶ Dutch:
 - ▶ *kwaa[t]* 'angry (PRED.)' - *kwadə* 'angry (ATT)'
 - ▶ *laat* 'late (PRED.)' - *latə* 'late (ATT)'
- ▶ German:
 - ▶ *Rad* 'wheel (NOM. SG.)' - *Rades* 'wheel (GEN.SG.)'
 - ▶ *Rat* 'council (NOM.SG.)' - *Rates* 'council (GEN.SG.)'

What is Final Devoicing?

- ▶ We can find many definitions of Final Devoicing in the OT literature.
- ▶ Two schools of thought:
 - ▶ Licensing by position: [voice] is only allowed in certain syllable positions (e.g. onsets; Lombardi 1999)
 - ▶ Licensing by cue: [voice] is only allowed in certain phonetically defined positions (e.g. before sonorants; Steriade 1997)
- ▶ Final Devoicing does not apply in any of these definitions.

No Final Devoicing as (simple) Licensing by Position

- ▶ FINDEV: *[voice]/Coda
- ▶ is counterexemplified by *a[d]mirer*

“the facts of the real language [=French] are unintelligible under prosodically based analyses of voice neutralization” (Steriade 1997)

No Final Devoicing as (simple) Licensing by Cue

- ▶ FINDEV: [voice] needs a cue in a following sonorant
- ▶ is counterexemplified by e.g. *laide* ‘ugly’ [lɛd] - *Lette* ‘Latvian’ [lɛt]

Falsification of Licensing by Cue

- ▶ Steriade (1997) points out that a language in which there is contrast in obstruents before tautosyllabic sonorants, but not before heterosyllabic ones, would constitute a falsification
- ▶ ‘Fictitious French’: [a.pri - a.bri, sjɛ.klə - ɛ.glə] but: *[dɔg.mə, mad.lɛn]

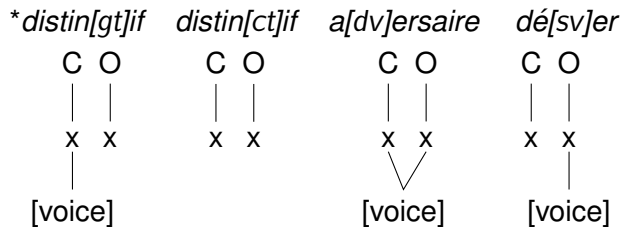
Catalan and Dutch are ‘Fictitious French’

- ▶ Wheeler (2005) points out that Catalan is ‘Fictitious French’: there is a voicing contrast in *clar* ‘clear’ [kla] vs. *gla* ‘acorn’ [gla], but not across syllable boundary, as in *poc lògic* ‘not very logical’
- ▶ Dutch might be another (possibly even more convincing case), since it does have final devoicing before sonorants: there is no contrast *atlas* - **adlas*, and words such as *Ariadne* would typically be pronounced with voiceless [t], *pace* Steriade.

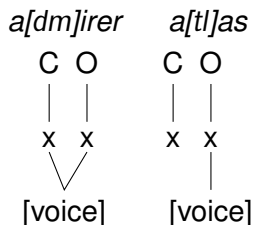
Towards a more sophisticated Licensing by Position

- ▶ FINDEV: [voice] needs to be licensed in an onset.
- ▶ α is licensed by β *iff* there is a path from α to β .

Being licensed



Being licensed by a sonorant



- ▶ This means that sonorants need to have a voicing specification, at least in cases such as *a[dm]irer*.
- ▶ [sonorant] ⊃ [voice] ≫ FAITH-[voice]

What about word-final consonants?

- ▶ Word-final consonants in French are assumed to be in onsets of otherwise empty syllables, hence voicing is licensed.
- ▶ There are additional reasons to assume this:
 - ▶ The famous geographic/sociolinguistic alternations between ə and \emptyset
 - ▶ The fact that words can end in consonant clusters of rising sonority (*table* etc.)
 - ▶ This allows for a uniform analysis of French words/phrases in all dialects ending in a trochee, with a weak syllable headed by schwa or nothing

Regressive voicing

- ▶ This should obviously be analysed as a separate process, since it also has separate properties (its optionality)
- ▶ Due to a freely rankable constraint $\text{ALIGN}([\text{voice}], \text{Left})$
- ▶ The fact that this cannot lead to [aʒve] is an instance of a so-called *grandfather effect* (McCarthy 2004), and should be treated as such:
 - ▶ Using 'Comparative Markedness' (McCarthy 2004)
 - ▶ Using 'Enriched Faithfulness' (Hall 2006):
 $\text{IDENT-}[+\text{VOICE}] \gg *3 \gg \text{ALIGN}$

Interim conclusions

- ▶ Parisian French is a dialect with Final Devoicing
- ▶ Final Devoicing can be and should be seen in terms of Licensing by Position (*pace* Steriade)
- ▶ We do not need to refer to [-voice] (*pace* Wetzels and Mascaró)

Final Devoicing in French

Standard French

Final Devoicing

Licensing by Position revisited

Two northern dialects

Walloon

Vimeu Picard

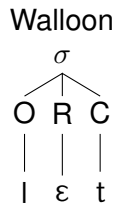
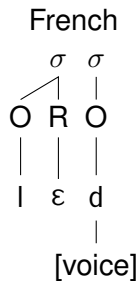
Walloon Devoicing

- ▶ Word-final devoicing: *wâde-lu* ‘keep it’ [wɑ:tly] vs. *wâd’-ler* ‘to support mine walls with billets’ [wɑ:dlɛ] (Liège)
- ▶ Word final obstruents assimilate in voicing to following obstruents: *lu bo[g] du vèjin* ‘the neighbour’s ram’, *oune gran[t] fèye* ‘a big girl’ (Bastogne)
- ▶ Fricatives are voiced finally when followed by a vowel: *dèl frize êwe* ‘some cold water’, cf. *l’êwe est frisse* ‘the water is cold’ (Liège)
- ▶ Syllable-final devoicing of fricatives: *amûsmint* ‘amusement’, *mouvemint* ‘movement’ [mufmɛ̃] (Liège)

(Data mostly from Francard and Morin 1986)

How is final devoicing possible?

- ▶ If French already displays Final Devoicing, how can Walloon dialects have it even more?
- ▶ We propose that this is the reflex of a difference in syllable structure. Word final consonants
 - ▶ are onsets in French
 - ▶ are codas in Walloon

laide

Independent evidence

- ▶ The most important argument in favour of the assumption that word final consonants are onsets in French, is that they can form clusters
- ▶ However, these clusters have been simplified in Walloon
- ▶ This gives strong support to the assumption that they are syllabified differently, i.e. in codas

underlying form	isolation	prevocalic
/trist/	[tris] 'sad'	[tristɛs] 'sadness'
/mɛspl/	[mɛs] 'meddlar'	[mɛspli:] 'meddlar-tree'

Syllable-final devoicing

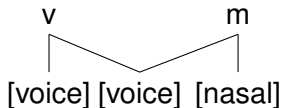
- ▶ Like French, many dialects of Walloon do not seem to have syllable-final devoicing of obstruents (cf. *wåd'-ler*)
- ▶ This is expected, since in this case the syllable boundaries are the same in the two systems
- ▶ However, Walloon does have devoicing of fricatives in this position: *amûsmint* 'amusement', *mouvemint* 'movement' [mufmɛ̃] (Liège) *T* 'h'is devoicing of fricatives is still "well-established in current regional French of Liège"

How can we understand this?

- ▶ Notice that the relevant environment most often is fricative-nasal
- ▶ This is a notorious environment, subject in many languages to *Padgett's Generalisation* (Padgett 1994):
 - ▶ If [+nas,+cons] then [-cont]
'Nasals may not be linked to continuants'
- ▶ Padgett discusses this generalisation mostly in connection to place assimilation

Padgett's Generalisation Generalised

- ▶ I propose to generalise Padgett's generalisation also to cases of voicing assimilation:



Vimeu Picard

- ▶ Voiced plosives are nasalised next to a nasal: *rudemint* /rydmɛⁿ/ → [rynmɛ̃] (cf. *rude* [ryd]), *gamme* /gaⁿb/ → [gã̃m] (cf. *gamber*)
- ▶ Voiceless nasals don't nasalise: *lampe* /laⁿp/ → [lã̃mp]
- ▶ No word-final devoicing: *tube* /tyb/ → [tyb]

(data mostly from José and Auger)

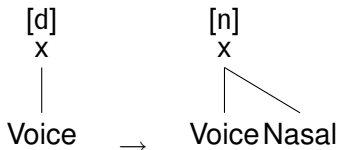
The Too Many Repairs Problem

Devoicing:	/tæb/	→	/tæp/
Lenition:	/tæb/	→	/tæj/
C Deletion:	/tæb/	→	/tæm/
Segment reversal:	/tæb/	→	/bæt/
Feature reversal:	/tæb/	→	/dæp/
V insertion:	/tæb/	→	/tæbə/
Nasalisation	/tæb/	→	/tæm/

(Steriade 2001)

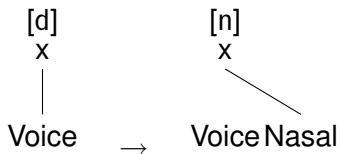
Nasalisation is no repair

- ▶ Under the present approach, nasalisation is not a possible repair for final devoicing




- ▶ We keep the feature [voice], which violates the relevant constraint

Nasalising and devoicing



Harmonic Bounding

/tæb/	FINDEV	FAITH(Voice)	FAITH(Nasal)
tæb	*!		
 tæp		*	
tæm	*!		*
tæm̥		*	*!

Analysis

- ▶ [nasal] ⊃ [voice], (Itô, Mester and Padgett 1994)
- ▶ DOCK: Nasal features on a vowel need to be supported by nasal features on the rhyme.

Tableau I


/tyb/	FAITH(Voice)	[nasal] ⊃ [voice]	DOCK
 [tyb]			
[typ]	*!		

Tableau II



/ga ⁿ b/	FAITH(Voice)	[nasal]⊃[voice]	DOCK
[gãb]			*!
 [gãm]			
[gãm̥]	*!	*	

Tableau III

/la ⁿ p/	FAITH(Voice)	[nasal] ⊃ [voice]	DOCK
 [lãp]			*
[lãm]	*!		
[lãm̥]		*!	

Interestingly, fricatives are not nasalised

- ▶ *mince* ‘thin’ [mɛ̃s], *tchinze* ‘fifteen’ [tʃɛ̃z]
- ▶ This must be a result again of Padgett’s Generalisation

Conclusions

- ▶ Final Devoicing is operative in many (Northern) varieties of French
- ▶ even if its effects are sometimes hidden
- ▶ The differences between French and Walloon are *not* due to a difference in a FD ‘parameter’, but to a difference in syllabification
- ▶ Vimeu Picard nasalisation is not due to Final Devoicing; there is no word-final devoicing of the Walloon type in Picard, not even hidden (*pace* José and Auger)

The voicing behaviour of nasals

- ▶ In our analysis of Picard, we make crucial use of the fact that nasals (sonorants) *must* be voiced.
- ▶ In our analysis of Parisian French, we used the fact that sonorants *can* be voiced (to explain why *admirer* is well-formed)
- ▶ However, this raises the question why we do not find regressive voicing assimilation (**adlas*) like we find it after
- ▶ Such voicing assimilation is found e.g. in Catalan (Wheeler 2005):
 - ▶ *hi[bn]osi, è[dn]ic, ri[dm]e, ca[zn]otable*


The dual nature of voicing on sonorants

- ▶ It is already well-known that sonorants have an ambiguous behaviour with respect to voicing.
- ▶ E.g. the famous interaction of Japanese Rendaku and Lyman's Law:
 - ▶ In certain compounds, the initial obstruent of the second part gets voiced: ore+kami → oregami
 - ▶ But this does not work if there already is a voiced obstruent in this second part: kami+kaze → kamikaze (*kamigaze)
 - ▶ Witness, *oregami*, nasal *m* does not count as voiced
 - ▶ At the same time, sonorants do voice the following obstruent: *tompō/*tombo

Constraints

- ▶ SONVOI: Sonorants should be voiced. $\text{Son} \supset \text{Voi}$
- ▶ LICENSE(F): A phonological feature must be licensed.
 $\forall F \exists G: G \times F$
- ▶ Licensing cancellation: If F implies G, F does not license G. $F \supset G \Rightarrow \neg (F \times G)$

Tableau

kami	LICENSE	SONVOI
kami	*!	
 kami		*

Tableau

tompo	LICENSE	SONVOI	IDENT
☞tompo			*
tompo		*!	

Conclusion

- ▶ Feature licensing may be one way of formalizing the ambiguous nature of sonorants with respect to voicing.
- ▶ Different ranking of LICENSE and SONVOI may explain differences between Catalan and French.