

# The Matter with the Penultimate: Prosodic Change in the Vernacular of Lower-Class Immigrant Youth in Paris

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## ABSTRACT

This study investigates a prosodic pattern in the vernacular of the working-class Parisian French youth known as ‘lengthening of the penultimate syllable’. Eighty-five middle-school students from a predominantly immigrant suburb near Paris were recorded in a picture-naming task during breaks and after school. Results for five words uttered by twelve boys of North-African, and of white Caucasian, origins show greater than average durations in most words, but significant difference between the two groups was only observed in one word. A high tonal target appears on IP-penultimate syllables perceived as unusually long. This pattern is atypical in non-emphatic uses of Parisian French, but its presence in both ethnic groups’ speech points to its possible vernacular status in working-class adolescent male peer groups.

## 1. INTRODUCTION

Since the late eighties, numerous studies focused on the morpho-phonology of *verlan* ‘backslang’ (from *envers* ‘backwards’), as spoken by second- and third-generation immigrant youth living in poor housing projects near large cities (so-called *banlieues*) in France [1] [2]. Despite the commonly shared assumption that this marginalized population speaks ‘its own variety’ of French [3], no systematic phonetic analyses of their vernacular have yet been carried out. Some of its peculiar prosodic features, however, “producing an immediate effect of strangeness” ([4] p. 108) have been pointed out by several studies.

According to Calvet [5], the speech ‘rhythm’ characterizing the ethnically mixed population of the *banlieues* ‘suburbs’ shares elements with rap music. Using a line of musical scores, Calvet illustrates an “interesting parallel” between “the form of text in rap and phrasing by the adolescents” (p. 287): the most noticeable prosodic feature of this vernacular, as spoken by adolescents of African descent, would be “a phrasal accent falling on the penultimate and not the final syllable, as it is the rule in French” (idem). This feature, Calvet argues, might not be remote from the “syllabic accent on the weak third beat” (p. 286) of the 4/4 rhythm of rap. Duez and Casanova [6], on the other hand, examining the question from a phonetician’s point of view declare having found no such parallel. No durational correlates of a phrasal accent were apparent in excerpts from movie-sound tracks and television interviews recorded with adolescents of African

origin. Therefore, these authors conclude that the perceived distinctiveness of ‘the talk of the *banlieues*’ might come from surface prosodic features, such as acceleration and deceleration within the prosodic phrase, or else.

Yet, the ‘lengthening of the penultimate’ is consistently treated as a diagnostic feature of the Parisian working-class vernacular in several other studies. Méla [7], analyzing her interview with a 13-year old *Beur* speaker, Malik, mentions “a word or phrase accent falling on the penultimate” (p. 27) which, she argues, is a pattern that middle-class speakers associate with the youth of North-African descent. The same pattern is considered by Conein and Gadet [4] a ‘hereditary’ feature typical of ‘*français populaire*’ ‘working class French’, spoken by the Parisian working-class since at least the late 19<sup>th</sup> century. Conein and Gadet also argue, however, that the “unusually strong” (p. 110) final and initial accents in a prosodic phrase (of unspecified type), constitute a truly innovative, possibly contact, phonological feature that now functions as a marker of identity for this social group.

This study represents a first empirical approach to these questions. Is there evidence of a penultimate phrase accent in the vernacular of lower-class Parisian French youth? If yes, does it systematically appear, as some of the transcripts in previous studies suggest, in the final word (possibly Accentual Phrase, AP) of an Intonation Phrase (IP) ? (The terminology is following [8] [9].) Does its use primarily characterize boys of African descent, as some reports seem to suggest ? Since no measurements or pitch tracks have yet been published in the literature, one first had to proceed with data collection.

## 2. CORPUS AND METHOD

Eighty-five girls and boys between 11 and 15 years of age, born and living in the primarily immigrant working-class suburb of *La Courneuve* (Seine-Saint Denis), North-East of Paris, were recorded in a middle-school during breaks and after school. Fieldwork took place in five sessions of six to ten weeks at a time between May 1999 and December 2002. It was carried out by the author of this paper: a white, female, near-native speaker of French living in the United States. After two fieldwork sessions, during which no recording took place, boys and girls from different ethnic background were asked to give an interview and to participate in a picture naming task. Other than school officials authorizing work on the school’s

Table 1: Duration of the penultimate syllable with respect to total word length for six boys of North-African descent (top half), and six boys of White Caucasian origin (bottom half). See text for an interpretation of these results.

speaker	4 syll étoile de mer			3 syll perroquet			3 syll animaux			2 syll voiture			2 syll collier		
	T	penult	%	T	penult	%	T	penult	%	T	penult	%	T	penult	%
	(ms)			(ms)			(ms)			(ms)			(ms)		
Khatib A	907	221	<b>24.36</b>	682	135	19.79	401	143	35.66	426	183	42.95	497	203	<b>40.84</b>
Laith B	91	158	17.36	45	72	16	--	--	--	420	184	<b>43.8</b>	319	105	32.91
Mansur F	937	157	16.75	463	132	<b>28.5</b>	456	234	<b>51.31</b>	452	203	<b>44.91</b>	312	245	<b>46.47</b>
Khamil J	852	175	<b>20.54</b>	603	135	<b>29.15</b>	465	109	23.44	523	226	43.21	390	122	31.28
Mousa B	747	160	<b>21.42</b>	68	192	<b>28.23</b>	482	184	<b>38.17</b>	374	156	41.71	400	169	<b>42.25</b>
Saleh K	598	127	<b>21.23</b>	466	167	<b>35.83</b>	378	111	<b>38.17</b>	346	156	<b>45.08</b>	339	143	<b>42.18</b>
Mean	20.28			26.25			37.35			43.61			39.32		
Alain P	696	106	15.23	622	114	18.32	597	145	24.28	521	193	<b>37.04</b>	503	188	37.37
Christian T	954	111	11.63	532	163	<b>30.63</b>	289	54	18.68	326	141	<b>43.25</b>	343	141	<b>41.1</b>
Jacob M	599	111	<b>18.53</b>	467	15	<b>32.11</b>	--	--	--	698	173	24.78	473	180	<b>38.05</b>
Karl P	71	122	17.18	602	135	22.42	438	151	<b>34.47</b>	322	139	<b>43.16</b>	398	152	<b>38.19</b>
Kent L	876	152	17.35	462	116	<b>25.1</b>	393	94	23.91	423	148	34.98	385	124	32.2
Basil B	909	222	<b>24.42</b>	745	145	19.46	455	154	<b>33.84</b>	262	102	<b>38.93</b>	375	148	<b>39.46</b>
Mean	17.39			24.67			27.03			37.02			37.72		
	U = 10, p=0.2002 <sup>ns</sup>			U = 16, p=0.7488 <sup>ns</sup>			U = 4, p=0.0758 <sup>ns</sup>			U = 5, p=0.0374*			U = 12, p=0.3367 <sup>ns</sup>		

premises, and temporarily integrating the fieldworker in the school's English teaching curriculum, no student was explicitly told that the aim of the recordings was to study pronunciation. Participants who volunteered to be recorded on tape were asked to talk about their image of France and the United States, and to comment on pictures depicting every-day objects, and international celebrities. Students were told that the tasks represented extra-curricular activities, and had no impact on their grades or standing in school. All participants are mentioned here by their code names, their exact identity is only known to the researcher. Besides their age and gender, participants were divided in five ethnic groups, based on their reported origins and language(s) spoken at home. In this study, male speakers of 12 and 14 years of age were of *North-African* (Arabic or Kabyle) or *Caucasian* (Catholic or Jewish) descent. Only those who told the fieldworker about their origins, and reported speaking *Berbère* or a vehicular variety of Arabic at home were included in the first group. '*Caucasian*' boys had to be of white French origin, speaking French at home for at least two generations. Interviews recorded with a portable DAT recorder and a clip-on microphone were digitized at 22kHz (16 bits) in the Phonetics Laboratory of the University of Illinois, using Entropics' CSL program.

Five target words uttered by twelve male speakers in the picture-naming task were randomly chosen from the corpus. Each word in each speaker's speech represented a final AP in an utterance-final IP. E.g.: *C'est Zidane* 'This is Zidane', *J'vois une voiture* 'I (can) see a car', or *C'est*

*une étoile de mer* 'This is a sea star'. Words were plurisyllabic, and featured different consonants and vowels in their IP-penultimate syllables (bolded): (1) *étoile de mer* [etwaldəməʁ] 'sea star', (2) *perroquet* [peʁokɛ] 'parrot', (3) *animaux* [animɔ] 'animals', (4) *voiture* [vwatyʁ] 'car', and (5) *collier* [alfabɛ] 'collar/chain'. In (1) the penultimate and final syllables are separated by a morpheme boundary, since the former corresponds to the function word *de* 'of' of the compound noun. In the disyllabic words *voiture* 'car', and *collier* 'collar', the penultimate of the IP was also the first syllable of the lexical word. Comparisons of syllable durations involved IPs with H% and L% boundary tones, while the analysis of tonal patterns extends only to IPs with a final L% tone. The aim of these comparisons was to determine whether atypical lengthening, and tonal events associated with it, occur in these contexts.

### 3. DURATION PATTERNS

Durations of the penultimate syllables in the IPs were measured on spectrograms. Since speakers spoke at different rates, the length of the syllable was expressed relative to the total duration of word, and not to the IP or the AP: the occurrence of comparable lexical items, other than the target word, could not be guaranteed in larger phrases. Target words (all nouns) could be preceded by a definite or an indefinite article, as well as their plural forms. For this reason, the consonants [n], [l], or [z]

whenever re-syllabified in the onset of target words beginning with a vowel, such as in (1) and (3), were discounted from the duration of these words.

Table 1 shows (from left to right) durations of the target words in the IP, durations of the penultimate syllables in the IPs, and relative lengths of the penultimate syllables in the word for five target words. The top and bottom parts of the table show measurements for boys of North-African, and of Caucasian descent, respectively. Speakers' Laith B and Jacob M's renditions of the word *animaux* 'animals' were discarded because of hesitation-type lengthening in the final syllable [mo], which would have biased the computation of ratios. Relative length of the penultimate syllables exceeding the mean value for the group (see italicized under each % column) are bolded in the table. They make it apparent that greater than average durations were measured for the penultimate in both groups of speakers, and in numerous target words in the IPs. U- and p-values, as computed with the 'Mann-Whitney' non-parametrical version of an independent 't' test on these ratios, are reported for each word in the last row of the table. As these, yet preliminary, results show, only in the target word *voiture* 'car' did the North-African speakers have significantly longer IP-penultimate durations in comparison with the Caucasian speakers. In fact, taken as groups, these speakers differ very little from each other. When analyzed individually, however, results show widely differing strategies: speaker Saleh K, for instance, utters longer than average IP-penultimate syllables in all target words, while Mansur F, Mousa B, also from the North-African group, do so in all but one word. Only Basil B shows behavior similar to these speakers from the Caucasian group.

Whether these highly variable, 'longer than average' durations correspond to what French listeners perceive as 'unusually long' penultimate syllables has to be established empirically in future studies. When such words are examined, and compared to their apparently unmarked renditions (no perceived lengthening), however, a peculiar tonal pattern seems to emerge.

#### 4. PITCH MOVEMENTS

Figures 1 and 2 show *étoile de mer* 'sea star' uttered as a single, utterance-final AP and IP by three boys. The target word was elicited with a drawing depicting toys in a sandbox, and was uttered as the final item in the list by each speaker: *un seau* (H%), *une pelle* (H%) *et une étoile de mer* (L%) 'a bucket, a shovel, and a sea star' (example from Mansur F). The utterances were pronounced in a neutral way, i.e. with no evidence of focus, contrast, or a peculiar speaker's attitude or emotion. In Mansur F's speech, a short filled pause occurred before the target word. Perceptually, the words pronounced by the speakers of North-African descent (Fig.1) give the impression of unusual lengthening of the penultimate syllable *de* 'of'. Although Khatib A speaks slower (4.4 syll/sec) than Mansur F (5.7 syll/sec), the duration of the penultimate syllables represents 18% of the total duration of the word

in both speakers' speech. This ratio is 15%, i.e. not substantially different, for the white Caucasian boy, Jacob M (Fig.2), who pronounced the word at an even faster, 7 syll/sec, rate. Although the difference between the duration ratios is not substantial, the first two boys' tonal patterns are markedly different from the third boy's intonation.

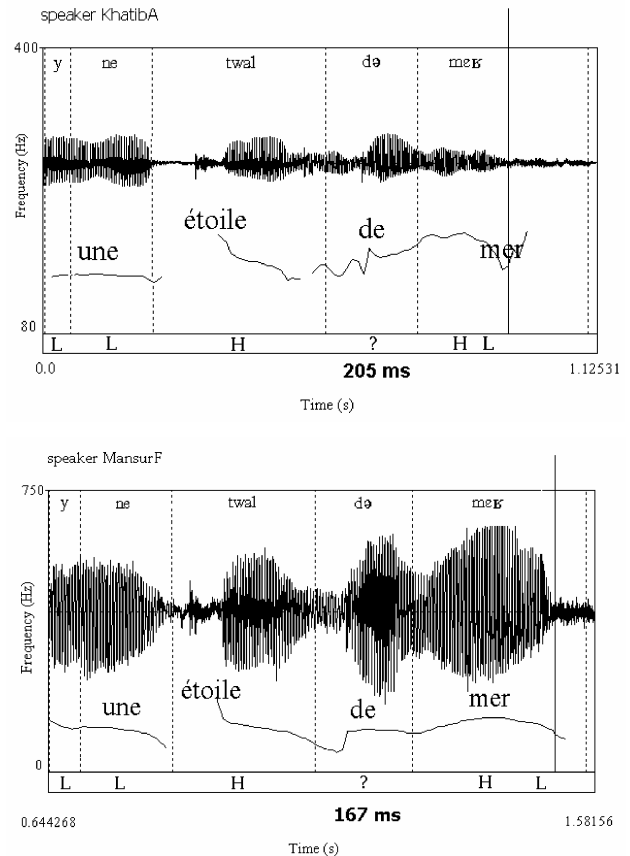


Fig. 1. Penultimate syllables *de* 'of' perceived as unusually long in *étoile de mer* 'sea shell' (Khatib A (top) and Mansur F (bottom)).

In a 'neutral' discourse setting, and when the first noun is not de-accented in the compound, the following intonation patterns can be predicted for *étoile de mer* in standard French: LLLLL% with an AP-initial H tone on *é-*, and LLHLL% with an AP-final H tone on *-toile*. Jacob M's contour (Fig.2) illustrates the second pattern. The contours in Fig.1 show an AP-final H tone on *-toile* in *étoile*, thus exhibiting a LLH tonal pattern on the first noun. They do not display, however, the predicted tonal pattern on the second noun. According to the waveform, in Khatib A's speech there is rising pitch movement on the penultimate starting from the onset of the syllable. The rise continues through the consonant, reaches its target in the final syllable where it is followed by a sharp drop. The vowel [ɛ] in *mer* is quite short, but the final fall is still carried out within the the vowel (see vertical bar). Although this rising pitch movement could still be an interpolation between a low target, located near the onset of *de*, and a high target within the final syllable, the peak on the penultimate in Mansur F's speech points to the presence of

some kind of a high tonal target Numerous instances of such ‘penultimate high’ exist in the corpus. Figure 3 shows the word *l’alphabet* in two other boy’s pronunciation. In each case, the 234 ms and 182 ms long IP-penultimate syllables (*pha* [fa]) represent 32% and 31% of the duration of the word. Once again, despite rate differences (4 syll/sec for Laith B, and 5 syll/sec for Alain P), the relative length of the syllable is the same in both words.

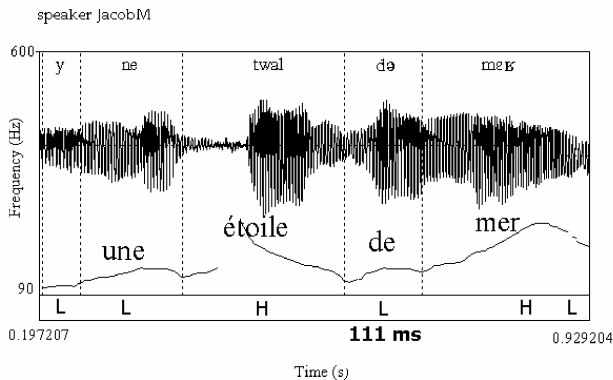


Fig. 2. LLHLL% pattern typical to the IP-final AP *étoile de mer* ‘sea shell’ in standard French (Jacob M).

The tonal patterns, on the other hand, are different. Other than the ‘midish’ F0 plateau at the end of Alain P’s word, and the devoicing of the final [ɛ] mistakenly treated as voicing by the pitch tracker in Laith B’s speech, the two intonation patterns differ only on the IP-penultimate syllables. As observed before, and shown by the F0 values in Hz, there is a high tonal target on the penultimate in Laith B’s speech, but not in Alain P’s pronunciation.

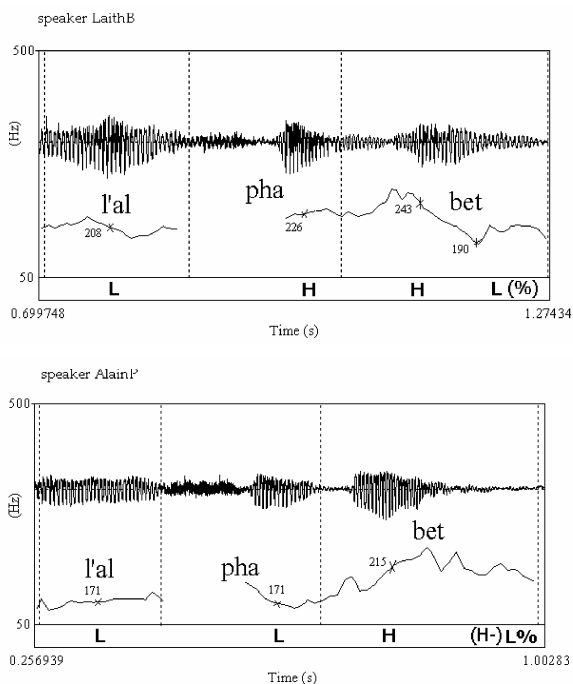


Fig. 3. High tonal target on the penultimate syllable in Laith B’s pronunciation (top) of *l’alphabet* ‘the alphabet’, and low target on the same syllable for Alain P (bottom).

## 5. CONCLUSIONS

This study examined whether in five plurisyllabic nouns uttered by twelve male speakers of North-African, and of Caucasian, descent ‘unusually long’ penultimate syllables occurred in IP-penultimate position. Although several speakers, when considered individually, do show such lengthening, taken as a group, North-African boys only uttered significantly longer IP-penultimate syllables in one word. A qualitative analysis of tonal patterns in some words indicate the presence of a ‘penultimate high’ tonal target on penultimate. If such a target appears systematically in other words in this prosodic position, it could be interpreted as an intermediate *h*- phrase tone, or an accent reminiscent of nuclear pitch accents in some languages (especially with systematic lengthening by some speakers). In either case, a consistent and recurrent use of this ‘penultimate high’ tonal pattern, with or without lengthening, could account for the perceived prosodic distinctiveness of the vernacular of the working-class Parisian youth.

**Acknowledgement.** This research benefited from support by the William and Flora Hewlett Foundation’s Summer Research Grant for 2001, and the Illinois Program for Research in the Humanities Fellowship for 2002-2003.

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