



A study of the phono-styles used by two different Spanish-speaking political leaders: Hugo Chávez and José L. R. Zapatero

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Abstract

Politicians' speech styles can be distinguished by their prosodic realizations. Generally, we can recognize a 'revolutionary' or a 'traditional' politician by just listening to a few minutes' discourse; in this paper, I try to show which prosodic features enable us to do so, comparing the phono-styles of two politicians, Hugo Chávez (HC) from Venezuela and José Luis Rodríguez Zapatero (Z) from Spain, in public 'spontaneous' speeches. Moreover, I will show the differences between HC's productions in an interview and in a 'spontaneous' public speech. Philippe Martin's 'melodic slope contrast' model has been used to describe the prosodic structure and its relation with the syntactic one. The acoustic analysis illustrates the fact that the phono-styles of these political leaders differ in a similar speech situation ('phono-genre'), mainly in (i) the realization of continuation melodic contours, (ii) the F0 range, and (iii) the speech rate, while the construction of the intonation phrases is of the same type.

Index terms: intonation, public speech, political speech, phono-genre, phono-styles, Hugo Chávez, Zapatero.

1. Introduction

Politicians' speeches are often distinguished by remarkable prosodic realizations that make them more or less charismatic, significant and popular. These prosodic characteristics are manifested by prosodic features such as prominences, accelerations, decelerations, register changes, lengthenings, breaks [1], [2], [3], [4], [5], and, to quote León [6], other "avatars of the politician's voice". The prosodic aspect analyzed here is purely descriptive: my aim is to describe the prosodic features that characterize different politicians' phono-styles; this study is not concerned with the different varieties of Spanish [7], [8], [9], [10], [11]. I am interested in comparing the late HC productions, on the one hand in two different conditions, i.e. 'genres', (public 'spontaneous' speech and interview) and on the other hand, in comparing HC public 'spontaneous' speech to another Spanish-speaking politician, Z former Prime minister in Spain, in the same condition. In a previous study [12], a series of perception tests which is not related here, shows that the prosodic style of HC appears to be 'revolutionary' and informal, close to the public attendance, whereas Z, in the same conditions, appears to be rather 'conservative' with a more formal way of speaking.

¹ In 80% of Spanish words, the stress syllable is the penultimate one, which should have a rising or falling slope, while the final unstressed

2. Methodology

2.1. Corpus

The corpus consists of several 5 minutes to 6 hours TV recordings of speeches belonging to different genres (interviews, television programs, ONU speeches or 'spontaneous' public speeches) delivered by thirty Spanish-speaking politicians from Latin America and Spain. The 3 examples chosen here to illustrate the analysis concerning HC and Z are considered as representatives of the way they address their audience.

2.2. Analysis Program and intonation model

The acoustic study was conducted with P. Martin's analysis and synthesis program 'WinPitch' [13]. The interpretation of the prosodic analysis is based on P. Martin's model "F0 slope contrast" [14], [15], [16], [17], [18], [19]. He claims that prosodic words (a group of one or more words with only one stressed syllable) which have a syntactic dependency relation, present a contrastive F0 slope on their two respective last stressed syllables; in an utterance, the first contrast is between the final terminal falling contour slope 'C0' and the main preceding rising tone; within each prosodic level there is another contrast in the prosodic structure. If F0 slopes are parallel (i.e. prosodic events of the same type), there is no dependency relation between the prosodic words. The prosodic structure is autonomous and may not correspond to the syntactic one, complying for example with a certain phono-genre and style. The actual realization is specific to each language, according to stress position¹.

The different melodic contours observed are thus phonologically described in this model:

- **C0** Fall (Low) on the last stressed syllable (of an utterance) and eventually on the following unstressed syllables of the word;
- **C1** Rising contour, above the glissando threshold (see the glissando formula in [20]);
- **C2** Non-final falling contour, above the glissando threshold;
- **Cn** Neutralized: F0 contour is slightly rising or falling, with a shortened vowel duration, below the glissando threshold;

Complex contours. In the final tone sequence made of a stressed syllable followed by an unstressed one (of a word), there may be a complex sequence of tones. Here we only have

syllable has a floating tone which may continue the movement of the preceding tone or have a contrary slope for stylistic reasons.

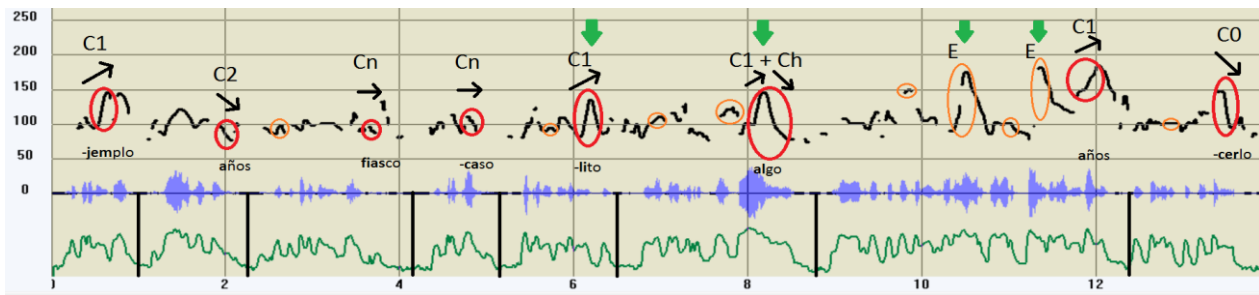


Figure 1 : Hugo Chávez in interview.

“Si por ejemplo (C1) # yo a los dos años (C2) # resulta (Cn) que soy un fiasco (Cn) # un fracaso (Cn) # o comometo (Cn) un delito (C1 ou E) # un hecho (Cn) de corrupción (C1) o algo (C1 or E) # que justifique (Cn) mi salida (E) del poder (Cn) antes (E) de los cinco años (C1) # yo estaría (Cn) dispuesto a hacerlo (C0)”. [If for example, after two years, I am a fiasco, a failure or commit a crime, an act of corruption, or something to justify my departure from power before five years, I would be willing to do so]. In all the figures, the contours are circled on the F0 line. For legibility reasons, only the IPs contours are transcribed, with their text aligned. Fundamental frequency (on the top), waveform (in the middle) and intensity curves (at the bottom). The horizontal black line is the waveform and F0 baseline and the vertical thick black lines to indicate the IPs separations.

C \wedge (rise-fall, above the glissando threshold, rising on the stressed syllable and falling on the following unstressed final syllable). P. Martin’s C ϵ (fall-rise, flat or slightly falling on the stressed syllable and rising on the following unstressed final syllable) is not present in my corpus. For this study, a Ch ‘Hugo Chávez contour’ (the typical phono-stylistic realization of C0) has been added. This specific HC contour is falling very low (‘high dive’ on the last syllable of the word) at the end of each chunk, and it is above the glissando threshold.

3. Acoustic analysis

3.1. Hugo Chávez in interview

In this utterance (fig.1), HC presents a proposition where in which he enumerates possible examples that could justify his departure before the legal end of his presidency and concludes that he could eventually do so. The meaning of this utterance is presented in this way: ‘if for example, such and such events, I quit’.

To interpretate the prosodic structure, we need a several contrasting levels of hierarchy: one in which we can find the contours highlighted at the end of each ‘Intonation Phrase’ (IP = a group of one or several prosodic words) and others that correspond to the syntactic structure in which several dependency relations among the elements can be found; those contours are realized with less melodic movements. At the top level, the final contour ‘C0’ (contour of declarative modality) on the last prosodic word ‘a hacerlo’ contrasts with the first C1 on ‘si por ejemplo’, the C1 on ‘...o algo’ and the last one ‘antes de los cinco años’, which is the end of the enumeration. At a lower level, the C2 on ‘yo a los dos años’ contrasts with the C1 on ‘...o algo’. As for the enumerations or coordinations (corresponding to ‘such and such events’) in the middle of the utterance, each enumeration’s contour is realized with a Cn or C1 (which is typical in these cases); the Cn contours are considered as parallel contours. The last C1 of this series of possible events where Chávez could quite the power on ‘antes de los cinco años’ reaches the highest F0 values and constitutes the climax of the statement.

Several emphatic stresses ‘E’ are realized on semantically important words: ‘delito’ (crime), ‘algo’ (what ever it is),

‘salida’ (resignation), ‘antes’ (before), indicated by big arrows. These words are realized with a sharper C1 rising contour, noted E, on the penultimate stressed syllable. In case of ‘delito’ and ‘o algo’, the contours can be considered as C1 or E, but they are noted here C1 because they are at the end of an IP.

There is a correspondence between the syntactic and the prosodic structures inside the IPs at the lower levels and at the top level where the C1s contrast with the C0. The end of the IP ‘...o algo’ belongs syntactically to the preceding enumeration sentences and at the same time governs the following one ‘que justifique...’ (in this ambiguous case two prosodic structures could be associated to this sentence), without determining another chunk in ‘un hecho de corrupción’. ‘...O algo’ is characterized by Ch final contour on ‘-go’ followed by a break. This is an example of the prosodic structure autonomy.

The register is quite low (average F0 is 110 Hz) with a narrow F0 range (50 Hz) while the stressed syllables reach 180 Hz. The speech rate is around 6 syll/s and IPs are 3 to 20 syllables long.

3.2. Hugo Chávez in public speech

As it is illustrated in figure 2, this utterance is divided into several chunks separated by quite long pauses (0.26 to 1.22s). They all finish with a C1, on the accented syllable, followed by a spectacular ‘high dive’ of about sixteen semi-tones on the last unstressed syllable of the word. Furthermore, this unstressed syllable is nearly twice as long as the preceding stressed vowel (in ‘a las millones mujeres’, the lexical stress on ‘-je-’ is 0.26s long, and the final syllable ‘-res’ is 0.49s long). This is the ‘Ch’ contour which is the phonetic marker of CH ‘phonostyle’. When these contours do not fall very low, they can be considered as continuation contours (-*) as in ‘y sobre todo*’, ‘norteamericanos*’, ‘...desde aguí*’. In a prosodic hierarchy, at the top level, the last continuation contour C1 on ‘...desde aguí*’ (the climax) contrasts with the final C0; at a lower level, the C1s corresponding to all the preceding IPs contrast with the C1 on ‘...desde aguí*’, which means that all the C1 depends on ‘...aguí*’ and ‘...aguí*’ depends on the C0. This hierarchy structure seems to be incongruent with the syntactic-semantic structure and contours are regularly parallel. But at a certain level (syntactic lower levels), there is a contrast between the elements with less melodic movement, realized as C \wedge . The

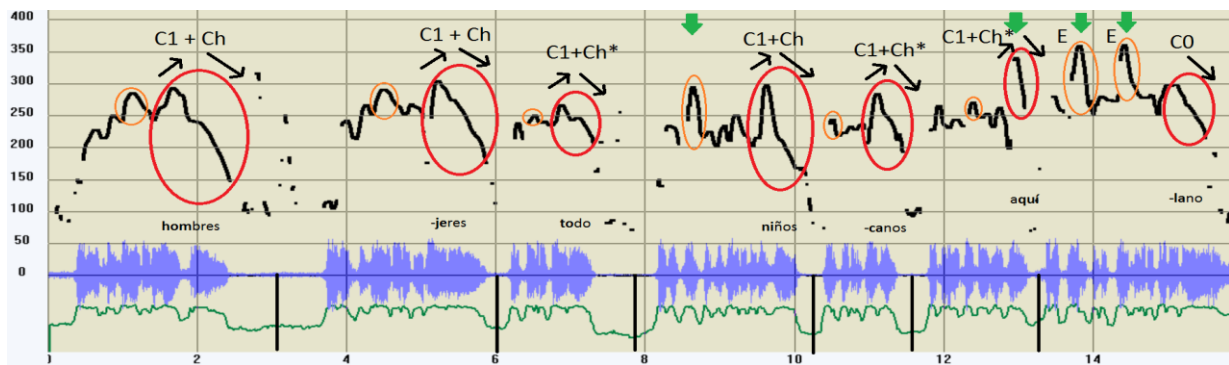


Figure 2 : Hugo Chávez in 'spontaneous' public speech.

"A los millones (C^) de hombres (C1+Ch) # a las millones (C^) de mujeres (C1+Ch) # y sobre todo (C1+Ch*) # a los muchos (C^) millones (C^) de niños (C1+Ch) # norteamericanos (C1+Ch*) # vamos (C^) a mandarles (C^) desde aquí (C1+Ch*) # el aplauso (C^) del pueblo (C^) venezolano (C0)". [For the millions of men, for the millions of women, and especially to the many millions of children, Americans, we will send them from here, the applause of the Venezuelan people].

slope contrast is between the rising slope of the C^ contours with the typical realization 'Ch'. In the IP 'a los millones de hombres', the contour C1 on '-llo' contrasts with the Ch on '-bres' (see fig. 3).

The word 'norteamericanos' may be understood as an independent chunk which could be linked to the preceding ('...hombres', '... mujeres', 'millones de niños') or following ones ('vamos a mandarles...').

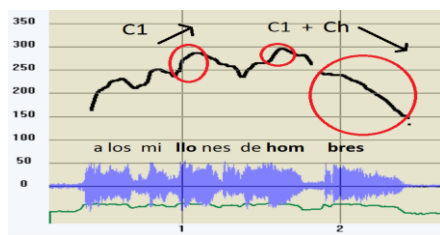


Figure 3: Zoom on Chávez IP "a los millones de hombres" from the utterance of the figure 2.

The average F0 is 250 Hz while the F0 range goes from 150 to 350 Hz (practically an octave). The speech rate is 4 syll/s and IPs are 5 to 12 syllables long. Emphatic stresses on semantically important words "muchos" (a lot), "agu" (here), "aplauso" (clap), "pueblo" (people) are indicated by big arrows in the figure.

3.3. Comments about Hugo Chávez in both styles

In both cases there is no declination line. In fact, there is an initial relatively low F0 register, which suddenly rises for the final semantic climax before dramatically falling on the final word. These patterns are very often specific to orators' speeches and considered as argumentation and persuasion techniques [21].

Some of the differences found in HC speech situations are as follows. In an interview, HC has a conversational prosodic pattern with F0 slope contrasts corresponding to the syntactic structure, a faster speech rate and a narrower F0 range. Conversely, in a public speech, he makes a 'high dive' at the end of each chunk (which is very similar to the contours produced by Ms. Ségolène Royal, a French politician [18]), combined with an huge lengthening of the last unstressed

syllable of an IP, a wider F0 range and a slow speech rate. Some similarities are: on one hand the emphatic stresses and on the other hand, the chunking and the F0 curve form in the stressed + unstressed syllables at the end of each IP (in some IP in interview), that are exaggerated in public speeches (C1+Ch).

The typical prosodic features in HC's public speeches can be regularly found all along public speeches analysed in the corpus. His phono-style can be represented simply (see fig. 4).

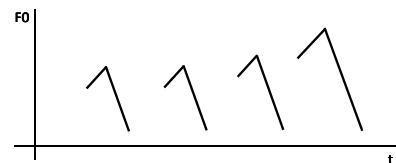


Figure 4: Hugo Chávez prosodic pattern in public 'spontaneous' speech

3.4. José Luis Rodríguez Zapatero in public speech

As is illustrated in figure 5, in Z's public speeches we can notice that IPs are cut in small chunks and generally characterized by rising contours (C1). Most of the times these C1 contours are rising on the penultimate syllable (Spanish word stress pattern) and, as a floating tone, rising even higher on the last one. At the top level, all the C1 contours contrast with the C0. At the lower levels, regardless of the length of the chunk, there is a slope contrast to indicate the dependency relation between two prosodic elements. For example, at the beginning of Z's text, a zoom on the second chunk' would show a C2 on 'el pago...' which contrasts with the final C1 on 'deuda' (see fig.6).

There is an emphatic stress on the word 'mil' to emphasize on the amount of debt. It is interesting to notice that on one occasion, the expected word stress is not realized because it is replaced by an emphatic stress on the first syllable (in 'de manera razonable' there is an emphatic stress on 'ra-'). This phenomenon looks like what has been described in French as so-called 'didactic' or 'intellectual' accent [22], [23].

To summarize, there is no congruency between the syntactic-semantic structure and the prosodic one in this utterance at the top level. Instead, the chunks are presented as if they are in an enumeration so they are all parallels. The register is quite low (F0 mean =110 Hz) with a narrow F0 range (40 Hz), not

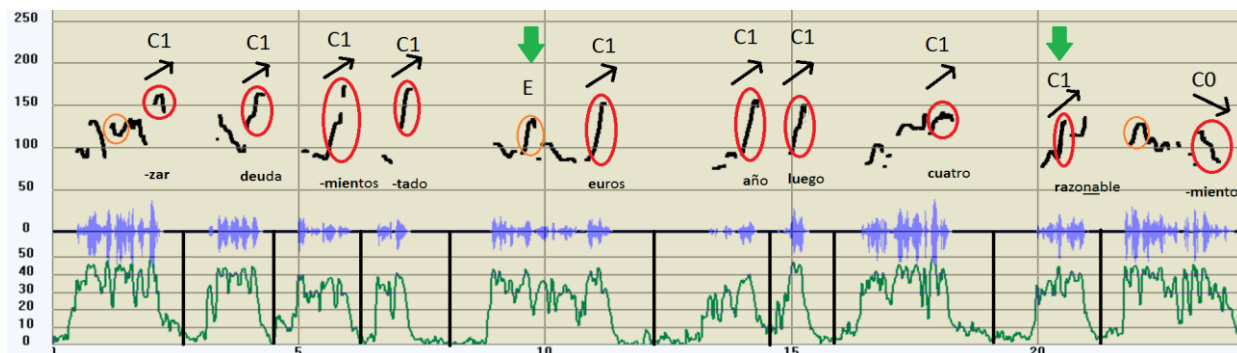


Figure 5: Zapatero in 'spontaneous' public speech.

“Os puedo anunciar (Cn) que vamos a aplazar (C1) # el pago (C2) de la deuda (C1) # de los ayuntamientos (C1) # con el estado (C1) # deuda de más de mil (C1) quinientos (Cn) millones de euros (C1) # que aplazaremos (Cn) un año (C1) # y que luego (C1) # de manera razonable (Cn) durante cuatro (C1) # de manera razonable (C1) # tendrán (C1) que devolverse (Cn) por parte de los ayuntamientos (C0)”. [I can announce that we will defer the payment of the debt of the municipalities with the state debt of over a half billion euros, which will postpone a year and then in a reasonable manner for four, in a reasonable way, reasonably, they will have to be returned by the municipalities].

including the stressed peaks, and there are no noticeable lengthenings. The speech rate is 4 syll/s and IPs are 2 to 15 syllables long.

This typical prosodic pattern can be regularly found all along the Z's public speeches analysed in the corpus. His phono-style can be represented simply (see fig. 7).

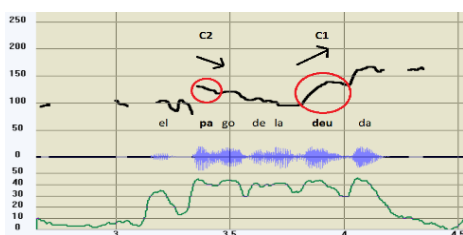


Figure 6: Zoom on Zapatero IP “El pago de la deuda” from the utterance of the figure 5.

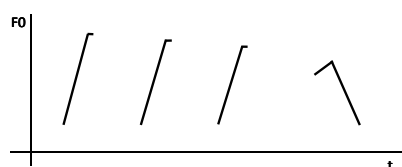


Figure 7: Zapatero prosodic pattern in public 'spontaneous' speeches

4. General discussion and comments

An important prosodic difference has been found between 'spontaneous' public speeches of HC and Z. Most significantly, HC's IPs contours are all “C1+Ch” (some of them are continuation contours C1+CH*) while Z's contours are most of the time “C1” continuing with a rise to a much higher F0 value on the following unstressed syllable. HC uses huge lengthenings at the end of each IP (in a regular way) whereas no lengthenings were found in Z utterances. Furthermore, Z's and HC's speeches are generally cut into small chunks (IPs), which is probably a way of producing utterances in order to facilitate understanding of the orator's speech [24]. Here also it

is interesting to note it looks like former French President N. Sarkozy's phono-style [12].

In fact, both politicians (HC and Z) respect the general Spanish intonation patterns as described by authors [25], [26], [14], [22], [10], [13], but exaggerate the usual prosodic parameters.

5. Conclusion

The prosodic patterns observed in HC and Z clearly represent two different political phono-styles. HC is an example of a revolutionary politician while Z is a prototype of a traditional one. If we take into account the facts that HC and Z are from two different Spanish varieties (Venezuelan Spanish and Castilian Spanish), that the speech situations are not exactly the same and that the attending public is different in both cases, we can suppose that these two phono-styles are characteristics of two men with a different personal, historical, political and professional background. The phono-styles are essentially characterized by prosodic criteria. The results of these phono-stylistic analyses of two Spanish-speaking political leaders are comparable to what has been described for French-speaking politicians [1], [25], [2], [26], [4], [27], [28], [29], [5], [30], [31]. As far as I know, this is the first prosodic study concerning Spanish-speaking political leaders.

HC is considered as a great South American leader and orator. He was a revolutionary and populist politician, with a military background, who took a great importance in politically changing Latin American countries because of his ideas and his charisma. Z, on the contrary, is a European politician with a traditional European university education and a lawyer background in a modernized and politically transformed Spain. I claim that the differences in their social and political background are conveyed by a different phono-style in their respective speeches.

This paper is part of a long ongoing prosodic and perceptive study dedicated to other Spanish-speaking politicians from America and Spain, aiming to demonstrate that the classification of the different phono-styles would match, to a certain extent, the political tendencies as well as the historical and professional background of the speaker.

6. References

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