REQUESTS IN DIALOGIC SPEECH: A PROSODIC ANALYSIS ON ITALIAN AND SPANISH TASK-ORIENTED DIALOGUES

Iolanda Alfano and Renata Savy
Università degli Studi di Salerno
ialfano@unisa.it, rsavy@unisa.it

1. ABSTRACT

In this paper we present the first results of a prosodic analysis on “requests” in Italian and Spanish task-oriented dialogues. Our final goal aims at an intra and interlinguistic description of the different kinds of requests in two so close languages, in order to verify if and how requests are realised as far as their prosodic structure is concerned and if this potential correspondence between pragmatic function and prosodic realisation shows some comparable features between the two languages. Several studies on Italian and other languages clearly suggest the existence of specific patterns associated with functions and meanings, even if they do not indicate a one-to-one correspondence (among the most recent works, Marotta & Sorainello, 1999; Sorainello, 2001; De Dominicis, 2002; Grice & Savino, 2004; Hedberg et al., 2004; Crocco, 2006a; 2006b; Giordano, 2006; Gili Fivela, 2008).

Our pilot corpus is constituted by two “spot the difference” dialogues (Péan et al., 1993), one in Neapolitan Italian and one in the variety of Spanish spoken in Gerona, in which we examine four categories of requests pragmatically identified within the Pr.A.T.I.D coding scheme (Pragmatic Annotation Tool for Italian Dialogues, Savy, 2010). Prosodic analysis and annotation develops in two steps: 1) phrasing in tonal units; 2) phonetic description of $f_0$ contour, basically taking into account two main parameters: global pattern and terminal contour, through the INTSINT annotation system with some adaptations (Hirst et al., 2000).

Although this preliminary study does not allow us to reach any definitive conclusions, in the first place because of corpus dimensions, it suggests the possibility to define a systematic relation between pragmatic function and its prosodic realisation. In the Italian variety, generic questions show a rising tune; wh- questions and polar questions are characterised by a rising-falling tune with different degrees and ranges, and requests of confirmation present a quite flat-falling contour. With regard to the TC (Terminal pitch Contour), the main difference occurs between generic questions and the other ones: only this type of interrogatives presents a rising terminal contour. The other types show a low target (wh- questions), a slightly falling terminal contour (yes-no questions) and a falling terminal contour (requests of confirmation). In the Spanish variety, our generic questions show a rising tune, both wh- and yes-no questions present a rising-falling tune (even if polar questions show an important final rising) and requests of confirmation appear to be characterised by a quite flat contour plus a final rising. Looking at the TC, the main difference occurs between wh- questions and the others, since only in this case we find out a low target. The other three requests show a very similar final rising. This first examination seems to show in the observed language varieties that both the global pattern and the terminal pitch contour contribute to differentiate prosodic patterns intralinguistically, while the interlinguistic perspective seems to point out that main differences are to be found in terminal contours.
2. INTRODUCTION

Linguistic research in different fields has clearly shown that the closeness between the two languages under analysis -Italian and Spanish- does not always imply an actual similarity in the effective realisations. In many cases, systematic analyses at the various linguistic levels point out interesting hidden differences. Interlinguistic pragmatic analyses on requests show different choices in communicative strategies adopted by Italian and Spanish speakers (Savy & Solís, 2008; Solís & Savy, in press).

The idea of the study we present comes from the necessity to investigate the prosodic realisation of these very frequent speech acts, hoping that this kind of studies will increase, also in relation with foreign language didactics. Scientific community is more and more conscious of the importance of prosody to convey linguistic meaning, but we are far from reaching an exhaustive description, a universally accepted methodology and even farer from an actual consideration of prosodic features in foreign languages didactics. A so ambitious purpose requires en enormous effort and a strict methodological rigidity, since on the one hand, numerous factors co-occur to determine what is called a speech act and on the other hand, variations in intonation are due to the simultaneous interaction of several correlates. Additionally, the coding of both pragmatic and prosodic levels presents many unsolved problems. It becomes, therefore, self-evident the enormous difficulty to adopt an adequate methodology that take into account all these kinds of factors. As a matter of fact, this preliminary study wants to be a sort of methodological test in which we discuss some critical points, from the pragmatic framework the analysis is inserted in, to the choices and the limits of the prosodic study.

Within the framework of speech act theory, a request is “an illocutionary act whereby a speaker (requester) conveys to a hearer (requestee) that he/she wants the requestee to perform an act which is for the benefit of the speaker” (Trosborg, 1995: 187). The requested contribution may be an action, an object or some kind of service, a non-verbal good, but it can also be a verbal good, i.e. an information. The requests we analyse in this work belong to the second type of speech acts and are coded through the scheme for pragmatic annotation Pr.A.T.I.D (Pragmatic Annotation Tool for Italian Dialogues), specifically designed for the pragmatic analysis of this kind of dialogues. The main aim is to identify the primary pragmatic function assumed by each dialogue act\(^1\) in communicative context. Even if we are aware of the intrinsic multifunctional nature of dialogue acts, we use a mono-dimensional scheme, in order to avoid the exponential combination of tags and functions (Savy, 2010).

Within the coding scheme Pr.A.T.I.D, requests eliciting a contribution in communication are indicated by six types of move (Carletta et al., 1996). We do not focus on Pr.A.T.I.D structure here\(^2\), but we only briefly summarize the tags indicating a request move.


\(^2\) For further details, see De Leo & Savy (2007) and Savy (2010).
1) **Info Request**: generic questions not focused on a specific topic, as the following example shows.

   i) A: vale, ¿la posición del pie?  \[Info Request\]
   B: es para arriba\(^3\)

2) **Query_w**: questions introduced by an interrogative pronoun (see example ii)

   ii) A: ¿cúantas manchas tiene el huevo?  \[Query_w\]
   B: el huevo tiene tres manchas\(^3\)

3) **Query_y**: yes/no questions (example iii)

   iii) A: ¿y el huevo tiene rayas entre las manchas?  \[Query_y\]
   B: sí\(^3\)

4) **Check**: requests of confirmation, exemplified in iv

   iv) B: las piernas una cruzada
   A: vale, la derecha, ¿no?  \[Check\]
   B: si\(^3\)

5) **Hold**: signals of confusion, perplexity, that require a clarification, as the following example indicates.

   v) A: sí que es más largo el superior que el de abajo
   B: ¿cómo de largo?  \[Hold\]
   A: ehm solamente un poquito más, pero que tiende a subir el pico para arriba\(^3\)

6) **Align**: questions or verifications of alignment (see example vi).

   vi) B: y a ver la correa del perro  \[Align\]
   A: sí
   B: ¿dónde empieza y dónde acaba?

---

\(^3\) A: ok, the position of the foot?  
B: it’s upward  

\(^4\) A: how many spots has the egg?  
B: the egg has three spots  

\(^5\) A: and has the egg some lines between the spots?  
B: yes, it has  

\(^6\) B: legs, one’s crossed  
A: ok, the right one, isn’t it?  
B: yes, yes  

\(^7\) A: yes, the higher one is longer than the lower one  
B: longer?! (what do you mean?!)  
A: ehm, just a little bit more, the beak tends to get upwards
In this preliminary analysis we focus on the prosodic realisation of the first four moves: *Info_Request*, *Query_w*, *Query_y* and *Check* moves; in the section dedicated to the corpus we will expose the reasons of our choice (§ 3.2.2).

While coding generic questions (*Info_Request*) and questions introduced by an interrogative pronoun (*Query_w*) does not present many problems, the distinction between yes/not questions (*Query_y*) and requests of confirmation (*Check*) is not always so trivial. Both *Query_y* and *Check* moves imply yes/no answers, but the first one is an authentic question, while in the second one the speaker supposes to know what the answer is. Three elements basically help to distinguish these two tags, at least in the varieties of language we analyse: general context, information structure (a *Check* move tends to deal with given information, while a *Query_y* move with new information) and intonation. In ambiguous cases, a native speaker can interpret communicative intention relying on prosodic information.

The choice to perform these moves takes place simultaneously obeying to different needs: first of all, speakers have to solve a task (to find out differences between their drawings, § 3.2.1); at the same time, we cannot forget that each choice has a pragmatic value on different and strongly related levels. Analysing these moves, from *Info_Request* and *Query_w* moves to *Query_y* and *Check* moves, we can imagine they are arranged in continua according to at least three aspects: illocutionary force, performativity, interactional organisation. Nuances and interactions between these levels define different communicative styles, which we do not examine here (for a pragmatic study on Spanish and Italian task-oriented dialogues, see Savy & Solís (2008), Alfano (in press), Solís & Savy (in press)).

### 3. METHOD

#### 3.1 Participants

Since our work deals with the interface between pragmatics and prosody, all sociolinguistic variables play a very central role. It has been extensively demonstrated that speakers adopt pragmatic strategies depending on contextual, situational, social, relational, cultural and individual factors (Blum-Kulka & Olshtaihn, 1984; Blum-Kulka *et al.*, 1989; Cenoz & Valencia, 1994; García, 1989; Izaki, 2000; Savy & Solís García, 2008). On the prosodic side, thanks to analyses carried out on different languages and varieties of languages, we know that all prosodic features can vary according to diatopic, diaphasic, diamesic and diastratic factors. To try to take under control all this variability, we have chosen only male participants aged between 20 and 27 years old with an analogous education. The two speakers of the Italian variety are born and have always been living in Naples, while the two participants of the Spanish variety are Catalan (from the city of Gerona).

---

8 B: and, well, the dog’s leash
A: yes
B: where does it start and end?
A: you can’t see it, you can’t see it

9 Our annotations have been revised by native Italian and Spanish speakers. With regard to the Spanish annotation, we want to thank Inmaculada Solís Garcia for her valuable help.
3.2.1 Elicitation Technique

The corpus we have recollected consists of two “spot the difference” dialogues (Péan et al., 1993) of an approximated duration of 15 minutes. With this kind of elicitation technique, participants are asked to find some differences between two drawings without looking at each other. Figure 1 shows an example of drawing belonging to the CLIPS project (Corpora e lessici dell’italiano parlato e scritto, www.clips.unina.it, Savy & Cutugno, 2009)

![Figure 1: an example of drawing used in “spot the difference” dialogues (Cutugno, 2007)](image)

This type of dialogic text reasonably allows freedom of interaction and, consequently, a good variability in the conversational schemas: speakers alternate each other in turn taking quite freely and spontaneously (even if with obvious limitations compared to everyday life conversations), since the goal of the game successfully distracts the speakers and lets them stop thinking about the recording or, at least, refrains them from doing it all the time. Pragmatic, syntax and lexical variety is reduced because of the necessity to solve the task, because of the predominance of the structure question/answer in the text and because of lexical choices imposed by the task features and by the pre-ordered referents (the objects in the drawings).

Each participant describes his/her drawing trying to provide as much information as possible and asks about all the details he/she thinks could differ from his/her interlocutor’s drawing: shape, colour, orientation, dimension and so on, performing many types of requests, such as in Spanish ¿Qué forma tiene tu nube?, ¿El huevo que ves en tu dibujo es muy grande? and in Italian E il becco della papera?\(^\text{10}\).

In this type of dialogic text, therefore, requests play a very central role, since they permit the task to be solved.

3.2.2 Pilot Corpus

The following table (1a) illustrates the number of moves we found in our pilot corpus.

---

\(^{10}\)“What’s the shape of your cloud?”, “Is really big the egg of your drawing?”, “And what about duck’s beak?”.
First of all, we decided to give up the investigation of Align and Hold moves for three main reasons. They are extremely complex on the pragmatic side and they may be expressed in very different ways; as table 1a shows, we found very few occurrences. In addiction, in order to analyse comparable moves, we had to exclude some of total items.

As far as Info_Request moves are concerned, we take into account the ones constituted by a noun phrase with a paroxytone stress pattern, such as l’antenna? (“the antenna?”), since the paroxytone pattern is the most frequent in both languages, but we leave out Info_Request moves with different and more complex syntactic structures (such as lo specchietto retrovisore in alto quello all’interno della macchina?, because of lack of comparable occurrences. With regard to Query_w moves, we kept out very short moves (such as Come? “How?” or Dove? “Where?”) and moves realised through more complex syntactic structures, and we found that in the Italian variety all the other occurrences are introduced by an interrogative pronoun with a left-dislocation of the topical subject (e.g., le scarpe come sono? “the shoes how are?”). This is the reason why we analyse this type of wh-question in both varieties.

With analogous criteria, we selected Query_y and Check moves, limiting our first examination to types with one kind of syntactic structure present in both varieties. The following table (1b) shows the number of occurrences we actually considered (48 moves).

<table>
<thead>
<tr>
<th></th>
<th>I_R</th>
<th>Q_W</th>
<th>Q_Y</th>
<th>Ck</th>
<th>total number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italian</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>Spanish</td>
<td>6</td>
<td>5</td>
<td>7</td>
<td>6</td>
<td>24</td>
</tr>
</tbody>
</table>

Table 1b: number and type of request moves analysed in Italian and Spanish dialogues (I_R = Info_Request, Q_W = Query_w, Q_Y = Query_y, Ck = Check, A= Align, H = Hold).

3.4 Prosodic transcription

It is well known that there are several prosodic annotation systems, characterised by a different attention for phonetic and phonological aspects (Llisterri, 1994; Garrido & Quazza, 1999). In the first step of this work we aim at obtaining a phonetic description of $f_0$ contours, following the INTSINT system, INternational Transcription System for INTonation (Hirst & Di Cristo, 1998; Hirst et al., 2000).

This system basically assumes that $f_0$ contour corresponds to the superposition of a microprosodic component (entirely dependent on the choice of phonemes in the utterance) and a macroprosodic component (intonation pattern chosen). In the authors’ proposal, different levels may be taken into account for the analysis of intonation, i.e. a physical, a
phonetic, a surface phonological and an underlying phonological level. The phonetic level represents the \( f_0 \) curve once the traces of physical constraints have been factored out; the phonetic representation corresponds to the sequence of target points, obtained through stylisation. This process aims at extracting the macroprosodic component from the \( f_0 \) curve, which reflects intonational intention of the speaker and which constitutes the real object of study. The stylised contour is calculated through automatic processing via the algorithm MOMEL (M0delling Melody, Hirst & Espesser, 1993; Hirst et al., 2000). Finally the surface phonological representation corresponds to the description of prosodic events using a restricted set of symbols that make possible the prosodic transcription, independently of the specific language analysed.

Within this kind of theoretical framework, we have used the pitch stylisation algorithm PAx (Pitch ApproXimator, see Origlia et al., in preparation) which produces an approximation of pitch contours using syllable prominence detection\(^{11}\). Our choice is due to the fact that a subjective test (performed by two human experts that judged the perceptual similarity of the stylised curve with respect to the original one) and an objective test (carried out to evaluate the quality of the stylisation and the number of points used) find PAx to perform better than MOMEL.

The idea keeps being the same: reducing the intonation contour to a series of target points, which represent the relevant pitch movements. Unvoiced segments are interpolated so that the resulting curve presents no discontinuities and the series of target points aims at producing an \( f_0 \) contour undistinguishable from the original, apart from a few detection errors that must be corrected by hand.

This method has the appealing feature to be very economical and to allow a description of different languages cross-linguistically. It recognizes absolute tone labels which indicate the speaker’s pitch range within the tonal unit: T (Top), M (Mid), B (Bottom) and relative tones defined with respect to the preceding target: H (Higher), U (Upstepped), S (Same), D (Downstepped), L (Lower). Relative tones can further be subdivided into iterative and non-iterative categories, where it is assumed that iterative tones (U and D) can be followed by the same tone, while non-iterative tones (H, L, S) cannot.

Several versions of the INTSINT system have been implemented (HL, Config, Mixed, Ampli2, Ampli3 and Levels, see Campione et al., 2000); they all share the two absolute symbols T and B, used to code extreme pitch values, and S, used to code target points which are not significantly different from the preceding point. On the contrary, relative tones are used differently depending on the version. In this work we consider three of the above mentioned implementations: Mixed, Ampli3 and Levels. The Mixed version assumes that the distinction between iterative and non-iterative categories is based both on configuration and on size, thus plateaus in rising or falling sequences are coded U and D, whereas peaks and valleys are coded either H or U and L or D respectively, depending on the size of the pitch interval with respect to the preceding target point. The implementation Ampli3 assumes that the distinction between iterative and non-iterative tones is purely scalar: H and L indicate larger pitch intervals than the preceding target point in comparison with U and D. Moreover, three degrees of size, defined by two thresholds, are added; this version uses, therefore, six relative pitch levels: H\(_1\), H\(_2\), H\(_3\), L\(_1\), L\(_2\) and L\(_3\). The

\(^{11}\) The algorithm is more precise when stylising prominent areas of the signal while admitting a higher degree of approximation in other areas.
implementation. Levels considers a central region between two thresholds divided into three bands: G (Grave), M (medium) and A (Acute). The coding of the target points takes into account both the direction (with respect to the preceding target point) and the band in which the targets are situated. Also this version uses six relative pitch levels: Hₐ, Hₘ, Hₕ, Lₐ, Lₘ, Lₕ.

To code our results, we use the first implementation with some adaptations, but we take into account the second and the third one to have further elements useful for our description. Amplitude3, indeed, results to provide a better fit for relative pitch intervals whereas Levels results to provide a better fit for absolute target values. When systematizing our data, we realized that it was very useful to code absolute tones as relative tones too: the absolute T tone, for instance, depending on the size of the pitch interval with respect to the preceding target point, could be annotated as an H or a U. This is the reason why we choose to tag absolute tones also as relative tones (indicated between parentheses). Comparing figures 2 and 3 it is possible to appreciate an example of this variation in our coding: in the first case T target is a relative U tone: T(U); in the second case the T target is a relative H tone: T(H). They indicate, indeed, very different risings. Additionally, the other two implementations result helpful since they take into account absolute target values and pitch interval dimensions, as we will see discussing some examples.

3.4.1 Limits and critical issues

As already stated, in this first step of the analysis, we aim at providing a purely phonetic encoding of the macroprosodic component of the f₀ curve.

Our first descriptions are based on pitch stylisations: at the moment, we leave aside intensity and duration variations and, as far as f₀ is concerned, we do not focus here on accurate acoustic measures. Even if we code f₀ tunes using three implementations that, as mentioned above, help to highlight different aspects of variations (levels, configurations and slopes), global considerations, which are not accompanied by relative measures, start to give some useful indications, but are not enough.

Another essential consideration would regard the interaction between these parameters: several studies clearly point out the importance of the exact temporal implementation of pitch variations relative to structural elements and their segments. Alignment and scaling of tonal highs (H) and lows (L) are found to contribute to convey linguistic meaning (Prieto et al., 1995; D’Imperio, 2000; Gili Fivela & Savino, 2003; Gili Fivela, 2005; 2008). These considerations lead us to make the reasons of our choices clear: in this first approach to a so complex issue, we aim at a phonetic description of patterns, not tones. We consider more cautious starting from more general considerations, with no proposal of phonological representation through a ToBI-like system, that would probably be early and inadequate in our case, until we refine our methodological procedure.

These are the reasons why we start our analysis considering two parameters: the global Pattern (P) and the Terminal pitch Contour (TC), without considering accent types or assigning boundary tones. In some cases, as we will see, in order to provide a better description, we take into account not only terminal contours, but also realizations on last

---

12 We mean by terminal contour the direction of the pitch, starting from the last stressed syllable.
pretonic syllables. We initially measured f₀ onset too, but, at least in our pilot corpus, it did not seem to be a distinctive parameter.

To all these critical issues we have to add a further consideration: corpus dimensions. If you choose to work on semi-spontaneous material, then you do not know what number and type of occurrences you will have at your disposal. Our numbers do not permit to talk about results, but do allow us to perform a methodological test, starting to find some initial evidence.

4. RESULTS

We expose our preliminary results considering Info Request, Query_w, Query_y and Check moves in both varieties and carrying out a first comparison between them, basically considering two parameters: the global Pattern (P) and the Terminal pitch Contour (TC). We present our results illustrating at least an example of each move taken into account. The three coding levels indicate Ampli3, Levels and Mixed implementations respectively. The black line indicates the original f₀ contour, whereas the red line traces the stylised curve. We will provide an intralinguistic description for the Italian variety and for the Spanish variety and we will make a comparison between them.

4.1 Italian variety

4.1.1 Intralinguistic Description

The Info Request tag in the coding scheme Pr.A.T.I.D can indicate a wider category than the type we analyse here. We limit our examination to one type of Info Request, constituted by one noun phrase with a paroxytone stress pattern, since, taking into account contextual, syllabic, accentual and syntactic variability, this type results to be the most frequent one (33%).

Moves of this type present a global rising pattern (P) and a rising terminal contour (TC). The Info Request move in figure 2, I capelli? “The hair?”, illustrates an example: the first target point is the lowest point in the tonal unit [B - S - H - T (U)]. The point H indicates an important rising with respect to the preceding one, confirmed by the tag H₁ and H₃ of the other two versions, indicating an H point in the acute region realised with a significant slope (see Figure 2).

As far as Query_w moves are concerned, we excluded those moves exclusively consisting of an interrogative pronoun (4 occurrences); within the other 12 occurrences, we found different syntactic structures and we chose the questions with a focalisation on the subject, since they were the most numerous type. Query_w tonal patterns result to be rising-falling and present a final falling contour. We cannot properly talk about a falling terminal

---

13 Even if we have slightly modified Mixed coding system, we will keep referring to the Mixed implementation, since our adaptations do not contradict the principles of the Mixed coding version and, in addition, they appear indicated between parentheses.

14 Also the so called “or questions” fall within this category; for an exhaustive explication, see Savy (2010) e De Leo & Savy (2007).

15 The first point is always supposed to be M, unless it corresponds to another absolute tone, in this case B, that is why the coding indicates B(M).

16 As mentioned above, the tag U or H depends on the size of the pitch interval in comparison with the preceding target.
contour, because of the final lexical stress, but rather of a low target [L], confirmed by the tag L3 and Lg, representing an L point in the grave region realised with a significant slope, as the example in figure 3 shows. Indeed, looking at the realisation of the last pre-tonic syllable, we can observe a falling movement, which contributes to determine a TC characterised by a low target.

Figure 2: an example of Info Request, I capelli? “The hair?”.

Figure 3: an example of Query, Il naso del tuo tizio com’è? “How is your man’s nose?”

*The nose of your man how is?*
Yes-no questions, or polar questions, probably represent the most investigated category among the ones we are working on. The greater interest may be due to the fact that in Italian these questions are not expressed by means of morphosyntactic elements, but only thanks to intonation. Several studies on yes-no questions on Neapolitan Italian in read speech (D’Imperio, 1997, 2000, 2001; Grice & Savino, 1995a; 1995b; 1997) and in spontaneous speech (Caputo, 1994; 1996) indicate a global rising-falling pattern; in spontaneous speech a non-systematic final rising is found.

Looking at the realisation of query_y moves in our corpus, it is easy to suppose that also in this case we found several types of syntactic structures; among them, we chose to analyse the type subject-verb-object, following the same criteria above mentioned (number of occurrences and comparability). Although we preferred the most frequent type, we take into account for this work only 20% of the totality.

Our query_y moves confirm what other works have yet found out: polar questions show a slightly rising-falling tune (see an example in figure 4).

Check moves appear to be characterised by a quite flat-falling pattern: the T of the tonal unit is not much higher than the M one (see figure 5). Requests of confirmation can be realised in very different ways; we do not consider here tag questions, typically realised in Italian with a sort of “tail” that can be “no?” or “vero?”.

In the type of check we consider, we can observe a falling terminal contour: [H - L] (see figure 5).
4.1.2 Intralinguistic comparison

Preliminary results coming from our pilot corpus can be summed up as the following table indicates (table 2).

<table>
<thead>
<tr>
<th>I_R</th>
<th>Q_W</th>
<th>Q_Y</th>
<th>Ck</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>TC</td>
<td>P</td>
<td>TC</td>
</tr>
<tr>
<td>rising</td>
<td>H-T (U)</td>
<td>rising-falling</td>
<td>D - B</td>
</tr>
</tbody>
</table>

Table 2: Info_Request, Query_w, Query_y and Check moves P (global Pattern) and TC (Terminal pitch Contour) in Neapolitan Italian.

Info_Request, Query_w, Query_y and Check moves seem to be different both in the global pattern and in the terminal pitch contour.

As far as global patterns are concerned, analyzing our moves in the pragmatic continua mentioned above, it is worth noting how the feature “rising” fades away: Info_Request moves show a rising tune, Query_w and Query_y moves show a rising-falling tune with different degrees and ranges, followed by requests of confirmation, characterised by a quite flat-falling contour.

With regard to the TC, the main difference occurs between Info_Request move and the other ones, since it presents the only rising one: H-T (U). The other three moves show a low target (wh- questions), a slightly falling terminal contour (yes-no questions) and a falling terminal contour (requests of confirmation).
If we globally consider our first data, we can say they tend to agree with other works and they seem to suggest an important role played by both global pattern and terminal contour.

Within the theoretical framework of the autosegmental analysis of intonation, $f_0$ contours can be analysed as having two types of tonal specification: tones which have a prominence-lending function, referred to as pitch accents, and those which delimit intonational phrases, referred to as boundary tones (Pierrehumbert, 1980; Beckman and Ayers, 1994).

In a study on Bari Italian in map-task dialogues, Grice and Savino (1997) hypothesise that the information status of the answer may be related to the accent pattern of the question: the degree of confidence with which the speaker believes the information to be shared with his/her interlocutor would be reflected in prosodic strategies. They observe that polar questions are generally realised with a rising pitch accent followed by a low phrase accent plus low boundary tone ($L+H^* LL%)$. Later, Grice and Savino (2003a; 2003b) extend their notation of information structure in that they take the speaker’s consciousness into account. Thus, the intonation pattern that speakers use to indicate information or confirmation requests depends on the speaker’s degree of confidence in the information being asked. A low boundary tone signals that the speaker has an expectation of the answer, that is, s/he is asking for mutually shared information. On the other side, a high boundary tone signals that the speaker is asking for new information that has not previously been mentioned in the conversation. The speaker has no expectation of the answer in this particular case. This would be a true information question. Checks, on the other side, may be realised with a falling pitch accent ($H+L^* LL%$), according to their information structure. If a check is realised by means of a rising pitch accent, the speaker is asking for new information, while a falling pitch accent signals that the question refers to given information.

This kind of interpretation is particularly interesting for our data: we do not focus on pitch accents and boundary tones, as already explained, but both information structure (more precisely, new information required) and the speaker’s degree of confidence in the information being asked seem to characterise our continuum of requests, since they are found to be arranged in a close relation with a rising/not rising TC and the global pattern.

4.2 Spanish variety

4.2.1 Intralinguistic description

*Info_Request* realisations show a rising global pattern. In the example in figure 6, the point H indicates an important rising with respect to the preceding one, confirmed by the tag $H_a$ and $H_3$ of the other two versions, indicating an H point in the acute region realised with a significant slope.
As mentioned above, in our pilot corpus of Neapolitan Italian, we chose to analyse he questions introduced by an interrogative pronoun with a focalisation on the subject. Consequently, we analyse this type of wh-question in the Spanish variety too. Query_w tonal patterns show a rising-falling tune: they result to be globally rising until the topical subject [M - T] and falling in correspondence with the interrogative pronoun [T - B].

As the example in figure 7 shows, they do present a final falling [H - L], well represented by the tags of Ampli3 and Levels, indicating a significant slope: from H₁ (in the acute region) to L₂ (in the grave region).

It is not very easy to find other works with which we can directly compare this kind of data: we are describing a not so studied variety and, in order to compare these data with the Italian ones, we have chosen a specific syntactic structure. What we can say in general is that the Spanish tradition of studies on intonation indicates a melodic configuration for wh-questions not very different from the declarative statements (not only in Spanish, but in other languages too), in which the interrogative element is realised with the highest f₀ (for peninsular Spanish, Alcoba and Murillo, 1999; for American Spanish, Sosa, 1999). This is not our case, in which there is a focalisation on the subject; notwithstanding, it is worth noting that also in this case, we find out a global pattern which results to be more similar to declarative statements than to other types of questions. Even if we are working on one tonal unit, if we divide in two parts the move -the topic (la patilla del niño) and the interrogative pronoun (cómo es)- we can see how the first part results to be “typically interrogative” (we

---

18 We find, indeed, other types of Query_w moves to be realised with a very different pattern.
mean as rising as in the other cases object of study), whereas the second part, the grammatical element, contributes to determine a low TC.

Figure 7: an example of Query_w, “la patilla del niño cómo es?” “How is kid’s sideburn?”

Looking at the realisation of Query_y moves, we can talk of a rising-falling pattern plus a pronounced final rising. As figure 8 shows, this kind of questions appears to be characterised by a rising terminal contour [L - T], where we pass from the grave region to the acute region, with a significant slope ($H_a$ and $H_3$).

The Spanish tradition, from Navarro Tomás (1944) to Quilis (1987) has always described polar questions as characterised by a final rising (in Castilian Spanish). Analyzing polar questions, Sosa (1999) indicates they constitute a very interesting category, because of systematic differences between American Spanish varieties. The Spanish spoken in Buenos Aires, Bogota, Ciudad de México presents polar questions characterised by a rising TC, while in other varieties, such as Puerto Rico, Caracas, La Habana, the author indicates a very different global pattern and a falling TC\textsuperscript{19}. As far as peninsular varieties, Sosa analyses Seville, Barcelona, Pamplona and Madrid Spanish. In all these cases the author points out a rising TC\textsuperscript{20}, with very slight differences in global configurations and in temporal implementation of pitch variations relative to structural elements and their segments.

Comparing our first results with these peninsular varieties, we can observe a corroborate of the rising TC and we can notice that the Gerona global pattern is more similar to the one of Pamplona as indicated by Sosa. The main difference with the other varieties deals with a rising culminating in a T target point: on the contrary, Seville, Madrid

\textsuperscript{19} Different pitch accents and boundary tones characterise these varieties, according to the author (Sosa, 1999: 198 and following pages).

\textsuperscript{20} Indicated through ToBI formalism, always $L^* H\%$, except Pamplona variety ($L^*+H H\%$).
and Barcelona final rising contours are not (much) higher than the other target point of the tonal unit. Thus, Gerona polar questions seem to show a slight difference in their realisation.

As far as Check moves are concerned, we can see an example illustrated in figure 9; it shows a globally flat pattern followed by a clearly rising terminal contour [L - H] defined by a consistent slope (from L2 to H3) and a passage from the grave to the acute region.
4.2.2 Intralinguistic comparison

Preliminary results coming from our corpus can be summed up as the following table indicates (table 3). *Info_Request*, *Query_w*, *Query_y* and *Check* moves appear to differ both in their global pattern and in their terminal pitch contour.

<table>
<thead>
<tr>
<th>I_R</th>
<th>Q_W</th>
<th>Q_Y</th>
<th>Ck</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>TC</td>
<td>P</td>
<td>TC</td>
</tr>
<tr>
<td>rising</td>
<td>S - T (H)</td>
<td>rising-falling</td>
<td>L - B</td>
</tr>
<tr>
<td>rising-falling</td>
<td>rising-falling-(rising)</td>
<td>S - T (H)</td>
<td>quite flat - (rising)</td>
</tr>
<tr>
<td>B - T (H)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3: *Info_Request*, *Query_w*, *Query_y* and *Check* moves P (global Pattern) and TC (Terminal pitch Contour) in the Spanish variety.

With regard to the global pattern, evaluating our moves in the pragmatic continua mentioned above, we can see that *Info_Request* moves show a rising tune, both *Query_w* and *Query_y* moves present a rising-falling tune, but polar questions show an important final rising and *Check* moves appear to be characterised by a quite flat contour plus a final rising.

Looking at the TC, the main difference occurs between wh- questions and the other ones, since it presents the only falling TC: L - B. The other three moves show a very similar final rising. It seems to us that the grammatical element, the interrogative pronoun which already manifests the interrogative sense of the utterance, does not need a specific help by intonation.

If we globally consider our first data, we can say they tend to agree with other works and they seem to suggest an important role played by both global pattern and terminal contour.

4. INTERLINGUISTIC COMPARISON

Trying to compare our results, we can discuss the following table (4) which summarizes these first data. Main differences are indicated in bold type.

Comparing Italian and Spanish *Info_Request* moves, we can see that although the rhythmic structure realisation should be equivalent -four syllables with the penultimate stressed one (Italian “pe” vs. Spanish “bli”) - we find a partially different melodic pattern. The difference deals with the TC realisation: Italian rising starts before and in correspondence with the stressed syllable, while we can observe in Spanish variety a sort of displacement with respect to the stressed syllable (for a discussion on this topic, see Garrido et al., 1993; Llistèrri et al., 1995; Prieto et al., 1995). We can observe in the Italian variety the most important f0 movement on the stressed syllable, whereas in Spanish this movement involves the tonic syllable, but above all the postonic syllable. It would be very interesting to investigate on different *Info_Request* moves with different segmental features and rhythmic structure, but we had to limit our analysis to this type because of lack of occurrences.

---

21 As explained before, we can rather define a low target, not a falling TC, but we consider the pretonic movement in order to get a better description.
Evaluating Italian and Spanish Query \textit{w} moves, we can notice in both cases a similar rising-falling pattern with a TC characterised by a low target and a T target point on the postonic syllable of the topic of the utterance. From the example of the two varieties we showed above, we can see how the part which precedes TC in the Spanish variety tends to be realised in a more abrupt way (L-B), if compared with the Italian variety (D-B). We do not dispose of a sufficient number of occurrences to hypothesize if this difference can be significant or if it only depends on a different topical structure. Moreover, it will be necessary to consider also possible differences related to the different interrogative pronouns.

While the comparison between these two varieties does not show dramatic differences for generic questions and wh- questions, if we compare polar questions (our Query \textit{y} moves), we can observe a slightly different global pattern and an differing TC: quite flat-falling in Neapolitan Italian and resolutely rising in Gerona Spanish. Checks realisations show in both languages a quite flat pattern, but an opposite TC: falling in the Italian variety (T-B) vs. rising in the Spanish variety (B-T(H)).

<table>
<thead>
<tr>
<th></th>
<th>P</th>
<th>TC</th>
<th></th>
<th>P</th>
<th>TC</th>
<th></th>
<th>P</th>
<th>TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{I_R}</td>
<td>rising</td>
<td>\textit{H} \text{ - T} (U)</td>
<td>\textit{Q_W}</td>
<td>rising - falling</td>
<td>\textit{D} \text{ - B}</td>
<td>slightly rising-falling</td>
<td>\textit{Q_Y}</td>
<td>\textit{S} \text{ - B}</td>
</tr>
<tr>
<td>\textit{I_R}</td>
<td>Q_W</td>
<td>\textit{Q_Y}</td>
<td>\textit{Ck}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>P</th>
<th>TC</th>
<th></th>
<th>P</th>
<th>TC</th>
<th></th>
<th>P</th>
<th>TC</th>
</tr>
</thead>
<tbody>
<tr>
<td>\textit{S} \text{ - T} (H)</td>
<td>rising-falling</td>
<td>\textit{L} \text{ - B}</td>
<td>rising-falling</td>
<td>\textit{S} \text{ - T} (H)</td>
<td>quite flat-falling</td>
<td>\textit{B} \text{ - T} (H)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Info \_Request, Query \textit{w}, Query \textit{y} and Check moves P (global Pattern) and TC (Terminal pitch Contour) in both varieties.

5. DISCUSSION AND CONCLUSIONS

We aimed at an intra and interlinguistic description of different kinds of requests (of information and of confirmation) in two very close varieties of languages, in order to verify if and how requests differ as far as their prosodic realisation is concerned and if this potential correspondence between pragmatic function and prosodic realisation shows some comparable features between the two languages. As previously stressed, in this first step of the analysis, we aimed at providing a purely phonetic encoding of the macroprosodic component of the $f_0$ curve, with no proposal of phonological representation through a ToBI-like system.

Many objections can be made about these preliminary results and we are aware we do have to be very cautious, because of a whole of reasons.
First of all, we did not consider acoustic measures, but we worked on pitch stylisations. Secondly, we left aside intensity and duration variations and the interaction between these parameters, without considering the exact temporal implementation of pitch variations relative to structural elements and their segments.

To all these methodological considerations, we have to add another very important point: only a systematic analysis that take into account all the other involved linguistic levels can reveal something clearly. To do that, a massive enlargement of the corpus is necessary. Indeed, the number of the analysed occurrences and the methodology adopted, which certainly needs to be refined, do not permit to talk about results, but only allow to find some initial evidence.

This first intralinguistic analysis seems to show in the examined varieties that both global pattern and terminal pitch contour contribute to differentiate, while the interlinguistic perspective seems to point out that main differences are to be found in the terminal contour.

Further investigation is needed to be able to draw some exhaustive conclusions. Notwithstanding, this first examination of the interface between intonation and meaning of requests reveals that the prosodic structure, in particular the direction of the final contour, plays a fundamental role in defining interactional pragmatic meaning.

BIBLIOGRAPHICAL REFERENCES


dell’Associazione Italiana Scienze della Voce (AISV), 30/11- 2/12 2005, Università di Salerno.


