Spanish and English Intonation Patterns. A Perceptual Approach to Attitudinal Meaning

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1.   Introduction

In this paper the attitudinal function of *wh-* and *yes/*no questions is studied from a contrastive viewpoint. Our starting point is O'Connor and Arnold's statement that 'The pitch patterns or tunes of English are not necessarily the same in form as those of other languages, nor do they necessarily produce the same effect as they would in other languages' (1973: 1). Indeed when one compares the intonation patterns of English and Spanish,[1] one finds phonetic similarities between the two systems beyond the falling and rising basic tunes. But there are differences, as we shall see, in pitch range at nuclear level as well as in pre-nuclear positions. It is no wonder that a foreign accent is usually attached to the use of a tune in the target language which is typical of the speaker's native language. The obvious outcome is a misunderstanding on the part of the native, although possibly to a lesser degree of what one might surmise due to the fact that the so-called "foreign talk", far from being particularly emotional, characterises itself by the use of a stereotyped, simplified intonation pattern. Native speakers, however, seem to make less allowance for mistaken tunes than for faulty segmental pronunciation according to O'Connor and Arnold (1973: 2).

Despite its importance from a pedagogical standpoint, intonation has always lagged far behind other areas in phonology. There are several reasons for this current state of affairs. Undoubtedly, one of the most important ones is the difficulty of disentangling phonological categories or intonational lexicons (Liberman 1979) out of the phonetic complexity underlying intonation. In the case of British English, Halliday (1967, 1970), for instance, has established five categories, giving fourteen patterns to

capture attitudinal meaning, whereas Crystal has posited just seven tones (1975), and O'Connor and Arnold (1973) twenty patterns —ten non-emphatic and ten emphatic.

There are also differences among authors regarding the pitch movement of the nucleus. While Halliday (1967, 1970) envisages eight nuclear movements (high fall, high rise, low fall, low rise, fall rise, rise fall, low fall rise and low rise fall), Crystal (1975) does away with the low fall rise and the low rise fall introducing a level tone instead. O'Connor and Arnold (1973) bring in a complex tone (fall plus rise) to the tones used by Crystal and they are more specific about the level tone which they consider to be "mid" level.

Greater discrepancies are apparent in the interpretation of the attitudinal meaning conveyed by the tones. Halliday (1967, 1970) introduces the concept of "key" which is realised by secondary tones as opposed to neutral tones. This, by the way, raises the question of how a tone can be neutral with a certain clause type (e.g. *wh-*question) when in fact it carries attitudinal force if applied to another type of clause (e.g. a *yes/no* question). If we take for instance the rise fall, a fairly common tone, and compare the attitudinal load attached to it by different authors, we find a whole gamut of interpretations. While Gimson (1980) sees in it "enthusiasm, doubt, horror, sarcasm, indignation, etc.", and Carr (1999) attaches to it "a sense of strong agreement or disagreement", Halliday (1970) considers that the speaker is "committed, insistent, asserting", which is a long way from O'Connor and Arnold's view of this tone as showing that the speaker is "impressed, challenging, antagonistic" (1973: 214), a definition that Crystal accepts with the qualification "…or the reverse, depending on kinesic accompaniment" (1975: 38).

There is a general agreement that intonation is not the only means available to the speaker in order to convey the speaker's inner feelings. Kinesics, lexical choice, grammatical construction, range of tone, pitch level, loudness, tempo and other prosodic and paralinguistic features play an important role in this respect. But from a purely linguistic standpoint, intonation seems to be the basic means to convey attitudinal meaning, an opinion held by Bolinger (1986), Couper-Kuhlen (1986), Crystal (1969), O'Connor and Arnold (1961, 1973), Schubiger (1958), who see attitude as the primary function of intonation. This view echoes in a way Bally's (1935) dialectics of verbal interaction according to which language in general reflects two basic functions, the logical and the affective one. Both go hand in hand and constantly strive to win one over the other. This means that all expressions in language consist of a logical side plus

an affective one in varying degree, to such an extent that, strictly speaking, no utterance in a language is entirely logical nor purely emotional. There may be utterances where the logical side may prevail, as when they are used in a referential function, as there are expressions that can be heavily tinged with emotion, but this does not preclude the presence of both elements.

These comments of a speculative nature are not shared by all linguists; the matter has, of course, a lot do with how we define attitude and how we perceive a particular message. Roach, for one, draws a clear distinction between "normal" and "emotional" language (1995:137). Crystal, too, talks about attitudinally neutral tones as if this was an inherent feature of certain tones. Tench shares this view too when he writes that "the expression of attitude is an optional element" (1996: 108), "…mainly to be found in the extent of a fall or rise and in variations of pitch in the head and pre-head" (1996: 20). He claims that there are "neutral tones" (falling, rising and falling rising) *vs*. non-neutral or "secondary tones" used for attitudinal purposes which are variations in degree of the neutral ones. The former are not envisaged as attitudinal carriers and are, therefore, the only ones present in the ideational, interactional and textual functions of language if emotions are not present. While there is reason to doubt this interpretation, there is a point on which I would sympathize with Tench's quotation, which echoes Halliday's as well as O'Connor and Arnold's view on this matter: that linguistically speaking, attitude depends not just on nuclear variation, but also on the pitch variation of heads and pre-heads as we shall discuss below.

2.   Objectives

Our analysis will focus on the attitudinal component of the English and the Spanish intonation systems as used with *wh-* and *yes/no* questions. Our interest in questions derives from the fact that, unlike statements which are characterised by a falling tone ("the vast majority being low falling in type", according to Crystal (1975: 33), questions display an array of tone patterns which makes them particularly attractive from the standpoint of a study of attitudinal meanings. As for the choice of their attitudinal function as an area of study, there are two reasons for this: firstly, the attitudinal meaning will probably be most familiar to our readers —in fact, it is considered by some as the main function of intonation as pointed out above— and secondly, it has been the most thoroughly described of all the intonation functions. English (the British

variant) will be our target language which shall be approached from the perception of a Spanish speaking audience. Firstly we shall consider the two systems in order to see the degree of similarity between their nuclear intonation patterns. Secondly, we shall discuss the role of the pre-nuclear elements in order to see whether they perform a fundamental or an ancillary role in the overall perception of a given attitude. Thirdly, a comparison will be made of all English intonation patterns in order to rank them from the easiest to the most difficult for a Spanish learner of English. Finally, we shall see how focus placement in English is perceived by Spanish speakers.

3. Methodology

3.1. Participants

Thirty four Spanish students of English Philology took part in this experiment. Their level of English could be described as post-intermediate. All of them had followed an introductory course on English Phonetics, but none had specific training in the intonation system of English. They all come from Murcia, an area characterised by a Spanish intonation system with a narrow pitch range.[2]

3.2. Instruments

O'Connor and Arnold's (1973) description of English intonation was used on the grounds of it being internationally the best known textbook on British intonation, and also because, despite its deficiencies, it is the most comprehensive description of attitudinal meaning in English. Ten tone units constitute the axis of their system, giving rise to two sets: ten patterns characterised by ten pitch movements of the nucleus, preceded by low pre-head in all of them, and four types of head (high, low, falling and rising), and a second set labelled "emphatic" involving high pre-head, plus stepping, sliding and climbing heads before the ten nuclear tones. Our questionnaire confined itself to the first set as it is the one thoroughly covered in their *Intonation of Colloquial English. A Practical Handbook* (second edition, 1973). O'Connor and Arnold attach all their intonational lexicon to four basic grammatical patterns: statements, *wh-* and *yes/no* questions, commands, and interjections.[3] As pointed out above, we decided to take *wh-* and *yes/no* questions as the focus of our research; the nucleus was preceded in all of them by either a head or an unmarked pre-head. In order to see the degree of variability in pattern perception, we introduced twenty questions —ten of the *wh-* and ten of the

yes/no type— repeating each intonation pattern twice. We also devised a second questionnaire to test the Spanish perception of focus in English (see Appendix 1).[4]

3.3. Procedure

The first task consisted of listening three times to each of the twenty questions, all taken from O'Connor and Arnold's textbook (1973), so that the students could decide which intonation contour was involved. After this, our informants were asked to mark on a five-point scale their level of familiarity with the intonation pattern heard as follows:

(i)   A, if the utterance was perceived as fully familiar;

(ii)   B if it was fairly familiar to them;

(iii)   C, if it was occasionally heard and occasionally used;

(iv)   D if it was rarely heard and used; and

(v)   E if the pattern was completely unfamiliar to them.

After completion of this task, they heard each expression twice again, but this time they had to mark the most prominent word in each sentence, associated with the focus of information and, therefore, with new or important information. Percentage values were obtained by converting the nominal to ordinal data as follows: A: 10; B:7.5; C: 5; D:2.5; E: 0 (see Table 1 in Section 4).

4.   Analysis and results

4.1 Tone group 1: low drop

Pattern similarity between the first English tone (low drop) and the Spanish equivalent tone is high (50%) or very high (23.5%) in the *wh-* question. No one reported that the tone was totally unknown to him/her. As seen on Table 1 below, there is a low percentage of students who perceived it as an occasional tone (17.6%) and 8.8% who considered it rarely heard. This is surprising as the low drop is a very common tone in Spanish, even in detached or unsympathetic types of *wh-* questions. A possible explanation for this lack of agreement among our informants could be the pre-nuclear pattern used –a high, sustained head, which is not as uniform, at least in Murciano accent, as Navarro Tomás (1948: 48) surmises.[5]

Table 1. Percentage values of wh- questions (1 to 10) and yes/no questions (11-20).
Maximum values in bold type

Wh-	1	2	3	4	5	6	7	8	9	10
%A	23,5%	17,6%	17,6%	**44,1%**	**32,4%**	**26,5%**	5,9%	8,8%	5,9%	5,9%
%B	**50,0%**	**50,0%**	23,5%	26,5%	20,6%	23,5%	**41,2%**	26,5%	26,5%	**29,4%**
%C	17,6%	26,5%	20,6%	20,6%	29,4%	23,5%	23,5%	26,5%	**41,2%**	**29,4%**
%D	8,8%	5,9%	**29,4%**	8,8%	17,6%	20,6%	11,8%	**29,4%**	17,6%	26,5%
%E	0,0%	0,0%	8,8%	0,0%	0,0%	5,9%	14,7%	5,9%	8,8%	8,8%

Y/N	11	12	13	14	15	16	17	18	19	20
%A	11,8%	**35,3%**	17,6%	17,6%	14,7%	11,8%	26,5%	17,6%	**58,8%**	26,5%
%B	32,4%	**35,3%**	**41,2%**	26,5%	23,5%	**38,2%**	**38,2%**	**47,1%**	23,5%	**50,0%**
%C	20,6%	14,7%	17,6%	**41,2%**	**44,1%**	26,5%	23,5%	11,8%	8,8%	17,6%
%D	20,6%	14,7%	23,5%	14,7%	14,7%	14,7%	8,8%	17,6%	5,9%	0,0%
%E	14,7%	0,0%	0,0%	0,0%	2,9%	8,8%	0,0%	2,9%	0,0%	0,0%

The *yes/no* question with identical tone pattern (num. 11)[6] confirms this impression. We notice that the nucleus here is a descending rather than an ascending movement, which is the normal tone used with Spanish questions of a *yes/no* type; this may account for the lower percentage (44.2%) of students who recognise the descending pitch as a fairly or very common pattern. The remaining informants judge it as occasionally familiar (20.6%) if not downright strange (14.7%). The unexpected tone seems to have, however, more to do with the interplay of the pre-head and the head than with the nucleus. A low pre-head in "*Can I…*" followed by a high head beginning with *see* and continuing uniform until the low fall of the nucleus *later* is indeed unusual in Spanish. One has only to translate the English expression to realise that the first and the second element (*Can I…)* could never be pronounced in our language the way they are in English. This explains why in terms of pattern ranking (see Table 2), the *wh-* sentence

has a mean of 7.21% (the second from the top) and the *yes/no* sentence appears bottom of the list (2.06% mean difference) despite the fact that both share an identical tone pattern.

Table 2. Patterns ranking wh-/yes/no questions

WH- Q	Mean	YES/ NO Q	Mean
4	7,65	19	8,48
1	7,21	20	7,73
2	6,99	12	7,28
5	6,69	17	7,12
6	6,10	18	6,52
7	5,30	13	6,32
3	5,29	14	6,18
8	5,08	15	5,81
9	5,07	16	5,74
10	4,93	11	5,15

If we consider focus placement (see Table 3 below), we notice that in sentence number one an overwhelming majority (76%) place it rightly on *do,* which is interesting as it means a departure from the Spanish tendency to favour the last strongly stressed syllable as a focal point (Ortiz Lira, 1994). Those who depart from this, place it on either *why* (the beginning of the head) or on *did* (12% in both cases). However, in sentence eleven, with an identical tone pattern, 38% misplace the nucleus on *see* vs. 26% who rightly placed it on the last strong word *later*.

4.2 Tone group 2: high drop

This second tone group is characterised by a high fall on the nucleus, a common tune used in Spanish with emotional intonation (Navarro Tomás, 1944). In *wh-*questions, half of the sample identified it as a fairly familiar and 17.6% as a very familiar tone pattern. It was an occasional pattern for 26.5% and no one considered it a strange one. In the *yes/no* sentence with identical tone (see Table 1 above), familiarity increased: 71% identified it as a fairly or very familiar pattern; and, as with the *wh-*pattern, no one regarded it as an unfamiliar one. In both examples the first word was the beginning of the head and, despite the fact that it was a high, sustained head, it was

Table 3. Focal variability in the ten tone patterns (wh- and yes/no questions)

EXPRESSIONS	FOCUS	OTHER FOCI			N=34
1. ˈWhy did you ↘do such a stupid thing?	76% do	12% why	12% did		
2. ˈWhen did he arrive in ˋEngland?	62% England	9% when	12% did	17% arrive	
3. At ↗what time did you say?	15% what	18% at	12% what	55% time	
4. And ˈwhat can I do for ↗you?	41% you	24% what	15% can	20% do	
5. ↘How far to √Heathrow?	79% Heath.	15% how	6% far		
6. What on ↗earth are you ↘doing here?	68% doing	20% earth	12% here		
7. He's ↗how tall?	9% how	91% tall			
8. Who ↗else is there to do it?	79% else	9% who	12% do		
9. How ↘can you be so hard-hearted ↗father?	76% can 15% father	6% hard-	3% how		
10. If you ˈdon't mind my →asking, ↗where's the ↘money come from?	50% asking	35% don't	15% mind		
11. Can I ˈsee him if I come back √later?	26% later	12% can	38% see	24% him	
12. ˈAre you free ↘tomorrow night?	59% tomor.	9% are	26% free	6% night	
13. Is it ↗my fault you are stupid?	0% my	9% it	59% fault	32% stupid	
14. Is it as ˈpopular as all ↗that?	35% that	62% popul.	3% all		
15. ↘Have I had e√nough?	82% enough	15% have	3% had		
16. Yes but ↗where can we get ↘hold on you?	91% hold	6% can	3% on		
17. ˈDo the ↗others like it?	29% others	12% do	47% like	12% it	

8

18. Can I ^count on Peter?	94% count	6% can			
19. ˋCan I have another piece of ⸝cake?	29% can 41% cake	15% have	15% piece		
20. If ꞈit is con→venient, ꞈcan we start ⸜earlier?	94% conven.	6% it			

perceived as familiar, probably due to its short length. Both types of questions occupy identical ranking (see Table 2 above), with a mean difference of –0.29%. Focus was identified on the right words (*England* in the *wh*– and *tomorrow* in the *yes/no* type) by 62% and 59% respectively, followed at a large distance by *arrive* (17%) and *free* (26%) (see Table 3 above). A small percentage associated the nucleus with the first elements of the tone units (*when*, 9%; *are,* 9%) due to their prominence as heads of their respective units.

4.3 Tone group 3: take off

Pattern three characterises itself by a low rise movement as typical of English as it is of Spanish in *wh-* as well as in *yes/no* questions. And yet 29.4% of our informants defined it as scarcely used in Spanish, and 8.8% as a tone unknown in our language; in sharp contrast, 17.6% defined it as a very common pattern (see Table 1 above). This wide range of discrepancy can be explained in terms of the way people may apprehend the intonation contour of this pattern. The pitch movement of the nucleus –a low rise– is quite common in Spanish (Navarro Tomás' *semianticadencia* 'low or mid rise', 1944), which explains why 41% consider it a fairly or a very common pattern. On the other hand, the jump from a neutral pre-head (*At…/Is it…)* down to the beginning of the low rise movement of the nucleus is certainly unusual to Spanish ears, which probably justifies the choice of those who perceive it as a pattern of low or null occurrence in our language. Notice, though, that this only applies to the *wh*-question; in the case of the *yes/no* question, 23.5% considered that it was a contour rarely used in Spanish, but no one considered it wholly unusual. In fact, both ranked similarly occupying the seventh and sixth position respectively (see Table 2). Interestingly, when looking at the focal

elements in both sentences, of all tone patterns, this was the one with the lowest score: only 15% answered correctly in sentence 3 (*what)* and no one in sentence 13 (*my*) (see Table 3 above). This seems to show that Spaniards have greater sensibility to prominence linked to a higher than to a lower pitch, and that such prominence is better perceived if the nucleus falls on a *wh-* element that if it does on other word, particularly if it is not a content item.

Table 4. Comparison between means of identical intonation patterns

TONE PATTERNS	WH- Q	Mean	YES/NO Q	Mean	Mean Diff.
1. LOW DROP	1	7,21	11	5,15	2,06
2. HIGH DROP	2	6,99	12	7,28	-0,29
3. TAKE OFF	3	5,29	13	6,32	-1,03
4. LOW BOUNCE	4	7,65	14	6,18	1,47
5. SWITCHBACK	5	6,69	15	5,81	0,88
6. LONG JUMP	6	6,10	16	5,74	0,37
7. HIGH BOUNCE	7	5,30	17	7,12	-1,82
8. JACKKNIFE	8	5,08	18	6,52	-1,44
9. HIGH DIVE	9	5,07	19	8,48	-3,41
10. TERRACE	10	4,93	20	7,73	-2,81

4.4 Tone group 4: low bounce

O'Connor and Arnold (1973) define tone four as a pattern with a low rise nucleus preceded by a high head. English speakers resort to this tone whenever they want to convey puzzlement or, in the case of *yes/no* questions, genuine interest. It is quite a common tone in English as well as in Spanish where it can alternate allotonically with a mid rise preceded by a mid head (e.g. *¿Es que vienen?* 'Are they coming?'). This explains why 44% of our informants (Table 1 above) described it as very familiar in a *wh*-type question (sentence four). The number declined dramatically, however, in the corresponding *yes/no* type expression (sentence fourteen) where a close percentage (41%) perceived it simply as a pattern occasionally heard or used, and 14.7% judged it an unfamiliar tone; no one, however, viewed it as a foreign pattern. The big difference in terms or ranking (first position in the case of the *wh-* sentence *vs.* the seventh in the *yes/no* question), as illustrated in Table 3 above and Figures 1 and 2 below, may be due

to the influence that the pre-head exerts on the pattern as a whole: the jump from the neutral pre-head (*Is it as…*) to the beginning of the following high head is something unusual in Spanish. The students' reaction to focal prominence (Table 2 above) show this in a way. In the *yes/no* question, 35% assigned the nucleus correctly against 62% who opted for *popular* –the beginning of the head. In the *wh-* question, 42% rightly identified the focus of information *(you)* *vs.* 24% who took the beginning of the head (*what*) as nuclear.
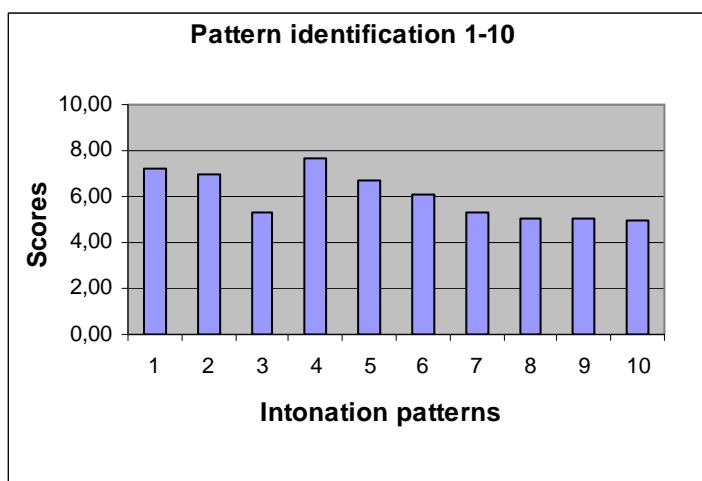

Fig. 1 Pattern identification (wh- questions)

4.5 Tone group 5: switchback

This tone occurs in English whenever the speaker is "interested and concerned as well as surprised" (O'Connor and Arnold 1973: 170). Roach comments that this intonation pattern is "used a lot in English" (1991: 138) characterising itself by a fall rise nucleus preceded by a descending head. This nuclear pitch movement is used in Spanish to show reluctance or disagreement, which is also a characteristic of the English tone. As shown in Table 1 above, 53% of the participants agreed that the tone they heard in sentence five (*wh-* question) was a fairly or very familiar one, and only

17.6% thought that it was a tone which was hardly used in the language. This percentage decreased, however, in the *yes/no* question: 38.2% found the pattern fairly or very familiar *vs.* 14.7% who considered it not very familiar. In between, 44.% described it as an occasional pattern, rarely used or heard while 2.9% deemed it to be as totally foreign pattern.
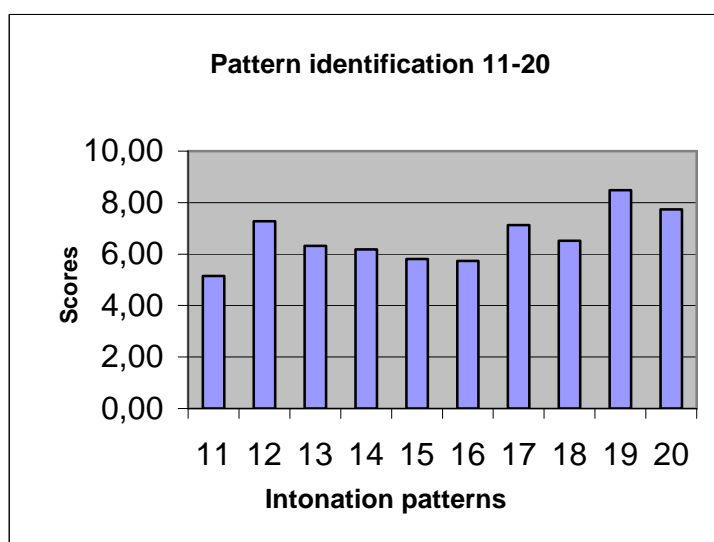
Pattern identification 11-20

Figure 2. Pattern identification (yes/no questions)

Arguably, the fall rise constitutes part of the Spanish tonal system, but it has a restricted use due partly to a narrower range of uses than in English, and also because, more often than not, it is replaced in ordinary language by a high mid/mid high or low mid tone, if disagreement is involved (e.g. *¿Guapa? ¡Qué va a ser guapa! 'Pretty, she is no pretty!')*, or a mid high /high mid if the idea of continuity or emphasis is present (e.g. *Y si quiere entrar, que me pida la llave – 'If she wants to go in, she should ask me for the key'*). The mean difference (0.88%, Table 3 above) between the two sentences exemplifying this tone shows that the pattern is perceived differently when occurring in a *wh-* question than when occurring in a *yes/no* question. The former occupies the fourth position from the top in terms of level of familiarity whereas the latter is eighth down the scale (see Table 2 above). My impressionistic view is that the reason for this may lie not so much in the type of head used (descending) as in the fall rise tone as such: its three pitch movements (high mid high –this last lower than the first) conform well to a three-syllable word, but the drawling of one of the syllables when affecting a two-syllable word may produce an effect of foreignness to Spanish ears. Because of the

shortness of both *wh-* and *yes/no* questions (only one content word in each , see Table 3 above), focal prominence presented no difficulty to our informants: the nuclear element was assigned correctly by 79% and 82% of the informants respectively.

4.6 Tone group 6: long jump

This pattern is linked to protesting in the two types of questions. The pitch movement of the nucleus is a high fall –like tone two– and likewise it is a common pattern in Spanish, corresponding to N. Tomás' (1944) *cadencia 'high fall'*. As such it is recognised by 50% of the participants in both the *wh-* and the *yes/no* questions. Unlike pattern two, however, the head presents an ascending movement from a low pitch, resulting in a pattern used in Spanish to show surprise rather than protest (e.g. *¿Cuándo has venido?* (high prominence on *ni 'When have you arrived?*). But it is the neutral pre-head what produces an unusual tune as in sentences six (*What on…)* and sixteen (*Yes but..*) (see Table 3 above). This seemingly accounts for the 26% who reckoned it was a uncommon pattern (14.7% in the case of the *yes/no* question) or who considered it a foreign intonation contour (5.9% in the *wh-* type structure and 8.8% in the *yes/no* type).

As for their ranking, (cf. Table 2 and Figures 1 and 2 above), the *wh-* question occupies mid position down the scale whereas the *yes/no* question with identical intonation tune turns out to be the last but one pattern in terms of familiarity. There is no apparent reason for this behaviour unless we consider the role played by the head: in sentence six, *earth* initiates the head, and its prominence is felt as nuclear by 20%; in sentence sixteen, however, no one noticed the presence of a head on *where,* thus resulting in an anomalous pattern to a Spanish speaker (the corresponding Spanish adverb is always stressed, i.e. it has high prominence attached to it.

Focus identification was no problem for the great majority of the informants: 68% placed it correctly on *doing* (*wh*-sentence), and 91% targeted it rightly on *hold* (*yes/no* type). Unlike pattern three, characterised by a low pitch pattern, here the focus fell in both sentences on those words with higher pitch (see Table 3 above), thus making nuclear identification easier.

4.7 Tone group 7: high bounce

The high bounce is a tone whose nuclear movement, a high rise from a mid low or mid position, is very common in standard Spanish: it is the typical pattern of *yes/no* questions as well as of most echo questions. Not surprisingly, 46.7% of our participants corroborated this fact. What is more surprising though, is that only a modest 5.5% would consider it a "very familiar" pattern and that, in the case of the *wh-* question, 14.7% did not recognise it as a Spanish tone at all (the highest percentage of non recognition of all intonation patterns). A likely explanation for such behaviour might be, once again, the effect the head might have on the overall tune: the English pattern is produced with a sustained high head followed by a jump down in order to initiate the beginning of the rise in the nucleus. But this is a common pattern in Spanish too (e.g. *¿Trabaja en qué? –He works in what? – qué* with a lower ascending pitch than the pre-nuclear component or, alternatively, with a higher level tone). Another tentative explanation could be the impact that the Spanish rendering of the English utterance might exert on our listeners: the intonational contour of the English expression would not fit the one that characterises all the structural components of the Spanish translation. Thus, in sentence seven (*He's how tall?*), the nucleus starts on *how* with a mid low ascending pitch, whereas in the equivalent Spanish version (*¿Cómo es de alto?*) *cómo* is usually produced with a higher pitch. This is confirmed by the way our participants reacted to focus placement (see Table 2 above). In the expression under consideration, only 9% answered it correctly, placing the nucleus on *how*, whereas the rest ticked *tall* as the focal point of the utterance.

The level of familiarity increases ostensibly in the *yes/no* question (64.7%) –not surprisingly it is the tone more commonly attached in Spanish to *yes/no* questions– followed by 23.5% who considered it an occasional pattern and 8.8% who perceived it as a rarely familiar tune (no one saw it a strange pattern). This is manifest too in the ranking position of the two types of questions: the *yes/no* type is higher up the scale (i.e. it is recognised as more familiar) than the *wh-*type (see Table 2 above). As for focus identification, the students favoured once again the most prominent content word (*like*, 47%) at the expense of *others* (29 %), the nuclear element.

4.8 Tone group 8: jackknife

Tone eight is defined by O'Connor and Arnold (1973: 214) as "challenging and antagonistic" when applied to *wh-* or *yes/no* questions. Roach (1995: 139-140), who nonetheless includes it in his five basic intonation patterns, remarks that "it is not usually considered to be an important tone for foreign learners to acquire", perhaps considering rightly that foreigners' talk is rarely challenging. The nucleus presents an ascending followed by a descending movement (rise fall) preceded by a sustained high head. This pattern has a restricted use in standard European Spanish:[7] it only occurs with certain types of statements and exclamations, but scarcely ever with imperatives (e.g. *¡Pues, claro que sí! 'Yes, of course!'* –with a lengthening and rising on *cla-*) nor with any type of questions. It is not so uncommon, however, in other Spanish accents (e.g. Cuban or Mexican Spanish) or even in Peninsular local accents (leonés or gallego, for instance). Our informants' reactions show that in the case of the *wh–*question, B and C options (fairly familiar/familiar respectively) are surpassed by a modest difference (29.4%, seeTable 1 above). The data reveal that this tone is little known (for 5.9% totally unknown) despite the fact that the final movement of the nucleus (a fall) fully coincides with the tone that characterises *wh–*questions in Spanish.

On the other hand, this tune is not common in standard Spanish with *yes/no* questions. It was this final fall which probably served as a clue for our students to recognise the pattern as fairly familiar (47%) and even very familiar (17.6%), although a modest 2.9% considered it foreign. This raises the question of how a tone uncommon in the system can be regarded a familiar one. Admittedly, the tone as such has a low frequency of occurrence in our language, but there is another pattern, consisting of a high fall nucleus preceded by a descending (sliding) head, not included by O'Connor and Arnold within their primary ten tone patterns, which is widely used in Spanish and which sounds to Spanish speakers very much like the rise fall movement of the jackknife. This could explain why the English pattern seems familiar to Spanish speakers. In ranking terms (see Table 2 above), there is a noticeable difference between the two types of questions, the *yes/no* type ranking higher (mid position in the scale) than the *wh*-type (eighth position). Focal information was no problem this time: 79% in the case of the *wh–*sentence, rising to 94% in the *yes/no* type, placed it on the right words, which shows once again that the greater prominence of the rise fall, as was also

the case with the fall rise, was unmistakeably perceived by the large majority of the group.

4.9 Tone group 9: high dive

Unlike the 1961 edition of *Intonation of Colloquial English*, where O'Connor and Arnold discussed three compound nuclei (high fall + low rise, high fall + high fall, and high fall+ fall-rise), in the 1973 edition they did away with two of them, keeping the first, the *high dive*, consisting of a primary nuclear element followed in a different word by a secondary rising nuclear tone. This compound tune is in a sense a combination of patterns two and three. It also has a close resemblance to pattern five – the fall rise. In the first edition, our authors discuss at length the differences between the two tone patterns, which they summarise in five main points. They acknowledge, however, that "all these differences [between the fall rise and the fall + rise] may not be operating" (1961: 28). As regards the occurrence of a high dive pattern, they point out that this tone "with questions of any kind is unusual" (1973: 87). It is perhaps this characteristic that moved the authors to recommend foreign learners not to use it (1973: 87). From a contrastive standpoint, however, this tone is quite common in Spanish and, unlike English where it conveys considerable emotion taking the form of "plaintiveness, despair or…gushing emotion"(ibid.), the Spanish tone has an inquisitive, casual questioning import as seen in *wh-* (e.g. *¿Cuándo dijo que se iba?*, rising on *I- 'When did he say he was leaving?'*) as well as in *yes/no* questions (e.g *¿Quieres que hable con su padre?*, rising on *pa- 'Do you want me to talk to his/her father?'*).

What is surprising is that such a familiar tone should be perceived as an occasional pattern by 41.2% of the students. 32.4% considered it a fairly or very familiar pattern *vs.* 26.4 who deemed it to be an unusual tune. This contrasts with their reaction to the *yes/no* question. Here there was a large majority (58.8%) who described it as a very familiar tune and 23.5% as a fairly familiar one, with a mere 5.9% finding it unusual. For this reason, the *yes/no* question ranked top of the scale in familiarity (see Table 2 above), whereas the *wh-* type occupied the last but one position (-3.41 mean difference, see Table 4 above). As for the focal point, most students (76%) rightly placed it on *can* (sentence 9) and 15% on *father.* In the case of the *yes/no* question, a smaller percentage was obtained, 29% choosing *can* and 41% opting for the final content word *cake.* (see Table 3 above).

4.10 Tone group 10: terrace

This tone is unusual in several respects. To begin with, it does not easily fit the definition of tone as "pitch change" (Brazil 1975) on the tonic syllable. Unlike falls, rises, rise falls, etc., where pitch alteration is self-evident, here we are confronted with a mid level pitch with no upward or downward movement. Not surprisingly, not all authors (Schubiger (1958) or Halliday (1970) for instance) recognise this as a proper tone. Secondly, in O'Connor and Arnold's typology (1973), it is an unfinished tone which cannot exist on its own independent of another tone unit. In this respect, it is not possible to include this pattern in the intonational lexicon of English for those who equate a tone unit with a sentence. Thirdly, it is a tone almost devoid of an attitudinal import –unless we take it that "marking non-finality", because the utterance is inconclusive, is attitudinal in itself. In fact, non finality can be accomplished by other tones so long as a pause is introduced between high or low heads and the nucleus. And yet, level tones are common in English and they have been recognised as such by some intonologists. Jassem (1932), for instance, accounts for two level tones in his tonal system: the high level and the low level, and provides examples of them occurring in autonomous tone units as in *My lady?* (high level) or *That's a pity* (low level) where no sense of inconclusiveness is involved. Crystal (1975) includes a level tone in his system which, when final in a sentence, implies absence of emotional involvement, and when non-final, conveys a sense of routineness. In his scale of affective involvement this tone "takes the functions of either fall or rise" (1975: 38).

Very often Spanish too resorts to a level tone, particularly in the speech of the South Eastern part of Spain.[8] But, unlike in English, it is not just a single mid level tone which is involved: the level pattern occurs frequently with different keys (low, mid or high) whenever the nucleus falls on an end of a tone unit final syllable or a monosyllabic word. One has to compare an expression like *¿Quién es? ('Who is it?')* with *¿Quién vino?('Who's arrived?')* to realise that in the former, the nucleus, be it pronounced in a low, mid or high key, is basically a level tone (alternating allotonically with a low or mid rise), whereas in the latter, due to its disyllabic character, is uttered with a low fall/low rise/mid high tone, the accented syllable indicating the beginning of

the pitch movement and the second the end of it. This explains why 75.% of our students find this tone fairly or very familiar in the *yes/no* question; in the *wh*-question, unexpectedly, 64.7% of the sample consider the pitch pattern not very common or unfamiliar, perhaps due to the influence of the long jump pattern of the following tone unit. This is counterbalanced in the case of focal prominence where the nuclear element in the *yes/no* sentence was ticked by 94% —here the tone unit's shortness might have played a role; also, the fact that with neutral tonicity —as in this case— the nucleus falls on the last content word. The longer structure of the *wh-* question might account for a greater variation in focal choice. Thus while 50% of the sample rightly assigned prominence on *asking* (see Table 3 above), 35% took the beginning of the head as the focus of the tone unit.

5.   Conclusions

Various aspects of intonation have been dealt with from a contrastive perspective. Regarding nuclear tones, similarities between English and Spanish are clear in the case of simple tones (high fall (high drop and long jump), low fall (low drop), high rise (high bounce), and low rise (take off, low bounce)). There is a close similarity too as regards the complex tone (high dive). Compound tones (fall rise (switchback) and rise fall (jackknife)) are not very common in Spanish, although the fall rise is acknowledged as very familiar owing to its close likeness to a high mid tone, typical of echo questions in Spanish. There were mixed reactions as regards the high fall: in *wh-* questions the "rarely used" option prevailed over the rest, whereas in the *yes/no* question the "fairly familiar" one was the more common; perhaps due to its perceptual resemblance to the high fall tone also common in Spanish. Pre-nuclear patterns are determining in the overall contour of an intonation unit. Tones consisting of high heads followed by a fall, a rise, or a level nucleus were the ones more easily recognised; compound tones trailed behind but in varying degrees: while the descending head of pattern five was no problem in the *wh-* question, it was not clearly identified with the Spanish pattern in the *yes/no* question, just the opposite of what happened with pattern eight (fall rise). In terms of pattern ranking, it was tone four (the switchback) which, unexpectedly (*wh-*questions favour a low fall in Spanish rather than a low rise), ranked top of the *wh*-sentence list, pattern ten being the last one. Surprisingly, the last two tones in the *wh*-questions were the first two in the *yes/no* type, pattern one ranking bottom of the list. As

for focus placement, it was rightly recognised by at least 50% of the students in the majority of expressions, the exceptions being tones three and eight where, because of the focus falling neither at the end nor on a content word, it was not identified by most participants.

NOTES

1. See among others, Bolinger, D. L. (1954); Bowen, J.D. (1956); Cárdenas, D.N. (1960); Delattre, P., Olsen , C., and Poenack, E. (1962); Stockwell, R.P. and Bowen , J.D. (1965).; Kvavik K.H. (1982); Fant, L. (1984); Cid-Uribe, M. (1989); Garrido, J. M. (1991); García Lecumberri, M.L. (1995); Hidalgo Navarro, A. (1997), etc.

2. Monroy, R. (2002).

3. O'Connor and Arnold were aware that clause types and communicative functions do not always match. "What is true [they write]… is that some sentence types are more likely to be said with one tone group than with any other" (1973: 46).

4. We consider focus to be the main information carrier of the tone unit corresponding to Halliday's *tonicity* (1970). It is associated with the speaker's decision to attach greater prominence to a given element –which becomes nuclear within the tone unit– in order to treat something as new information. This does not preclude the fact that all accented words may signal important or new information as held by Schubiger (1958), Bolinger (1972) or Brazil (1981) among others.

5. According to Ortíz-Lira (in García Lecumberri 1995: 195) "there exists, at least in Chilean Spanish, an intonation pattern consisting of a relatively level (possibly slightly rising) high-pitched pre-nuclear accent followed by a relatively low-falling nuclear accent".

6. The questionnaire consists of 20 sentences (see Appendix I); the first ten *wh-* questions correspond to O'Connor and Arnold's ten non-emphatic patterns, the remaining are *yes/no* questions repeating correlatively the first ten patterns.

7. According to Navarro Tomás, it is used mainly for the expression of affective meanings, particularly in exclamatives as a substitute for semicadencias (high mid tones) and semianticadencias (low or mid rises) in utterance internal melodic units (1948: 159-160)

8. Up to five level tones we had to set up in our analysis of Murciano accent. See note 2 above.

Appendix I

ENTONACIÓN INGLESA: TEST DE PERCEPCIÓN (*Perception test*).

1. Escucha las frases siguientes. En la hoja de respuesta has de indicar si el patrón entonativo que oyes te resulta (*Listen to the following utterances. Tick in your answer sheet the option that seems to you*

    A. Totalmente familiar (lo utilizas mucho y lo oyes también mucho). (*Wholly familiar. You use it and hear it a lot*)

    B. Bastante familiar (lo utilizas bastante y lo oyes a menudo). (*Fairly familiar. You use it and hear it quite often*).

    C. Familiar (lo usas algo, y crees que otros pueden usarlo alguna vez). (*Familiar. You occasionally hear it and use it*)

    D. Poco familiar (no estás seguro de usarlo o de que lo usen otros). *(Scarcely used. You are not sure whether you use it or people may use it)*

    E. Nada familiar (ni lo usas ni crees que lo usen los hablantes de español). *(Totally unfamiliar. Neither you use it nor you think other people do it)*

2. Subraya la palabra que crees es más prominente en cada oración. *(Underline the word you think is more prominent in each sentence)*

1. Why did you do such a stupid thing?

2. When did he arrive in England?

3. At what time did you say?

4. And what can I do for you?

5. How far to Heathrow?

6. What on earth are you doing here?

7. He's how tall?

8. Who else is there to do it?

9. How can you be so hard-hearted father?

10. If you don't mind my asking, where's the money come from?

11. Can I see him if I come back later?

12. Are you free tomorrow night?

13. Is it my fault you are stupid?

14. Is it as popular as all that?

15. Have I had enough?

16. Yes but where can we get hold on you?

17. Do the others like it?

18. Can I count on Peter?

19. Can I have another piece of cake?

20. If it is convenient, can we start earlier?

References

Bally, Charles
1935   *Le langage et la vie*. Zürich
Bowen, J.D.
1956   "A comparison of the Intonation Systems of English and Spanish". *Hispania*, XXXIV: 30-35.
Brazil, David
1975   *Discourse Intonation I*. Birmingham: English Language Reseach Monographs.
Bolinger, Dwight. L
1954   "English Prosodic Stress and Spanish sentence order". *Hispania*, 37: 152-156.
Carr,   Ph.
1999   *English Phonetics and Phonology.An Introduction*. Oxford: Blackwell.
Cárdenas, Daniel
1960   *Introducción a una comparación fonológica del español y del inglés*. Washington, D.C.
Couper-Kuhlen, Elizabeth
1986   *An Introduction to English Prosody*. London: Edward Arnold.
Crystal, David
1969   *Prosodic Systems and Intonation in English.* Cambridge: Cambridge University Press.
Crystal, David
1975   *The English Tone of Voice*. London: E. Arnold.
Delattre, Pierre., Olsen, Carl., and Poenack, Elmer
1962   "A Comparative Study of Declarative Intonation in American English and Spanish". *Hispania*, XLV: 233-241.
Fant, Larse
1984   *Estructura Informativa del Español.Estudio Sintáctico y Entonativo*. Uppsala: Uppsala Universitet.
García Lecumberri, Maria Luisa
1995   *Intonational Signalling of Information Structure in English and Spanish. A Comparative Study*. Universidad del País Vasco.
Garrido, Juan Manuel
1991   *Modelización de Patrones Melódicos del Español para Síntesis y Reconocimiento de habla*. Barcelona: Universidad Autónoma de Barcelona.
Halliday, M.A.K.
1967   *Intonation and Grammar in British English*. The Hague: Mouton.
Halliday, M.A.K.
1970   *A Course in Spoken English: Intonation*. London: Oxford University Press.
Hidalgo Navarro, Antonio
1997   *La entonación colloquial. Función demarcativa y unidades de habla*. Valencia: Universitat de Valencia.
Jassem, Wiktor
1952   *Intonation of Conversational English (Educated Southern British)*. Prace Wroclawskiego Towarzystwa Naukowego, Seria A. Nr 45: Wrocklaw.
Kvavik K.H.
1982   "Spanish multiaccent intonations and discourse functions". In P. Lantolf and Gregory B. Stone (eds.), *Current Research in Romance Languages*,

Bloomington: Indiana Univ. Ling. Club. 46-62.

Monroy Casas, Rafael.
2002   "El sistema entonativo del español murciano coloquial. Aspectos comunicativos y actitudinales". *Estudios Filológicos.*37: 77-101.

Navarro Tomás, Tomás.
1944   *Manual de entonación española.* New York: Hispanic Institute of the United States.

O'Connor, J.D. and Arnold, G.F.
1961   *Intonation of Colloquial English.* (2ª ed., 1973) London: Longman.

Ortíz Lira, Héctor
1994   *A Contrastive Analysis of English and Spanish Sentence Accentuation.* Unpublished Ph. D. thesis. University of Manchester: Manchester.

Roach, Peter
1983   *English Phonetics and Phonology.* (2ª ed., 1991).Cambridge: Cambridge University Press.

Schubiger, Maria
1958   *English Intonation. Its Form and Function.* Tübingen: Max Niemeyer Verlag.

Stockwell, R.P., and Bowen , J.D.
1965   *The Sounds of English and Spanish.* Chicago: University of Chicago Press.

Tench, Paul
1996   *The Intonation Systems of English.* London: Cassell.

Table 2. Patterns ranking wh-/yes/no questions

WH- Q	Mean	YES/ NO Q	Mean
4	7,65	19	8,48
1	7,21	20	7,73
2	6,99	12	7,28
5	6,69	17	7,12
6	6,10	18	6,52
7	5,30	13	6,32
3	5,29	14	6,18
8	5,08	15	5,81
9	5,07	16	5,74
10	4,93	11	5,15

Table 3. Focal variability in the ten tone patterns (wh- and yes/no questions)

EXPRESSIONS	FOCUS	OTHER FOCI			N=34
1. ˈWhy did you ↘do such a stupid thing?	76% do	12% why	12% did		
2. ˈWhen did he arrive in ˋEngland?	62% England	9% when	12% did	17% arrive	
3. At ↗what time did you say?	15% what	18% at	12% what	55% time	
4. And ˈwhat can I do for ↗you?	41% you	24% what	15% can	20% do	
5. ↘How far to √Heathrow?	79% Heath.	15% how	6% far		
6. What on ↗earth are you ↘doing here?	68% doing	20% earth	12% here		
7. He's ↗how tall?	9% how	91% tall			
8. Who ↗else is there to do it?	79% else	9% who	12% do		
9. How ˋcan you be so hard-hearted ↗father?	76% can 15% father	6% hard-	3% how		
10. If you ˈdon't mind my →asking, ↗where's the ↘money come from?	50% asking	35% don't	15% mind		
11. Can I ˈsee him if I come back √later?	26% later	12% can	38% see	24% him	
12. ˈAre you free ↘tomorrow night?	59% tomor.	9% are	26% free	6% night	
13. Is it ↗my fault you are stupid?	0% my	9% it	59% fault	32% stupid	
14. Is it as ˈpopular as all ↗that?	35% that	62% popul.	3% all		
15. ↘Have I had e √nough?	82% enough	15% have	3% had		
16. Yes but ↗where can we get ↘hold on you?	91% hold	6% can	3% on		
17. ˈDo the ↗others like it?	29% others	12% do	47% like	12% it	

18. Can I ^\count on Peter?	**94%** **count**	**6%** **can**		
19. `Can I have another piece of ⁄cake?	**29% can** **41%** **cake**	**15%** **have**	**15%** **piece**	
20. If ˈit is con→venient, ˈcan we start ⁔earlier?	**94%** **conven.**	**6%** **it**		

Table 4. Comparison between means of identical intonation patterns

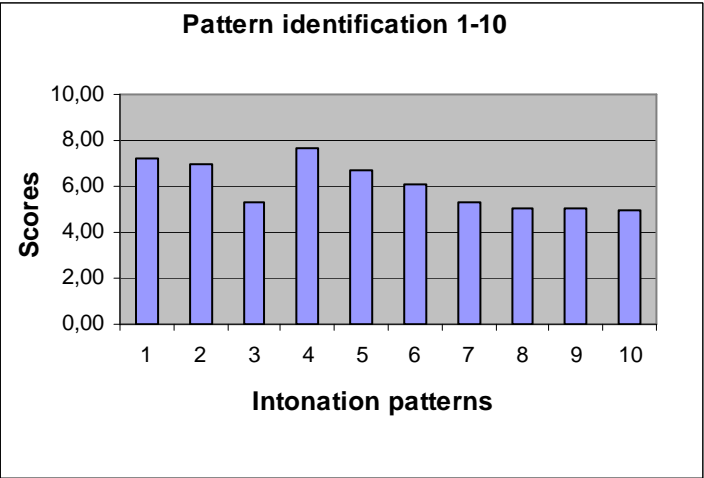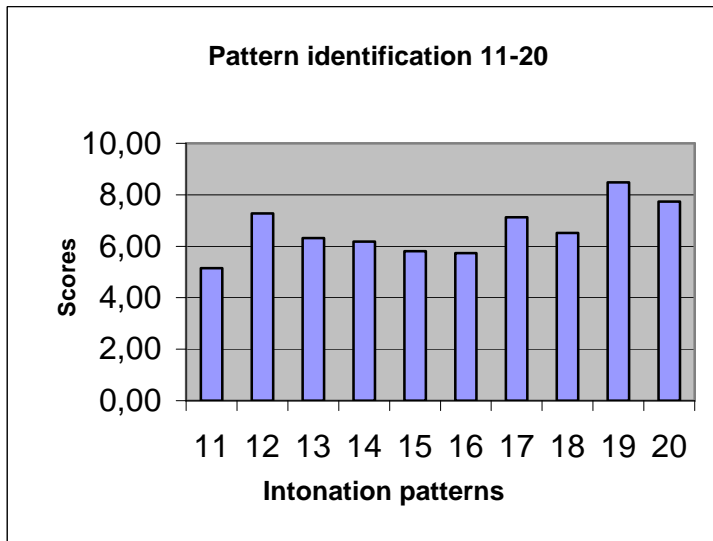| TONE PATTERNS	WH- Q	Mean	YES/NO Q	Mean	Mean Diff.
1. LOW DROP	1	7,21	11	5,15	2,06
2. HIGH DROP	2	6,99	12	7,28	-0,29
3. TAKE OFF	3	5,29	13	6,32	-1,03
4. LOW BOUNCE	4	7,65	14	6,18	1,47
5. SWITCHBACK	5	6,69	15	5,81	0,88
6. LONG JUMP	6	6,10	16	5,74	0,37
7. HIGH BOUNCE	7	5,30	17	7,12	-1,82
8. JACKKNIFE	8	5,08	18	6,52	-1,44
9. HIGH DIVE	9	5,07	19	8,48	-3,41
10. TERRACE	10	4,93	20	7,73	-2,81

Fig. 1 Pattern identification (wh- questions)

Pattern identification 11-20

Fi Pattern identification (yes/ no questions)

  Fig. 2 Pattern identification (yes/ no questions)