

The Intonation Patterns of Bullying Language with Reference to the American TV Series "The Good Doctor": A Prosodic Study

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Abstract:

This study examines the intonation patterns of spoken language in English, more specifically, the bullying language in the TV series "The Good Doctor", the first season (2017). The aim is to find the common patterns used by the bullies against their victims or targets. From eighteen episodes of season one, 34 bullying utterances were captured for analysis by Praat software to trace the pitch contour of each utterance. To transcribe the intonation of these utterances, the present study adopted Beckman & Elam's (1997) version of the Tobi system (Tone and Break Indices) to label the pitch movement and get their intonation patterns. In conclusion, it is revealed that there are 18 patterns classified according to the number of the intermediate phrases (ip's), the number of pitch tones and the type of edge tones. The predominant patterns found in the data are (H* !H* L-L%), (H* H* L-L%) and (H* H* !H* L-L%). Moreover, the selected utterances showed five bullying attitudes according to the context and situation in which they were uttered. The top of which is mocking and the less occurred one is the accusatory attitude.

Keywords: ToBI, bullying, pitch tones, phrase accents, boundary tones, down-stepping

انماط التنغيم في لغة التمر بالاشارة الى المسلسل التلفزيوني الامريكي "الطبيب الجيد"

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الخلاصة :

يهدف هذا البحث لدراسة انماط التنغيم في اللغة الانجليزية المنطوقة وتحديد لغة التمر في المسلسل التلفزيوني " الطبيب الجيد" الموسم الاول الذي عرض سنة ٢٠١٧. ان الغاية من البحث هو ايجاد انماط التنغيم المشتركة التي استخدمت بواسطة المتمررين تجاه الاشخاص المتمر عليهم. ومن خلال الدراسة تم ايجاد ٣٤ عبارة تمر اخذت من ١٨ حلقة من الموسم الاول للمسلسل. تم تحليل هذه العبارات باستخدام برنامج Praat لظهار مسار النغمات الصوتية لعبارات التمر المختارة. ولأجل تحويل التنغيم الصوتي لكل عبارة الى رموز تنغيمية تتجلى باستخدام حرف H^* للاشارة للنغمة المرتفعة و L^* للاشارة للنغمة المنخفضة وبعض النغمات الاساسية الاخرى اضافة الى النغمات الحدية في نهاية العبارة مثل L^- و H^- و $L\%$ و $H\%$ تم استخدام نظام تدوين التنغيم الصوتي الذي يسمى ToBI . وقد توصلت الدراسة الى ان الانماط ($H^* !H^* L-L\%$) , ($H^* H^* L-L\%$) و ($H^* H^* !H^* L^-$) هي الانماط السائدة في عبارات التمر ضمن نطاق الدراسة. اضافة الى ذلك فان هناك خمسة سلوكيات تنغيمية ظهرت في عبارات التمر وقد تصدّر سلوك السخرية اعلى نسبة منها اما السلوك الاتهامي فقد كان بالرتبة الادنى في تلك العبارات.

الكلمات المفتاحية : لغة التمر ، النغمات الصوتية ، نظام تدوين التنغيم الصوتي ToBI ، النغمات الحدية، الانخفاض التدريجي في النغمة

1-Introduction:

According to Roach (2009)¹, it should be noted that it is the pitch of the voice that plays the important role in describing the intonation of a spoken language (p. 119). Likewise, Ladefoged and Johnson (2011) defined the intonation of a sentence as "its pattern of pitch changes. The pattern over which a particular part extends is called an intonational phrase", henceforth an IP (p. 118). They pointed out that the pitch is an auditory characteristic. Without considering its acoustic properties, the listener can place the pitch on a scale varying from (Low) to (High). So in practice, if the sound ascends in frequency it ascends in pitch (Ladefoged & Johnson, 2011, p. 24). Pitch is also referred to by Roach (2009) as "an auditory sensation experienced by the hearer" while the rate of vocal folds vibration that can be measured physically and is related to the speaker's part is called the fundamental frequency of the voiced sounds". Generally, the term "pitch" is used informally to refer to both the subjective sensation and the objectively measured fundamental frequency (p. 120).

Mozziconacci and Hermes (1999) argued that speech conveys more than linguistic structure of sentences, it is the expression of attitudes and emotions of the speaker. They added that Prosody plays an important role in adding information to the linguistic structure of the speech. Prosodic cues like the levels of pitch, the range of pitch, and speech rate are said to be significant in the expression of emotions and attitudes (p.2001). Following this, the present study attempts to show how the prosody of bullying utterances represented by their pitch patterns can reveal the bullying attitudes found in the selected data. As such, the study aims to answer the following questions; what specific intonation patterns characterize the bullying utterances in "The Good Doctor"?, what are the possible common pitch patterns?, and what are the common bullying attitudes found in these utterances? To conclude, this study helps in understanding how intonation plays an important role in marking the bullying language by the use of an intonation transcription system like ToBI which facilitates the process of identifying the pitch pattern of each utterance. It also helps to fill the gap in the literature concerning the study of intonation patterns of bullying language as very few studies have examined this particular topic.

2-ToBI (Tones and Break Indices)

Intonation of speech is an essential component of prosody. Breen (2007) defined prosody as "the word [that is] used to describe the characteristics of the acoustic signal

¹ This study uses the APA (2018) guidelines for in-text citation as well as reference formatting.

which affect non-lexical meaning. It describes the way in which words are grouped in speech, the relative prominence of words in speech, and the overall tune of speech" (p.3). She commented that prosody comprises psychological features like pitch, quantity and loudness that lead to the perception of prosodic features like stress, phrasing, and intonation (Breen, 2007, p.3). According to Silverman, Beckman, Pitrelli, Ostendorf, Wightman, Price, Pierrehumbert, Hirschberg (1992), prosody is central in bridging between speech and natural language processing technologies. It accounts for the variability in speech signals as well as conveying the information needed for retrieving the intended meaning of an utterance. This information might not be available in orthographic transcriptions. As a result, understanding how prosody relates to both the acoustic speech signals and to the text and discourse is essential and crucial because speech understanding and synthesis technologies goes forward towards developing complete spoken language systems that can do complex real-world tasks (p.867).

Consequently, in the early 1990s, a prosodic transcription system was developed by Kim Silverman and seven other researchers from three different fields; psychology, phonology, and computer science. The system was named ToBI (Tone and Break Indices). They aimed it to be used across different disciplines to gain a large body of annotated speech. According to them, ToBI is defined as "an agreed transcription system which builds on much recent progress in prosodic modelling [that is used as] a standard for prosodic transcription of a large speech corpora" (Silverman et al, 1992, p.867).

Originally, ToBI comprises three parallel tiers that reflect the various components of prosody. Each one of these tiers is composed of symbols that represent prosodic events alongside with time in the utterance that shows where the prosodic events occur. These tiers are: the tonal tier, the break index tier, and the miscellaneous tier which is used for writing additional information like hesitations, disfluencies, breaths, laughs, false starts or restarts (Silverman, et al, 1992, p. 867). Breen (2007) mentioned another tier named "the orthographic tier" that is used for labelling the time-aligned text. As far as the tonal tier, this tier is used for labelling pitch events. It comprises two types of information; pitch accents and phrasal tones (p.9). Significantly, Wightman (2002) stated that ToBI adapted Pierrehumbert' notation developed in her (1980) doctoral dissertation. She describes the intonation as a series of pitch accents as well as boundary tones that are either low (L), or high (H). The pitch accents are distinguished by a star (*) above the tone mark, while other

tones are marked by a percentage sign (%) or a dash sign (-) to denote the boundary and phrase tones. Furthermore, the (!) diacritic is used to indicate downstepping (p. 26)

According to Beckman & Elam (1997), pitch accents correspond to "the local maximum or minimum of the fundamental frequency taking the values H*, L*, L*+H, L+H*, H+!H*, !H*" (Öztürk, 2005, p.15). these six tones are described as follows:

- H* refers to a tone target on the stressed syllable in the speaker's upper pitch range of the phrase .
- L* refers to a tone target on the stressed syllable in the speaker's lowest pitch range of the phrase .
- L*+H refers to a low tone target on the stressed syllable that is followed by a sharp rise symbolized by (H) representing a top of the speaker's pitch range.
- L+H* represents a relatively sharp rise from a low tone (L) in the lowest part of the speaker's pitch range to a high peak target on the stressed syllable .
- H+!H* it's an apparent stepping down onto the stressed syllable (representing the pitch tone) from a high non accented pitch.
- !H* represents a down-stepped high syllable working as a pitch accent itself.

Regarding the phrase accent, Beckman & Elam (1997) mentioned that it is the pitch level that extends from the nuclear accent which is the last pitch tone in an ip to the end of the phrase. It can be either L- or H-. At the end of each IP comes what is called a boundary tone which is marked by L% or H% . For the last tier i.e., the break index tier, this tier has break indices that refer to the degree of the perceived juncture between adjacent words and phrases ranging from 0 to 4 (Öztürk , 2005, p.15). Wightman (2002) identified the reference of each number as follows:

- 0 – No boundary like in a clitic groups (e.g. I've)
- 1 – The default prosodic boundary between words (e. g. I write).
- 2 – A boundary between perceived word groups within an ip.
- 3 – An ip boundary (the one that is terminated by a phrase accent).
- 4 – An IP boundary (the one that is closed by both a phrase accent and a boundary tone) (p.26-27).

3- Bullying: An Overview

According to Einarsen (2000), bullying and harassment are seen as "systematic aggression and violence targeted towards one or more individuals by one individual or by a group. To be considered a victim of bullying, ...the person involved must find it difficult to defend himself/herself in the actual situation" (p. 381). Moreover, Olweus (1999) defined bullying as "a subset of aggressive behavior, in which the aggression is repeated, and in which there is an imbalance of power such that it is difficult for the victim to defend him/herself" (as cited in Cowie, Naylor, Rivers, Smith, and Pereira, 2002, p.34).

Bullying is categorized into verbal bullying, cyber bullying, relational bullying and physical bullying. In contrast to physical bullying, which is more visible, verbal bullying can be challenging to be identified yet it affects the victim significantly. Verbal bullying includes using words or behaviors to demean, insult, or hurt a person by using threats, teasing, insulting or name-calling. (Sari, Mariyani, Miko, and Oktviana, 2024, p.186- 187). Since the current study examines the intonation patterns of the language of bullying in a TV series, this section will focus specifically on verbal bullying.

More specifically, as this study tackles workplace bullying (in a hospital setting), it follows Rayner and Hoel (1997) classification of workplace bullying. They classified it into five types three of which are related to verbal bullying. The first is "threat to professional status (e.g., belittling opinion, public professional humiliation, and accusation regarding lack of effort)"; the second is "threat to personal standing (e.g., name-calling, insults, intimidation, and devaluing with reference to age)"; and the third is "destabilization (e.g., failure to give credit when due, meaningless tasks, removal of responsibility, repeated reminders of blunders, and setting up to fail" (p.183).

4- Previous Studies

In the literature, few studies have tackled the role of intonation in identifying verbal bullying. The closest studies are those of Cheang and Pell (2007) and Smith and Glenwright (2025). The former conducted their study to identify possible acoustic cues of sarcasm. They acoustically analyzed the recorded speech which consists of simple utterances conveying four different attitudes: sarcasm, humor, sincerity and neutrality to obtain F0, F0 standard deviation, F0 range, speech rate and some other acoustic features. They concluded that sarcasm in speech has a specific pattern of prosodic and textual cues. The study of Smith and Glenwright (2025) demonstrated how intonation affects children's understanding of verbal irony by examining previous empirical studies on this subject. Comparing context, facial

expressions and intonation which were examined to see how children interpret irony, Smith and Glenwright (2025) concluded that intonation is considered as an important cue to identify verbal irony by children.

4- The Data

The present study examines the bullying utterances in the American TV series "The Good Doctor" (2017). The story is about a young autistic surgeon- "Dr. Shaun Murphy" who recently moves to work in a prestigious hospital, but he faces objections from his colleagues because of being an autistic surgeon. He ultimately gains their trust by solving many complex cases by his medical brilliance.

All of the data are taken from the first season of this series which comprises 18 episodes. The data is limited to the bullying utterances of two characters who produced the majority of bullying speech in the series. The first character is Dr. Melendez who is the surgical chief at the hospital and he is the one who constantly bullies Dr. Shaun and other residents in the hospital. The other character is Dr. Shaun Murphy who is the victim of bullying and sometimes he becomes the bully himself. The recorded data is 34 utterances, 21 utterances belong to Dr. Melendez while the other 12 are uttered by Dr. Murphy.

5- Data Analysis and Discussion

By using Pratt software, the selected bullying utterances were pictured into pitch contours revealing the peaks and the troughs of pitch movement. These pitch contours, were then transcribed into ToBI labels to extract the intonation patterns for each utterance. The patterns are arranged into three tables according to the number of the ip's (ip) within an IP (Intonational Phrase) in addition to the number of pitch tones. Accordingly, table (1) includes the bullying utterances with one IP , one ip and two pitch tones. Table (2) has utterances with one IP, one ip but three pitch tones. The last table includes utterances with one IP, two ip's and one or more pitch tones.

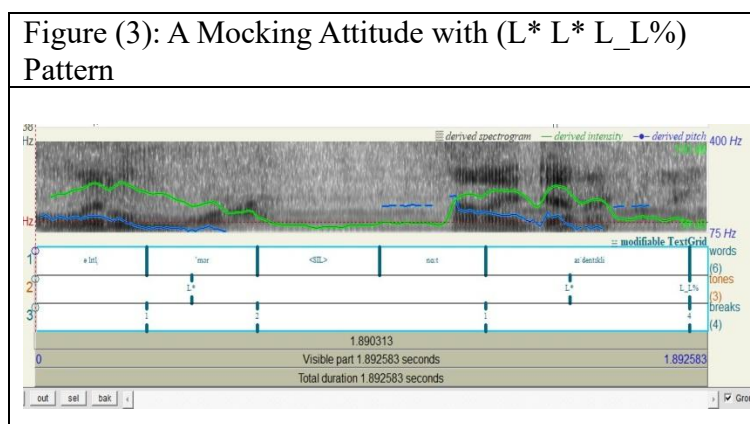
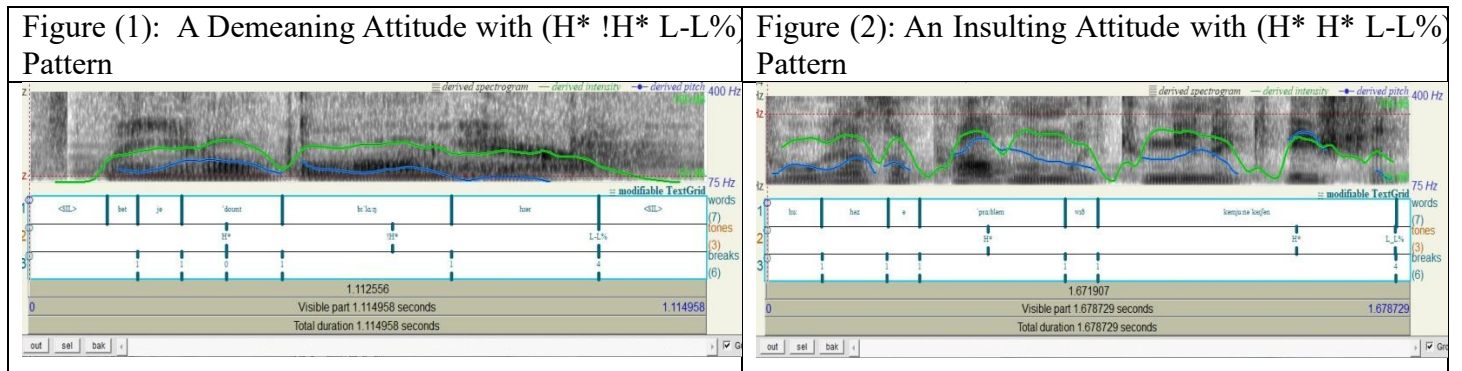
Table (1): Intonation Patterns with One IP, One ip and Two Pitch Tones

No.	Intonation Pattern	Frequency of Occurrence	Type of Attitude and Number of Utterances
1.	H* !H* L-L%	8 (32%)	Demeaning (3 utterances) Insulting (2 utterances) Accusatory (2 utterances) Mocking (1 utterance)
2.	H* H* L-L%	6(24%)	Insulting (2 utterances) Mocking (2 utterances)

			Demeaning (1 utterance) Accusatory (1 utterance)
3.	H* L* L-L%	2(8%)	Mocking (1 utterance) Sarcastic (1 utterance)
4.	L* H* L- L%	1(4%)	Mocking (1 utterance)
5.	L* L* L-L%	1(4%)	Mocking (1 utterance)
6.	H* L+H* L-L%	2 (8%)	Sarcastic (2 utterances)
7.	H* !H* L-H%	2 (8%)	Mocking (1 utterance) Demeaning (1 utterance)
8.	H* H* H-L%	1(4%)	Insulting (1 utterance)
9.	H* !H* H-H%	1(4%)	Mocking (1 utterance)
10.	H* L+H* H-H%	1(4%)	Mocking (1 utterance)
Total		25 (100%)	

As shown in table (1), there are (10) intonation patterns out of (25) bullying utterances. Following Rayner and Hoel (1997) classification of work place verbal bullying, the bullying utterances are classified according to the type of bullying attitudes by which they were uttered namely three attitudes; insulting, demeaning, and accusatory . However, the selected data shows two other attitudes that can be added to workplace bullying which are mocking and sarcastic attitudes. Each intonation pattern might belong to one or more bullying utterances with a specific attitude. The first six patterns end with (L-L%) edge tones which are found mostly in statements. Two of these patterns recur more than all other patterns. The first one is (H* !H* L-L%) with 8 utterances that follow this pattern starting with a high pitch tone then a down-stepped high pitch tone ending with a low phrase accent and a low boundary tone. Within this pattern, four bullying attitudes namely demeaning(3 utterances), insulting (2 utterances), accusatory (2 utterances) and mocking (1 utterance) are demonstrated . Figure (1) shows an example of this pattern in bullying utterance with a demeaning attitude. The second frequent pattern is (H* H* L-L%) that has two successive high pitch tones followed by low edge tones. It recurs six times expressing four different bullying attitudes namely; insulting (2 utterances), mocking (2 utterances), demeaning (1 utterance), and accusatory (1 utterance). In figure(2) below, this pattern is shown demonstrating an insulting attitude. The following three patterns (H* L* L-L% , L* H* L-L% ,and L* L* L- L%) occur in one or two utterances expressing mainly a mocking attitude. The first one starts with a high pitch tone then goes down to a low pitch tone. The second one begins with a low pitch tone then the

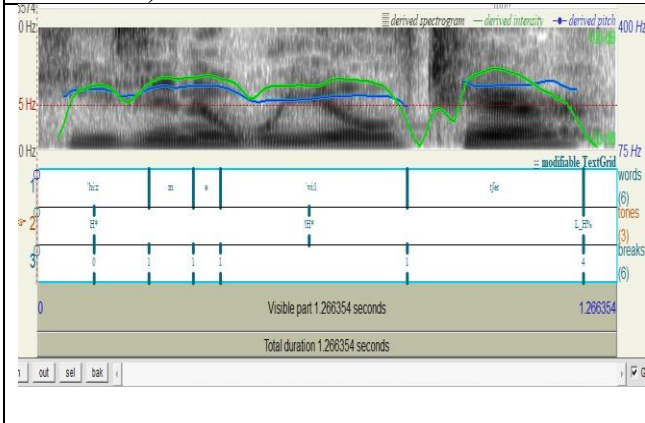
pitch ascends to a high tone. The last one; however, has two successive low pitch tones as shown in figure (3).



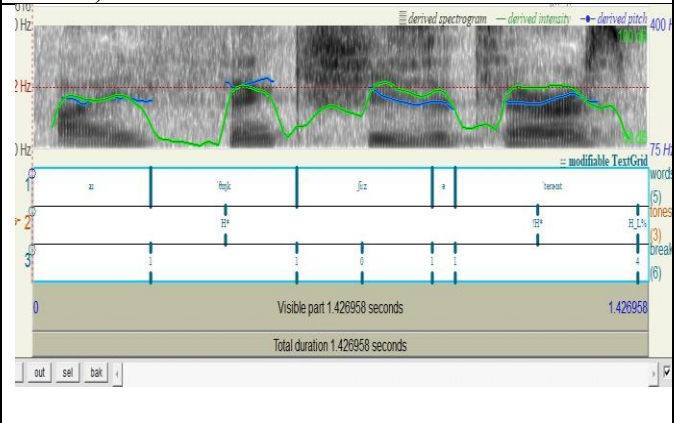
The last pattern with low edge tones ($H^* L+H^* L-L\%$) starts with a high pitch tone on the first stressed syllable then the pitch drops on a low curve (L) then rises sharply to a high (H^*) on the accented or stressed syllable which makes a bitonal rising pitch accent. This pattern is demonstrated in two bullying utterances with a sarcastic attitude.

The pattern ($H^* !H^* L-H\%$) is found in two bullying utterances, a demeaning and a mocking one. Within this pattern there are two high pitch tones, the first of which is higher than the following one making the second a down-stepped high pitch tone. The utterance ends with a low phrase accent followed by a high boundary tone indicating continuation and non-finality. See figure (4). The next pattern ($H^* H^* H-L\%$) starts with two successive high pitch tones placed on the accented syllables. It ends with a high phrase accent then a low boundary tone which shows emphasis and contrast. The one utterance that follows this pattern (figure 5) shows an insulting attitude.

Figure (4): A Demeaning Attitude with (H* !H*L-H%) Pattern



Figure(5): An Insulting Attitude with (H* L*+H H-L%) Pattern



The last two patterns end with a high phrase accent and a high boundary tone. Such ending of an intonation phrase is usually found in yes- no questions with an expectation for a response; however, in both utterances that follow this pattern the yes- no questions are used for mockery. In the first pattern (H* !H* H-H%), a high pitch tone is followed by a downstepped high pitch tone. The second pattern (H* L+H* H-H%), has a high pitch tone on the first accented syllable, followed a bitonal rising pitch accent that starts with a low curve than sharply rises to the peak of a high pitch tone on the second stressed syllable. An example is shown in figure (6) below.

Figure (6): A Mocking Attitude with (H* L+H* H-H%) Pattern

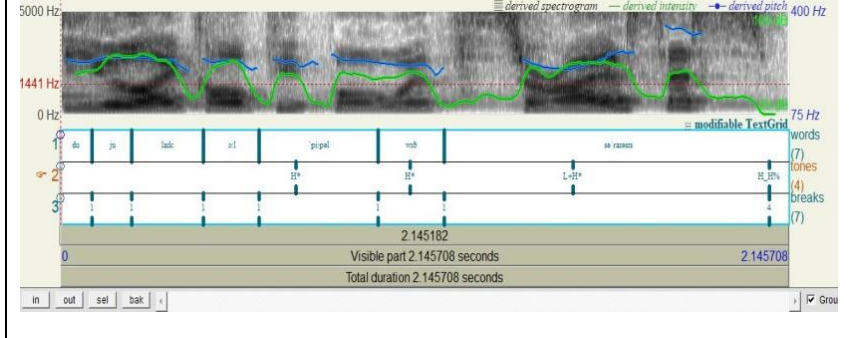


Table (2) covers five patterns out of six utterances. Only the first pattern is followed by two bullying utterances (with a mocking and an insulting attitude) while each of the other patterns are followed by only one bullying utterance expressing one attitude as shown in the table below.

Table (2): Intonation patterns with One IP, One ip and Three Pitch Tones

No.	Intonation Pattern	Frequency of Occurrence	Type of Attitude and Number of Utterances
1.	H* H* !H* L-L%	2(33.33%)	Mocking (1 utterance) Insulting (1 utterance)
2.	H* H* L+H* L-L%	1(16.66%)	Sarcastic (I utterance)
3.	H* L+H* H* L-L%	1(16.66%)	Demeaning (I utterance)
4.	H* !H* !H* H-L%	1(16.66%)	Mocking (1 utterance)
5.	H* !H* L+H* H- H%	1(16.66%)	Mocking (1 utterance)
Total		6(100%)	

The first pattern (H* H* !H* L-L%) begins with a high pitch tone on the first stressed syllable and continues to the next stressed syllable with a high pitch tone, then down-steps on the third high pitch tone that is placed on the last stressed syllable of the utterance. The pattern ends with a low phrase accent and a low boundary tone. An example of which is in figure (7).

The next two patterns also end with a low phrase accent and a low boundary tone but preceded by different pitch tones. The second pattern (H* H* L+H* L-L%), starts with successive high pitch tones then followed by a bitonal rising pitch accent that starts with a low pitch movement then rises sharply to high pitch tone on the third stressed syllable expressing a sarcastic attitude. The third pattern; however, has a high pitch tone placed on the first stressed syllable then the pitch goes low to rise sharply on the second stressed syllable forming a bitonal rising pitch accent (L+H*) then followed by a high pitch tone on the last stressed syllable. This pattern is demonstrated by a demeaning utterance. For the fourth pattern (H* !H* !H* H-L%), the pitch starts high with a high pitch tone on the first stressed syllable then it down-steps in the second and third stressed syllables forming two down-stepped high pitch tones. The pattern ends with a high phrase accent then drops to a low boundary tone. It is demonstrated in a mocking utterance as shown in figure (8).

Figure (7): An Insulting Attitude with (H* H*!H L-L%) Pattern

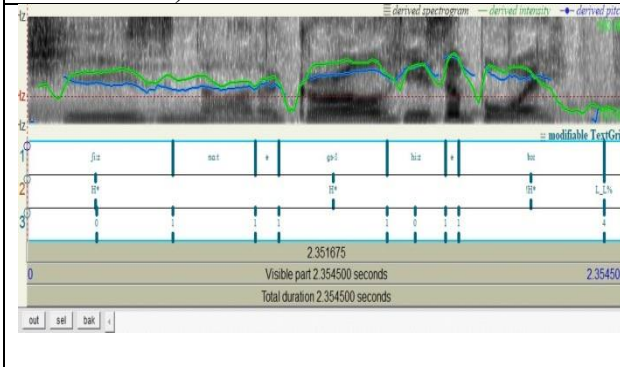
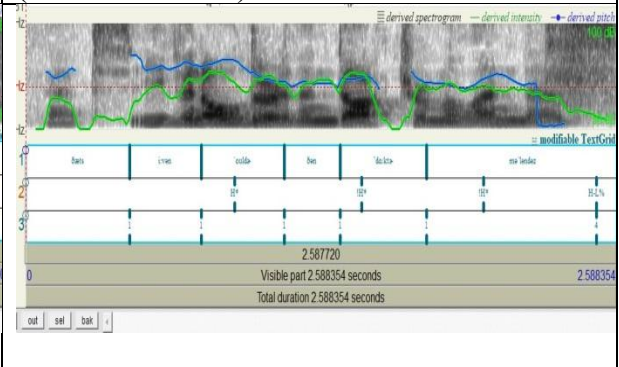


Figure (8): A Mocking Attitude with (H*!H*!H H-L%) Pattern



The last pattern in table(2) which is (H* !H* L+H* H-H%), begins with a high pitch tone on the first stressed syllable, then the pitch down-steps on the next stressed syllable forming a down-stepped pitch tone followed by a bitonal rising pitch accent that is formed from a low pitch movement to rise sharply on the third stressed syllable with a high pitch tone. The pattern is terminated by a high phrase accent and a high boundary tone as seen in figure (9) below.

Figure (9): A Mocking Attitude with (H* !H* L+H* H-H%) Pattern

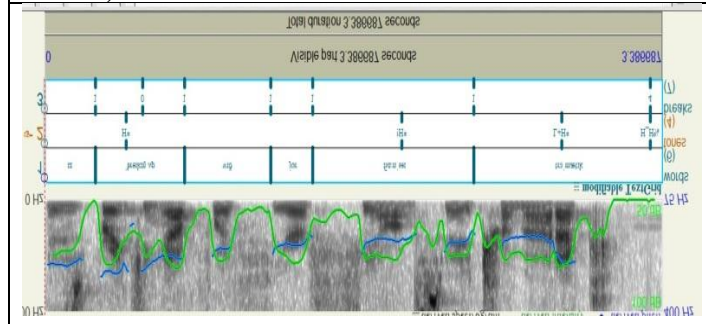


Table (3): Intonation Patterns with One IP and Two ip's (One or Two Pitch Tones)

No.	Intonation Pattern	Frequency of Occurrence	Type of Attitude and Number of Utterances
1.	H* H* L- H* L-L%	1(33.33%)	Demeaning (1 utterance)
2.	H* H* L- H* H* L-L%	1(33.33%)	Mocking (1 utterance)
3.	H* !H* L- H* L- H%	1(33.33%)	Insulting (1 utterance)
Total		3 (100%)	

Table (3) shows three distinct patterns with one IP and two ips expressing three different bullying attitudes. In the first pattern (H* H* L- H* L-L%), the first ip begins

with two successive high pitch tones followed by a low phrase accent indicating the end of the phrase. Then the pitch rises on the next stressed syllable in the second ip to terminate the utterance with a low phrase accent and a low boundary tone. This pattern is applied to one bullying utterance with a demeaning attitude (figure 10).

The second pattern (H* H* L- H* H* L-L%) is similar to the preceding pattern with one difference that is the second ip has two successive pitch tones instead of one. This pattern is expressed by a mocking bullying utterance. The last pattern (H* !H* L- H* L-H%) begins with a high pitch tone on the first stressed syllable then down-steps to the next high pitch tone on the second stressed syllable and ends with a low phrase accent. In the second ip the pitch rises from the low phrase accent to the high pitch tone on the next stressed syllable then it curves low in a low phrase accent then rises slightly to conclude with a high boundary tone. This pattern is found in an insulting bullying utterance. See figure (11) below.

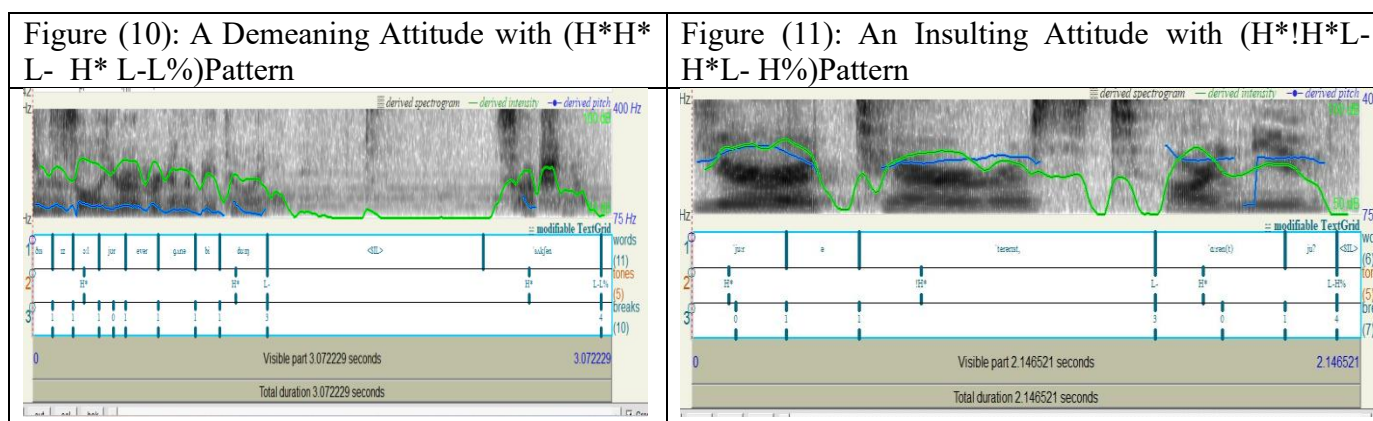


Table (4): The Bullying Attitudes in the selected Utterances with their Edge tones

No.	The Bullying Attitude	Frequency of Occurrence	The Patterns' Edge Tones	Frequency of Occurrence
1.	Mocking Attitude	13 (38.23%)	L-L% H-H% L-H% H-L%	8 3 1 1
2.	Insulting Attitude	7 (20.58%)	L-L% L-H% H-L%	5 1 1
3.	Demeaning Attitude	7 (20.58%)	L-L% L-H%	6 1
4.	Sarcastic Attitude	4(11.76%)	L-L%	4
5.	Accusatory Attitude	3(8.82%)	L-L%	3
Total		34 (100%)		

As for the bullying attitudes, table (4) lists the top five bullying attitudes found in the selected utterances arranged according to how often they appear in the selected data. Mocking attitude recurs in 13 utterances (38.23%), 8 of these utterances end in L-L% , a falling tone that is usually found in statements indicating finality, decisiveness and closure of thoughts. In these utterances, the bully determines to mock the victim by the falling final tone in a statement. For example, Dr. Melendez's mocking statement to Dr. Jared Kalu " pain can be a hell of a motivator". Patterns ending in (H-H%) recur three times as a rising tone in yes-no question utterances to indicate mockery. As in Dr. Shaun Murphy's mocking question "Is breaking with your fiancée traumatic?" to make fun of Dr. Melendez's breakup with his fiancée . Mocking utterances with (L-H%, H-L%) patterns showing a fall-rise and a rise- fall intonation, are each used in one mocking utterance only.

The second attitude is the insulting attitude that covers (20.58%) of the total bullying utterances occurring in 7 utterances. 5 of which end in L-L% edge tones by which the bully insults the victim by using a falling tone to indicate determination on offending others. An example is Dr. Melendez offending his fiancée's father by saying " you prefer to be a lazy parasite". The other edge tones that end the sixth insulting utterance is (L-H%) while the seventh insulting utterance is closed by (H-L%) edge tones. The example of the final (L-H%) is the tag question said by Dr. Murphy to a patient " you are a terrorist, aren't you?" while the utterance with a final (H-L%) is " I think you're a terrorist..." said by the same bully to the same patient.

The demeaning attitude recurs also seven times within the selected utterances, six of which end in (L-L%), a falling tone that is used to humiliate and belittle the victims. An example is when Dr. Melendez belittles Dr. Murphy saying " but you don't belong here" (because of being an autistic doctor). Only one demeaning utterance ends with different edge tones (L-H%) exemplified by the declarative question " he's in a wheelchair?" said by Dr. Murphy bullying a disabled patient.

The sarcastic attitude; however, is found only in four utterances, all of them end in (L-L%) edge tones. An example of a sarcastic utterance with a falling tone is " he's an excellent diagnostician" said by Dr. Melendez about Dr. Murphy which was certainly not intended to praise him but to make fun of him. The last attitude is the accusatory attitude that is found only in three utterances, all of them end in (L-L%) edge tones. The three utterances were said

by Dr. Murphy to bully his superior Dr. Melendez by accusing him for a lack of effort in his work. An example of an accusatory utterance is " this breach was your fault" to remind him of a mistake made during a surgery.

6- Conclusions

Through the use of ToBI transcription system on the selected 34 bullying utterances, this study reveals different intonation patterns classified according to the number of ips, the number of pitch tones, and the type of edge tones in an IP that form an utterance. As such the following conclusions are obtained:

- 1- All of the transcribed utterances consist of one IP only.
- 2- Within the ten patterns with one ip and two pitch tones, the (H* !H* L-L%) and (H* H* L-L%) patterns are the prevailing ones.
- 3- Patterns with one ip and three pitch tones show dominance to (H* H* !H* L-L%) pattern.
- 4- The three patterns with two ips are equally shown in three utterances with no pattern showing dominance on others.
- 5- Among all of the 18 patterns, the prevalent sequence of pitch tones is successive high pitch tones with (L-L%) edge tones within all bullying attitudes. The high pitch tones might be used as a way to assert dominance or draw attention and the final falling boundary tones creates finality and decisiveness in attacking the victim.
- 6- The selected utterances were translated into five bullying attitudes according to the context and situation in which they were uttered. The top of which are mocking and insulting attitudes which shows that the bullies mostly use mockery to make fun of the victims or use harsh language to insult them.

In conclusion, the present study contributed in filling the gap in the literature concerning identifying the intonation patterns of bullying language in one season of the TV Series " the Good Doctor"; however, future research can adopt the same methodology to analyze varying instances of verbal bullying from different spoken corpora like other TV shows, films, and political debates.

7- References

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