

*The Application of Hirschberg Maxims in Frost's 'Mending Wall' and Darwish's 'Scenario Jaahiz': A Phono-Pragmatic Analysis*

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**ABSTRACT:**

This paper presents a study of prosodic traits and the pragmatic implications connected to them. It is suggested that there is a prosodic code in which a selection of suprasegmental elements is deliberately and consciously changed, putting it in relation to syntactic structures, lexical choices, and pragmatic meanings, is believed that a prosodic grammar works together with the linguistic and rhetorical devices in order to organize a narrative discourse firstly, and secondly to highlight the argumentative part within the narrative discourse.

The prosodic features and the possible communicative meanings associated as well as the pragmatic effects are all described and justified. This study is the result of the analysis of two narrative poems in two different languages; English and Arabic. It is believed that the methodological procedures followed and the conclusions arrived at can be easily extended to other languages. General correlations that could be a starting point for further studies and practical employment of prosodic features are proposed.

**Keywords** Hirschberg Maxims, prosodic features, argumentative strategies, narrative structure, conversational implicature

**1. Introduction**

Speakers use prosodic strategies by manipulating tone, pause, accent, and rate in a way that can be decisive in constructing the narrative discourse and conveying opinions in any argument within the narrative discourse. These prosodic strategies are intentionally chosen by narrators in order to reinforce their discourse construction. Prosodic features are selected to convey pragmatic meanings on two levels. The organizational level includes the use of certain prosodic features to divide the narrative discourse into parts. While the argumentative level includes the use of the prosodic features to support the argumentative strategies within the narrative discourse.

To perform this study, two long narrative poems recited by the poets themselves in two different languages have been analysed. The two poems are ‘Mending Wall’ for Robert Frost (which tells the story of two neighbours. The narrator is the one who tries to convince his neighbour about the uselessness and absurdity of building a wall between their properties) and ‘Scenario Jaahiz’ for Mahmoud Darwish (which tells a story of an imaginary scene of two enemies fall in the same hole. The narrator is the one who tries to convince his enemy about the uselessness of claiming rights or quarrelling over past or even future events. Each of the poets is performing different linguistic and prosodic styles. Moreover, the arguments within the narrative poems present the best discursive framework where prosody is used as a tool to enhance argumentation movements. The prosody/ pragmatics correlation is a subject where there is still a lack of research, and as far as the authors know, there are scarce and light previous published studies, especially in Arabic language.

## 2. Methodology

The prosodic features considered in this study are based on Julia Hirschberg’s maxims (2002) which represent an extension to Gussenhoven’s biological codes (2002). According to Carlos Gussenhoven, the intonational meaning of speech can be understood in terms of three “biological codes” based on aspects of the production process of pitch variation. These codes are universal for all languages and carry out paralinguistic meanings. These codes are Frequency, Effort, and Production. Under this scenario, the codes give rise to a set of Conversational Implicatures, similar to those defined by H. Paul Grice in his description of Cooperative Conversation (1975).

- **The Frequency code** is the variation in larynx size causes differences in the speech of adults and children, males and females. This justifies the cultural association of lower pitch with dominance and higher pitch with submission. The uncertainty and questioning interpretation of certain intonational contours derive from the high pitch or rising pitch association with some interrogative contours vs. the lower or falling pitch association with assertions. Confidence, aggressiveness, submission, politeness, and friendliness are associated with dominance and conveyed by the use of lower or higher pitch. (Hirschberg, 2002, p.65).
- **The Effort code** is associated the increased effort expended on speech production with a wider pitch range. The expanded range conveys that the speaker intends an item or proposition associated with the item to be seen as of greater prominence than other items. Affective meanings derived from the effort code may be obligingness, surprise, agitation, and emphasis. The meaning of intonational prominence is known as intonational focus.
- **The Production Code** is speakers’ expansion of pitch span (increased effort) on the beginnings of phrases, where subglottal pressure is higher, than at the end. So, there will be a gradual declination in F0 and intensity over the phrase. There is considerable evidence showing that high

beginnings signal changes in topic structure, high endings indicate continuations of topic, and low endings indicate topic endings. (Hirschberg, 2002, p.65).

Based on Gussenhoven's biological codes, Hirschberg (2002) adds several additional maxims to the Gricean Cooperative Conversation pragmatic framework understood by speakers and hearers, and represent "norms" of speech production (i.e., not always followed). The shared knowledge of these norms may form the basis for certain additional meanings which can be conveyed by intonational variation.

- The **Maxim of Pitch** is based on the frequency code. "Try to match the rise or fall in the pitch of your utterances to the degree of confidence you wish to convey. In other words, "Let your pitch rise to convey uncertainty and fall to convey certainty."
- The **Maxim of Emphasis** is based on the effort code; "Try to make informationally important portions of your speech intonationally prominent."
- The **Maxim of Range** is based on the production code "Let the width of your pitch range reflect the location of your utterance in the topic structure of the discourse. In other words, "Increase your range to start new topics. Decrease your range to end old ones."
- The **Maxim of Phrasing**, which is also based on the production code might be formulated as: "Phrase your utterance so that it is divided into meaningful portions of speech."

These maxims are adapted in this work in order to define the prosodic elements that should better characterize the segmentation of the narrative and the argumentative strategies used within the narrative.

The features which are utilized in this study as prosodic variables are pitch reset, pitch range, pause occurrence, pause duration, and boundary tones simply because they have more perceptual impact in discourse segmentation and in argumentative movements. They are acoustically measured by using computer programs following the procedures below.

1. Using an MP4- to -WAV converter to modify the sound formants of the poet's recitation of the narrative poem to what PRAAT can deal with.
2. Using AUDACITY to split the poem into utterances depending on the variables of intonational phrase.
3. A detailed acoustic analysis is carried out by using PRAAT for each utterance to show the prosodic features under investigation and to get Praat annotated sound file.
4. The prominent prosodic features of each utterance are analysed according to the compositional model of intonational meaning (Wennerstorm 2001) and presented according to the ToBI System of the Autosegmental Metrical Theory.
5. Highlighting prosody alignment to the pragmatic structure of the narrative (The organizational level whose analysis is carried out according to Labov (1997) and Labov and Waletzky (1967))

6. Highlighting how prosody serves to distinguish the argumentative strategies (The argumentative level whose analysis is carried out according to Braga and Marques (2004))

### 3. Prosody and Hirschberg's Maxims in Frost's Mending Wall

Concerning the application of the four maxims throughout the whole narrative poem, it is found that the maxims are working at two levels; the organizational in which the poet employs prosody to segment his narrative poem into smaller parts (sections, topics and IPs), and the argumentative where the poet employs prosody to mark the argumentative strategies within the narrative poem.

#### 3.1 The Organizational Level

First, the use of low pitch boundary L-L% when the pitch falls at the end of most of the IPs to reflect the speaker's certainty, thus, the **Maxim of Pitch** is working. Second, the **Maxim of Emphasis**, which suggests that important portions of speech (from the point of view of the speaker) are prosodically marked, and this is clearly revealed by the use of high pitch accents on certain words, the coincidence of high pitch, high intensity, long duration, marked syntax and changing voice quality using creaky voice. Finally, the **Maxim of Pitch Range** is there whenever an intonational phrase starts, i.e., the use of pitch resets to mark new IPs. **The maxim of Phrasing** is noticed in narrative in signaling new topics and the use of major paratones to mark the segmentation of the narrative into sections. Figure 1 shows the use of L-L% at the end of several selected IPs.

#### 3.2 The Argumentative Level

A special space is given to the way prosody serves and supports the argumentative strategies along the narrative poem.

The first argumentative strategy used in "Mending Wall" is **assertive modality** where the storyteller has conflicted ideas (the narrator's and his neighbour's) and audience to convince. From the analysis of the given data, it is noticed that several prosodic features are used to enhance the pragmatic purpose of conveying assertiveness, conviction and determination to the discourse. The first prosodic behaviour associated with assertive modality is the use of low pitch value and low volume to convey certainty. Thus, **the Maxim of Pitch** is followed i.e., "Let your pitch rise to convey uncertainty and fall to convey certainty." The decreased frequency and the lowering volume often occur at the end of IPs especially those that meet typical declarative statements. Therefore, other prosodic phenomena which often exhibit a kind of synchronization at the end of IPs, decedent contours like low boundary tones (whether partially falling or low), and creakiness represent the other prosodic behaviours that coincide with assertiveness. For instance: "my apple trees will never get across and eat the cones under his pines, I tell him". To support his view, Frost ends his utterance with a creaky voice which is often used with authoritative statements giving the meaning of "I know and I am certain that my apple trees will never eat his". Frost's assertiveness and certainty about the pointlessness of the event is conveyed through the personification of trees and the use of the lexical item "never" and affirmed by the amalgamation of three prosodic features:

remarkable **decrease** of F0, low intensity, and the use of creaky voice. If we compare pitch and volume values at the beginning of the utterance with their values at the end of the utterance we find 159.2 Hz, 80.08 dB and 87.1 Hz 67.16 dB respectively. Even when creakiness used at the beginning of the IP, on the non-lexical item “oh!”, it is associated with an authoritative statement to depict the narrator’s awareness and his full knowledge that the task of building the wall is pointless, and eventually conveying the meaning that “he knows and is certain that it is no more than a game”.

Concerning irony and ridiculousness, no examples of irony are found in “Mending Wall”, instead, there are two examples of **hyperbole and exaggeration** in order to achieve sarcasm with the aid of a special use of the **Maxim of Pitch** since the matter has nothing to do with certainty, the speaker exploit the shared knowledge of the maxim to achieve a different effect, for example, in “even two can pass abreast” there is a dramatic pitch rising (F0 increasing) associated with the evaluative exaggerated words in the IP. Another way of exploiting the shared knowledge of the maxim to different effect is Frost’s use of **rhetorical questions**. With the following example, three maxims are operational. It is already well-known in literature that Yes/ No questions have a gradual increasing F0 contour, “Isn’t it where there are cows?” is uttered with H-H% pitch boundary and L\*+H pitch accent with a value of 184.9 Hz as a special case of the **Maxim of Pitch**. The pragmatic function of L\*+H is to indicate doubtfulness of the propositional appropriateness of a word. In other words, the speaker is dubious about the existence of “cows”. Thus, cow’s appropriateness is questionable. The alliance of intensity and duration with frequency in “cows” attracts the attention to what the narrator is questioning, and this is the **Maxim of Emphasis**. The purpose behind rhetorical questions is to bring a problem to people’s minds and make them think of it. The power of silence appears clearly in Frost’s employment to the **Maxim of Phrasing**, using a pause of 0.88s to give his audience time to think before he himself answers the question in the coming IP. Thus, Frost manages silence (intentional silence definitely) to achieve pragmatic objectives that are associated with what is not said in the discourse like delaying the important answer to the rhetorical question, provoking suspense to what is about to be said in the next IP, and conveying rhythm to speech.

As for **negation and refutation**, it is noteworthy that in all the several times that negation is used, the negative expressions are prosodically marked, which means that Frost’s does not intend them to be mere tools for refutation, he does not emphasize negation arbitrarily. Since its final aim is certainty to what is denied, refutation is contained within assertive modality. Syntactically speaking, Frost uses, most often, unabbreviated forms of auxiliaries and other expressions for negation. Prosodically, it is often expressed F0 increase, loudness and long duration. Thus, the **Maxim of Emphasis** is followed with negation.

#### 4. Prosody and Hirschberg's Maxims in Darwish's 'Scenario Jaahiz'

##### 4.1 The organizational Level

The compositional model of intonational meaning which has been followed by the researchers throughout the analysis to reveal the conscious and/or unconscious application of the narrator to the compositional function of prosody is regarded a clear obedience to **The Maxim of Phrasing**, which urges the chunking of one's speech into 'meaningful unites' and within which other maxims are embedded. Each tone adds a small element of meaning to the discourse as a whole. Pitch accents are associated with lexical items to indicate how the speaker intends those items to cohere within the information structure of the discourse; (**The Maxim of Phrasing**), final pitch boundaries reflect the hierarchical organization of the discourse, i.e., how listeners are to interpret an utterance in relation to what follows (The application of the **Maxim of Pitch** "Let your pitch rise to convey uncertainty and fall to convey certainty" facilitates the work of the Maxim of Phrasing). This is achieved by using:

- The low boundary tone L-L% to reflect finality and certainty, e.g.,  
فنحن عدوان fanahnu aduaan ↓
- The plateau boundary tone H-L% to express non-finality, e.g.,  
عندما قال لي سابقاً:  
indama+ QAALA+ li sabiqan ▲
- The low-rise boundary tone L-H% for continuation, and when it is used in yes/no questions it expresses uncertainty, e.g.,  
ولك! هولي وما هو لك  
+WAMA+ hwa lak hwa li walak ↓  
قال لي: هل تُفأوضني الآن؟  
qaala li hal tufawidhuni +ALAAN+ ↑

Furthermore, key conveys the speaker's stance at the onset of a new intonational phrase in relation to the prior; and paratones indicate the topic status of a new constituent (again, this is **The Maxim of Phrasing**). In other words, the maxim is followed to assign the boundaries of intonational phrases by using pitch reset, pitch declination, final vowel elongation, pause occurrence, pause duration, volume decrease, boundary tones. It is noteworthy that the **Maxim of Range** is embedded within the Maxim of Phrasing and workable, first, whenever the narrator applies the prosodic feature of pitch reset in his phrasing/segmentation. Second, to mark new topic boundaries and new narrative section boundaries by the use of paratones. One case of flouting The Maxim of Phrasing is detected in Darwish's utilization of stylistic pauses (i.e., pausing for effect), for instance:

ففنحن عدوان فنحن  
لن نقول عبارة شكرٍ وتهنئةٍ على ما فعلنا معاً فنحن ولكننا  
ليس لها أيديولوجيا فنحن والغريزة

**The maxim of Emphasis**, which suggests that important portions of speech (from the point of view of the speaker) are prosodically marked, is clearly shown by the use of high pitch accents on certain words in addition to the coincidence of high intensity, and longer duration utterances.

#### 4.2 The Argumentative Level

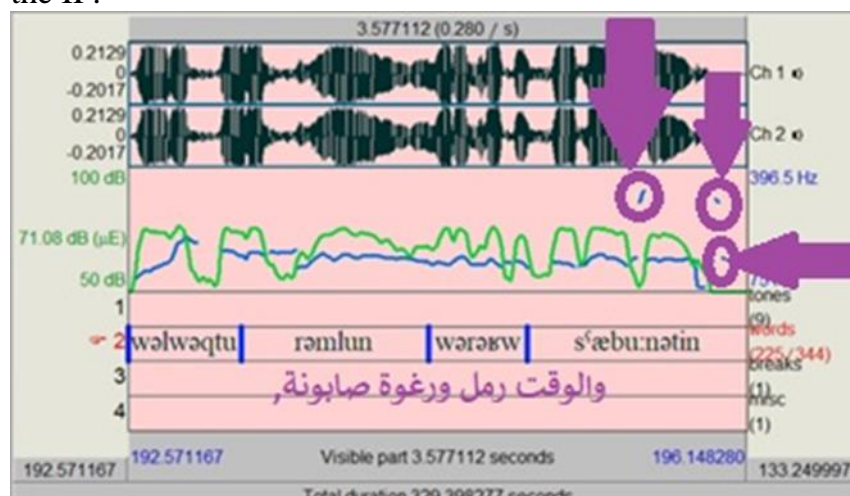
As for the way prosody serves and supports the argumentative strategies along the narrative, the first argumentative strategy used in the poem is **assertive modality** where the storyteller has conflicted ideas (the narrator's and his enemy's) and audience to convince. From the analysis of the given data, it is noticed that several prosodic features are used to enhance the pragmatic purpose of conveying assertiveness, conviction and determination. The first prosodic behaviour associated with assertive modality is the use of low pitch value and low volume to convey certainty within **the Maxim of Pitch**. The other prosodic behaviours that coincide with assertiveness are decreased frequency, lowered volume (often occur at the end of IPs especially those that meet typical declarative statements), decedent contours like low boundary tones, and the use of the creaky voice. For instance:

والوقت رملٌ ورغوةٌ صابونةٌ

wəlwəqtu rəmlun wərəkwətu s'æbu:nətin

+WALWAQTU+ ramlun waraghwatu saboonati↓

The creaky voice is shown as a break in the pitch tracker at the end of the IP.



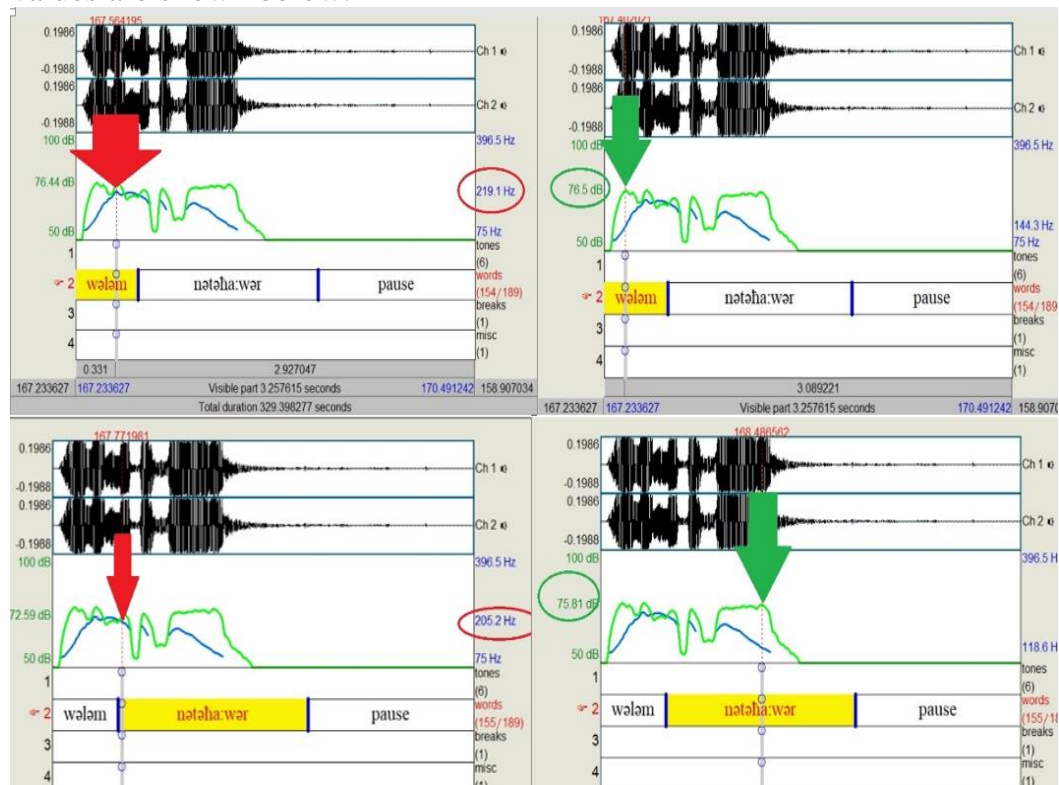
**Figure 1.** The Creaky Voice at the end of the evaluative IP ‘ والوقت رملٌ ورغوةٌ صابونةٌ’ in Darwish’s “Scenario Jaahiz”

Although creaky voice encodes a variety of meanings, most often it conveys a sort of authority giving the meaning of “I know what I am talking about” the reason why it is associated with authoritative statements like advice, opinions, decisions, etc., which are based on expert knowledge (Ward, 2004, p.573). With this, one gets a stronger impression how much the narrator is aware that time vanishes swiftly. He implicitly tells his audience that he knows and is certain about this. Darwish’s assertiveness and certainty concerning his view about time is affirmed by the amalgamation of several prosodic features: remarkable **decrease** of F0, low intensity, and the use of the low boundary tone L-L% .

Concerning irony and ridiculousness, no examples of irony are found in “Scenario Jaahiz”.

With the following **Rhetorical question**, ‘*ما الفائدة؟*’ two maxims are operational. Since the matter has nothing to do with certainty, the speaker exploits the shared knowledge of the **Maxim of Pitch** to achieve a different effect. ‘*ما الفائدة؟*’ is uttered with L-L% boundary tone. The purpose behind rhetorical questions is to bring a problem to people’s minds and make them think of it. The power of silence appears clearly in Darwish’s employment to the **Maxim of Phrasing**, using a pause of 0.95s to give his audience time to think before he himself answers the question in the coming IP. Thus, Darwish uses silence intentionally to provoke suspense to what is about to be said in the next IP.

As for **negation and refutation**, it is noteworthy that in almost all the several times that negation is used, the negative expressions are prosodically marked (the exception is the one within the external evaluation), which means that Darwish’s does not intend them to be mere tools for refutation, he does not emphasize negation arbitrarily. Since its final aim is certainty to what is denied, refutation is contained within assertive modality. Prosodically, it is often expressed by F0 increase, loudness and long duration. Thus, the **Maxim of Emphasis** is followed with most of negation cases. For instance: *ولم تتجاوز* whose intensity and F0 values are shown below.



**Figure 2.** The Prosodically Marked Negation in the 34<sup>th</sup> IP in Darwish’s “Scenario Jaahiz”



## 5. Conclusion

Both poets make use of all Hirschberg's Maxims employing them to serve the narrative segmentation and argumentation in their poems. Poets of two different linguistic/cultural backgrounds applying all the maxims cannot prevent affirming the high possibility of these maxims to be universal since they are based on biological codes. Gussenhoven's biological codes whose shared knowledge between speaker and hearer gives rise to a variety of intonational meanings find their augmentation in Hirschberg's maxims and are based on Gricean conversational implicature that much of the intonational meaning is context-dependent and defeasible. To interpret the intonational meaning, some empirical studies including this one look for regularities and could really find examples of regular associations between, for instance, increased pitch and new topics, or intonational prominence and perceived focus, but there are also counter examples when prosodic features have different interpretations. The analysis shows that along the two selected narrative poems in the two languages the same maxim could have two functions depending on the context. For instance, the maxim of phrasing makes use of high pitch accent and wide pitch range to start a new intonational phrase, topic, or narrative section, at the same time, in other contexts, it is used to give prominence to specific focused items (especially those items that considered new information) in the discourse.

Speakers have a set of choices that they may or may not select to build their argument. In spite of attempting to describe regularities based on some recurrence of certain prosodic features on both levels: the organizational and the argumentative within a narrative, the context-dependence, defeasibility, non-truthfunctionality of intonational meaning are inevitable and appear to justify its classification as a form of conversational implicature.

It is believed that the conclusions achieved can be easily extended to other languages.

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### المستخلص

يقدم هذا البحث دراسة للسمات العروضية والتأثيرات البراغماتية المرتبطة بها. يقوم البحث على فرضية أن هناك كودًا من السمات العروضية يتم فيه اختيار مجموعة من العناصر فوق المقطعية بشكل متعمد وواعي، ووضعها في علاقة ترابط مع كل من التراكيب النحوية، والخيارات المعجمية، والمعاني البراغماتية. ويعتقد أن السمات العروضية تعمل جنبًا إلى جنب مع الوسائل اللغوية والادوات البلاغة الخطابية من أجل تنظيم الخطاب السردي أولاً، وثانيًا لإبراز الجزء الجدلي في الخطاب السردي.

يتم من خلال هذه الدراسة وصف وتبرير السمات العروضية والمعاني التواصلية المحتملة المرتبطة بها بالإضافة إلى التأثيرات البراغماتية. تتمثل الدراسة في تحليل قصيدتين سرديتين بلغتين مختلفتين: الانجليزية والعربية. من المعتقد أن الإجراءات المنهجية المتبعة والاستنتاجات التي تم التوصل إليها يمكن أن تعميم إلى لغات أخرى.