A Prosodic Study of Question types in English and Arabic

دراسة نحوية صوتية لأنواع السؤال في اللغة الانكليزية و العربية

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Abstract

Prosody is one of the significant features of spoken language, that is, other than the basic segments (i.e., consonants and vowels), prosody affects the meanings of sentences through elements such as pitch, tone, rhythm and intonation. This study particularly deals with the intonation patterns that are used to designate different question types. This study makes such implications by a comparative prosodic approach with a special reference to question types in English and Arabic to point out the differences in prosodic cues that each language employs when requesting information. This will be done through the usage of the acoustic tool Praat, which is a widely used program in the studies of this nature. The results show that both YN-questions and declarative sentences in Arabic and English are characterized by rising and falling intonation styles respectively. However, a new insight was gained with the identification of the different intonation patterns of Wh-questions, where the Arabic language has a flatter pitch contour, whereas the English language has more significant pitch variation.

Key Words: Prosody, Intonation, Wh-questions, Pitch, Praat, Yes-No questions.

المستخلص

ان علم العروض من السمات المهمة للغة المنطوقة, اي انه بخلاف المقاطع الأساسية (اي الحروف الساكنة و الحروف المتحركة), فان علم العروض يؤثر على معاني الجمل من خلال عناصر مثل درجة الصوت, و النغمة و الايقاع و التجويد, و تتناول هذه الدراسة بشكل خاص انماط التنغيم المستخدمة لتعيين انواع الاسئلة المختلفة. و تتوصل هذه الدراسة الى مثل هذه الاستنتاجات من خلال نهج عروضي مقارن مع اشارة خاصة الى انواع الاسئلة في اللغتين الانجليزية و العربية للإشارة الى الاختلافات في انماط التنغيم التي تستخدمها كل لغة عند طلب المعلومات. و سيتم ذلك من خلال استخدام برنامج التحليل الصوتي praat, و هو برنامج يستخدم على نطاق واسع في دراسات هذا النوع. و تظهر النتائج ان كل من اسئلة YNQs و الجمل الاخبارية في اللغتين العربية و الانكليزية تتميز بأنماط النغمة الصاعدة و الهابطة على التوالي. ومع ذلك, تم الحصول على نظرة ثاقبة جديدة من خلال تحديد انماط التنغيم المختلفة لأسئلة Wh, حيث تتمتع اللغة العربية بمحيط نغمة اكثر تسطحا", في حين تتمتع اللغة الانكليزية بتنوع نغمة اكثر اهمية.

الكلمات الاساسية: علم العروض، التجويد، اسئلة النطق, درجة الصوت, اسئلة نعم و لا.

1. Introduction

This paper deals with the prosodic features that are interrelated with specific types of questions in both the English and Arabic language. Prosody forms the core of spoken language (Said, 2021, p. 501), thus, it is not limited to some phonetic components, but rather, it carries great importance in meaning making through pitch, tone, rhythm, and intonation. In this study, the researcher will examine the differences among these prosodic elements as well as their role in the comprehension of both English and Arabic through the fraction of this information, i.e., the intonation patterns that are unique to question types.

Building on the results of the previous studies of Arabic language varieties, an investigation for the role of prosody in the meaning of questions in relation to different language systems will be tackled. This approach is the combination of polysystematic principles, which means that prosody is the uppermost tier in spoken language. Through the juxtaposition and analysis of prosodic features: rising, falling, and neutral tones, this research seeks to show both the universality and the linguistic peculiarities of prosody that are involved in the question-making in English and Arabic.

1.2. Significance of the Study

This study is important because it may contribute to a better understanding of distinguishing between the two types of question prosody in the languages of two different linguistic families. Arabic and English are very different in their phonological and syntactic structures, but the prosodic features associated with the question in both languages may be useful in understanding how speakers convey meanings beyond the words themselves. Apart from accentuating the theoretical knowledge in phonetics and linguistics these features also have practical implications for fields like language teaching cross-cultural communication and translation studies.

Aside from that, this research aim to fill a lacuna (i.e., the lack of faceting studies) in the a comparative prosodic analysis of the Arabic language with the English language utilizing the different intonation patterns to indicate the question types. Because of the great variety of prosodic characteristics in the Arabic language, it is possible that this study will reveal the most effective ways of contrastive phonology between Arabic and English, thereby aiding the research of second language acquisition and the automated speech recognition systems.

1.3. Research Objectives

This study aims to achieve the following objectives:

1- Identifying and categorizing the prosodic features in different question types in both English and Arabic. This means that this study is going to analyze tone, pitch and stress patterns that are associated with different question structures, such as yes-no questions and wh-questions to determine language - specific characteristics.

2- Comparing the use of rising and falling intonations in different question types in both English and Arabic. This is important to discover whether there are universal intonational cues for questioning or if there are distinct differences between these languages.

2. Literature Review

2.1 Question Types in English

Prosodic features are highly important in English in the process of distinguishing between the different types of questions, such as yes-no questions, wh-questions, and tag questions. English sentence tunes often utilize the raising and lowering of pitches to show which question types and intentions the speaker has. For

example, a yes-no question uses a rising tone of voice mostly, while wh-questions often have a descending tone, which sometimes has meaning of requesting or confusing kind of attention.

English intonation is flexible enough in how the speakers place stress on different morphemes, as well as higher or lower pitch, to modify the meaning of questions. In the case of the spoken English dialect, even the smallest variations of stress can lead to a change in word function, as in "record" (noun) versus "record" (verb), which is equally accounted for in the Arabic dialects (Rogers, 2000, p. 88). The power to draw out variance in metrical and tonal elements in English is an important intuitive route to recognizing question intonation and complying with intricate interrogative forms that interject subtle nuances akin to surprise or politeness in the dialog.

2.2 Question Types in Arabic

Arabic questions exhibit a rich prosodic and syntactic structure that enables speakers to distinguish between different types of questions through both intonation and linguistic cues. The following primary question types are prominent in Arabic: Yes-No Questions, Wh-Questions, Rhetorical Questions, and Embedded Questions.

Yes-No Questions (YNQs): Yes-No Questions are characterized by their binary answer format, requiring only a "yes" or "no" response. In Arabic, they are often introduced by the particle hal, though it is not always necessary. Prosodically, Yes-No Questions typically feature a rising intonation towards the end of the utterance, which serves to signal the interrogative nature of the question (Shriberg, 1998, p. 75). For instance, "Hal taqra'u al-kitab?" (Do you read the book?) illustrates the typical use of hal and rising intonation to prompt a Yes-No response.

Wh-Questions: These questions involve interrogative words such as Aish (What), Mata (When), Man (Who), Ay (Which), Wain (Where), and Laish (Why) to seek specific information beyond a simple "yes" or "no" (Narayanan, 2005, p. 294). Wh-Questions in Arabic, as in other languages, commonly have a falling intonation at the end of the utterance, marking the question as complete and signaling a request for specific information rather than confirmation. An example of a Wh-Question is "Mata tanzilu ila al-madina?" (When will you go to the city?).

Rhetorical Questions: Unlike other question types, Rhetorical Questions in Arabic do not seek an actual response. Instead, they are used to emphasize a point or convey a specific attitude, often with an implied answer that is understood by the listener. The prosodic pattern here can vary, as the intent is more to stress the speaker's message

than to elicit information. For example, "Hal ta'tiqid anna hada sahih?" (Do you really think this is correct?) illustrates a rhetorical form where the speaker's intonation and emphasis suggest a level of disbelief, thereby not anticipating an answer.

Embedded Questions: Embedded Questions in Arabic appear within larger declarative or interrogative sentences and are not intended as direct questions in their context. Although they may contain interrogative words, they do not alter the overall sentence into a question form. For example, "Ana la a'rifu mata ja'a." (I don't know when he came). In this instance, the embedded question "mata ja'a" (when he came) serves as part of a declarative sentence rather than a direct query.

2.3 Prosodic Cues in Arabic Question Types

Prosody which includes the instruments such as pitch, tone, and intonation is an integral part of the language in terms of distinguishing among the Arabic question types. As far as Yes-No Questions are concerned, they predominantly take on the form of a rising pitch at the end, which has elements of prosody that are in line with many languages like English and German (Shriberg, 1998). In contrast, the final tone ending in a falling direction is the identifying marker in Wh-Questions, which is a feature shared by languages that leads to further differentiation of the information-seeking and confirmation-seeking phrases by the listeners. The different prosodic patterns of Rhetorical Questions and Embedded Questions may be among the elements of these that are affected by the main point of each question. However, they may still have prosodic patterns that are Informatics-driven (ibid).

Besides that, the acoustic properties of Arabic questions may be the tonal differences along with the temporal differences in syllable duration and the variation of the energy distribution; thus, the language can be spoken more subtly Yuan and Jurafsky, 2005. Understanding of the aforementioned prosodic features serves as a major step in clearly defining how the Arabic speakers utilize tone and intonation to structure the meaning as well as emphasis in the interrogative settings.

2.4 Previous Studies

Diversified research has presented studies of Arabic interrogative constructions, prosody, and their underlying syntactic and semantic functions that provide a better understanding of how Arabic is used in different contexts to convey meaning in a question. Researches on the question types in Arabic have revealed the unique syntactic and prosodic aspects of this language that have been found to influence the way it is communicated and understood among the Arab-speaking people.

Shriberg and their colleagues take the syntactic and prosodic structural analysis of Arabic question frames with a focus on Yes-No Questions and Wh-Questions. They observed new acoustic features including patterns of pitch, tone, and intonation which varied with the question types investigated; thus, Yes-No Questions frequently revealed a rising pitch at the utterance's end (Shriberg, 1998). Their study emphasizes how prosodic cues enable the listener to recognize a question's search for confirmation or specific information. This investigation employed the Arabic question forms as well as the differences between other languages' question formats and prosody which play an important role in cross-linguistic studies of questions.

Lee and Narayanan (2005) explored the pragmatic role of rhetoric in Arabic language. Rhetorical Questions in Arabic, Unlike Wh- or Yes-No Questions, help the loquacious person express his attitude rather than extract the information that is needed. This research investigated the tonal variations that occur in rhetorical questions which actually don't have the up and down tone typical of information questions. The study of Lee and Narayanan showed how the Arabic speakers deploy rhetorical questions to subtly express doubt, give more stress on disbelief, or simply indicate criticism. Their findings refer to the mastery of Arabic discourse and how rhetorical questions implicate one's speech (Narayanan, 2005, p. 150).

Yuan and Jurafsky (2005) investigated the acoustic characteristics of the Arabic intonation of a question along with others including pitch, duration, and energy distribution. They pointed out that the Arabic Yes-No Questions are usually accompanied by a slight lengthening of the final syllable and a pitch rise, whereas Wh-Questions mainly have a falling tone. The results contribute to a more general understanding of the function of acoustic properties in Arabic question formation, showing how these features are used to recognize the types of questions by the hearer and facilitate effective communication in the language (Jurafsky, 2005, p. 289).

3. Methodology

The present study employs a comparative prosodic approach to the analysis of question types in both English and Arabic languages, considering the prosodic cues in each language such as intonation, pitch, duration, and stress patterns for the distinction of question forms.

3.1 Analytical Framework

3.1. Intonational Phonology

The Autosegmental-Metrical (AM) framework is adopted from the theories of intonational phonology, whose first formulation by Pierrehumbert (1980) has been followed by further development in Ladd (1996)'s. The model gets tonal patterns into prosodic units which are the basic of utterances. Through the application of AM methodology, the research is conducted on pitch movements and boundary tones in English and Arabic in order to inform the types of questions, namely Yes-No Questions, Wh-Questions, and Rhetorical Questions, that the.

In addition to the above modeling, this one also helps in the strict demarcation of prosodic markers, final rising tones, plummeting tones, as well as pitch accents, that are specific to each language.

Studies in Arabic by Shriberg et al. (1998) and Al-Ani (1970) have indicated that intonational patterns are the enormous factor in the identification of questions, where Yes-No Questions are usually marked by specific pitch contours, while Wh-Questions are relatively flat. These patterns are then compared to English question intonation which is, also, explained in the AM framework, to reveal both the peculiarity of the languages in terms of prosodic features and the universality (Shriberg, 1998).

3.2. Acoustic Analysis Tools

The framework employs acoustic analysis tools, such as Praat, to quantitatively measure pitch, duration, and intensity in recorded question samples. Acoustic analysis is crucial for capturing subtle prosodic distinctions between question types in each language. Metrics such as mean pitch, pitch range, and syllable lengthening are examined to uncover how prosodic variation conveys distinct questioning intent. For instance, Arabic Yes-No Questions are expected to show rising final pitch, while English Wh-Questions generally maintain a falling intonation, as documented in (Jurafsky, 2005).

4. Analysis and Discussion

This study focused on analyzing 6 sentences, two of which are not questions, in order to highlight the difference between the questions and statements. The other 4 questions are intended to exhibit a variety of questions' types in Arabic and English.
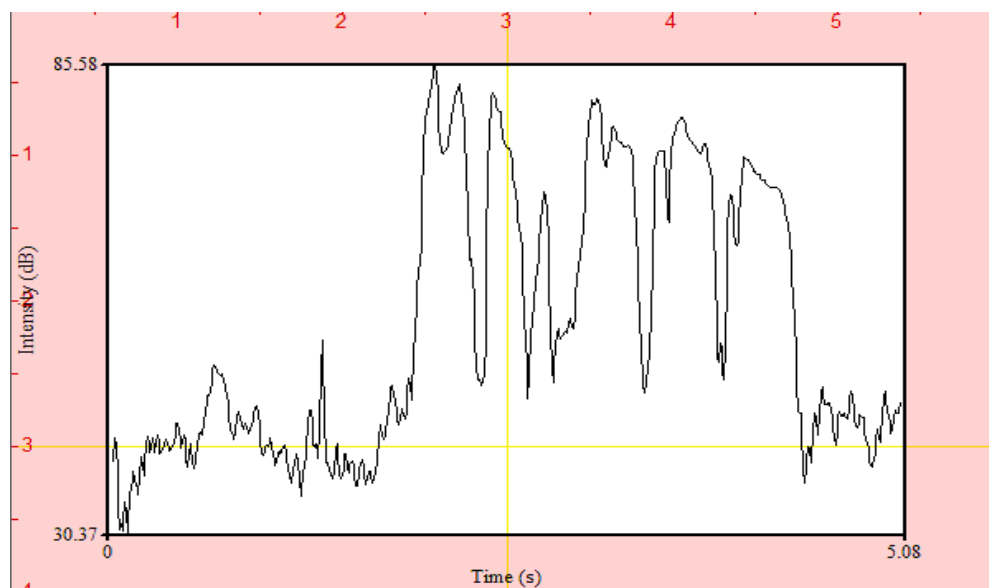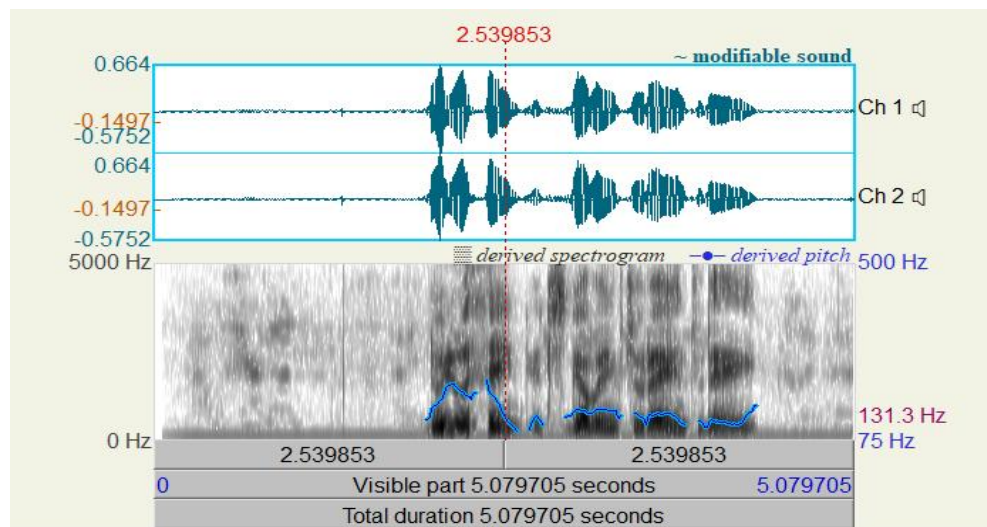
1. "Do you think it's going to rain today?" Spectrogram (1)

Yes-No Question

Intonational Phonology (AM Model): According to the Autosegmental-Metrical model, we see a rising pitch contour towards the final syllable in a Yes-No question. This typically signals that the speaker is unsure and seeking confirmation. In English, the final pitch movement also rises.

Acoustic Analysis: In Praat, we observe a higher mean pitch at the end of the sentence compared to the beginning. The pitch range is also broader, with syllable lengthening towards the end of the question "today" indicating uncertainty and inviting a response.

Spectrogram (1): Pitch and Intensity in Sentence 1:

Interpretation: The rising pitch at the end of this question invites a simple yes or no response. It's likely to have a higher peak around the word "today" (final word of the

question), marking the question's closure. This type of questioning reflects a typical English pattern of intonation for Yes-No questions.
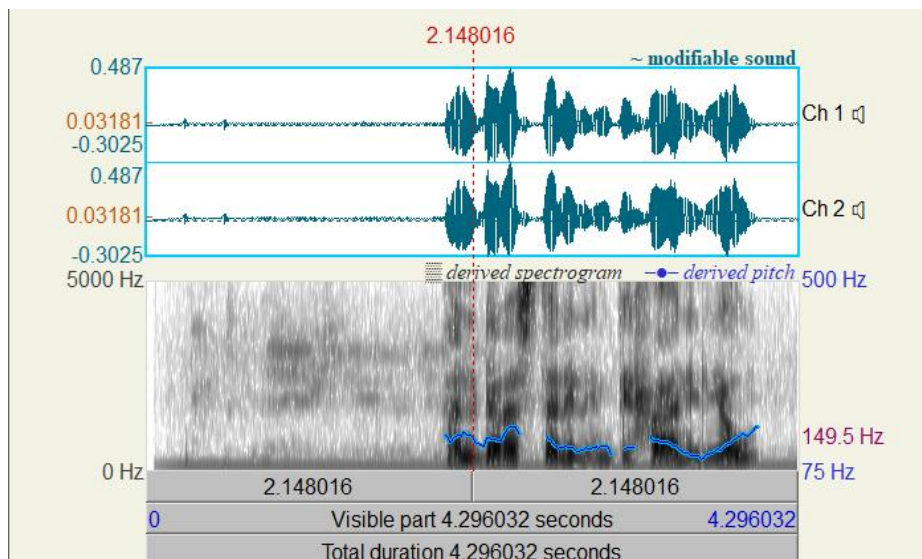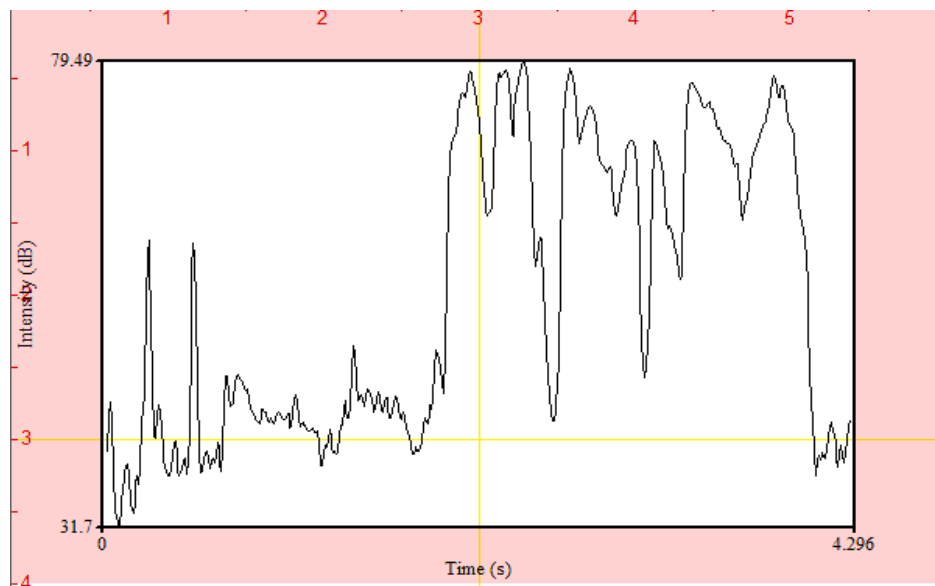
2. Spectrogram (2)   "اليوم؟ للامتحان درستَ هل"

Yes-No Question

AM Model: A rising pitch towards the end of the sentence marks this as a Yes-No question. The pitch rise is placed at the final word "اليوم."

Acoustic Analysis: We observe a rising pitch on "اليوم," with syllable lengthening towards the end, marking this question as inviting a response.

Spectrogram (2): Pitch and Intensity in Sentence 2:

Interpretation: The rising pitch at the end signals a Yes-No question, where the speaker is seeking confirmation about whether the listener has studied for the exam. This pattern mirrors the rising pitch in English Yes-No questions.
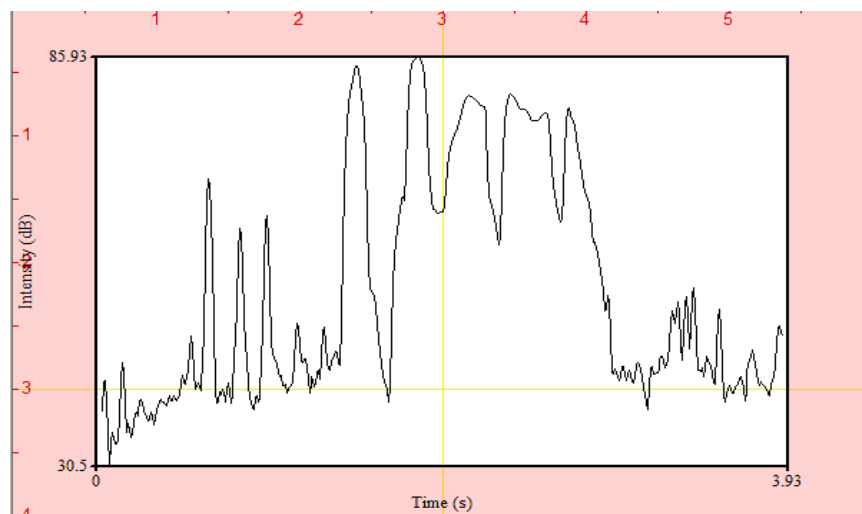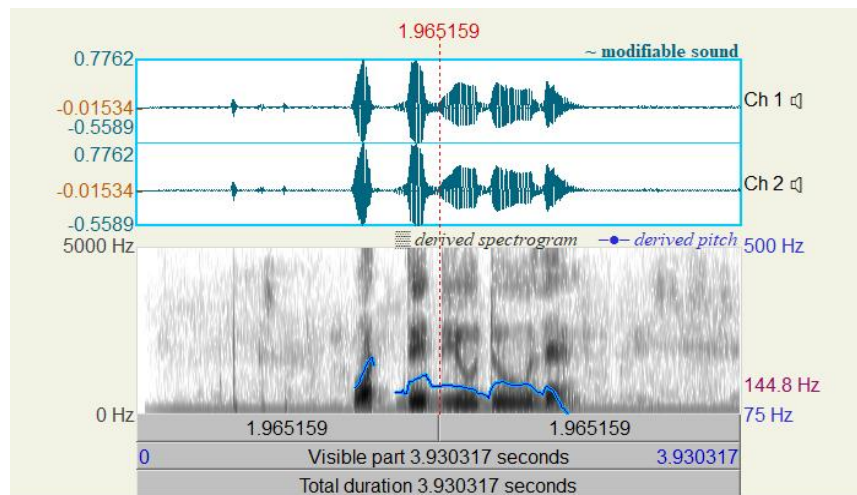
3. "What did you do then?" Spectrogram (3)

Wh-Question

Syntactic Structure: This is a Wh-question, marked by the use of the question word "What" at the beginning of the sentence, followed by the auxiliary verb "did" followed by the subject "you."

Intonational Phonology: Wh-questions in English typically exhibit a falling intonation towards the end of the question, with the pitch movement being most prominent on the final stressed syllable. In this case, the final stressed syllable is "then."

Acoustic Analysis: Using Praat, we notice a drop in pitch at the end of the question, with a relatively level or slightly declining contour towards the end of the phrase "then." The pitch is lower than the pitch peak during the stressed syllables, such as "do" in "do you."

Spectrogram (3): Pitch and Intensity in Sentence 3:

Interpretation: The falling pitch at the end of the question signals a complete thought, as Wh-questions in English generally tend to have a falling intonation. This is in contrast to Yes-No questions, which typically exhibit rising intonation. The falling intonation here helps to mark the Wh-question as seeking specific information, with the expectation of an informative response rather than a simple "yes" or "no."
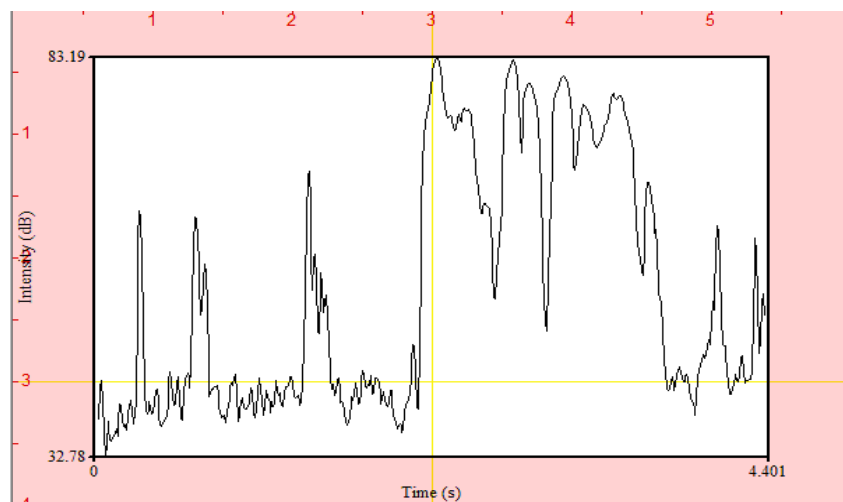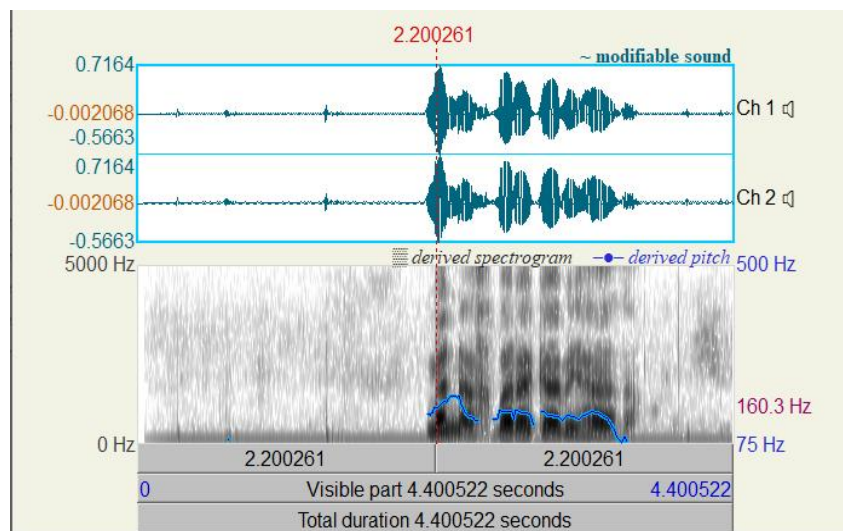
4. من" أخبرك   "بهذا؟" Spectrogram (4)

Wh-Question

Syntactic Structure: In Arabic, the question word "من" (who) comes at the beginning of the sentence, followed by the verb "أخبرك" forming a Wh-question structure. In contrast to English, Arabic Wh-questions do not use auxiliary verbs.

Intonational Phonology: In Arabic, the pitch typically falls towards the end of a Wh-question as well, though the pitch contours is more subtle compared to English. In this case, the intonation starts high and drops towards the final stressed syllable, which is "بهذا" (this). This is consistent with the general tendency of Arabic Wh-questions to have a falling intonation at the end.

Acoustic Analysis: Similar to English, the pitch drops on "بهذا," with a higher pitch earlier in the question, particularly on "من" (who). The duration of the final word "بهذا" is lengthened slightly to emphasize the importance of the question. The drop in pitch towards the end signals the completion of the inquiry.

Spectrogram (4): Pitch and Intensity in Sentence 4:

Interpretation: The falling intonation at the end of the Arabic question indicates that the speaker expects a specific answer and is not seeking a simple "yes" or "no" response. Like in English, the falling pitch on the final word marks the closure of the question, signaling the end of the inquiry and inviting an informative response.

4.1 Comparison of English and Arabic Wh-Questions

Both English and Arabic Wh-questions share a common prosodic feature of falling intonation, typically toward the end of the sentence. In English, this fall is more prominent and often accompanied by a marked drop in pitch towards the final stressed syllable, which in this case is "then." In Arabic, the pitch similarly falls towards the final word "بهذا," but the intonation might not be as steep or broad as in English, depending on the dialect.

In both languages, the final word (in English, "then," and in Arabic, "بهذا") would exhibit a drop in pitch. However, the range of pitch variation is more pronounced in English due to its use of a broader pitch contour, whereas Arabic demonstrates a more gradual fall in pitch. The duration of the final word could also be lengthened in both languages to signal the closure of the question.

Both languages use falling intonation to signal a Wh-question, but English tends to have more marked pitch movements, particularly at the end of the question. Arabic, while following a similar pattern, exhibits less dramatic pitch variation, and the intonation could be more neutral depending on the dialect or regional accent.
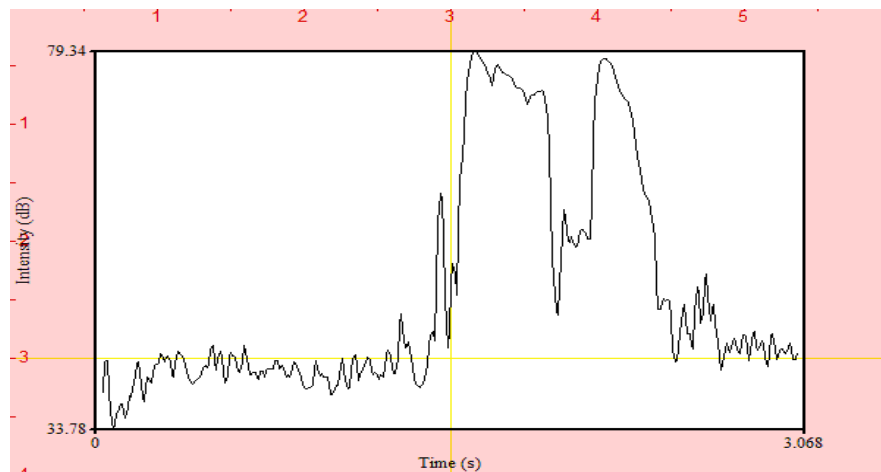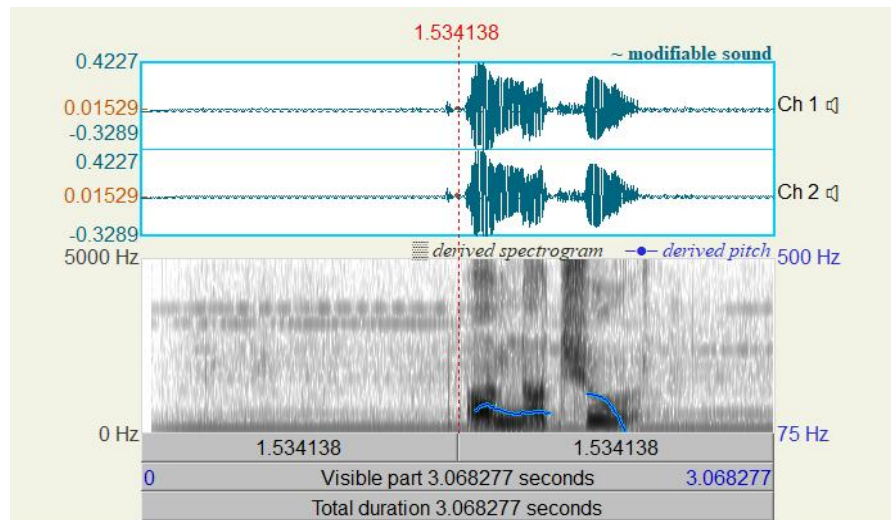
5. "I'm not sure" Spectrogram (5)

This phrase is a declarative statement, not a question. It could function as a softening or hedging expression when used in conversation, signaling uncertainty.

The intonation of "I'm not sure" in English would typically follow a falling intonation pattern, especially when it's used as a statement. The pitch begins relatively higher and falls at the end, signaling the completion of the thought.

Acoustic Analysis: The pitch in "I'm" starts at a mid-to-high level, and the pitch decreases slightly as the speaker reaches "sure." The final word, "sure," is slightly lengthened and is generally pronounced with a lower pitch, indicating the end of the utterance.

Spectrogram (5): Pitch and Intensity in Sentence 5:

Interpretation: This falling intonation on the final syllable of "sure" marks the completion of the statement. The drop in pitch gives the impression of certainty or a definite conclusion, even though the content of the phrase expr0esses uncertainty. The falling intonation is typical of declarative sentences in English, which contrasts with the rising pitch found in questions.
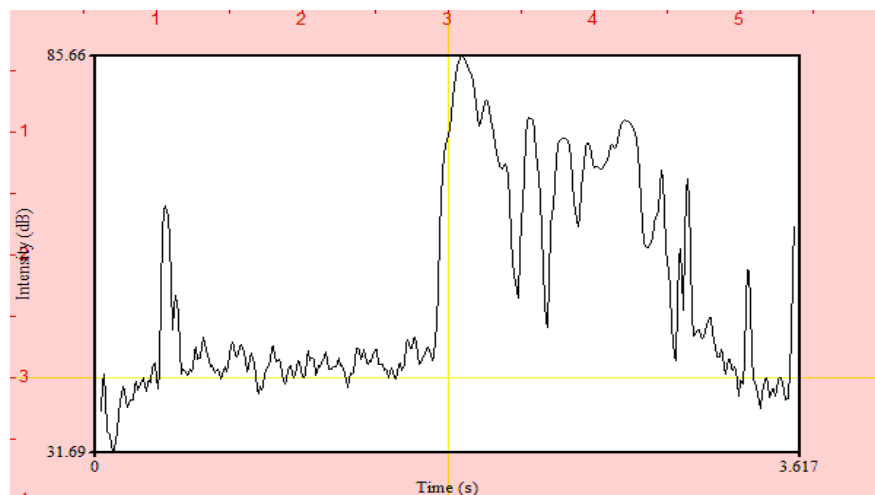
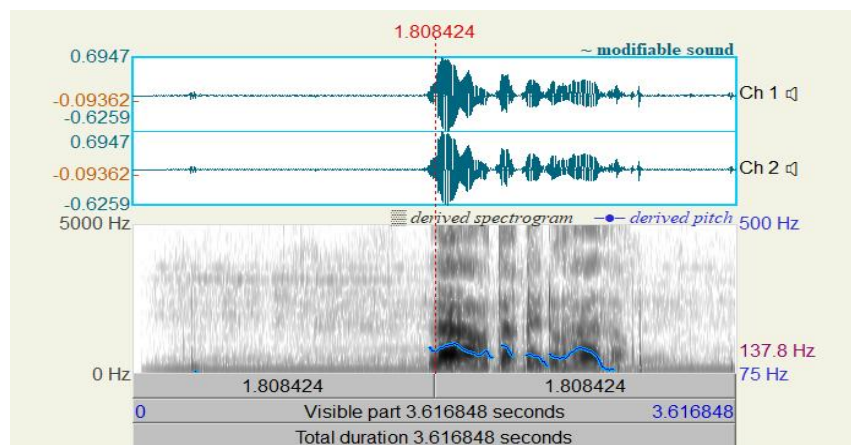Spectrogram (6)   "هذا أعتقد "لا. ٦

This phrase is also a declarative sentence. It expresses uncertainty or disagreement, but it is not a question. The phrase functions similarly to the English "I'm not sure," conveying doubt or a lack of conviction.

In Arabic, the intonation for the phrase "لا أعتقد هذا" involves a slight fall in pitch towards the end, similar to the English phrase. The pitch starts at a higher level, particularly at the beginning of "لا" (No), and then gradually falls towards the final word "هذا" (this).

The pitch begins with a slight rise at the start of "لا" (No) and then falls towards the final syllable "هذا" (this), which is typically the most stressed syllable. The final syllable "هذا" has a slightly longer duration compared to the rest of the phrase, emphasizing the conclusion of the statement.

Spectrogram (6): Pitch and Intensity in Sentence 6:

Interpretation: Like in English, the falling pitch towards the end of "لا أعتقد هذا" marks the end of the statement. The fall in pitch helps signal the completion of the utterance and provides a sense of finality, even though the content expresses uncertainty. This pattern is consistent with how Arabic declarative sentences generally end, with a falling intonation.

4.2 Comparison of the English and Arabic Phrases:

Both phrases follow a falling intonation pattern. In English, "I'm not sure" falls on the final stressed syllable "sure," while in Arabic, " اذا " falls towards the end on the word "هذا" (this).

In both cases, the falling pitch serves to mark the end of the utterance, indicating that the speaker has finished their thought. This type of intonation is typical of declarative sentences in both languages.

The phrase "I'm not sure" will likely show a clear pitch drop from "I'm" to "sure," with "sure" being slightly lengthened and having a lower pitch. Whereas the phrase " لا أعتقد هذا" also exhibits a pitch fall towards the end, with "هذا" being the most prominent syllable. The duration of the final syllable "هذا" may also be lengthened, signaling the end of the phrase. The acoustic analysis in both languages shows a similar prosodic pattern, where the final word is emphasized, signaling the end of the utterance.

Both phrases use falling intonation to signal a completed statement. The falling pitch in both languages helps to mark the phrase as declarative and not a question, even though both phrases express uncertainty.

There is a slight difference in the pitch range: English tends to use a more noticeable drop in pitch, especially towards the final stressed syllable. Arabic, on the other hand, has a more subtle fall, depending on the dialect.

5. Findings

The findings show that the key characteristics that distinguish different types of questions and statements in English and Arabic are :

Arabic: "هل درستَ للامتحان اليوم؟":

This question is marked by rising intonation at the end of the phrase. The pitch begins relatively low at the start and rises towards the end of the question, with the final syllable of "اليوم" (today) exhibiting a noticeable increase in pitch. This rising pitch serves as a clear prosodic marker indicating the interrogative nature of the question in Arabic. The pitch rise aligns with the typical prosodic pattern for Yes-No questions in Arabic, where the rising tone suggests an inquiry.

English: "Do you think it's going to rain today?":

Similarly, in English, this question ends with a rising intonation. The final word "today" is stressed and features a rise in pitch, signaling that the sentence is a Yes-No question. English Yes-No questions tend to have a final rising pitch contour, indicating that the speaker is seeking confirmation or information.

Both sentences exhibit rising intonation, marking them as Yes-No questions in their respective languages. However, the pitch range and specific rise may differ slightly due to language-specific intonational rules.

In Wh-questions, we observe that:

Arabic: "من أخبرك؟ بهذا؟":

The Arabic Wh-question shows a relatively flatter intonation throughout, with a slight rise in pitch toward the end of the sentence. Unlike the Yes-No questions, this Wh-question does not exhibit a sharp rise in pitch at the end, but rather a subtle increase near the final word "بهذا" (this). The pitch remains relatively consistent throughout the phrase, indicating that the sentence is a Wh-question, which typically does not require the sharp final pitch rise characteristic of Yes-No questions.

English: "What did you do then?":

In English, this Wh-question starts with a higher pitch on "What" and follows with a general fall in pitch after the stress on "do." The final part of the sentence, "then," exhibits a lower pitch compared to the start, reflecting the intonation patterns typically seen in Wh-questions. The falling intonation towards the end contrasts with the rising pitch in Yes-No questions, signaling that this is an information-seeking question rather than a confirmation-seeking question.

The key distinction between Wh-questions in both languages lies in the difference in pitch rise and fall. While the Arabic Wh-question tends to maintain a flatter pitch contour, the English Wh-question shows more marked intonational movement, with pitch variations signaling the different syntactic components of the question.

Intonational Features in Declarative Statements:

When analyzing declarative statements, both languages display falling intonation, yet subtle differences in pitch and duration emerge:

Arabic: "هذا أعتقد لا":

The Arabic declarative statement expresses doubt or uncertainty and ends with a falling intonation pattern. The pitch starts relatively high at the beginning of "لا" (No), and then falls towards the final stressed syllable "هذا" (this). The fall in pitch signals the completion of the thought, marking the statement as declarative. The final syllable "هذا" is slightly lengthened, emphasizing the conclusion of the phrase.

English: "I'm not sure":

Similar to the Arabic example, the English phrase follows a falling intonation pattern. The pitch begins at a mid-high level and falls towards the end, particularly on the word "sure." This drop in pitch marks the end of the statement, giving a sense of finality to the speaker's uncertainty. Although the content of the phrase expresses doubt, the prosody suggests that the speaker is not seeking further clarification.

Both of these declarative statements use falling intonation, which signals the completion of the thought. The final pitch drop in both languages provides a sense of certainty, despite the content suggesting uncertainty. The prosodic feature of finality is common in both English and Arabic, reinforcing the declarative nature of the sentences.

Final Intonation Patterns and Pitch Contours:

Yes-No Questions in both languages exhibit rising intonation at the end, signaling that the speaker expects confirmation or information. This is especially noticeable in "هل

درستَ للامتحان؟ "اليوم" and "Do you think it's going to rain today?" where the final syllable or word shows a significant rise in pitch.

Wh-Questions in both languages display variations in pitch, with English showing a clearer falling intonation towards the end of the sentence (as in "What did you do then?"), while Arabic shows a subtler rise at the end of the phrase (as in "من أخبرك بهذا؟"). This difference reflects the linguistic features of the two languages, where Arabic Wh-questions tend to have a flatter intonation compared to the more varied pitch contours of English Wh-questions.

Declarative Statements in both languages, such as "لا أعتقد هذا" and "I'm not sure," end with a falling intonation, signaling the end of a thought. Despite their uncertainty or doubt, both phrases are marked by finality in their intonation, which contrasts with the rising pitch of questions.

6. Conclusion

This study is evidence that there are prosodic differences as well as similarities between English and Arabic question types and declarative sentences. The report mentions that the two languages use increasing pitch for Yes-No questions and decreasing pitch for declamatory statements. Nevertheless, there are obvious different intonational patterns of Wh-questions coming from the two languages because Arabic tends to follow a flatter pitch contour whereas English has more evident pitch changes. Such prosodic cues are critical for separating the question types and statement forms in the two languages thus offering a vital component in the comprehension process.

References:

Jurafsky, Y. a. (2005).

Narayanan, L. a. (2005).

Rogers. (2000).

Rogers. (2000, p88). *The sounds of language: An introduction to phonetics.* . Pearson Education.

Said, I. (2021, 8 23). A Study of English Transcription Mistakes Committed by Students at University Level. *Journal of Al-Frahedis Arts*, pp. 509-518.

Shriberg, E. B.-D. (1998). *Can prosody aid the automatic classification of dialog acts in conversational speech. Language and Speech, Special I.*