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A CONTRASTIVE ANALYSIS OF ENGLISH AND PERSIAN INTONATION*

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1. Introduction

In this paper, the intonation systems of both American English (AE) and Persian will be contrasted. To achieve this purpose, the following points will be of importance:

From the theoretical standpoint, the first objective of the paper is to predict the problems of Iranian speakers in producing the correct patterns of English intonation. This study, therefore, may help the language teachers, course designers and others involved in the language learning/teaching program to base their materials on the predictions.

Throughout the analysis, intonation of English and Persian utterances produced in context-free situations will be in focus, though there are some other cases such as importance, complaint, ridicule, doubt, etc. where varieties of the same pattern are used depending on the situation (for details see Hayati, 1995). Therefore, a full detailed descriptive analysis of intonation is left to other researchers.

For the sake of clarity and simplicity the whole analysis will be conducted on three levels of structure: Simple, Compound (sentences combined by conjunctions such as and, but, and or), and Complex (embedded sentences).

The contrastive analysis hypothesis suggesting that the degrees of similarity and difference correspond respectively to the degrees of simplicity and difficulty was assumed throughout the paper. A second objective of the paper is to evaluate this hypothesis by means of a simple experiment.

The following abbreviations have been used in the paper: VS (verb stem), V (verb), N (noun), O (object), ADV (adverb), OM (object marker), COP (copula), SUB (subject), QW (question word), TAGM (tag marker), VPT (verb particle), VPR

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(verbal prefix), PP (personal pronoun), NEG (negative marker), VR (verb root), PST (past tense), ADV (adverb), NIS (nominal indefinite suffix), PREP (preposition), EPE (enclitic personal ending), SR (suffix of relation), RM (relative marker), N (noun), EIN (esafe inflection), PC (present continuous marker), ? (glottal voiced stop).

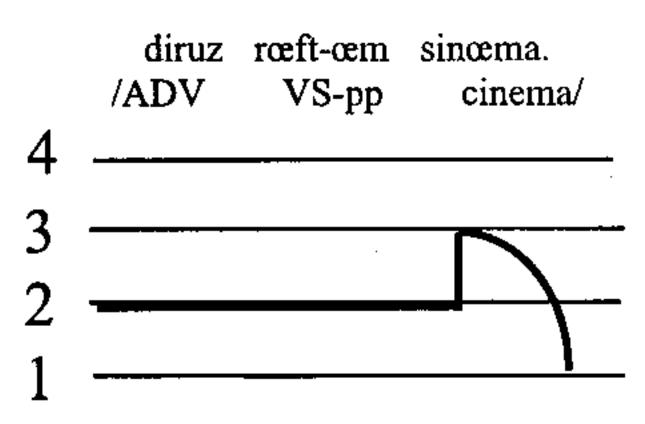
2. Contrastive Analysis

2.1. Simple sentences

In relation to simple sentences, some common sentence types such as statements (negative and affirmative), questions (interrogative and yes/no), and question-tags will be illustrated in turn. This will be followed by contrasting the compound and complex sentences of the two languages.

2.1.1. Declaratives

The intonation pattern of declaratives which normally state a fact about something or somebody seems to be similar in one aspect and different in another in the two languages. That is, as far as the final part of the sentences is concerned, statements are produced with a falling intonation. However, since stress plays a significant role in describing intonation, the intonation graphs of English and Persian statements will differ in some areas.

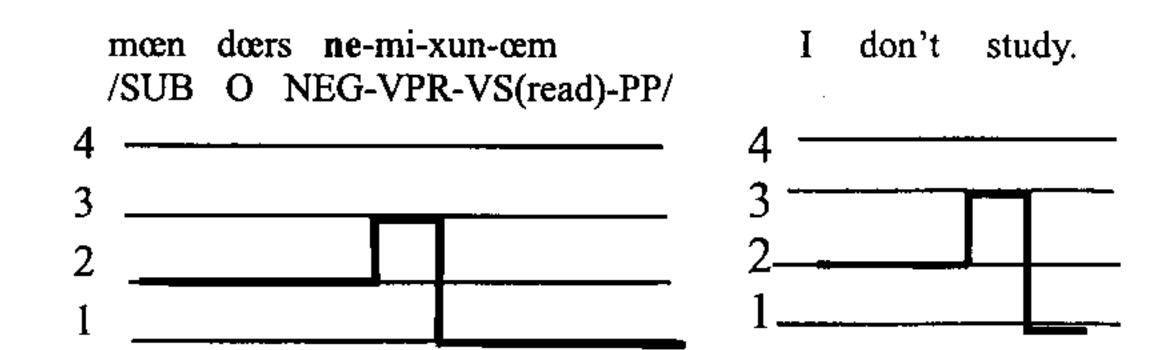


(Yesterday, I went to the cinema.)

In regard to negation, since in Persian the negative prefix attracts the primary stress over itself, the pitch contour naturally changes.

On the other hand, the intonation of AE statements (affirmative and negative) is said to follow a /2 3 1/ pattern. It begins on pitch level 2, rises to pitch 3, and then either steps down or glides down to pitch 1, depending on the number of syllables on which the change occurs.

As a result, concerning affirmative statements, there is no serious difference, i.e. both languages have a falling intonation at the end of the sentence. In negative statements, however, the intonation patterns do not seem to be exactly the same, though they are falling at the end. This is because in Persian, the negative markers $/n\alpha$, ne, $m\alpha$ / bear the primary stress thus causing a pitch change over negation prefixes.



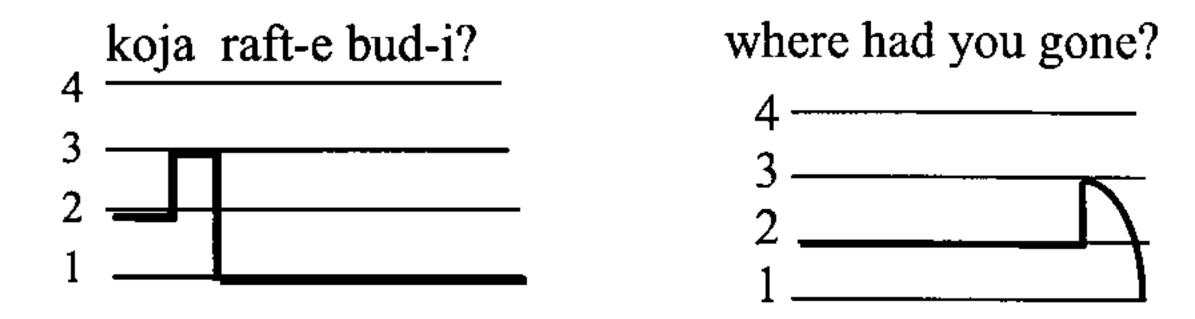
2.1.2. Questions

Questions in Persian, as in many other languages, are of two types: wh-word (which elicits a particular kind of oral response) and yes/no (which elicits a certain response normally selected from yes or no). Each of these categories has certain intonation patterns. However, it is not a rule of thumb because they can be expressed with various pitch contours denoting different meanings, e.g. echo questions.

There are some interrogative words such as če (what), ke or ki (who), čera (why), četor (how), kei (when), kodam (which), čænd (how many), čeqædr (how much), ku or koja (where) which carry the primary stress in any normal Persian question; consequently, the pitch changes occur where the interrogative words are located. In addition, when word order changes, the intonation pattern remains the same. A final point to mention in this regard is that they have a falling tone at the end.

On the other hand, the intonation of English wh-questions follows that of statements, i.e. /2 3 1/ with the question words such as who, what, when, why, etc. usually carrying the secondary stress.

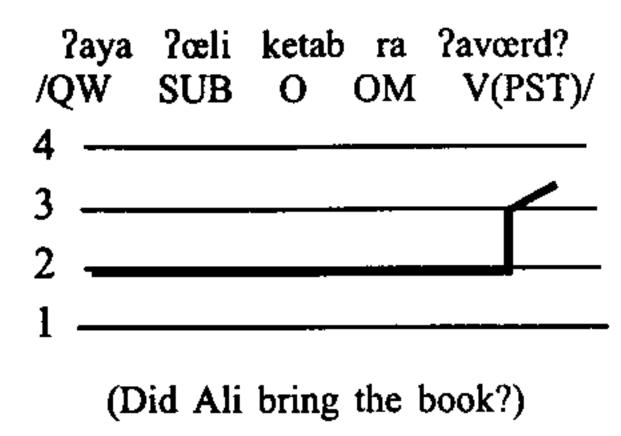
In regard to wh-questions, there again seems to be no difference between the two languages as far as the final part of the sentence is concerned, i.e. both end the question with a falling intonation. Nevertheless, since stress has a determining role in the segment, in perspective there would appear a distinction in intonation. In Persian, the voice rises on the question word whereas in English it glides up on the content word.



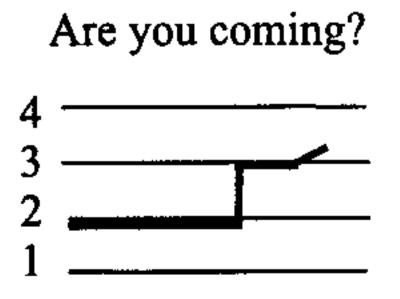
2.1.3. Yes/no questions

Unlike what is true in English and many other languages, yes/no questions are not produced by changing the word order in Persian. (Except for the question word

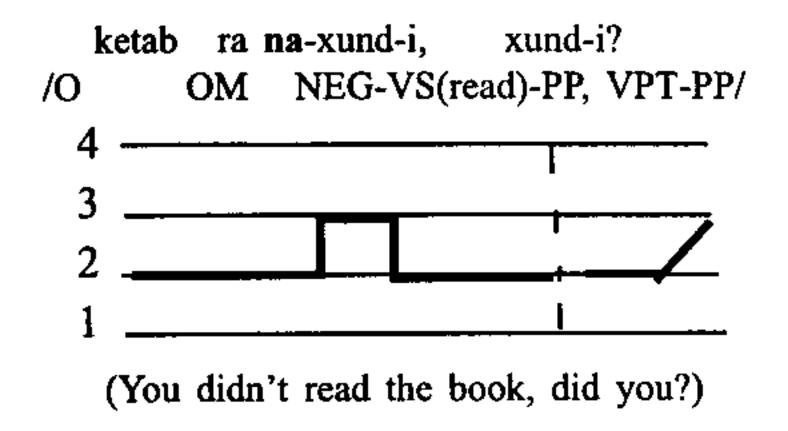
?aya which comes at the beginning in formal cases.) Instead, it is the intonation pattern which directs the sentence into a question form, i.e. the question ends with a rising tone. As a matter of fact, the speaker has some idea about the message and accordingly s/he is intending to receive some confirmation or rejection to her/his question.



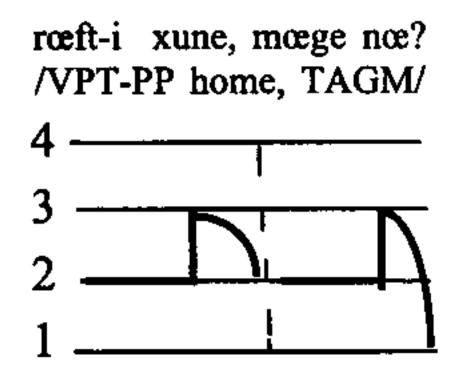
In English, a yes/no question is made by making a change in the word order of the statements. In speech, however, it is often the tone variation which distinguishes it from other sentence types: the question begins on pitch level 2, then steps up to level 3, and then either steps up or glides to a slightly higher position (see Prator and Robinett 1972: 56, Pike 1945, Gimson 1975, O'Connor 1967, Cruttenden 1986, Kreidler 1989, and others).



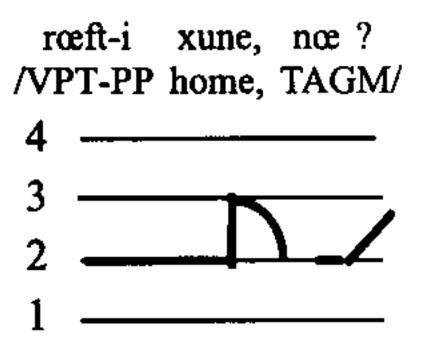
Moreover, question-tags seem to be another structural and tonal subdiscipline which belong to the category of yes/no questions. In Persian, there are two varieties of question-tags: if the tag is expressed with a rising tone, the speaker is seeking information; nevertheless, when s/he uses a falling intonation, confirmation of the idea is of concern.



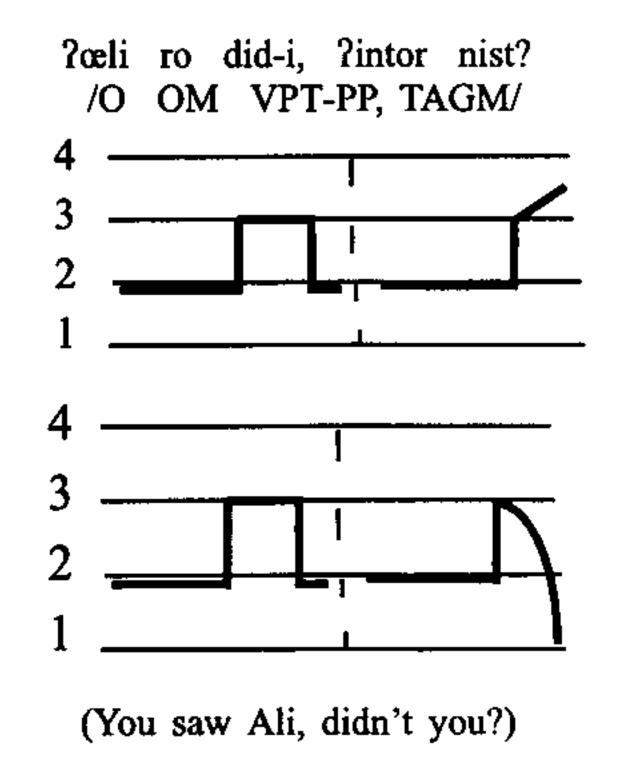
At times, there are some special words and phrases such as mæge næ, næ, or ?intor nist, used as question tags at the end of the sentence.



(You went home, didn't you?) [often falling]

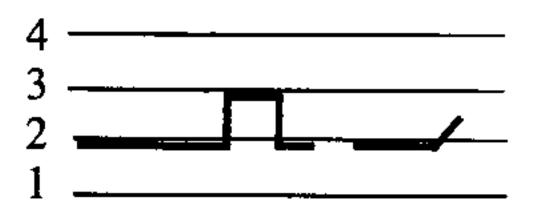


(You went home, didn't you?) [often rising]



Furthermore, concerning the question-tags in English, two different intonation patterns could be considered, i.e. rising and falling. In the case of the former, the speaker is asking for information (2 3 2|2).

You can do it, can't you?



In the second alternative, one is probably a little more sure that s/he is trying to get the confirmation s/he expects: /2 3 1|3 1/. In other words, when the speaker says 'You can do it, can't you?' with a falling intonation, it could imply that s/he knows that the listener 'can do it'. The speaker is then asking for confirmation of the idea.

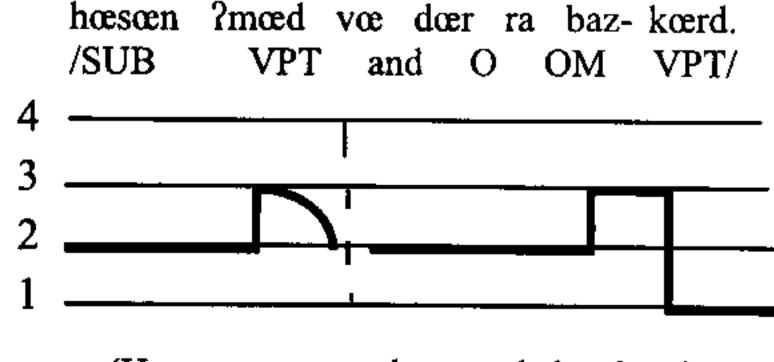
In respect to normally-uttered yes/no questions, there is not any significant difference between English and Persian except for the question-tags. As mentioned earlier, in addition to syntactically made question-tags in Persian, there are some other words and phrases which come at the end of the statements and function as question-tags. Therefore, they require certain intonations in normal speech; but AE has often a fixed syntactic set of question-tags.

2.2. Compound sentences

2.2.1. Coordinate sentences

In Persian compound sentences joined by conjunctions, two common intonation patterns may occur.

- a. The two sentences could have a falling tone /2 3 1/ if the conjunction $v\alpha$ (and) is fully pronounced.
- b. The pre-conjunction part remains level, but the post-conjunction sentence is falling, if $v\alpha$ (and) is reduced to o (n):



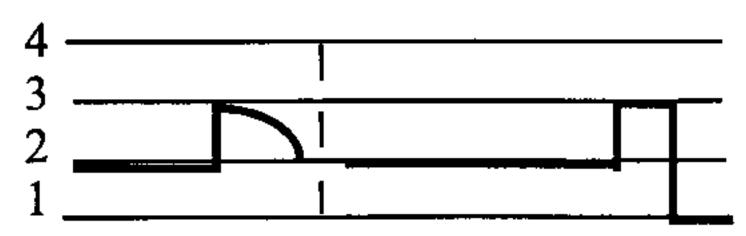
(Hassan came and opened the door.)

There are two characteristics for these types of sentences in English:

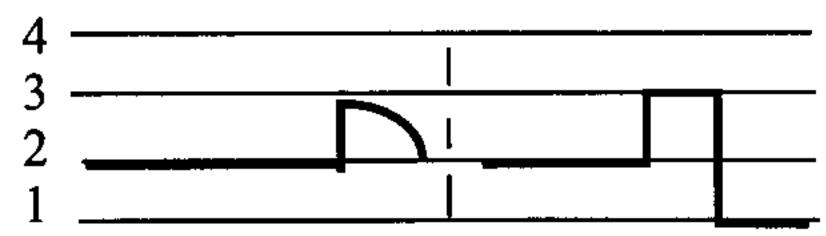
- a. Each sentence has only one primary stress;
- b. In regard to intonation, there will be a slight pause at the end of the first sentence but the pitch change goes on with the beginning of the second sentence.

Consequently, in a compound sentence joined by connecting words such as and, but, or, intonation begins on level 2, goes to level 3 and comes back to level 2 again; intonation of the second sentence will be identical to that of statements. The whole pattern, therefore, is /232|231/, with the connecting words bearing usually either a weak or a tertiary stress:

I ate the food, but I wasn't hungry.



It was a good book, and I enjoyed it.



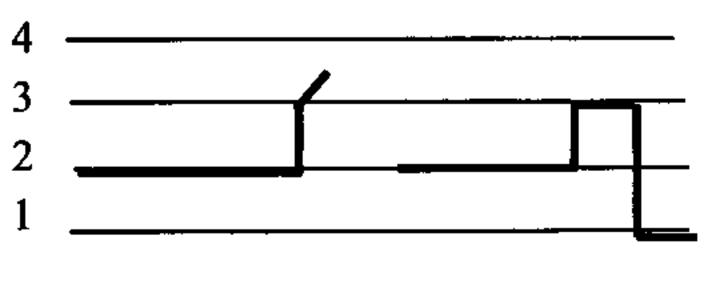
Thus, no problematic difference is observed regarding the tone characteristics of compound sentences in both languages.

2.2.2. Subordinate sentences

The following generalizations could be considered true for Persian complex sentences:

2.2.2.1. Conditional sentences. In this respect, the if-clause will have a low rise and the subordinate clause a falling tone.

?ægær mi-umæd ma ra mi-did. / if VPR-V(come-PST)PP O OM VPR-VS(see-PST)/

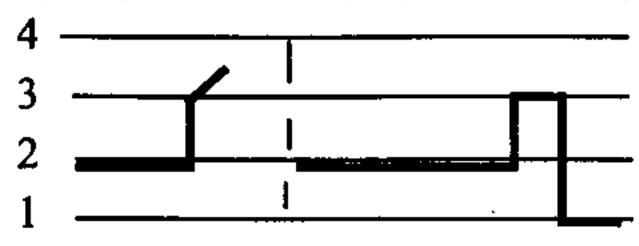


(If s/he came, s/he would see us.)

Although the negative prefix attracts the primary stress in Persian, the case is different in conditional sentences. That is, the last syllable of the if-clause receives the

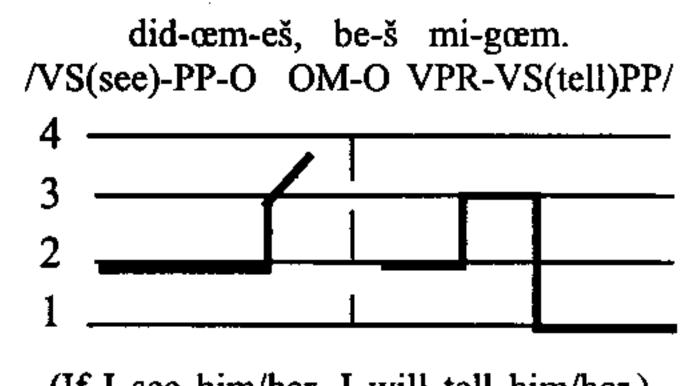
primary accent followed by a low rise; the subordinate clause, however, follows the normal stress rule, i.e. the negative marker is stressed. Notice that ?æge is commonly used as the contraction of ?ægær (if):

?cege be-xad, mi-tune nce-yad. /if VPR-VS(want)PP, VPR-VS(can)PP NEG-VS(come)PP/



(If s/he wants, s/he will be allowed not to come.)

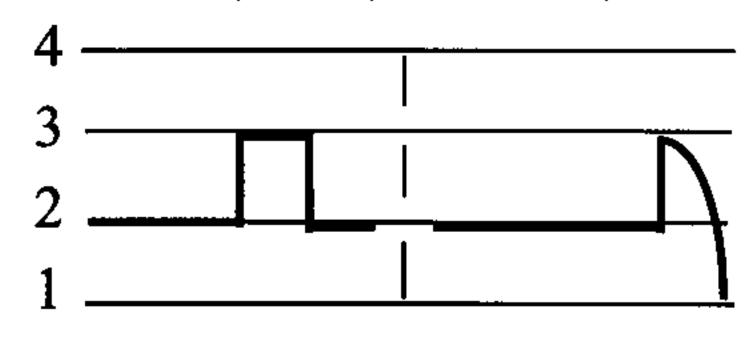
In some instances, if is omitted in if-clause; the intonation pattern, however, remains the same.



(If I see him/her, I will tell him/her.)

If the order of clauses in a conditional sentence changes, the intonation pattern will slightly change.

ma ra mi-did ?cege mi-umced.
/O OM VPR-V(see-PST)PP if VPR-V(come-PST)PP/



(S/he would see us if s/he came.)

In contrast to the low rise common in normal conditional sentences, the last syllable of the first clause remains level in the above example.

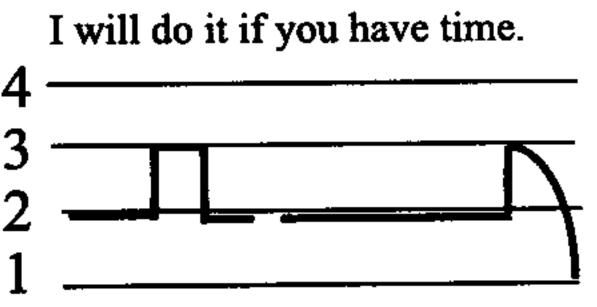
On the other hand, two conditions may occur in English conditional sentences: first, the if-clause may have a /2 3 2/ pattern while the subordinate clause is /2 3 1/. Secondly, the if-clause may sometimes be uttered with a /2 3 2/ pattern, i.e. a low

rise at the end, and the subordinate clause with the usual form of /2 3 1/. However, the choice between the two is a matter of the context.

If you can do it, do it now.

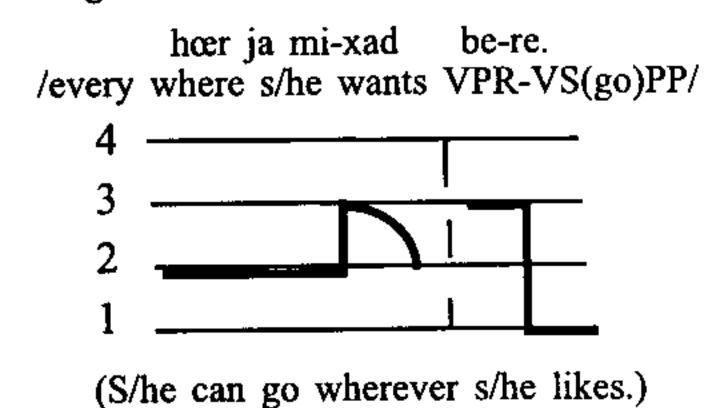
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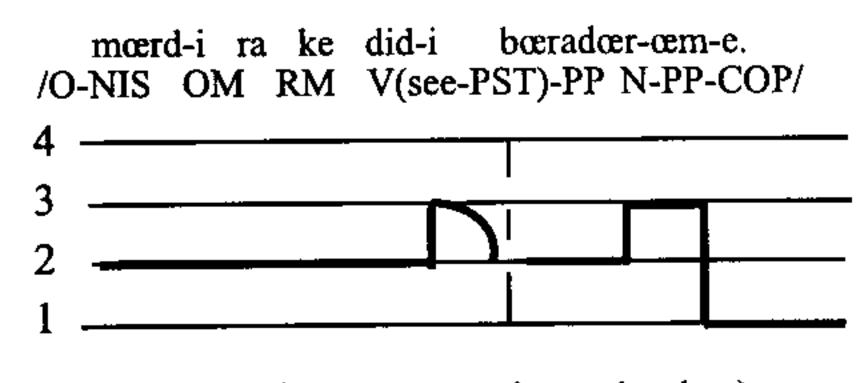
If the order of clauses changes in the conditional sentence, the /2 3 2 | 2 3 1 / pattern will be used. That is, it would be most common to have no rise at the end of the if-clause.



2.2.2.2. Dependent clauses

These clauses could be of different types such as cause and effect, place, time, and adjectival. Yet, all normally have similar intonation patterns: low rise in the dependent clause and falling in the main clause.

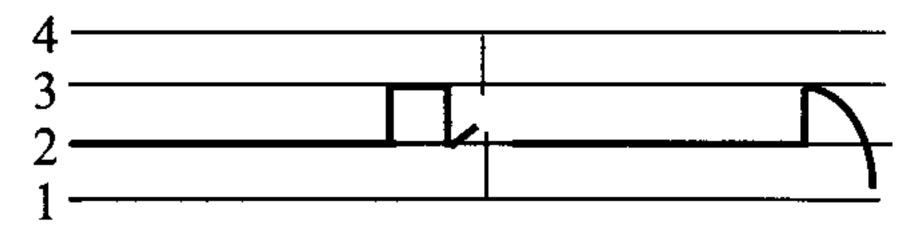




(The man whom you saw is my brother.)

In English, there are different types of clauses of this type all of which commonly follow the /2 3 2|2 3 1/ pattern if the dependent clause appears at the beginning of the sentence. Otherwise, there will be no rise in the clause. Sometimes, the two clauses are uttered as one sentence with no pause involved, thus following the /2 3 1/ pattern. Regarding relative clauses, two intonations are common depending on the speaker's intention. If the speaker intends to have a pause, a low-rise will appear at the end of the modifying clause; otherwise, it may have a /2 3 2/ pattern. The rest of the sentence, then, follows the /2 3 1/ model. In some rare conditions, the whole sentence could be uttered without any pause. In that case, the intonation will be of the /2 3 1/ type with only one sentence stress.

Because he had classes, he couldn't go away.



They did it because they had to.

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We went home after they left.

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The boy wearing black shoes is very anxious.

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Consequently, as far as conditional sentences are concerned, patterns seem to be rather similar in the two languages under analysis. Nonetheless, since each clause carries one primary stress, the difference may emerge in stress placement, thus distinguishing the two languages with regard to pitch change:

?œge didœmeš, beš migœm.

If I see him, I will tell him.

4
3
2

ENGLISH

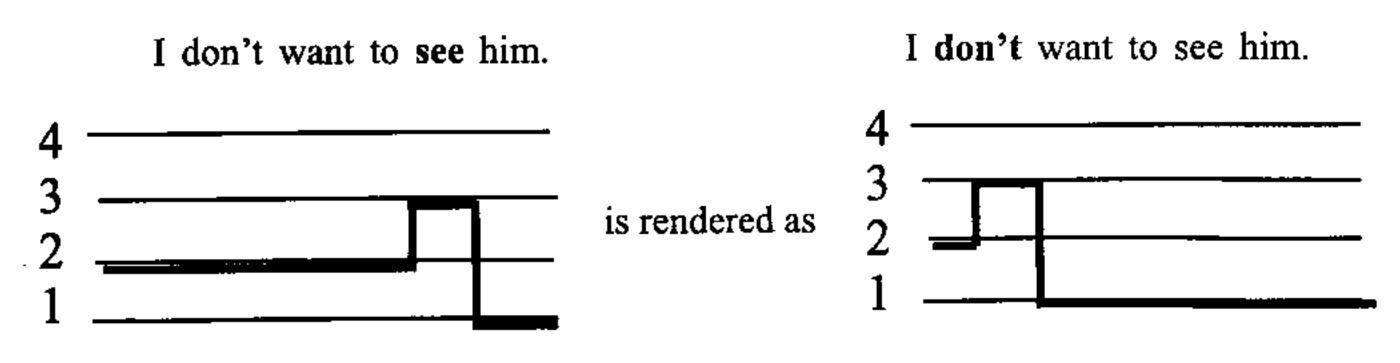
In respect to other clauses, too, no significant difference(s) could be experienced, except for the sentence stress.

3. Predictions

PERSIAN

According to the basic assumptions of the Contrastive Analysis Hypothesis, learners of any language tend to transfer the structure of their native language into that of the target language while coming across such differences. Consequently, due to the differences mentioned above, it seems that Persian speakers learning English may face difficulties in using the correct intonation patterns of English. The following are some general predictions derived from the contrast made between the two languages in question.

a. In terms of negative statements, students may tend to put the primary stress on the prefixes of negation. Therefore, a change will occur in the intonation pattern of the English sentence, making it into an emphatic expression (sometimes aggressive). However, the resultant sentence will still have a falling tone at the end.

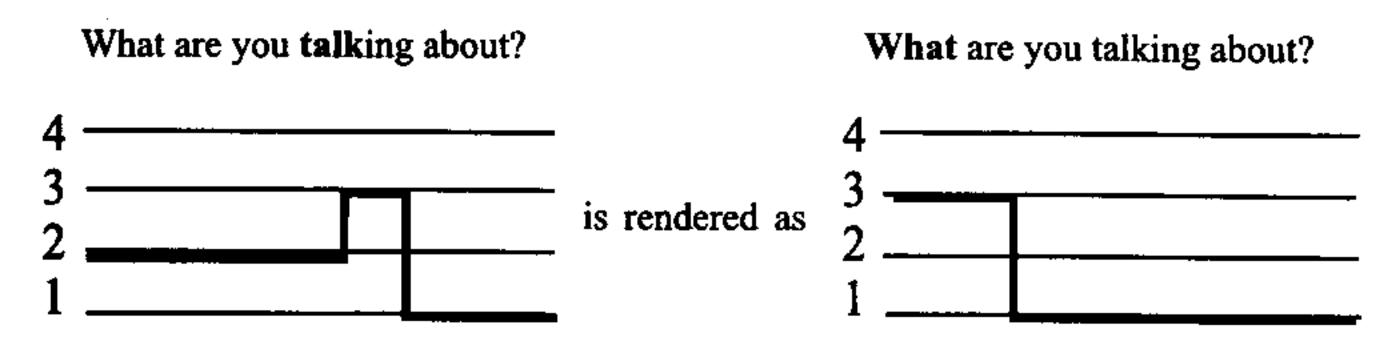


b. In relation to wh-questions, Iranian students may place the sentence stress on the wh-word. Therefore, although no change is made concerning the falling tone at the end of the question, the pitch variation will occur at the initial part of the sentence

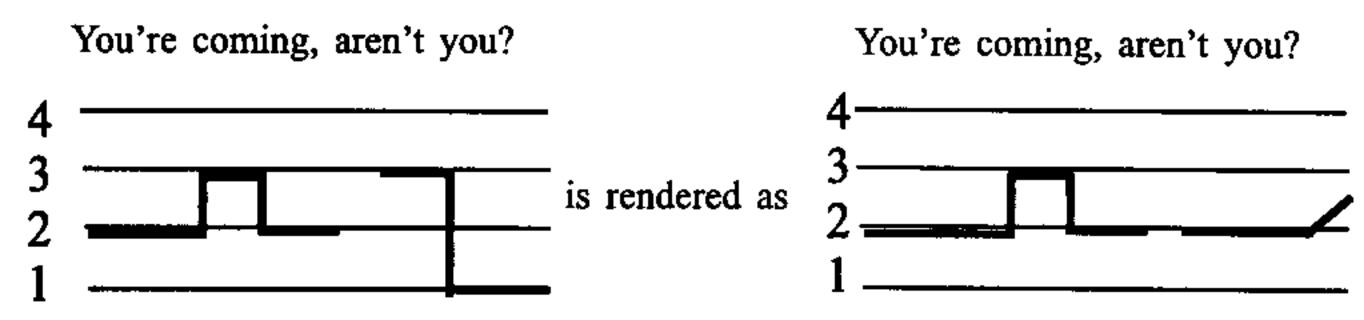
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where the question word is located. Once again, the normal intonation pattern of the English sentence changes to an attitudinal expression suggesting students' emphasis.

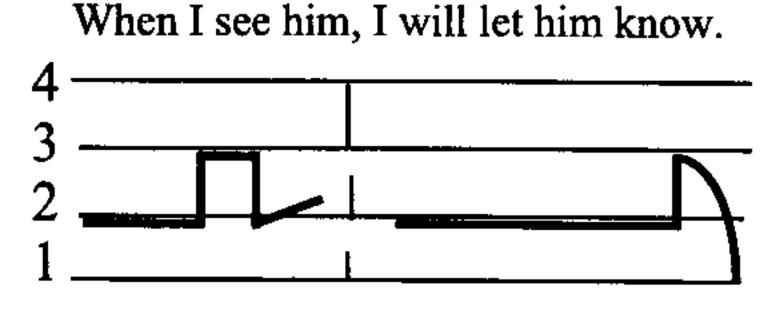
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c. Learners may not face any serious difficulty in using the common intonation of English question-tags. Yet, from the semantic point of view, since there is rarely a one-to-one correspondence between the question tags of English and Persian, learners may substitute the information-seeking intonation with that of asking for confirmation:

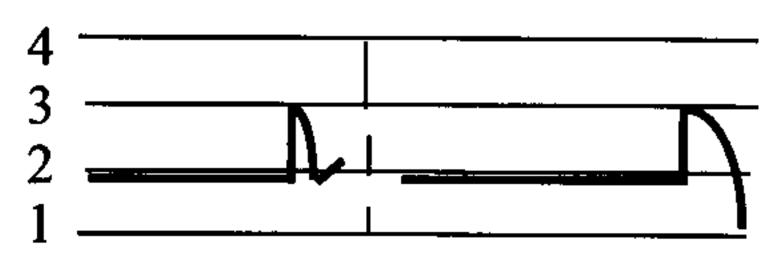


d. Concerning different types of clauses, learners may not generally have any important problems in using the correct intonation as far as the end of the clauses is concerned. Nevertheless, the difference between the stress patterns of the two languages causes the learners to raise their voice on the Persian-based accented words.



is rendered as

When I see him, I will let him know.



4. Experiment

Most Iranians were expected to use the English intonation rules correctly as far as the end of the sentences is concerned. Yet, in some cases it was predicted that Iranian speakers learning English may follow the Persian sentence stress patterns while reading the English sentences, thus making certain changes in tone specifications. In particular, the idea of interference was of preliminary significance to the present contrastive study. Therefore, an experiment was conducted to evaluate the degree of interference at least at the level of sentence stress predicted earlier in this paper.

4.1 Subjects

Ten university students majoring in fields other than English, who were studying at the University of Wollongong (Australia), were selected to participate in the experiment. The selection criterion was an average grade B they received in a 3-month English course.

4.2. Data

In order to confine the area of the research, only some of the most common structures have been considered as the basic data for the experiment; that is, from among all the sentence types discussed earlier, only statements (including affirmative and negative), and questions (wh- and yes/no) were taken into account.

4.3. Administration

The selected data plus some sentences of other types were scrambled and typed on pieces of paper. The reason for adding the other types of sentences was to divert the subjects' (Ss) attention from the main concern of the research. The Ss, then, were asked to read the sentences only once. In the meantime, their voices were recorded with a high quality tape-recorder. To analyze the data, four judges (three linguists and a postgraduate student majoring in English Literature) were requested to listen to the Ss' readings. On the other hand, to make the judgements more objective, a format with three specific columns was prepared. The columns consisted of "words", "tones", and "attitudes" each covering certain aspects of the analysis. The questions to be answered by the judges were located at the top of each table:

- a. On what word has the speaker put the primary stress?
- On what word has the speaker made a pitch change?
- Regarding the end of the sentence, what is the tone of the speaker? (e.g. falling, rising, falling-rising, rising-falling, etc.)
- What attitude is the speaker expressing? (e.g. normal, emphasis, anger, asking for information, confirmation, etc.)

4.4. Data analysis

Some simple statistical analysis was performed on the reports given by the judges. Since the columns were analyzed separately, each sentence type was analyzed from three different aspects: words, tones, and attitudes. A note is necessary about the words. The Ss responses have been divided into two parts: S (similar to the normal English sentence stress patterns) and D (different from the normal English sentence stress patterns). The latter is, in turn, classified into two groups: those following the Persian stress system marked by "inter." (specifying interference), and those locating the sentence stress on other words, "others". In order to determine the correctness of the stress patterns used by the subjects, the readings were compared with an American native speaker of English reading the same sentences.

5. Discussion

According to the predictions made earlier, it was concluded that as far as the end of the sentences (where the final change of tone occurs) is concerned, Iranian speakers of English may have no difficulty in producing the English intonation patterns. For on the one hand no serious difference was found in this aspect of analysis between the two languages, and on the other about 90% of the total responses concerning the end of the sentences were correct. However, "In order to get at the meaning of intonation, we must investigate the different patterns that modify the accent contour." (Knowles 1984: 242). For the same reason, the stress phenomenon was believed to play a significant part in determining the intonation contours (See Hayati 1997). Consequently, since the sentence stress placement in the two languages under question is different, the Persian speakers were thought to make certain changes, following their native language stress system, on different parts of the English sentences. Now, to see if there is any conformity between the predictions made and the results of the experiment, each sentence type will be discussed in turn.

As far as the affirmative sentences are concerned, almost 95% of the total subjects read the sentences with a falling intonation. This supports one aspect of the prediction, then. However, about 29% seem to have followed the Persian sentence stress placement rule in specifying the prominent words of the structure; consequently, it caused some sentences to become emphatic, which would perhaps be surprising to the listener. In other words, what is normal in Persian could be emphatic in English. Let's consider an example:

Normal	Emphatic	
It's RAINY outside.	It's rainy OUTside.	
		
		

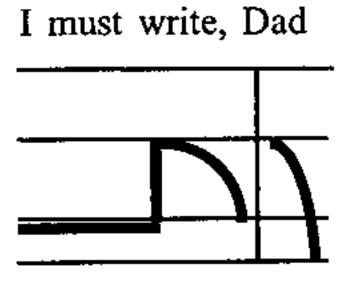
Since sentence stress occurs mostly on the final words or phrases in Persian, the second sentence may be interpreted correct from the Persian stress rules; but according to the English stress rules, this reading will appear as emphatic. In the following which is the Persian equivalent for the above sentence, almost the last syllable of the final word is receiving the primary stress:

?un birun bar**un-**e./it outside rainy-is/

The remaining 20% who have randomly stressed the words of the sentences in other places could be said to have signified the prominent words according to their perception. This is true because they may have perceived the sentences differently, although they were asked to read them at a normal speed. For instance, in the following sentence, only half of the subjects were correct in stressing the word "Dad"; Yet, the word "write" has been stressed by almost the other half:

I must write DAD.	I must WRITE dad.		

In fact, it could not be strictly concluded that those stressing either of the words, i.e. write or Dad, appealed to their mother tongue stress system. For another possibility appears to function as a source of error; that is, the subjects may have mistaken the above structure for the same sentence to which certain punctuation has been applied:



Thus, rather than an *interlingual* error, it might be evaluated as an *intralingual* error, i.e. a complexity within the target language.

Concerning the negative sentences, however, the case is significantly different in that about 62.25% of all subjects have stressed the wrong words out of which 50.75% have located the strongest stress, as predicted, on the negative markers. On the other hand, the use of correct falling tones at the end of the sentences by almost 93% of the subjects confirms the idea. The following sentences taken from the sample may illustrate the point:

Normal They haven't DISCUSSED it.		Emphatic They HAVEN'T discussed it.	
		 	

In general, almost one third of the readings have been interpreted to be emphatic. Actually, emphasizing the negative markers in normal situations may occasionally lead to eliciting certain attitudes from the listener. Take the following pairs of sentences for example:

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- A: Excuse me! Would you direct me to the central office?
- B: I'm sorry! I don't know where it is.

In this situation, the listener may wonder if s/he was asking so terrible a question that caused the speaker to become, say, cautious, angry, etc.

At the level of the wh-question sentence type, moreover, contrary to the prediction, only 15% of all subjects stressed the wh-words possibly following the Persian stress system. However, once again, it could not be referred to as interference because, on some occasions, the wh-words may become stressed in English. Another piece of evidence is that almost 100% of the readings were evaluated as expressing an information-seeking type attitude; on the other hand, the prediction concerning the tone of the sentences came true, i.e. 84% of the subjects read the sentences with a falling intonation.

In respect to the yes/no question type, a rather similar result occurred. Almost 60.25% located the correct sentence stress. But, the rest placed the strongest stress on other words, causing a 21% measure of emphatic attitude. Regarding the sentence stress in the yes/no question type, no definite prediction was made only because both languages let the primary stress go predominantly over the final word where the rising tone occurs. Further, almost 87% confirmed the prediction by using a rising intonation at the end of the questions. Nevertheless, another confusing phenomenon emerged making it possible to question the CA predictions. Reading the sentence "Are you watching, boys?", 52.5% of the subjects placed the strongest stress on the word "watching", and about 40% on "boys". Concerning the above sentence, one possibility may be that the subjects have confused it with the same sentence without additional punctuations applied: "Are you watching boys?", where "boy" is an addressee in the former, but an object in the latter. Another possibility refers, again, to the subjects' attitudes and/or perception towards the sentence. On the whole, ignoring this and the similar exceptional cases, the subjects have been successful in reading the sentences with correct intonation patterns.

In all, it seems that three out of four of the predictions were confirmed. However, there is still a problem in this regard. That is, although it was predicted that the subjects will make mistakes in both negative statements and wh-questions, the degree of interference was more in the first rather than in the second. In this respect one possibility can be suggested. As far as word ordering is concerned, the position of wh-words is often fixed in the two languages; however, in Persian the flexibility is relatively greater. On the other hand, the position of negative markers is almost always fixed in English but much more flexible in Persian. Therefore, some relative structural similarity of wh-words in the two languages helps the speaker to make fewer mistakes in producing the correct intonation pattern of this type. In fact, the speaker will come to focus more on the tune of the sentence than the structure. Nev-

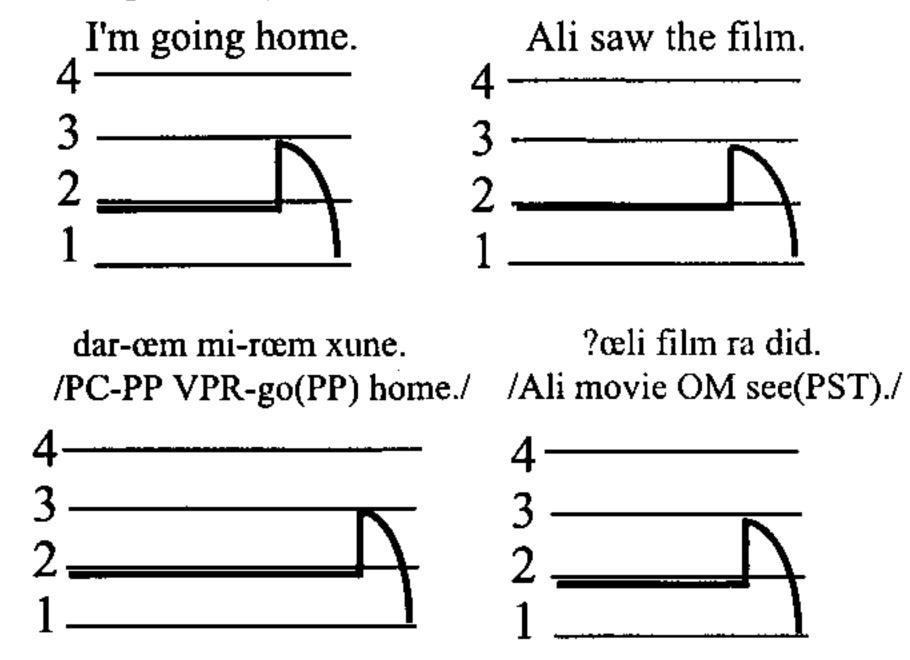
ertheless, the difference between the negation structure of the two languages seems to be much higher, which is why the Persian speaker of English has to pay attention to both grammatical and intonational structure of the negative statements at the same time. The nearest path to the speaker is therefore to go after the stress system of Persian and emphasize the negative marker.

6. Conclusion

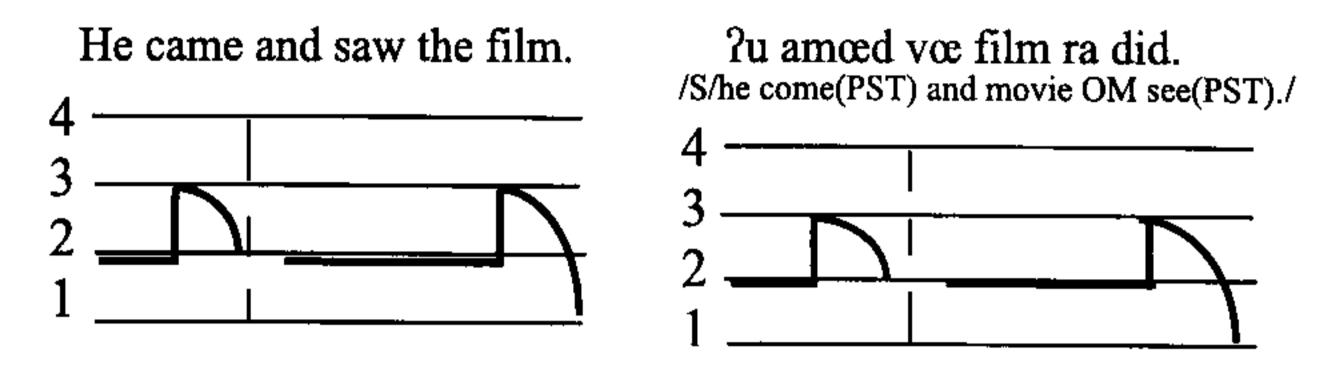
In summary, there are two important points to be mentioned in regard to contrasting the intonation patterns of any two languages in general and English and Persian in particular:

- 1. In the light of the above analysis, it becomes obvious that since stress has significant influence on intonation, it is not reasonable to consider the end of sentences as the realm of contrast; instead, the entire sentence structure is to be taken into account to make the analysis more reliable. As illustrated, as far as the end of sentences is concerned, English and Persian have many similarities, i.e. falling in statements, wh-questions, etc., and rising in yes-no questions, some types of question-tags, etc. However, the overall tune of the two languages does not sound similar. The reason can definitely be traced back to somewhere within the sentence.
- 2. Since the terms "similarity" and "difference" are broadly defined and used in the realm of contrastive analysis, the results of most contrastive studies may not seem to be valid to a large extent. Therefore, the more narrowly the terms are defined, the more accurate the results will be. For the same reason, the six levels listed below are some generalizations by which the relative degrees of similarity and difference between the intonation patterns of the two languages could be specified; for the sake of brevity, L1 and L2 will be respectively used for Persian and English:

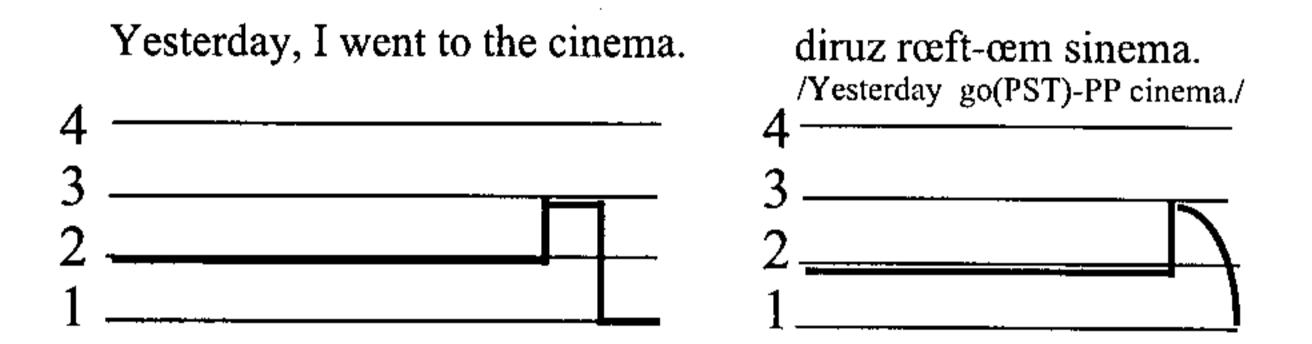
Level 1. The final syllable of the last word in the equivalent sentences of L1 and L2 is stressed and accompanied by similar pitch change, ie. rising, falling, etc. Ex.



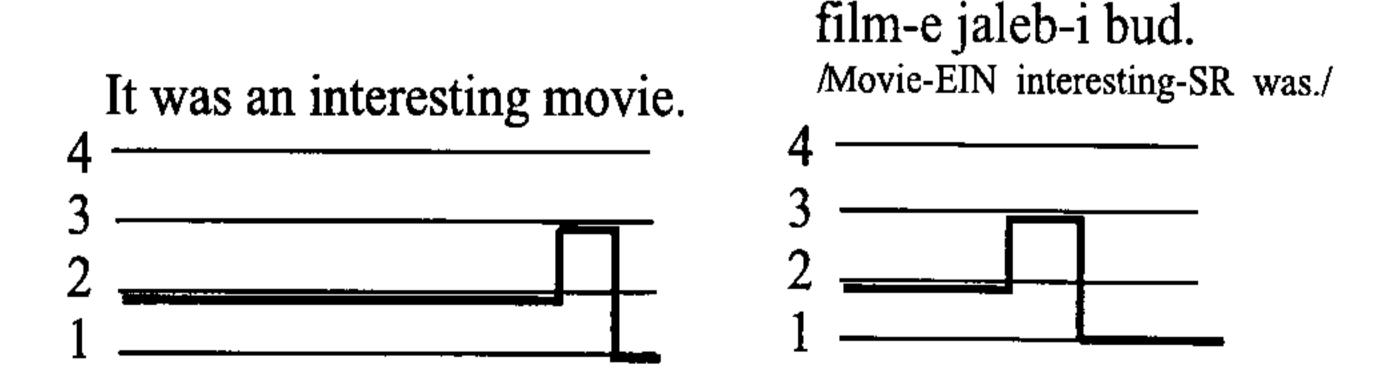
Level 2. The final syllable of the word in the two languages is stressed regardless of its location in the sentence. As a result, a similar pitch change occurs on the same word. Ex.



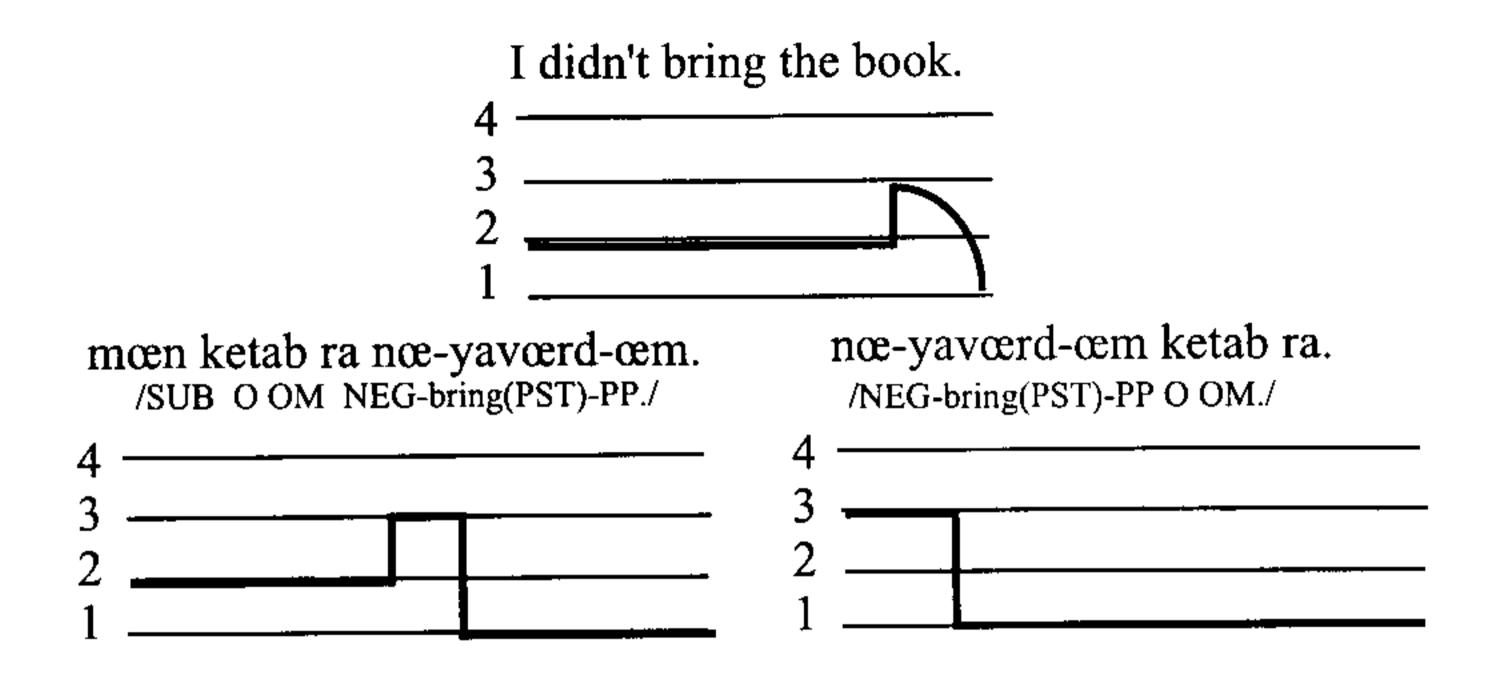
Level 3. The final two-syllable word of the two equivalent sentences is stressed but the primary stress occurs on the first syllable in L2 and second syllable in L1. Ex.



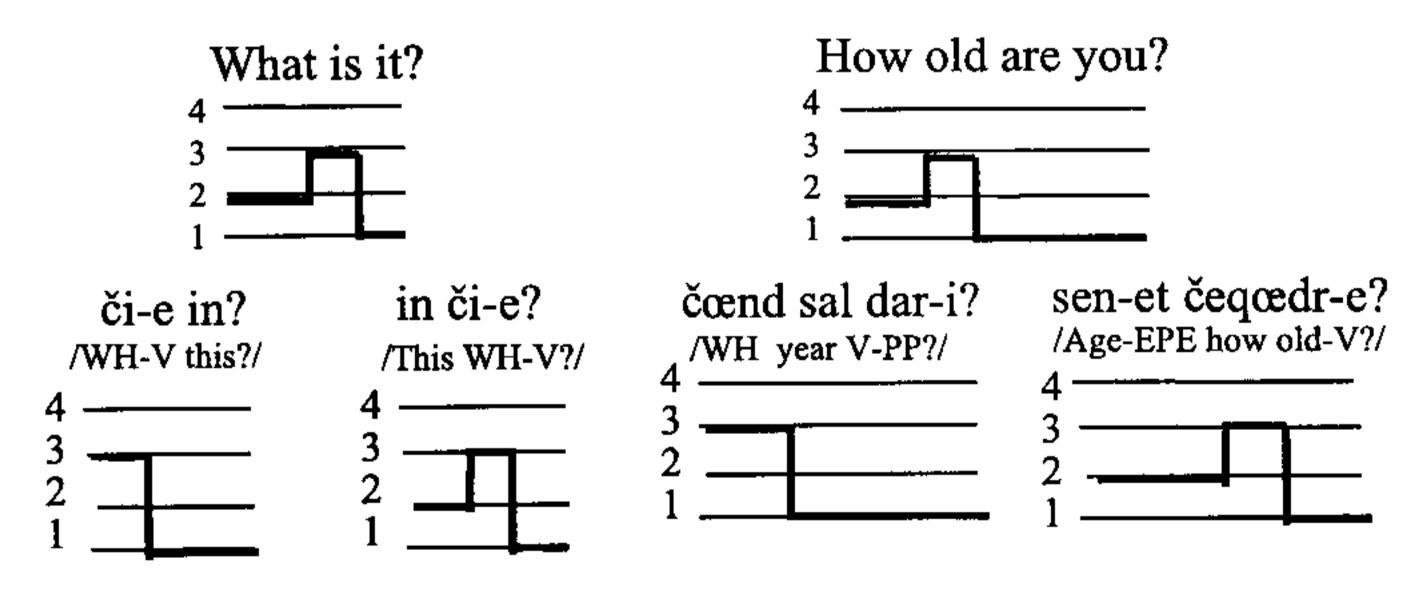
Level 4. Regarding compounds, the adjective and the noun are stressed in L1 and L2 respectively. However, the two languages follow the same pattern of pitch change (rising, falling, etc.) depending on the sentence type, i.e. yes/no question, statement, etc. Ex.



Level 5. The negative markers, regardless of their location in the sentence, are stressed in L1 but unstressed or less stressed in L2. Therefore, the pitch changes occur on the negative markers in L1 but towards the end of the sentences in L2. Moreover, the longer the distance between the stressed element in L1 and that of L2, the higher the degree of difference will be. Ex:



Level 6. Wh-words are stressed in L1, regardless of their place of occurrence in the sentence but unstressed or less stressed in L2. Thus, similar to level 5, wh-words could structurally occur in different parts of the sentence, while their position is fixed in L2, ie. initial. Once again, the degree of difference corresponds to the degree of distance between the stressed parts in L1- wh-words, and L2- any content word towards the end of the sentence. Ex.



What is the difference between this and that?

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	<u>.</u>	N
	<u>:</u> -`-	
	. <u> </u>	

če færq-i-st bein-e ?in væ ?un? /WH N-SR-V PREP-EIN this and that?/	bein-e?in vœ?un če færq-i-st /Between-EIN this and that WH N-SR-V	
4 — — — — — — — — — — — — — — — — — — —	4	

Finally, the attempt of the present paper was to work on a limited area of intonation. However, there are a lot of questions remaining whose answers could possibly be of interest and benefit to many people such as linguists, methodologists, course designers, etc. For example, it is still a matter of examination to see where the borderline between stress and intonation is. Which of the two, i.e. stress and syntax, dominates the other? Does "meaning" determine intonation or is it the other way round? What mutual effects do intonation and discourse have? ...

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