

A Contrastive Study of Function in Intonation Systems (part 2)*

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▶ key words

Syntactic Intonation System (SIS)
Pragmatic Intonation System (PIS)
tone language
pragmatic intonation
semantic intonation
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▶ 要旨

この研究は Kadooka (2000)の続編で、世界の諸言語におけるイントネーション体系が意味表出に際してどのレベルで機能しているかという観点を類型論的に分析しようとするものである。本研究の目的は、世界の諸言語を声調言語／統語的イントネーション型／語用論的イントネーション型という3分類にすることが合理的であるという枠組みを提示することである。

声調言語は定義上、語彙レベルでピッチ変化が区別されるためにイントネーションが統語・語用論的な機能は担えないものと仮定する。

統語的イントネーション型とは、イントネーション体系を平叙と疑問など統語的／意味論的にのみ区別するタイプである。この型の言語ではイントネーション体系が担う役割は限定的で、日本語における終助詞などイントネーション以外の範疇の依存することになる。

一方、語用論的イントネーションでは統語的な意味に加えて、話し手が伝える皮肉・哀願・同意の要求・遠回しの命令など対人関係性における非常に微妙なニュアンスを含む。この型の言語では、他の範疇よりも雄弁にイントネーションが機能するものと考えられる。

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4. SIS and PIS

In section 3 above (Kadooka (2000)), the function of the intonation system was categorized into syntactic, semantic and pragmatic branches. Those which convey interpersonal nuances more dynamically and predominantly than the other means in a given language will be dubbed Pragmatic Intonation System (PIS). If, on the other hand, only the syntactic meanings are carried, or the pragmatic meaning is conveyed only partially and/or passively, they will be defined as Syntactic Intonation Systems (SISs), as exemplified with a back channel response *soo-desu-ka* in Japanese in Kadooka (2000: 41).

This tripartite of tone languages, SIS and PIS is in line with the phonological functions working in the levels of lexicon, sentence and discourse, respectively. In tone languages, pitch differentiation is realized in the lexical level, hence sentence intonation is invalid syntactically/semantically. In the languages of syntactic intonation systems, sentence intonation is useful as a resource to function syntactically/semantically. If the lexicon distinguishes each item with the pitch system, as in the case with Japanese, the situation resembles those in tone languages in that the pitch is distinctive lexically. But the difference is that such lexical distinction is not always necessary in SIS. Take Japanese for example, again. Pitch is most distinctive with nouns, and less with verbs. In adjectives it is still less typical. The situation is in contrast with Beijing Chinese, a typical tone language in which all the lexical items should be realized with their inherent tone except certain limited categories such as final particles.

Pragmatic intonation is highly expressive to carry interpersonal nuances between the parties joining discourse. The borders between SIS and PIS may be difficult to draw in certain cases. In order to be classified as PIS, connotations conveyed by intonation must be demonstrative enough.

There would be two ways to divide the three categories of the languages of SIS, PIS and tone languages at the moment. The first one is to distinguish according to the existence/absence of the sentence intonation system. With this criterion, tone languages should be separated from the other two. The second one is to bisect by the interpersonal function of intonation; both tone languages and SIS languages belong to the same group in which the pragmatic expressiveness of intonation is subsidiary, while it is major in the PIS languages. To illustrate these two ways of division in the table below, dotted lines indicate that the two categories divided by them can be regarded as belonging to the same group:

(5)

category	sentence intonation	pragmatic function
tone languages	none	none
SIS	yes	subsidiary / passive
PIS	yes	predominant / active

From the comparison in this table, it is clear that the grouping does not necessarily remain exact

when the criterion is altered. This is because the in-between category SIS is combined with tone languages in some cases and with PIS in the other. As for the pragmatic function of intonation for example, the absence in tone languages and the subsidiary role in SIS are regarded alike to each other, compared to the predominant role in PIS.

Now let us turn our eyes to the discussion on each intonation system.

5. CLASSIFICATION OF EACH LANGUAGE

In this section, judgement will be made whether each intonation system listed in the catalogue in section 2 belongs to a SIS or a PIS, leaving aside the tone languages (Beijing Chinese, Thai, Vietnamese) since their status is evident from the definition. Below is shown the classification after the name of the language, except English and Japanese which have been verified in some depth in section 3 above. Examples will be adopted as many as possible, to demonstrate the classification.^{*1}

German: PIS

Gibbon (1998: 87)*, basing on the a precedent study^{*2}, verifies that the intonation patterns of German are similar to those of British English^{*3}, consisting of five simplex ones: falling (1), rising (2), level (3), falling-rising (4), and rising-falling (5). These patterns of intonation express the following meaning, parenthesized numerals corresponding the above patterns; here each systemic function such as *statements*, *questions*, *exclamations*, is classified into the two categories syntactic and pragmatic by the present author:

- (6) syntactic: statements (1), questions (2)
- pragmatic: exclamations (1), non-final (2), progredience (3), incompleteness (3)
- uncertainty (4), certainty (5), obviousness (5)

It is understandable that the patterns one through five and meaning denoted by them are almost exact as those of the English intonation system. This is because Pheby (1975) adopts the

*1 When the author's name is not listed in the bibliography at the end of this paper, the source is Hirst and Di Cristo (eds, 1998). The titles of the papers are "Intonation in (the name of the targeted language)." To take Gibbon (1998) for an example, its title is "Intonation in German." in Hirst and Di Cristo (eds., 1998). Those papers which are not found in the references at the end of the paper will be indicated with an asterisk attached after the closing brackets. See section 2 in Kadooka (2000) for the names of the authors.

*2 He cites the following work as the source, though the detail in the original paper simplified:

Pheby, J. (1975) *Intonation und Grammar im Deutschen*. Berlin: Akademie-Verlag.

*3 Halliday (1967, 1970) exemplifies the intonation patterns and the meaning, practical nuances denoted by them of British English.

Hallidayan scheme of the Systemic approach. It may be benefitable on the one hand in the sense that the two intonation systems are in parallel, hence the direct comparison is possible between them. If, on the other hand, the German intonation system is exact as that of English, we must investigate whether the complex patterns of 13 and 53 in English are found in German or not. Table 2 in Gibbon (*ibid**: 89) presents more subtle subclasses of Mood, Tone and Function.

Dutch: PIS

In 't Hart (1998*: 107), the function of the hat pattern⁴, beginning low followed by rising and then ending in low, looking like a shape of a silk hat, is explicated as follows:

- (7) ... although the hat pattern is the most adequate pattern to be used in neutral declaratives and interrogatives, it has been observed in many situations of which it was clear that peevishness, irony, preponderance, restrained anger or consolation was at stake.

From this short citation, the status of the Dutch intonation system is evident; it is a PIS, like its brother languages of German, Swedish and English. The varieties of connotation carried by intonation in Dutch are typical as speaker's secret intention.

Swedish: PIS

Though Swedish is similar to Japanese in that the lexicon is distinctive with pitch accent system, its intonation should be classified as a PIS, if we accept the explanation below (Gårding 1998: 121)*:

- (8) ... there are contributions also from lexicon and syntax [in speech acts conveying the speaker's attitude, emotion and selected center of message: KK]. However, the modal and expressive signals of intonation are so strong that they may override other cues.

Considering that the Swedish intonation system has common function with the Japanese counterpart in the lexical level on the one hand, and share the pragmatic intonation function with English on the other hand, it should be posited that tone system in the lexical level and function in intonation — the distinction in SIS and PIS — are independent to each other.

Danish: uncertain

It is not explicit whether Danish intonation is a SIS or a PIS, while Grønnum (1998: 132)* subdivides the phonological levels in Danish into the following six levels: text — sentence/utterance —

4 't Hart (1998: 101) clarifies the definition of hat pattern as 'a typical pattern for the intonation of a short non-emphatic declarative phrase in Dutch.'

prosodic phrase — prosodic stress group (foot) — *stød* — segments. Among these six levels, intonation should be related to those of text and sentence/utterance.

Haberland (1994: 323), on the other hand, explicates as follows with regard to Danish intonation function:

- (9) ... as far as clause types in Danish are marked by pitch contour, they are marked globally, in the entire clause, and not (*like in other Germanic languages like English and German*) by a typical contour in the last part of the clause only. This means that Danish has no sentence accent; in neutral sentences without contrast or focus accent, there is no particular stress group that is more prominent than others. *In this Danish is different from a closely related language like Swedish.* (Italics added)

Taking this statement — especially those italicized comments — into account, it seems better to classify Danish as SIS. As a conclusion, however, Danish will be excluded from the discussion in the next section, considering that there is no examples in Haberland (1994).

Spanish: SIS

It seems that the Germanic languages depend on intonation for communicating interpersonal nuances on the whole. Now let us turn our eyes to Romance languages. The phonological systems in Romance languages such as syllable structure, rhythm, accent differing from those of the Germanic languages. Alcoba and Murillo (1998: 159)* give example of three patterns of 'Si' (yes) in Spanish:

- | | |
|--|---------------------------------------|
| (10) a. SI, SI (two tone groups, each falling) | 'Yes, OK.' |
| b. SI SI (one tone group, falling) | 'No, only a fool would believe that.' |
| c. ¿SI? (one tone group, rising) | 'Is that so?' |

Strictly speaking, these are not minimal pairs with intonation, but together with the modification in the repetition in (10a, b) and number of tone group(s). Notice that these utterances are back channel responses, sharing commonality with 'soo/soo-desu-ka' in Japanese. This has led to the result that Spanish is classified as an SIS. To be judged as a PIS, intonational function should be more dynamic and active.

European Portuguese: PIS

In European Portuguese, various connotation can be conveyed with intonation, according to Cruz-Ferreira (1998*: 171-173)⁵:

5 In the examples are retained capitals indicating stress fallen on the syllables, preserving the ways in Cruz-Ferreira (1998).

- (11) a. está a choVER outra VEZ (a high-falling tone)
 'it is raining again (and I cannot stand it)'
- b. porque É que não DIzes o que PENsas? (a high-falling tone)
 'why don't you speak your mind? (you are an idiot if you don't)'
- c. SAI daQUI!! (a high-falling tone)
 'get out of here!! (I won't tell you again)'
- d. onde É que puSESte o meu caSAco?! (a high-falling tone)
 'where have you put my coat? (I'm sick and tired of you misplacing it!).'
- e. eu viVI na CHIna dez Anos (a rise-fall)
 'I lived in China for ten years (but I never learned the language)'
- f. tu SABes quem É aquele TIpo? (a rise-fall)
 'do you know who that chap is? (he's the one who was jailed for bigamy)'

Those interpersonal glosses parenthesized in each utterance verify the expressiveness of intonemes in European Portuguese, leading to a postulation that it is a PIS language.

Brazilian Portuguese: PIS

Though only with one type of utterance, the state of function of intonation in Brazilian Portuguese is judged as PIS. For the statement 'Fecha a porta' (close the door), the three patterns of command, request and suggestion are provided with the intonation contour (Moraes (1998*: 187-188), in the subsection titled *Illocutionary acts and intonation*). These three concepts cannot be integrated into one category though they have some commonality of asking illocutionary acts, and distinguished only with intonation. In this regard, the intonation system of Brazilian Portuguese should be considered to function pragmatically.

In the discussion in the next section, European and Brazilian Portuguese will be treated as one language, since both variants are classified as PIS.

French: PIS

In describing the expressiveness of the French intonation system, Di Cristo (1998*: 208)* states as follows:

- (12) It is a well known fact that both intonation and non-verbal gestures are used to convey attitudinal meanings.

As the exemplification of an "implicative" (Di Cristo (1998: 208))* utterance *La télé est caSSÉE*

6 Di Cristo (1998) cites the following references by the same author:

Delattre, P. (1966) "Les dix intonation de base du français." *French Review* 40, 1: 1-14.

— (1967) "la nuance de sens par l'intonation." *French Review* 41, 3: 326-339.

the TV set is broken), a large rise-fall movement on the last syllable and the deaccentuation of receding stressed syllable are illustrated by an F_0 curve. Such pitch pattern as this one 'conveys different meanings depending on the syntactic structure with which it is associated.' The detail is as follows (*ibid*, 208)*:

- 13) For example, with the syntactic structure of a partial question, it means some kind of exasperation; with that of an imperative, a polite invitation, and so on.

As Di Cristo (1998: 208)* concludes himself, however, 'a comprehensive description of expressive patterns needs more sophisticated frame of analysis.'

Italian: SIS

Table 1 in Rossi (1998: 223)* suggests the commonality of stress and intonation morpheme between Italian and French, in which PA for pragmatic accent seems to be most related to the present pursuit. An explanation for this concept is given as 'which ... focalises an element of an utterance.' The examples shown there are those of focalization (a), postponed theme (b), marked theme (c) and so on:

- (14) a. il nostro discorso, si avvia alla conclusione. 'our speech is coming to its conclusion'
 b. È molto femminile, mia figlia. 'she is very feminine, my daughter'
 c. La maggioranza relativa ... non ve la vuol togliere nessuno
 'The relative majority? No-one will take it away from you'
 d. Il potere, Lei può farlo sentire con delle decisioni
 'power, you can make it felt with decision'

Considering that these statements are marked — focalization, postponed and marked theme —, it should be appropriate to regard that the Italian intonation system is subsidiary to the syntactic means as far as looking at these examples.

Romanian: SIS

Not enough in number, nor poorly in the quality of the examples in the sense that intonation is auxiliary as the responses to precedent questions, it would be proper to classify Romanian an SIS language. Below are some of the examples from Dascălu-Jinga (1998*: 252-256)⁷:

*7 Intonation groups are divided by square brackets. These indications of intonation patterns are attached only for the words concerned words in the pair. The labels of intonation patterns *Bottom* (*Btm*), *Top* substitute the arrow symbols in Dascălu-Jinga (1998)*, which bases INTSINT (an international transcription system for intonation) as a rough phonetic description of the utterances. For the detail of INTSINT, see Hirst and Di Cristo (1998a: 14-18).

- (15) a. MAMA VIne REpede. b. MAMA VIne REpede.
 Top Downstep Dwnstp Top
 (Mother is coming quickly) (Mother is coming quickly)
 c. Dacă teCHEmă când ai să aJUNGI aCOlo, SPUnе-mi.
 [Bottom Btm Top][]
 (If he calls you when you get there, let me know)
 d. Dacă teCHEmă când ai să aJUNGI aCOlo SPUnе-mi.
 [][ø Btm Btm ø Top] []
 (If he calls, you when you get there let me know)
 e. Să facem fiecare câte o încercare? (Shall we all try?)
 f. DE ce NU! [Higher, Same, Lower] (Why not!)
 g. N-ai vrea să mergi cu mine la film? (You won't go to the cinema with me?)
 h. DE ce NU! [Same, Top, Bottom] (Why "won't")

The pair (15a, b) is essentially a matter of emphasis, rather than a subject of intonation exclusively. The alternation of Top fallen on *REpede* in (15a) and *Vine* in (15b) is a consequence of the change of emphasis.

The only occurrence of a possible instance for proving the validity of pragmatic aspect of the Romanian intonation system is this (Dascălu-Jinga (1998: 252)*:

- (16) a. Cînd Vine? (When is he coming?) b. Cînd Vine?
[Same Top, Bottom] [Top, Lower Higher, Bottom]

(16a) shows that the speaker wants to emphasize *Vine* for the purpose of contrast rather than the fully deaccented question word *cind*. In (16b), on the other hand, the speaker is more insistent, or even irritated for not being understood, the question *cind* has two intonation peaks Top and Lower.

As a conclusion, intonation in Romanian *per se* is not eloquent enough to be a PIS. The feeling carried by double peak intonation in (16b) above is of primitive nature pragmatically, not suitable for the definition of PIS in the present study.

Russian: PIS

As Svetozarova (1998: 268)* defines, the Russian intonation system is expressive in the following way:

- (17) Emotional connotation such as surprise, doubt, distrust, and irony are usually expressed in Russian by means of various modifications of the question intonation: differences in the length of the stressed syllable, the sharpness and height of the rise, different phonation types (...).

With this explication, it would be suitable to classify Russian as a PIS. One of the instances to show this is as follows (Svetozarova (1998: 270)*):

- (18) a. $\bar{n}BAH$ $\check{c}HTAet$ (John is reading)
 /i'van tʃi'tait/
 [Top Top Bottom]
 b. $\bar{n}BAH$ $\check{c}HTAet$ (It's John who is reading)
 /i'van tʃi'tait/
 [Top Btm]

In this pair (18) in Russian, intonation patterns are altered together with the emphasis on 'ЎBAH' (John). In (18a), the second syllable in 'ЎBAH' is raised in pitch, while in (18b) the first syllable raised then fallen on the second. This alternation corresponds to a cleft sentence in the English counterpart.

Bulgarian: PIS

To summarize the function of the Bulgarian intonation system (Misheva and Nikov (1998))*¹, it is the position of F_0 peak that influences the attitudinal aspect of utterances most relatedly. They insist that the progressive force of the F_0 peak is applied in typical WH-questions while it is the regressive force in declarative counterparts. Below is their account (*ibid.*, 281)*:

- (19) The intonation of emotionally loaded questions, the function of which is not to ask for information but to deliver information about the speaker's emotions (...), follows the basic regularities determined for statements: ...

An instance is given (*kak voima* (What's the matter?)) with falling and low rise tones, of which the latter sounds politer (*ibid*, 280)*. Considering that politeness is an important aspect of interpersonal relationship, intonation in Bulgarian has pragmatic sphere.

Greek: PIS

Botinis (1998)* devotes one sub-section (2.4 Phrasing and discourse intonation) to the description of the function of the Greek intonation system as the means to suggest changes of sub-turn-units (STUs). A rise of pitch, for example, 'marks the intention of the speaker to keep his turn, ...' (*ibid.*, 308)*. This kind of function to imply the turn of the speaker is crucial in discourse.*

Finnish: SIS

Though Iivonen(1998: 320)* comments as follows, it is doubtful to consider Finnish as a member of PIS group:

8 Botinis (1998) lists the following references concerning STU:

Bannert, R. (1985) "Toward a model for German Prosody." *Folia Linguistica* XIX.

Brown, G., Currie, K. L. and Kenworthy, J. (1980) *Questions of intonation*. London: Croom Helm.

- (20) It is hardly true that the variation range of Finnish intonation is narrow in all circumstances.

By F_0 delay, which seems to be akin to a pragmatic function of intonation, a meaning of hinting is suggested:

- (21) a. Sy dänvika se on. (F_0 peak on Sy: A heart disease it is.)
b. Sy dänvika se on. (F_0 peak on *dän*: A heart disease it is, sure)

This pair of F_0 shift brings a type of contrast. Notice that this minimal pair is the gap of F_0 peak, not a difference in the intonation patterns.

In conclusion, Finnish should be regarded as SIS as far as the data in Iivonen (1998)* are concerned.

Hungarian: SIS

Fónagy (1998: 330)* lists the below five patterns as the inventory of Hungarian prosodemes, utilizing the citation from some precedent studies⁹:

- (22) 1. falling 2. rising-falling 3. falling-rising 4. rising 5. descending

Though morphologically distinctive as well as intonational, the examples are given in the main text (*ibid*: 333)*:

- (23) a. Tett? (he did): rising
b. Tette? (did he do it?): rise-falling
c. Tetette? (did he pretend to do it?): rise-falling

At a glance, these patterns look opposite to the universal ones that declaratives are realized with a falling tone and interrogatives with final rise. Though the patterns of rise and fall are inconsistent with the universal counterparts, it is certain that intonation is related to the discernment of declarative and interrogative.

With the increase of the number of syllables, the meaning is changed from simple to complex: declarative (23a)—interrogative (23b)—complex interrogative (23c). For the addition of such meaning, intonation is subsidiary, however; suffixes are more predominant in the contrast of meaning. In this sense, it is determined that Hungarian is a SIS language.

Western Arabic: SIS

*9 Fónagy (1998) cites the following two references as the basis of his discussion:

Varga, László. (1981) "A magyar intonáció — functionális szempontból. (Hungarian intonation — from a functional point of view)" *Nyelvtudományi Közlemények* 83.

— (1983) "Hungarian sentence prosody: An outline." *Folia Linguistica* 17.

Investigating the examples in Benkirane (1998)*, no evidence is found to conclude that pragmatic function is included in the Western Arabic intonation system spoken in Morocco. Instead, declarative (23a) and interrogative (23b) are discerned as follows (Benkirane (*ibid*: 352- 355):

- (24) a. /ʒæ'bulha 'lma/ (They brought him some water)
 [Top Btm]
 b. /ʒæbu lma'gæna/ (Did they bring the watch/meter?)
 [Top Btm]

As Benkirane (*ibid*: 354)* states, 'the pattern for Yes/No questions is very similar to that observed for statements: in both cases a rising-falling pattern is observed.' Though it seems insufficient with the data in Benkirane (*ibid*)*, the most basic distinction of declaratives and interrogatives are confusing since both intonation patterns are alike to each other. Among the languages detested in Hirst and Di Dristo (eds., 1998), the Western Arabic intonation system is the least helpful in expressing syntactic/semantic meaning.

6. DISCUSSION IN LANGUAGE FAMILIES

To summarize the argument up to the previous section, the classification of each intonation system with the criterion of the tripartite is as follows, excluding Danish and including English and Japanese; the languages are grouped into the families/branches parenthesized in square brackets:

(25) PIS — 9 languages

- [Germanic]: English^{*10}, German, Dutch, Swedish,
 [Romance]: European and Brazilian Portuguese, French
 [Slavic]: Russian, Bulgarian
 [other IE]: Greek

SIS — 7 languages

- [Romance]: Spanish, Italian, Romanian
 [Uralic]: Finnish, Hungarian
 [Semitic]: Western Arabic
 [Altaic]: Japanese^{*11}

tone languages — 3 : Thai, Vietnamese, Beijing Chinese

The Indo-European family is further subdivided into the Germanic, Romance and Slavic branches,

10 British and American English is regarded as one language, though Bolinger (1998) and Hirst (1998)* are independent chapters in Hirst and Di Cristo (eds, 1998).

*11 The status of Japanese as one of the Altaic languages is not established yet, as I understand it. This is a tentative postulation for the present rubrication.

since the label *Indo-European* is too big to grip all of them at one time on the one hand, and so many languages are listed in proportion to the others belonging to different families. Non-Indo-European languages are: Uralic family of Hungarian, Finnish; Semitic Western Arabic; Altaic Japanese; and Sino-Tibetan family of Thai, Vietnamese, Beijing Chinese. The following characteristics can be pointed out with this result.

- (26) 1. All the Germanic languages belong to PIS.^{*12}
2. The Romance languages are divided into PIS (two languages) and SIS (three).
3. All the Slavic languages belong to PIS, with only two instances.
4. All the Uralic languages belong to SIS, with only two instances.

In general, each branch or family — especially Germanic, Slavic, Uralic — shows a tendency as a group in which intonation system behave similarly with regard to the pragmatic function, as far as these 19 languages in the catalogue are concerned.

When we enlarge the target to more diversified and numerous examples, the consequence is highly interesting from the typological viewpoint; non-Indo-European data must be reinforced in order to reflect the proportion of the existing languages of the world. If the result is akin to the one in this paper, it is fruitful as a pilot study.

It would also be misleading to deduce some conclusion from the statistics in (25), still there would be some tendencies, however; the PIS languages are slightly more predominant in number than the SIS counterparts in nine to seven. Whether the gap is greater or smaller than this figure will depend on the selection of the targeted languages. Tone languages occupy the position of relative minority. With larger databases, the proportion occupied by tone languages will be known easily. Then, it will be necessary to divide the rest of the languages into SIS and PIS, with procedures done so far in this discussion.

7. CONCLUSION

In this last section of the present investigation, some problems to be solved in future will be briefly addressed as concluding remarks.

The first and the biggest one is the complementary distribution of the interpersonal nuances carried by intonation system and other means. It will be clear-cut to take an example with one of tone languages. As neither syntactic nor pragmatic meaning is carried by intonation in them, other means are necessary to express syntactic function such as interrogative or pragmatic nuances. One of such realizations is the final particles in Chinese. In the PIS languages, various intonation patterns are predominant in carrying minute nuances, hence the role played by other means is relatively small. Kadooka (1999) contrasts the three languages English, Chinese and Japanese in

^{*12} As suggested in section 5, Danish will be an exception to this generalization in the Germanic languages; it should be dubbed as a SIS.

terms of how interpersonal nuances are realized linguistically.

It would need more minute examination which kind of connotation is expressed with syntactic and pragmatic function of intonation, respectively. To put differently, the definitions of the syntactic and pragmatic function should be pursued more extensively. To point out concretely, F_0 delay in Finnish is in a sense common to contrastive emphasis by sentence-stress in many of the languages worldwide, to be classified as one of syntactic functions; hint of sub-turn-unit change in Greek, on the other hand, is a type of pragmatic usage of intonation. Both are deviant from the typical realization of the two categories respectively, in that the syntactic function clarifies most universally the border between declaratives and interrogatives, and that the pragmatic one carries the speaker's interpersonal attitude.

Another question left unanswered here is whether there are any instances of non-tone languages or not whose intonation system are invalid in syntactic function of discerning declarative and interrogative. In other words, intonation system is not distinctive syntactically/semantically in such language, if any.^{*13}

A chance to argue the syntactic and/or pragmatic function in tone languages will be given in the next occasion. Some insist that syntactic and/or pragmatic function of intonation can be found in tone languages: e.g. Luksaneeyanawin (1998)* for Thai.

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*13 Hockett (1958: 34) comments as follows:

It is PERHAPS true that certain features of speech melody are to be found in all languages (e.g., rise of pitch and volume under the stimulus of pain or anger), but such universal features, if they exist, are not part of intonation as we now use that term. Recent research suggests that every language has a system of basic speech melodies which is as unique to the languages as is its set of vowel and consonant phonemes. (emphasis added).

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