

## INTONATION AND EMPHASIS IN POLISH AND ENGLISH

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It is generally accepted that intonation can serve as a means of expressing emphasis. A study of the two phenomena seems promising not only because their treatment within the framework of any linguistic theory has not been satisfactory but also because emphasis is a semantic category while intonation contours are assigned by rules of the phonological component. That surface structure is not sufficient for the application of those rules and that some reference must be made to a deeper level of an utterance is clear from several recent publications. The question whether preference should be given to the deep, syntactic structure, or to the semantic, conceptual structure also seems to pose no serious difficulties, particularly in view of an article by D. Bolinger (1972) which provides a convincing criticism of the Chomsky and Halle Nuclear Stress Rule (Chomsky, Halle 1968) and its modification by Bresnan (1971). A quotation from Bolinger (1972 : 644) summarizes his approach: "The distribution of sentence accents is not determined by syntactic structure but by semantic and emotional highlightings". An analysis of emphasis in relation to intonation will support this view, at least partly.

No reference will be made to those realizations of emotional emphasis which can be described in terms of word tempo or kinesics, an approach adopted by Lawendowski (1970). An interesting semantic approach to the problems discussed in the present paper was suggested by E. Gussmann in his article "Global rules and phonological processes" (1974). His rule, however assigning emphatic intonation covers only those cases where a contrast is expressed but it does not explain emotive emphasis. The present paper is an attempt to fill this gap.

If it is assumed that two sentences express different meanings if their underlying semantic structures are different then it must also be true that

sentences to which different intonation contours have been assigned, and which therefore express different meanings, are also derived from different underlying structures (cf. Marek 1972: 425). The reverse of this statement indicates that the semantic structure of an utterance determines the intonation which this utterance receives in the phonetic representation. Examples concerning emphasis illustrate this view:

- 1a. <sup>1</sup>Roger is a <sub>1</sub>teacher  
 1b. <sup>1</sup>Roger is a <sub>1</sub>teacher  
 2a. <sup>1</sup>Robert jest Ang<sub>1</sub>likiem  
 2b. <sup>1</sup>Robert jest Ang<sub>1</sub>likiem  
 3a. Ma<sup>1</sup>rysia jest tan<sub>1</sub>cerką  
 3b. Ma<sup>1</sup>rysia jest tan<sub>1</sub>cerką

Sentences of each pair differ in meaning in that examples 1b, 2b and 3b express a contrast which is either absent or less obvious in sentences 1a, 2a and 3a. The latter are in fact ambiguous. Although they appear to be "neutral" (the term will be discussed later) they can express a contrast just as sentences 1b, 2b and 3b do, although neither syntactic nor phonetic signals of emphasis are present. The only information suggesting such a contrast will in some cases be the context (either expressed verbally or provided by a situation). In other words, one does not need a complicated intonation pattern to express a contrast as for example a Rise-Fall in 4:

4. I <sup>1</sup>didn't <sup>1</sup>do it for <sup>^</sup>fun. I <sup>1</sup>did it on <sup>^</sup>purpose.

In some cases the only explanation of emphasis is a semantic one, provided by context as in 1a, 2a and 5:

- (Roger is an actor, isn't he?)  
 5. <sup>1</sup>No. <sup>1</sup>Roger is a <sub>1</sub>teacher (not an actor)

Before an attempt to concentrate on the relation of emphasis to intonation is made it seems necessary to explain the nature of neutral cases which will be referred to as "least marked sentences". The term was introduced by W. Chafe (1970) and roughly corresponds to what Quirk and others (1972: 938) call "neutral focus", namely a sentence which has an "end-focus" that is "chief prominence on the last open-class item or proper noun in the clause".

There seems to be no common opinion as to the nature of focus among various generative approaches. According to Chomsky for example, "the focus is determined by the surface structure, namely as the phrase containing the intonation center" (Chomsky 1972: 9), a view opposed by G. Lakoff (1971).

Neither Chomsky's nor Quirk's approach seem suitable for the needs of the present paper as both of them imply a somewhat automatic assignment of the nucleus on the last stressable element of the clause.

The only interpretation of a shift of the nucleus to an earlier position can be, according to Quirk, a contrastive one, and certain irregularities are ex-

plained by "general cultural norms" (Quirk 1972: 939) like in the sentence:

6. The <sup>1</sup>kettle's <sub>1</sub>boiling

(as the only thing we can say about kettles is that they are boiling).

If the above statement is true then the deviation from end-focus in sentence 7 should either be interpreted contrastively, or, by some "general cultural norms".

- 7a. <sup>1</sup>Mary has ar<sub>1</sub>rived  
 7b. Ma<sup>1</sup>rysia przyje<sub>1</sub>chała

As the latter possibility seems to be out of the question let us consider the former. Indeed, the sentence can mean that it is Mary who has arrived and not Pat. But the same sentence can be an equally good response to the question:

(What's the news?)

- 8a. <sup>1</sup>Mary has ar<sub>1</sub>rived  
 8b. Ma<sup>1</sup>rysia przyje<sub>1</sub>chała

where obviously no contrast is present and, what's more, the neutral "end-focus" is out of place:

- 9a. <sup>1</sup>Mary has ar<sub>1</sub>rived  
 9b. Ma<sup>1</sup>rysia przyje<sub>1</sub>chała

A number of other examples can be given to show that the context may require a placement of the nucleus which differs from the neutral, end-focus position, with no consequent contrast. Consider the pair of sentences:

- 10a. Po<sup>1</sup>lecam panu te kre<sub>1</sub>wetki (speaker 1)  
 10b. Smako<sub>1</sub>waly mi te kre<sub>1</sub>wetki (speaker 2, some time later)

Here the deviation results from the distinction between new and given information. Sentence 10a may be a response either to a question like "What shall I have next?" or "What would you recommend?" where the product is the only new information. In sentence 10b, however, what functioned as focus is now "given" and the new information the speaker expresses is that he liked the shrimps. No contrast is involved, while a neutral, end-focus placement of the nucleus would produce an effect unnatural for the context described, perhaps even that of emphasis:

- 10c. Smako<sup>1</sup>waly mi te kre<sub>1</sub>wetki

Accepting the statement concerning the "contrastive" consequence of shifting the nucleus (although it will later have to be modified if it is kept in mind that intonation is determined by the semantic structure), we can explain the non-emphatic character of sentences 8a and 8b if we agree that no shift was present in their derivation and that some element of the semantic structure determined a direct placement of the nucleus on the non-final proper name.

The approach adopted in this paper which will help clarify the problems presented so far is largely based on the semantic theory proposed by W.



Chafe (1970), and the term "focus" will be used in a sense slightly different from that in which it is used in current publications. I suggest that FOCUS is a specification assigned to an element of semantic structure before the latter enters any postsemantic processes, and which can later be manifested in the surface structure by means of a nucleus placed on a corresponding element.

In case of the "least marked sentences" the focus is assigned according to the following set of rules:

If the semantic structure is made up of a verb root alone then this verb root receives the feature FOC (focus)

11. V → V  
     root     root  
             FOC

11a. It's *raining*

The FOC is assigned to an action verb root if the semantic structure is composed of this verb root and an agent noun root

12. act     act  
     V → V/agt  
     root    root  
             FOC

12a. David *laughed*

If the semantic structure contains a patient the feature FOC will be assigned to it if it also contains a beneficiary or an agent noun root

13. pat    pat    ben  
     N → N/ agt  
     root   root  
             FOC

13a. *Mary* opened the *box*

A beneficiary noun root will not normally receive the specification FOC although there are cases when a FOC on this element seems quite natural:

14. *This* house belongs to *Mary*

A location noun root, if present, will always have the feature FOC (except for sentences with existential "there").

15. loc     loc  
     N → N  
     root    root  
             FOC

15a. The *book* is on the *table* (but: There is a *book* on the *table*)

The principle of FOC assignment seems to hold true for Polish.

16. *Pada*. *Ściemnia się*

17. *Janek* *zaśmiał się*. *Jacek* *mnie* *bije*

18. *Janek* *wylał* *mleko*

19. *Książka* *leży* *na* *stole* (but: *Na* *stole* *leży* *książka*)

Sentences like

20. *Pada* *deszcz*. *Idzie* *burza*

are not subject to rule 12, probably because the verbs "pada" and "idzie" are not used in the sense of action performed by an agent.

A similar doubt may arise with sentences like:

21a. *Mary* has arrived

21b. *Światło* *zgasło*

Again the verb root which is originally specified as "action" is used here to denote a state or a given situation rather than action. This becomes clear if we analyse the context in which 21a and 21b can appear. "What's the news?" or "What happened?" seem to be more appropriate questions than, say, "What did Mary do?" (she arrived) or, "What did the light do?" (it went out).

Having described the least marked sentences we are now almost ready to analyse the nature of emphasis and the principle underlying its phonetic manifestation. Let us first have a look at some examples.

22a. *Roger* is a *teacher*

22b. *Roger* jest *nauczycielem*

23a. *Roger* is a *teacher*

23b. *Roger* jest *nauczycielem*

24a. *Roger* is a *teacher*

24b. *Roger* jest *nauczycielem*

25a. *Mary* has arrived

25b. *Ma'rysia* *przyjechała*

26a. I *don't* know what to *say!*

I'm so *glad* to *see* you!

It's *beautiful!*

26b. *Co* ja *teraz* *zrobię?*

*Co* za *radość!*

Jak tu *ślicznie!*

All of the above sentences can be interpreted as emphatic although some of them are ambiguous. It can also be seen that the list contains examples for both contrastive and emotive emphasis. Sentences 22a and 22b can express a contrast in a certain context which must be the same for sentences 23a and 23b. In such a "contrastive" sentence the FOC is assigned to the element which is contrasted. This can either be manifested by special intonation (a High-Fall or extra force) or not but nevertheless the emphasis is present.



We can capture this by means of a rule which places a feature EMPH (emphasis) on focus in a contrastive sentence.

$$27. \quad \begin{array}{ccc} X & \longrightarrow & X / \text{contr} \\ \text{FOC} & & \text{EMPH} \end{array}$$

The context may sometimes require a shift of FOC from the neutral position of "least marked sentences" and place it on some other element of the semantic structure. We must therefore have an optional rule allowing for it.

$$28. \quad \begin{array}{ccc} X & & X \\ \alpha \text{ FOC} & & -\alpha \text{ FOC} \end{array}$$

It was mentioned earlier in the paper that such a shift produces emphasis. We then need a rule which will assign the feature EMPH to the focussed element (focussed, that is one which originally did not have this specification). The rule for contrastive emphasis (27) in its present form is not sufficient as not all instances of such a shift will involve a contrast. Sentences 24a and 24b illustrate two instances: one in which Roger is contrasted with somebody who is not a teacher, and one in which the sentence is a response to a question or statement of the sort:

29. I'm looking for a teacher. Do you know of one?

It seems that a modification of the emphatic rule can solve this problem. If  $\text{FOC}_1$  stands for an originally focussed element and  $\text{FOC}_2$  for an element focussed by rule 28 then the rule will acquire the following shape:

$$30. \quad \begin{array}{ccc} X & \longrightarrow & X / \left\{ \begin{array}{l} \text{contr} \\ \text{---} \end{array} \right\} \\ \left\{ \begin{array}{l} \text{FOC}_1 \\ \text{FOC}_2 \end{array} \right\} & & \text{EMPH} \end{array}$$

Sentences 25a and 25b are also ambiguous. Each of them can in fact, in different contexts, mean three different things:

— they can either be "least marked sentences", the instance explained earlier in the paper;

— they can express a contrast by virtue of rule 30, (rule 28, shifting the focus does not apply);

— they can involve the application of an optional rule to produce emotive emphasis

$$31. \quad \begin{array}{ccc} X & \longrightarrow & X / \text{emot} \\ \text{FOC} & & \text{EMPH} \end{array}$$

31a. 'Listen everybody! 'Mary has ar,rived!

31b. 'Patrzcie`państwo! Ma`rysia przyje,chała!

Sentences 26a and 26b will also be subject to the last rule as they all express emphasis for intensity. The application of this rule will normally be manifested in the phonetic representation by means of intonation, tempo, loudness, etc.

The above observations can be summarized as follows:

1. An analysis of intonation and emphasis necessitates reference to the semantic structure which underlies all processes resulting in what is interpreted as "contrast" and which, to a great extent, determines the intonation contour (if not its complete form then at least it specifies the position of the nucleus).

2. Emphasis for contrast is a result of an obligatory rule which applies in certain contexts.

3. The rule for emotive emphasis is optional and no linguistic context is necessary for its application. Whether it applies or not depends entirely on the speaker and his emotional attitude.

4. Intonation serves in a majority of cases as a means of expressing (or recognizing) both types of emphasis although there are cases when no such information is present in sentences expressing contrast. It must be kept in mind though, that the placement of the nucleus which signals such a contrast is determined by the semantic structure of an utterance.

5. There are also sentences in which an apparent shift of the nucleus is in fact a case of a least marked (neutral) sentence, or of emotive emphasis expressing no contrast at all.

It seems that the nature of emphasis and the principle underlying intonation assignment are basically the same in Polish and English. What may, and does differ, is the manifestation in the phonetic representation. A detailed study would have to include various attitudes which may accompany emphatic sentences such as surprise, anger and the like which would amount to a separate paper.

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