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### Emotive Intonation: A Question of Labels?

Emotywna funkcja intonacji

Экспрессивная функция интонации

It has sometimes been suggested<sup>1</sup> that the various inadequacies in the treatment of the problem of emotive intonation follow the inability of researchers to isolate a well defined set of emotive categories; lack of positive results in the area has been interpreted as due largely to the proliferation of and confusion among the descriptive labels employed. Undoubtedly, this confusion has had its confounding effect on the analyses, but its significance has often been overestimated since, as we shall try to show, the whole approach is fundamentally misdirected.

It has been common practice for analysts to determine the meaning of a given intonation contour by specifying the least common denominator of the situational contexts in which that contour occurs, and describing it in terms of lexical labels such as 'dispassionate', 'curt', 'polite' etc. The risks involved in such a procedure are manifold; one has to make sure that the generalization of meaning is not too particular or too general to be of any analytic value, and that the descriptive category chosen to delimit it is unambiguous and explicit enough. The problem becomes more apparent when one considers the number of lexical labels that have been used to cover the range of meanings which are supposedly expressed, which runs into three digits in the works of Jassem, Schubiger, and

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<sup>1</sup> See, for instance I. Pollack, H. Rubenstein, A. A. Horowitz: *Communication of verbal modes of expression*, „Language and Speech”, 1960, 3, 121—130; E. Uldall: *Dimensions of meaning in intonation*, In *Honour of Daniel Jones*, ed. by D. Abercrombie et al. London: Longmans 1964; D. Crystal: *Prosodic systems and intonation in English*, University Press: Cambridge 1969.

O'Connor and Arnold,<sup>2</sup> to mention but the most influential representatives of the tradition.

We would like to look more closely at the descriptive categories involved in the sources just cited, in order to try to remedy the situation by pointing to the fallacies underlying the use of some labels, thus reducing their number and, if possible, by introducing some order into the categories. For the sake of reference we present the list of labels arranged in alphabetical order, which are to be found in Schubiger (1958), Jassem (1952), and O'Connor and Arnold (1973):<sup>3</sup>

abrupt, accusing, affable, affected, aggressive, agitated, agreeable, airy, amicable, amazed, amused, angry, animated, annoyed, antagonistic, apathetic, appealing, appreciative, approving, argumentative, arrogant, astonished, authoritative, awed, bantering, bewildered, bluff, blunt, booming, bored, bright, brisk, buoyant, business-like, calm, casual, categoric, censorious, challenging, cheerful, compassionate, complacent, concerned, concessive, conciliatory, condescending, considered, controlled, cool, correcting, curt, defiant, deprecatory, derisive, detached, determined, disapproving, dismayed, dispassionate, dry, encouraging, entreating, excited, exhortative, firm, friendly, grim, guarded, haughty, hesitant, hostile, impatient, impressed, indifferent, indignant, insistent, interested, involved, ironical, irritated, judicial, light, lively, matter-of-fact, mystified, patronizing, peremptory, perfunctory, phlegmatic, placid, plaintive, pleading, pleased, precise, protesting, puzzled, questioning, reassuring, regardful, relieved, reproachful, resentful, reserved, resigned, restrained, sad, sarcastic, satisfied, searching, sceptical, scornful, self-confident, self-satisfied, serious, smug, soothing, stand-offish, startled, stupefied, suggestive, surprised, threatening, uncertain, unexpected, uninterested, unsympathetic, urgent, vexed, warning, weighty, willing.

The situation is complicated still further by the use of complex labels such as: 'teasingly reproachful', 'patronizingly encouraging', 'pleasantly', and 'unpleasantly surprised', (Schubiger), 'excessively benevolent', 'respectful astonishment', 'affectionate appeal', 'solicitous consideration' (Jassem), as well as 'grudgingly admitting', 'calmly patronizing', 'reluctantly dissenting' (O'Connor and Arnold), to mention but a few combinations which have been employed.

Some of the terms were clearly used as synonyms or hyponyms; some were introduced rather carelessly, since in a number of cases a new label was brought forward although the described effect had previously been expressed by means of a synonymous label. In some instances, however, the intended use to which a word was put is not at all clear.

<sup>2</sup> W. Jassem: *The intonation of conversational English*, Warszawa 1952, M. Schubiger: *English intonation, its form and function*, Max Niemeyer: Tübingen 1958; J. J. O'Connor, G. F. Arnold: *Intonation of colloquial English*, Longmans: London: 1961.

<sup>3</sup> The list does not purport to be fully exhaustive. For instance, it does not include some expressions designed to describe a given effect in a roundabout way; e.g. 'keeping somebody to the point' and the like.

Let us assume that the meaning of tone patterns can indeed be expressed in terms of discrete categories like the ones enumerated above. This assumption leaves us with the obligation of reducing their number to realistic and manageable proportions in order to ensure that the categories are in fact discontinuous and non-overlapping. One way to accomplish this would be the arrangement of labels into distinct sets whereby terms are grouped on the basis of synonymy relations they exhibit. Thus, for example, labels like 'warning' and 'threatening' will be allocated to one class following the fact that they both refer to the act of cautioning against a person or a thing; the difference consisting in the speaker's having control over the consequences of not paying attention to the cautioning act.

Variations in intensity of feeling, as inferred from context, may produce a graded series of 'quasi-synonyms' such as 'disapproving', 'exhortative', 'deprecatory', 'reproachful', 'scornful' and 'resentful'. Likewise, the category of 'surprise' may be employed in situations characterized by a certain abruptness of the state, 'amazed' — in cases marked by some kind of persistence of the state, 'bewildered' — in situations featured by persistence of the state and striving by the individual, and 'mystified' — sharing the elements of 'bewildered' with the feature of mystery added to the situation.

On closer inspection, some of the labels turn out to be merely terms indicating the kind of speech act performed, thus referring to the pragmatic value of an utterance rather than to its emotive impact. To this category belong such labels as: antagonistic, argumentative, questioning, threatening and warning (expositives), apologetic, approving, complaining, deprecatory, derisive, protesting, resentful, scornful, sympathetic (behabitives), challenging, defiant, willing (commissives), appealing, entreating, exhortative, insistent, pleading, suggestive, urging (exercitives), and accusing, appreciative, censorious, reproachful (verdictives), concessive (operatives).<sup>4</sup> We shall also have to exclude glosses like 'encouraging', 'reassuring', 'soothing', since these labels are clearly reporting on perlocutionary and not emotive effect<sup>5</sup>; the labels refer to the emotional state of the addressee which may have been caused, to all intents and purposes, by a wide range of attitudes on the part of the speaker. For instance,

<sup>4</sup> For the discussion and qualification of the acts see J. D. McCawley: *Remarks on the lexicography of performative verbs, Papers from the Texas conference on performatives, conversational implicature, and presupposition*, Center for Applied Linguistics: Arlington 1977.

<sup>5</sup> The term perlocutionary act or effect is used here in the sense of J. L. Austin: *How to do things with words*, University Press, London: Oxford 1962, pp. 121 ff.

quite different attitudes can have reassuring effect — polite and friendly, categorical, business-like, casual, interested, amused, or even conspiratorial, ironical, angry and hesitant, which, though less obvious, may be responsible for the perlocutionary effect considered here in some special circumstances which could easily be imagined for every one of them.

The elimination of these labels from further consideration here is not to be construed, however, as a denial of the role intonation may play in indicating the illocutionary force of an utterance. On the contrary, we regard it as one of the central factors in this indication, although we concede that the relationship is not quite straightforward; i.e. rather than being a device directly indicating illocutionary force,<sup>6</sup> intonation ought to be considered as a touchstone of the illocutionary force potential of an utterance.

We also consider as a misunderstanding frequent inclusion of the terms 'ironical', and 'sarcastic' under the rubric of intonational effect; it is virtually impossible for an isolated utterance to convey the meaning of irony or sarcasm by prosodic means exclusively. In other words, there is no tone pattern or patterns which would have the capability of expressing it; the ironic or sarcastic effect is produced solely through the clash between context and expression. In the case of irony the clash exists between utterance and situation, e.g. "Thank you very much" — produced in acknowledgement of a disservice, or "Let's kick them out" — where the actual situation may not justify such a drastic action and when the speaker may merely pretend to adopt a given point of view in order to ridicule it. Grice (1969:19) notes:<sup>7</sup> "I cannot say something ironically unless what I say is intended to reflect a hostile or derogatory judgement or a feeling such as indignation". Sarcasm is similar in so far as the speaker uses an 'inconsistent message' in the form of, for example, positive verbal content accompanied by a 'negative' vocal expression as in: "I really like that" — spoken with low precontour and low falling tone with no smile. But judging from prosodic shape of an utterance in isolation, nothing can be uniquely ironic or sarcastic.

Other misnomers on our list include labels like 'searching' which seems to be restricted to the description of question type intonation only, 'correcting' — where it is hard to see what tonal properties might be intended behind its use apart from some kind of emphasis for contrast, 'conciliatory' — aiming at expressing the rationale for a given utterance rather than reflecting any prosodic reality, as well as such labels as: 'unexpected',

<sup>6</sup> W. D. Stampe: *Meaning and truth in the theory of speech acts* [in:] P. Cole, J. L. Morgan (eds.) *Syntax and Semantics*, Vol. 3, Academic Press, New York, London 1975, pp. 3—4.

<sup>7</sup> *Utterer's meaning and intentions*, "Philosophical Review" 68, pp. 147—177.

'booming', 'precise', 'mild', 'placid', where the author's intention behind their use was by no means clear.

We shall now list the remaining labels, grouped into categories on the basis of semantic similarity and a fairly constant affective core they exhibit, bearing in mind the intentions with which they were originally used:

- a) authoritative, categoric, considered, determined, firm, grim, judicious, peremptory, weighty, arrogant, haughty;
- b) calm, controlled, cool, detached, dispassionate, dry, guarded, stand-offish, restrained;
- c) airy, animated, bantering, bright, brisk, buoyant, cheerful, light, lively;
- d) complacent, self-satisfied, smug;
- e) amazed, astonished, bewildered, mystified, puzzled, startled, stupefied, surprised;
- f) aggressive, angry, annoyed, hostile, indignant, irritated, vexed;
- g) causal, indifferent, perfunctory, uninterested;
- h) apathetic, bored, resigned;
- i) concerned, interested, involved;
- j) agitated, excited;
- k) grudging, hurt;
- l) abrupt, blunt, bluff, curt;
- m) affable, agreeable, amicable, friendly, regardful;
- n) business-like, matter-of-fact, precise;
- o) anxious, perturbed, solicitous, uneasy, worried;
- p) condescending, patronizing;
- r) awed, impressed;
- s) pleased, satisfied;
- t) hesitant, uncertain;
- u) plaintive, sad, phlegmatic.

It may be observed that some categories are composed of labels whose lexical meanings are very close; indeed, some words appear interchangeably in the dictionary entries like: complacent, self-satisfied, smug, haughty, arrogant, or abrupt, bluff, blunt. Some of the categories, however, contain apparently quite distinct items. The rationale behind their inclusion in one set will become clearer if we consider the denotative aspect of the labels against the affective meaning they are supposed to express. We have already stated that in the classification we shall be guided by the principle of effectively differentiating between the affective core of the items listed. Thus group (a) contains, among other things, such labels as 'authoritative', 'categoric', 'weighty', side by side with 'arrogant', 'grim' and 'haughty' which, in a sense, should not be treated as synonymous. Nevertheless, the common semantic core they share is lack of hesitation, certainty and assertiveness. The difference between 'categoric' and 'weighty' on the one hand, 'grim' and 'arrogant' on the other, lies in the neutral or positive evaluation depending on whether the assertiveness is viewed as undesirable, unjustified, presumptuous, etc., in

a given social or situational context. Similarly, lack of involvement, non-committal utterance may be interpreted as 'matter-of-fact', 'calm', 'controlled', 'detached', 'dispassionate', or, if the situation required some kind of involvement, the same utterance token might be negatively evaluated as 'cool', 'dry', 'stand-offish' etc. The same subjectiveness in evaluation is to be seen in pairs like 'calm vs. phlegmatic', 'self-satisfied vs. smug', 'friendly and affable vs. condescending and patronizing'. Another distinction that we have to make, is what might be termed subject-object dichotomy; reference to external object or person, or self as object. This inward vs. outward orientation underlies the distinction between such labels as: 'self-satisfied vs. pleased', 'angry vs. aggressive and hostile', 'calm vs. detached', 'controlled vs. indifferent', 'bright, buoyant vs. affable, amicable or friendly', which, nevertheless share the constant affective core of satisfaction, negative excitation, lack of involvement and some kind of positive excitation respectively. And finally, some labels appear to be 'style' or 'delivery' oriented and are often used metaphorically as correlates of emotive meaning as such. Here one could mention labels like: airy, weighty, brisk, light, abrupt, blunt, bluff, phlegmatic.

With all these considerations in mind, we can now set up a modified version of the categories, effectively reducing their number to manageable proportions and avoiding their mutual overlapping. The first item in each category has been chosen arbitrarily to denote the affective meaning portrayed by the rest of the labels in that particular group and will be used below with reference to the prosodic exponents of the categories. It should also be noted that we make no claim concerning the exhaustiveness of emotive effect expressed by the categories, as they have been set up utilizing only the labels employed in the works cited. The list will now include the following categories:

1) *Determined, arrogant, authoritative, categoric, considered, firm, grim, haughty, judicious, peremptory, weighty;*

2) *Matter-of-fact, calm, controlled, cool, detached, dispassionate, dry, guarded, restrained, casual, self-confident, business-like, uninterested, perfunctory, neutral, abrupt, bluff, blunt, curt, indifferent;*

3) *Airy, animated, bright, brisk, buoyant, cheerful, light, lively, affable, agreeable, amicable, friendly, compassionate, regardful, condescending, patronizing, pleased, satisfied;*

4) *Surprised, amazed, astonished, bewildered, mystified, puzzled, startled, stupefied;*

5) *Angry, aggressive, annoyed, hostile, indignant, irritated, vexed;*

6) *Apathetic, bored, resigned, plaintive, phlegmatic, sad, solicitous, worried, uneasy;*

- 7) *Agitated, excited, perturbed;*
- 8) *Awed, impressed;*
- 9) *Uncertain, hesitant.*<sup>8</sup>

We are now ready to take a closer look at the attitudinal meaning supposedly carried by intonation. Basing on the existing literature on the subject, one would expect to find some definite correlations between affects and tone patterns, if the latter's primary function can indeed be taken as reflecting the speaker's attitude at the time of the utterance. In order to simplify the presentation we shall employ the nine categories (inadequate as they are) which have informally been established on the foregoing pages. With each category we shall try to note down any systematic correlation that might exist between intonation contours and affective meaning. Sentence type categories, although relevant for the discussion, will not be specifically indicated; the choice of the examples will point exhaustively in each case to the sentence types being discussed. The illustrations are drawn from Jassem (1952), Schubiger (1958), and O'Connor and Arnold (1961).<sup>9</sup>

Group 1 (Determined) — characterized by certainty of assertion which, judging from the examples, includes the category of questions only marginally. The intonation patterns attributed to it are restricted to falling type nuclei and varying kinds of precontours. Examples:

- a) rising head + high falling nucleus  
 — *Father doesn't \like it (Sch:50)*<sup>10</sup>  
*I / don't think we \have (Sch:42)*  
*I / shut it when I came \in (Sch:42)*
- b) low level head + full falling nucleus  
 — *That's what \you think (J:71)*  
 — *What's all \this about (J:71)*
- c) low falling head + high rising-falling nucleus  
 — *When are you going to give your judgement on my ^library*  
*I \ think it's an absolute ne ^cessity (J:80)*
- d) high head + low falling nucleus  
 — *Sometime early in \June I believe*  
 — *Not so easy as you might \think (O'C:115)*  
 — *Now re ^peat the process (O'C:118)*

<sup>8</sup> The number of items in each category is a direct reflection of the popularity of some glosses in the works on intonation.

<sup>9</sup> Owing to its clarity and graphical simplicity, Kingdon's tonetic stress mark system will be used throughout. Sentence type categories will not be specially indicated — examples show exhaustively in each case what types are meant.

<sup>10</sup> The initials Sch correspond to Schubiger's work, J to Jassem's and O'C to O'Connor and Arnold's, *op. cit.*

As can be observed, no typical tonal pattern does emerge for this category. If at all, it can be defined in a negative way by pointing to the absence of rising tones and to the differentiation of the pitch range between the precontour section and the nuclear tone: high level precontour when nucleus low, and low level falling or rising precontour for high nucleus.

Group 2 (Matter-of-fact) — characterized by the absence of personal commitment with no positive or negative emotional involvement of the speaker. Examples:

- a) low head + low rising nucleus
  - All right / thank you (Sch:43)
  - About the same as be / fore (Sch:43)
  - Good for you (O'C:158)
- b) high head + low falling nucleus
  - The <sup>ˉ</sup>cottage is still for \ sale (Sch:41)
  - It <sup>ˉ</sup>isn't exactly what I \ want (Sch:41)
  - <sup>ˉ</sup>Tell him it isn't \ good enough (Sch:53)
  - Now <sup>ˉ</sup>come and sit \ down (Sch:53)
  - <sup>ˉ</sup>How about tomorrow \ morning (Sch: 58)
  - <sup>ˉ</sup>Which day would be \ best for you (Sch:57)
- c) high head + low rising nucleus
  - <sup>ˉ</sup>May I ask what it / is (Sch:62)
  - <sup>ˉ</sup>Is he very / busy these days (Sch:62)
- d) falling head + low falling nucleus
  - \ What do you \ want (J:73)
  - \ Is that \ reasonable (J:73)
  - \ Not a \ bit of it (J:73)
  - That's \ strictly a job for you and \ me (J:73)
- e) low head + high rising nucleus
  - Do you / think so (J:78)
  - Are you all / ready (J:78)
  - Have / you heard of them (J:78)

Again, no characteristic pattern can be observed to express this category. Negative description involves absence of wide, full range nuclear movements and lack of bidirectional tones. Statements, commands and interjections exhibit no high falling tones. The existence of pitch range interval for Yes—No questions, where low rise is accompanied by high precontour and high rise by low precontour, seems to be of significance.

Group 3 (Airy) — characterized by 'positive' feeling, or contentment (light, lively), which may be inward oriented (pleased, satisfied), or outward oriented (friendly, amicable).



- a) high or high rising head + low rising nucleus
- Here he ↘ comes (Sch:43)
  - I — quite under ↘ stand (Sch:44)
  - ↘ This is for your ↘ husband (Sch:44)
  - Don't for ↘ get (Sch:54)
  - ↘ Leave it to ↘ me (Sch:54)
  - ↘ Have it your own ↘ way (J:77)
  - Is this your ↘ wife (J:77)
  - It'll be — quite ready by to morrow ↘ morning (O'C:160)
  - I'll — repair them as soon as I ↘ can (O'C:160)
  - What's the ↘ matter (O'C:161)
  - How soon will they be ↘ back (O'C:161)
  - Are you taking the ↘ car (O'C:162)
  - Does he ever come to ↘ England (O'C:162)
  - Well — keep ↘ trying (O'C:164)
  - Now — don't dis ↘ courage him (O'C:164)
  - No ↘ thank you (O'C:165)
- b) unspecified head + rising-falling nucleus
- You don't have to cycle into ^Switzerland (Sch:51)
  - She's very ^handsome (Sch:51)
  - That would be ^wonderful (O'C:225)
  - What a ^treat (O'C:137)
- c) high head + high falling nucleus
- I'd — like ↘ coffee (O'C:134)
  - I'm — sorry I ↘ can't (O'C:134)
  - What did you ↘ think of it (O'C:137)
  - Which performance did you ↘ go to (O'C:137)

As can be seen from the range of examples following each of the tone patterns, there is a predominant tendency for high precontour and low rising nucleus to associate with this particular category. It is also one of the few instances showing agreement on the correlation between intonation and meaning. Patterns (b) and (c), it appears, require a fairly strong support of paralinguistic factors like voice qualifiers and facial expression to convey the attitude discussed.

Group 4 (Surprised) — expressing speaker's reaction to an unexpected course of events. Sometimes 'surprise' is subdivided into pleasant and unpleasant but the authors do not present here a differential interpretation in terms of tonal characteristics. We believe the difference to be manifested solely by means of paralinguistic features or be inferred from context alone. A number of different synonyms employed to express it, vary along the intensity aspect of this category, e.g. puzzled, amazed, bewildered, stupefied. Examples include the following contours:

- a) rising head + high falling nucleus  
 ↘ *Why not go for a walk* (Sch:60)  
 ↘ *Why did Monica say she was ill* (Sch:60)  
 ↘ *What do you mean* (J:75)  
 ↘ *How d'you know* (O'C:195)  
 ↘ *What have you done with it* (O'C:195)  
 ↘ *Eat as much as you can then* (O'C:199)  
 ↘ *So I should think* (O'C:200)
- b) rising head + low rising nucleus  
 ↘ *Aren't you staying* (Sch:64)  
 ↘ *Can't you see it* (Sch:64)  
 ↘ *Don't you know* (Sch:64)
- c) unspecified head + high falling-rising nucleus  
*You've deserted him* (J:79)  
*Marry her* (J:79)  
*Where did I meet him* (O'C:189)  
*How far to Luton* (O'C:189)  
*Has she told them* (O'C:183)  
*She has a lovely voice* (O'C:185)  
*It isn't a house* (O'C:185)
- d) unspecified head + full rising nucleus  
 ↘ *What did you say* (J:75)  
 — *But the dog doesn't bark at his own master* (J:75)  
 — *I don't seem to recognize him* (J:75)  
 ↘ *What did you say the name of the trouble was* (J:75)

Like in the previous cases, we are again confronted with a multiplicity of tonal patterns for a single category, which cannot be attributed to the differentiation between sentence types. However, one may observe absence of low falling nuclei in the patterns, and, apart from pattern (c), there appears a characteristic interdependence between the precontour and the nucleus; if the nucleus is low the precontour tends to be high and vice versa, which may indicate the importance of widened pitch category. The occurrence of wide rising nucleus for pattern (d), in view of the absence of precontour differentiation seems to point in the same direction.

Group 5 (Angry) — comprising strong negative excitation which may be described as inward or outward oriented (angry vs. hostile).

- a) rising head + low falling nucleus  
 I ↘ *thought he was here* (Sch:50)  
 I ↘ *hope he's all right* (Sch:50)  
 ↘ *Not by a long way* (J:75)  
 ↘ *They've been making a rare night of it* (J:75)

- ↙ What do you \mean (J:75)
- ↙ Which one \can I have (O'C:115)
- ↙ Why not leave it till tomorrow \morning (O'C:115)
- ↙ Are there any ob \jections (O'C:122)
- Then could we meet on \Wednesday (O'C:122)
- b) unspecified head + rising-falling nucleus
  - Why not ^ tell him so (O'C:228)
  - What difference does ^ that make (O'C:228)
  - Aren't ^ all of us getting old (O'C:223)
  - Would ^ Pamela be a better choice then (O'C:223)
  - Pretend you ^ haven't in that case (O'C:230)
  - Wait until it ^ stops then (O'C:230)
- c) rising head + full falling nucleus
  - ↙ That's exactly what I would like to talk to \you about (J:72)
  - ↙ Because it's the thing to \do (J:72)
  - ↙ Where have you \been (Sch:60)
  - ↙ What are we to \do (Sch:60)
- d) falling head + high falling nucleus
  - \How do you know \that (Sch:61)
  - \Why didn't you \tell me (Sch:61)
  - \What is it that you \want so much (Sch:61)

No typical intonation pattern does emerge from this tabulation. We may note, however, the absence of rising nuclei and a characteristic configuration of pitch in the patterns which are composed of two movements: rising or falling precontour and a falling nucleus. It looks as if the ascending or descending head was more important in the expression of this attitude than the nuclear movement itself.

Group 6 (Apathetic) — not 'popular' with analysts, which fact is reflected in the small number of examples which have been used to illustrate this category.

- a) unspecified head + low level nucleus
  - I for\_\_ give you (J:79)
  - That's a pity (J:79)
  - What's to be done (J:79)
  - Won't you give it just five\_\_ minutes (J:79)
- b) unspecified head + low falling-rising nucleus
  - I \wish it didn't happen (J:79)
  - It's \so dreary in the garden (J:79)
  - I \knew you'd make difficulties (J:79)
  - \ Why are you saying all this (J:79)

The 'passive' nature of this category appears to be manifested by low pitch range and very little kinetic movement of the nucleus.

Group 7 (Agitated) — a difficult category to handle since it does not specify the nature of this excitation with regard to evaluation. The neutral description allows one to include under this heading both positive excitation labels like: lively, affable, buoyant and cheerful as well as negative excitation labels like: angry, aggressive, hostile. Indeed, its use by the authors varies in the same way. In order to illustrate the tonal properties of this hybrid-like label we would have to quote examples which have already been given for groups 3 and 5. We may recall that the tonal movement of the two groups was characterized by a variety of tone patterns, wide pitch range and diversification between the pitch movement of the precontour and the shape of the nucleus.

Group 8 (Awed) — an exceptional category in as far as there exists a consensus of agreement concerning its prosodic exponents. The tone which supposedly carries this meaning is either low or high rise-fall.

^Is he (J:80)

^Did he, by Jove (J:80)

How ex^citing (J:80)

Five thousand^pounds (O'C:226)

Coffee in the^summer house (O'C:226)

Is it^really (O'C:229)

Hasn't he^grown (O'C:229)

How very pe^culiar (O'C:231)

Group 9 (Uncertain) — referring to lack of emotional involvement or intensity and thus close to Group 2, although judging from the use of the labels employed to express this category, it is meant to imply lack of assertiveness on the speaker's part. Only two patterns have been mentioned and, predictably enough, they do not involve high pitch range or falling tones. Examples:

a) low head + low rising nucleus

I'd \_think so (J:77)

I \_venture to \_say so (J:77)

It's \_quite \_possible (O'C:153)

I \_suppose I can \_spare it (O'C:186)

\_About a thousand \_pounds (O'C:186)

b) head + low falling-rising nucleus

I \_will if I ✓ can (O'C:186)

She \_may not have ✓ meant to say it (O'C:186)

\_Well I'm rather ✓ busy (O'C:186)

It \_ isn't e ✓ xactly the shade I want (O'C:186)

It may be observed that, as far as one can judge from this tabulation of the contours, few categories have unique tonal representation, and

few categories correspond uniquely to given categories.<sup>11</sup> Thus for statements, category 4 (Surprise) and category 1 (Determined) may share the same pattern, viz. low rising head followed by a high falling nucleus. Similarly, *Matter-of-fact* exhibits low head plus low rising nucleus which are also present in Group 9; *Awed* and *Airy* can be expressed by means of a rise-fall and *Determined* and *Matter-of-fact* by a high head followed by a low falling nucleus. In Wh-questions, *Angry* may receive the same prosodic interpretation as *Surprise*, and *Determined* may share the rising-falling nucleus together with *Awed*. For Yes-no questions, a high level head followed by a low rise can be taken to express both category 2 (*Matter-of-fact*) and category 3 (*Airy*). Likewise, a high level head and a low falling nucleus can represent category 1 and category 2 for commands.

In other words, although the organization of labels into clusters has obvious merits in that it reduces the spurious distinctions of emotive effect and results in establishing broadly distinct categories in terms of prosodic exponents, the presence of identical contours to express seemingly different semantic categories may point to some overlap within the latter. Even on purely semantic grounds differences between 'agitated' and 'angry', or 'airy' and 'determined' as opposed to 'matter-of-fact' are not as clear cut as might be desired.

This 'non-uniqueness' of prosodic form with respect to emotive category, paralleled by mistakes made by informants in categorizing expressions in recognition experiments<sup>12</sup> (see Crystal 1969) is nothing surprising when viewed in the light of evidence accumulated by psychologists in their work on recognition of emotion. It seems expedient at this point to mention but briefly the results obtained by Frijda<sup>13</sup> (1958) from experiments with filmed spontaneous expressions. In the course of his work on recognition of emotion Frijda found that not only did his subjects employ a large number of different labels to describe a given expression, but also sometimes the majority of interpretations was quite different from the true state of affairs. It was shown further that different emotions can give rise to one and the same expression which is precisely the situation evident in the foregoing tabulation of intonational exponents of emotive categories.

The category conception of emotion, where affective behaviour and

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<sup>11</sup> B. Marek: *Derivative character of intonation in English and Polish*, unpubl. Ph. D. diss. UMCS, Lublin 1975, examines contours individually with respect to labels they can convey and finds an even greater divergence.

<sup>12</sup> N. H. Frijda: *Facial expression and situational cues*, "Journal of Abnormal and Social Psychology", 1958, 57, pp. 149—154.

<sup>13</sup> Crystal: *op. cit.*

its recognition is conceptualized in terms of a number of distinct and unrelated classes, is but one model to which prosodic features can be related albeit rather unsuccessfully (cf. also Pollack et al. 1960, Crystal 1969). Psychologists preoccupied with the investigation of recognition of emotions were led to establish another conception — dimensional model — which emerged as a result of the fact that recognition errors follow similarities between emotions, similarities that may be conceived of as proximities in a multidimensional space<sup>14</sup> (Schlosberg 1954, Tomkins 1964, Osgood 1966). Recognition of emotion came thus to be viewed as a process of multidimensional placement rather than as placement in one of a number of unrelated categories.

The most widespread dimensional model consists of three dimensions: Evaluation — pleasant vs. unpleasant or positive vs. negative, Activation — strong vs. weak (running from 'complacency' to 'joy', 'rage' and 'horror'), and the third dimension labelled Control — active vs. passive or intentional vs. unintentional, distinguishing between emotions initiated by the subject from those elicited by the environment ('contempt' vs. 'fear', for instance). Thus, the dimensional conception of emotion consists of categorizing the observed emotive behaviour in terms of a set of general dimensions which allows further to specify, on the basis of situational cues, which of the emotions compatible with the given placement on the three-dimensional scale is actually present.

In other words, the dimensional system, having an abstract character, does not define emotions fully but leaves out some of their aspects, notably the denotative aspect expressed in terms of a concrete label. Consequently, 'startled' will differ from 'disgust' by virtue of the difference in the dimension of Control, with the former specified as: —positive, +strong, —active, and the latter as —positive, +strong, +active. Similarly, 'cheerful' would have the features +positive, +strong, +active, and 'complacent' would be marked as +positive, —strong, —active. But labels in pairs like: 'disgusted' and 'angry', 'bewildered' and 'astonished', 'complacent' and 'pleased', cannot be differentiated from each other by means of the existing dimensions; they are specified respectively as: —positive, +strong, +active, —positive, +strong, —active; +positive, —strong, —active.

The referential, or denotative meaning of emotions is thus viewed as dependent on situational factors, considerations as to what emotions

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<sup>14</sup> H. Schlosberg: *Three dimensions of emotion*, "Psychological Review" 1954, 61, pp. 81—88; S. S. Tomkins: *What and where are the primary affects? Some evidence for a theory*, "Perceptual and Motor Skills" 1964, 18, pp. 119—158; C. E. Osgood: *Dimensionality of the semantic space for communication via facial expressions*, "Scandinavian Journal of Psychology" 1966, 7, pp. 1—30.

are possible or permissible in various situations which serve to confer similarity upon the expressive labels used<sup>15</sup> (cf. Frijda 1969, Osgood 1966). Consequently, emotion is conceived of as constituted by behavioural as well as situational, or, more generally, cognitive factors.

To return for a moment to our previous discussion, the difference between labels like 'matter-of-fact' and 'stand-offish' rests in the cognitive reference, to cases implying evaluation. Similarly, the difference between 'pleased' and 'relieved', or 'respect' and 'sadness' is one of reference to the causes or concomitant situations. Both may be states of low general activity and low arousal, but, in the first case, the distinction stems from previous expectations of some unpleasant events, and in the second, from the realization of some loss or a missed chance. Similar explications might be made for the other examples that have been given.

The consequences for the recognition of emotion are quite clear. In so far as emotion is ultimately defined by cognitive aspects, it cannot be correctly identified on the basis of overt expressive behaviour. Many emotions will be confused with others, defined by different cognitive referents (situational), but by similar or identical behavioural components in terms of placement in the same points of the dimensional scale. If, indeed, emotion consists of behavioural and cognitive determinants, recognition of emotion will rest upon cues of both types.

That situational cues drastically modify the interpretation of emotive expression is evident from a number of experiments<sup>16</sup> (Davitz 1964, Mehrabian 1972, Goldberg 1951, Tomkins 1964), demonstrating an increase in recognition scores when situation cues are present. The process of recognition of affect is thus conceived of as a two stage process: assessment of the general activity pattern on the basis of the expression itself, and subsequent specification of this pattern on the basis of contextual cues and even, as demonstrated by Tomkins, on the basis of one's own emotional categories and experience.

A number of important implications can be drawn from the foregoing considerations:

a) Recognition of emotive meaning as expressed by prosodic features is likely to remain inaccurate in so far as part of this meaning is specified by cognitive and contextual factors.

<sup>15</sup> N. H. Frijda: *Recognition of emotion*, "Advances in Experimental Social Psychology" 1969, 4, pp. 167—219; Osgood: *op. cit.*

<sup>16</sup> J. Davitz: *The communication of emotional meaning*, McGraw-Hill: New York, 1964. A. Mehrabian: *Non-verbal communication*, Aldine Atherton: New York 1972; Tomkins: *op. cit.*

b) The primary task of an analysis and prosodic features would be to specify this relationship in terms of correspondence between the three dimensions of Evaluation, Control and Activation on the one hand, and prosody on the other. It might be interesting to find out whether all or only part of these dimensions are reflected prosodically, and whether the dimensions exhibit any hierarchical organization in this respect.

c) There may well exist some significant functional differentiation between intonation and other prosodic features with respect to individual dimensions into which emotive effect is structured. Our task would then lie, primarily, in showing how intonation on its own contributes to the relevant dimension or dimensions.

d) Given the significance of contextual cues for the actual naming of a given emotive effect, it might be of interest to ascertain the relative importance of intonation for attitude differentiation in cases of conflicting or inconsistent cues realized in terms of divergence between the propositional content of the utterance and its melodic pattern with reference to any dimensions that might be relevant.<sup>17</sup>

#### STRESZCZENIE

Dowolność i przypadkowość semantycznych uogólnień w opracowaniach na temat emotywniej funkcji intonacji były zawsze uważane za główną przyczynę niedoskonałości opisów relacji między intonacją a ekspresją. Mimo jednak systematyzacji istniejących kategorii opisowych daje się zauważyć występowanie różnych przebiegów intonacyjnych dla tych samych kategorii emotywnych i odwrotnie. W konsekwencji, mimo występowania pewnych współzależności między intonacją a ekspresją, teza o istnieniu jednoznacznych relacji między nimi musi być odrzucona.

System dyskretnych kategorii emotywnych przeciwstawia autor trójwymiarowemu modelowi emocji, używanemu z powodzeniem w psychologii, na który składają się tzw. parametry Kontroli (czynna wzgl. bierna), Oceny (pozytywna lub negatywna) i Aktywności (mocna lub słaba). Model ten ujmuje identyfikację danej emocji jako proces umiejscowienia ekspresji wielowymiarowo, a nie w ramach odrębnych kategorii. Dzięki swemu abstrakcyjnemu charakterowi, trójwymiarowy model emocji nie określa danej ekspresji w pełni, lecz pozostawia nieokreślone takie jej aspekty jak aspekt denotatywny i kognitywny. Pozwala to na wyjaśnienie niemożności prawidłowego nazwania danej emocji jedynie na podstawie czystej ekspresji właśnie ze względu na rolę czynników sytuacyjnych, które ostatecznie umożliwiają właściwe jej określenie, a tym samym prowadzi do stwierdzenia, iż iden-

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<sup>17</sup> An examination of this type was undertaken in M. Pakosz: *Attitudinal meaning of intonation in English*, unpubl. Ph. D. diss. UMCS, Lublin 1979, and resulted in a radical reappraisal of the way intonation can be related to emotive meaning. Abbreviated versions of its fragments appeared in "Lingua" 1982, 56, pp. 153—178 and "Lingua" 1982, 58, pp. 309—326.



tyfikacja znaczenia emotywnego w oparciu o postać prozodyczną wypowiedzi nie może być poprawnie wyrażona w jednostkowych kategoriach. Problem relacji między intonacją a emocją sprowadza się zatem do poszukiwania odpowiedniości i współzależności między linią melodyczną wypowiedzi a poszczególnymi parametrami trójwymiarowego modelu.

## РЕЗЮМЕ

Произвольность и случайность семантических обобщений в обработках экспрессивной функции интонации были причиной несовершенства описаний соотношения между интонацией и экспрессией. Кроме систематизации существующих описанных категорий, можно заметить выступление разного интонационного развития этих же экспрессивных категорий и наоборот. В результате, мимо выступления некоторых взаимозависимостей между интонацией и экспрессией, тезис о существовании однозначных между ними соотношений, нужно опровергнуть.

Систему деликатных экспрессивных категорий, автор противопоставляет трехмерную модель эмоции, выступающая в психологии и состоящая из т.н. параметров Контроля (активный или пассивный), Оценки (положительная или отрицательная) и Активности (сильная или слабая). Эта модель рассматривает данную эмоцию как процесс расположения экспрессии многомерно, а не в пределах отдельной категории. Благодаря своему абстрактному характеру, трехмерная модель эмоции не определяет данную эмоцию вполне, но оставляет неопределенные такие ее аспекты как денотативный и когнитивный. Это позволяет выяснить невозможность правильного определения данной эмоции на основе чистой экспрессии, а только учитывая роль ситуационных факторов можно ее правильно определить.

Исходя из просодического вида высказывания, идентификация эмотивного значения не может быть правильно выражена в единичных категориях. Проблема соотношения между интонацией и эмоцией сводится к поиску соответствия и взаимозависимости между линией мелодичности высказывания и отдельными параметрами трехмерной модели.

