

## THE PROJECTION OF „SINGING TENDENCIES“ INTO PROFESSIONAL COMMUNICATION

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*‘Both arts, singing and speech, are closely related. I cannot work on my singing voice without simultaneously improving my speaking voice; in the same way, speakers will gain in the flexibility and strength of their voices if they practice breath exercises and even learn singing...’*

*Leo Kofler*

**Abstract:** *The present contribution is directed to the identification of the peculiarities of the basic parameters of voice, speech and communication as they are perceived by the partners in formal and informal communication. The aim of these reflections and investigation is to improve the techniques of the training of communication (interaction) and the work with voice in the context of communicative situations, including problem ones, occurring in professions where voice is one of the working tools (education, care, leading, management, therapy).*

*The authors of the present paper have been working on the techniques of training in their professional fields.<sup>1</sup> They have concentrated on the intersection field, namely the human voice and speech in communication (communicative situations).*

*Their reflections are based on the idea assuming that the basic parameters of voice and specific features of speech, especially their formal characteristics (the use of the voice timbre, modulation, articulation, cadence and others, mostly called non-verbal or metacommunicative characteristics of speech) belong to the prerequisites of successful communication. One of the inspirations concerning the theme of the authors’ research was their participation in the ISME (The International Society for Music Education) Conference in Bologna 2008.*

**Keywords:** *voice, speech, communication, interactive exercises, condition voice exercises, rehabilitation of voice disorders, singing tendencies*

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<sup>1</sup> Interactive exercises concentrating on the cultivation of skills, especially in the field of symbolic interaction (communication) (Jaroslav Řezáč), and condition voice exercises as well as the rehabilitation of voice problems and disorders (Jana Frostová).

## Introduction

There is more and more evidence of the importance of effective communication for both the voice professionals (singers, actors) and those professions where voice is the basic means of influencing another person, thus being a „working tool“ (in education, leading, teaching, management, therapy). Due to our professional orientation we are interested in teachers and the field of pedagogical communication where the basic specific parameters of voice, such as *purity*, *sonority*, *pitch* and *timbre*, are the prerequisites of quality speech (its *modulation*, *intonation*, *articulation*, *speed*, *rhythm*) and communication. Voice and speech as the means of expressing emotional and social dimensions in professional relations are more and more important if confronted with the „e-communication“.

The goal of the project is to seek ways for improving communicative exercises. The investigation is a probe into the connections between the basic parameters of voice and the quality of communication. We shall try to find out whether the individuals whose voices are cultivated by singing differ in their professional communication from the others. In case such differences are found, the next stage of our investigation will be directed to the precise identification of these voice characteristics.

Our experience of exercises and training has led us to the following questions: do those whom we could tentatively call „**singing people**“<sup>2</sup> show different features in communicative situations in comparison with „**non-singing**“ people? Do those whose parameters of voice and speech are more cultivated thanks to their singing differ in communicative situations? How are these people perceived by their partners in communication? Will there be any difference at all? These questions gain importance when such techniques of communicative exercises are constructed that would include a methodically well-founded cultivation of the non-verbal components of voice and speech.

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2 The concept of „singing tendencies“ or „musicality“, as we use it in the present paper, stands, admittedly, close to the concept of „musicality“ used in the field of musical theory (eg Lýsek, F. 1956), but is not totally identical with it. Musicality is mostly understood in the context of preferences (of musical genres, singing or musical activities etc). From the psychological point of view, the emphasis is usually put on the relation between the content, „*the langure of music*“ and the sense of its identification). (B. M. Těplov pointed out that „the main characteristic feature of **musicality** is experiencing music as an expression of a certain content“ (1965, p. 21).) The attitude to a musical piece is then not primary here: primary is the ability to feel and understand its content. F. Sedlák as well seems to understand **musicality** as a personality’s quality changing during the ontogenesis („*the development of musicality at the pre-school age*“); he includes into this cluster of partial skills the following: vocal reproduction, the ability to transpose, etc; cf Sedlák, F. 1974, p. 87. He also uses the concept of „*musical maturity*“ in connection with musicality. In his conception musicality is unequivocally a cluster of musical abilities „*integrated in the concept of musicality*“. He explains the various musical abilities in connection with the diagnostics of musicality when the child enters school (ibidem, pp. 90-92). Some authors as early as in the 1920s and 1930s identified *musicality* and *musical talent* (eg C. Seashore); there are also some reflections on *the hereditary fundamentals of musicality* (Franěk, M. 2005, p. 143). Nevertheless, there is no unequivocal and generally accepted definition of musicality. Similarly, the concept of „singing tendencies“ mostly refers to the individual’s preferences while choosing certain musical genres, and less often to active musical or singing activities. „*Social singing tendencies*“ is another concept sometimes used: it accentuates not only the reproductive, but also the productive component of the attitude to music (cf, eg, Crha, B. b). The present study accentuates the productive aspect and uses the concepts „*singing*“, „*non-singing*“, „*decidedly singing*“ and others for marking respondents who have shown a certain score (see below) on the scale where **the quality, intensity and frequency** of singing activities is assessed by the respondents themselves (more details in the following chapter on the methodology of the investigation).

## The methodology of the investigation and the research sample

Based on the experience from the practical training of communication (and interaction)<sup>3</sup> and from the application of condition exercises and techniques of the rehabilitation of voice disorders and problems<sup>4</sup>, a two-part questionnaire has been worked out. Its first part offers a six-grade scale for the assessment and self-assessment of the following characteristics:

### Communication – 6 items:<sup>5</sup>

(1) *communicative skills* in the narrow sense of the term (the establishment and development of communication, the argumentation skill, the presentation and upholding of one's personal goal in communication, (2) *style* (the ability to captivate the listener by the manner of speech), (3) *the authenticity of the content* of communication, (4) *the interactive skill* (the establishment, development or even cultivation of relations in the communicative situation), (5) *the degree of pedagogical impact* by means of communication, (6) *empathy* (the ability to put oneself in the partner's situation and in the specificities of his/her personality).

### Speech – 10 items

(7) *the fluency* of speech, (8) *the speed* of speech, (9) *the articulation*, (10) *the modulation*, (11) *the structuralization* of speech (the inner continuity and interconnection in expressing the content), (12) *the technique* of speech, (13) the expression of *emotions*, (14) *the timbre* (and its changes used for emphasizing the content), (15) *the condition*, (16) *the resistance* to the situational strain.

### Voice – 5 items

(17) *purity*, (18) *intensity*, (19) *timbre*, (20) *pitch*, (21) *sonority*.

The three sections of the first part of the questionnaire, described above, are arranged in the given order so as to facilitate a gradual, more and more detailed direction and a constantly increasing exactness in assessing the individual characteristics.<sup>6</sup>

In the second part of the questionnaire the respondents have assessed subjectively their singing skills, motivations and attitudes to active singing on a seven-grade scale, the items being the following: *the appetite/aversion* to active singing, *the quality* (the level of their singing perceived subjectively), *the frequency*, *the intensity*, *the relation* to singing, *the type of singing activity* (amateur, half-professional or professional). The self-assessed scores in the second, third and fourth items of the second part of the ques-

3 ŘEZÁČ, J. K problému rozvíjení seberefektivní kompetence v rámci interakčních cvičení. *Pedagogická orientace* 1997, 4, pp.12-18, ISSN 1211-4669.

ŘEZÁČ, J. Zpětná vazba jako aktivizující a facilitující faktor interakčního učení. In kolektiv.: *Učitel, vyučování, situace*. Brno, Paido 1994.

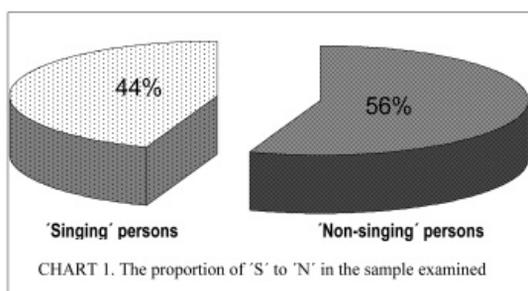
4 FROSTOVÁ, J. A study on teachers' voice development in the context of their profession. In *School and Health* 21. 1. vyd. Brno : MSD, s.r.o., 2008. pp. 65-78. *Social and Health Aspects of Health Education* (3). ISBN 978-80-7392-043-2.

5 The respondents were instructed to read carefully the descriptions of all the grades of the scale, since each grade only expresses a feature or skill in the mutual context and in the whole of the item.

6 This paper makes no difference between the assessment and self-assessment. The relation between self-perception and the assessment from the outside will be discussed in another paper.

tionnaire express „*the tendency or non-tendency to singing*“ . The data on the attitude to singing and on the free time activities connected with singing or playing a musical instrument make only a sort of supplementary information and have not be included in the quantitative results.

The“*singing*“ respondents are, according to the criteria of the present research, those respondents who have assessed *the quality, frequency and intensity* of their own singing within the scores 1.0 to 3.7. On the other hand, the „*non-singing*“ respondents’ self-assessments have reached the scores 4.33 to 7.0 and expressed either a very low *level* (quality) of their singing and its low *frequency and intensity*, or the absolute *absence* of singing activities. The respondents who have chosen the medium interval of the scale (3.8 to 4.0) make only 6.1 % of the total number. One of the first conclusions of the research is the fact that the „*non-singing*“ respondents visibly prevail over the „*singing*“ ones.



Originally 170 pedagogues of various types of schools (primary and secondary) promised to co-operate in the investigation. All of them were provided with a detailed and binding (written) instruction about the application of the questionnaire, as well as two questionnaire forms: for themselves and for the person examined. They tipped a colleague they had

known intimately from formal and informal professional communication and were administering the questionnaire from February to May 2009.

The respondents self-assessed the above given parameters of *voice, speech, communication and singing tendencies*. The same parameters (except *singing tendencies*) were then assessed independently by their partners who had known them well and for a long time. They were not acquainted with each other’s assessments and moreover the tipped respondents were not informed that the colleagues who had asked them for „completing the questionnaire“ assessed them as well.

The return of the completed questionnaires at the deadline was 164 (including three questionnaires where either one or two items were not completed due to carelessness).

TABLE 1. The professional status of the persons in the sample examined

	abs.	%
Educators (teachers, instructors etc)	101	61,59
Management (managers, entrepreneurs etc)	23	14,02
Others (teaching students, a stewardess, policemen etc)	18	10,98
Services, shops	14	8,54
Health service (a doctor, a children’s nurse, male nurses etc)	8	4,88
	<b>164</b>	<b>100</b>

In order to identify the differences more distinctly, we have supplemented the two categories given above („S“ for „singing“ persons and „N“ for „non-singing“ persons) with two new categories („DS“ for „decidedly singing“ persons and „DN“ for „decidedly non-singing“ persons). „DS“ are those respondents who have self-assessed *the quality, frequency and intensity* of their singing activities on the first two points of the seven-grade scale (the score: less than 3, namely 1.0 to 2.67). The category of „DN“ is made by respondents who said that they did not sing and were not attracted by singing (the score: more than 5.0, namely 5.1 to 7.0). Introducing these categories has proved to be very useful for the description of the differences.

## The results and discussion

Out of the 21 parameters of voice, speech and communication only the following assessed attributes show distinctive differences:<sup>7</sup>

### Communication

*Interactive skills* (considered as the ability to initiate, establish and deepen interpersonal contacts),

*communicative skills* (the ability to initiate a meaningful communication and develop it adequately),

*empathy* (the ability to put oneself in the situation and specificities of the partner in communication).

### Speech

*Articulation* (pronunciation),

*modulation* (adequate changes of intonation, voice intensity and the speed of speech, used for giving a clearer picture of the content of speech),

*condition* (the influence of tiredness on the condition during the communication,

*technique* (the support of the content of communication by means of non-verbal characteristics of voice and speech).

### Voice

In assessing the basic parameters of voice the „singing“ and „non-singing“ respondents have not shown any significant differences with the exception of *voice sonority*.

### Interactive skills

The most distinctive difference between the „singing“ and „non-singing“ respondents could be seen, in the assessors' view, in *interactive skills*.

The item had the following grades of the scale:

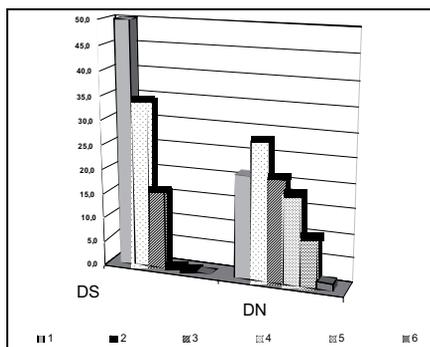
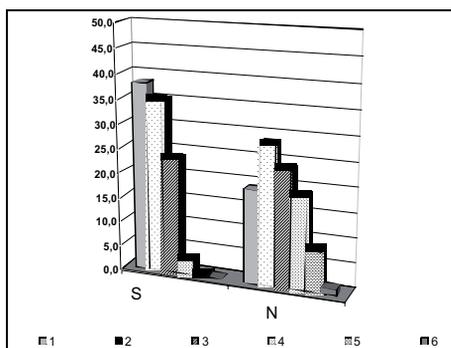
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<sup>7</sup> This survey only gives those qualities assessed where (using the F-test) the difference between the groups „S“ - „N“ and „DS“ - „DN“ is statistically relevant (on the level of 0.05%).

(Interactive skills)					
<i>I can say that</i>					
he/she is decidedly one of the people who can very well and naturally establish and develop relations with others	he/she establishes and develops new contacts with people without any major problems	he/she establishes or develops new relations quite well, as most people do	he/she establishes and develops relations with strangers without greater problems but a bit „carefully“	he/she establishes new relations with a certain „watchfulness“ or „noticeable problems“	establishing relations brings him/ her considerable and obvious problems
1	2	3	4	5	6

As the following CHARTS (2 and 3) show, the „singing“ respondents („S“) are assessed much better than „N“ in the sphere of *interactive skills*. This is a quite surprising finding, since we rather expected such a distinctive difference in communicative skills. Our experience would justifiably lead us to the presupposition that the ability to work with voice (a better control of its characteristics due to intensive and frequent singing) would especially influence the formal aspects of communication. However, our probe does not corroborate this presupposition as markedly as the difference in the interactive skills, which is really significant.

CHARTS 2 and 3. The assessment of interactive skills in „S“ - „N“ and „DS“ - „DN“<sup>8</sup>



The results suggest that a bigger sample might *confirm* the current results or, most probably, even *accentuate* them. This is because in the groups „DS“ - „DN“ the difference is even more shifted to very favourable assessments, the „DS“ group being assessed the most favourably in 50 %, mostly at the expense of preferring the fourth and fifth grades of the scale.

For the time being one can only speculate on the reasons for the favourable perception of „S“ and especially „DS“: is it *dependent* on „the singing tendencies“, or on the fact that singing activities rather attract individuals that are decidedly *more sociable*? In view of the fact that especially the „DS“ respondents go in for singing not only intensively and frequently, but also *in groups* or *teams*, it is quite probable that one can see

<sup>8</sup> The comparison of the results (the spread over the scale) has been worked out into contingent tables. All the charts in the present paper are based on them.

here the positive „consequences“ of „*team thinking*“ and „*team co-operation*“ . Choir activities seem to evoke unintentionally certain models of interaction. Common success, as well as pleasure experienced by motivated singers, need co-operation and reciprocity. An individual’s success presupposes the others’ success – and therefore virtually evokes the willingness to help the others, sharing the creative work and looking for ways that would remove individual mistakes. It remains to be seen what facts are the real determinants of the connection just revealed.

## Communicative skills

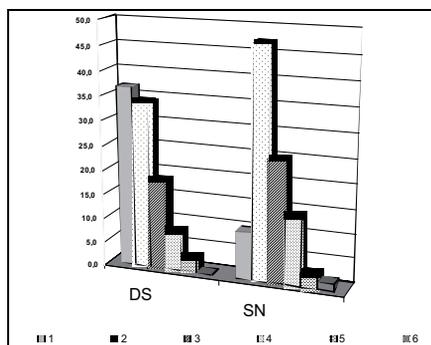
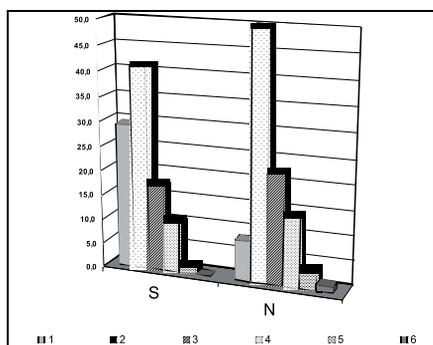
As we have adumbrated, the assessment of *communicative skills* is also more favourable in the „S“ group, but not as markedly as the assessment of interactive skills.

Communicative skills are characterized on the following scale:

(Communicative skills)					
<i>He/she is one of the people who</i>					
are able to establish communication in a really outstanding way, direct it or lead discussions arguments or in formal debates etc	can open a dialogue or another form of communication and adequately influence its progress	can communicate well, are relatively successful in communication, although they do not exactly seek debates, discussions etc	mostly manage to communicate, do not avoid debates or discussions, but do not usually initiate them or step in them vehemently	rather avoid debates or discussions, especially led in groups, since they find it quite difficult to present themselves and get the upper hand	prefer to avoid communication with people if it is possible at all, because their presentation skills are not good or not good them to reach success
1	2	3	4	5	6

The assessments are also spread differently over the scale: the „S“ group is mostly assessed as „*very good*“ at communicative skills (41.18 %) and even „*outstanding*“ (29.41 %), while the „N“ group is most frequently assessed as „*very good*“ (50.59 %) and „*good*“ (22.35 %).

CHARTS 4 and 5. The assessment of communicative skills in „S“ - „N“ and „DS“ - „DN“



As CHART 5 shows, in the „DS“ the proportion of evaluating assessments is changed towards the most favourable section (36.84 %), while in the „DN“ group it does not change very much. We suppose that the less marked difference between „S“ and „N“ („DS“ and „DN“) in their communicative skills, as compared with their interactive skills, may be caused by the fact that during communication the formal aspects of voice, as well as speech expression, do not play any important role. A successful (especially formal) communication will be conceivably more dependent on the argumentative force of the content than on the accentuation of the statements or expression (ie on the metacommunicative, formal aspects of communication). However, at the same time, it is obvious that the cultivation of voice (and consequently of speech) projects into communicative situations so greatly that it is worth planning a connection between the training of communication and the cultivation of voice and formal characteristics of speech.

## Empathy in communication

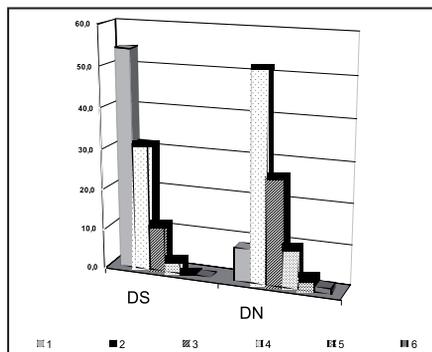
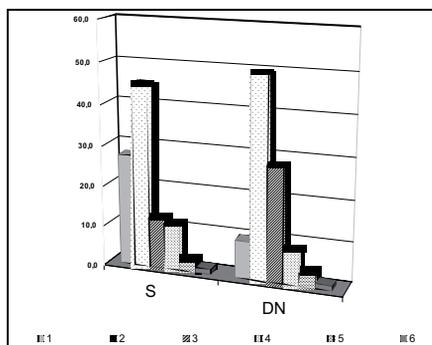
Quite great differences between „S“ and „N“ have also been found in assessing the characteristics of speech from the point of view of *communicative empathy*<sup>9</sup>. The assessments were based on the scale with the following evaluations:

(Empathy)					
<i>During communication this man/woman</i>					
can in an outstanding way put himself/herself in other people's situations and personalities	can well identify himself/herself mentally with others	can quite well identify with others	in spite of certain problems can identify himself/herself mentally with others	is not really good at putting himself/herself in others' situations, experiences or qualities	is not „empathic“ at all, is not given that talent
1	2	3	4	5	6

The results show again that „*singing tendencies*“ to a certain degree correlate with communicative empathy. In CHARTS 7 and 8 the „DS“ group is unequivocally assessed favourably („mark“ 1 on the scale in 54.29 %). The difference between „S“ and „N“ is not so obvious, but it evidently rises with stronger „*singing tendencies*“.

<sup>9</sup> During our work we have used this concept for assessing empathy as a prerequisite for an adequate perception of the partner in communication as well as an impact on him/her (ie for an adequate and effective transference of the message on the recipient).

CHARTS 6 and 7. The assessment of *empathy* in „S“ - N“ and „DS“ - „DN“



The change in the spread of the assessments over the scale is quite visible. While the „S“ group is evaluated with „marks“ 1 and 2 on the scale (27.5 %, 45.0), the „DS“ group shows the dominance of the most favourable grade of the scale before the second one (54.29 %, 31.43 %). Further connections are shown clearly in CHARTS 6 and 7.

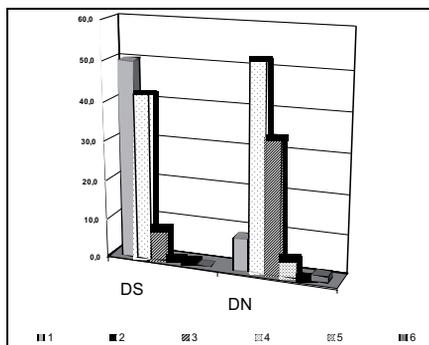
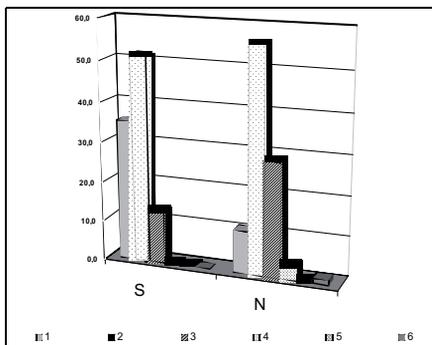
## Articulation

The following scale was the criterion for assessing articulation:

(Articulation)					
<i>His/her speech</i>					
is an example of correct articulation, his/her pronunciation is perfect, everybody understands him/her very well	is easy to understand, he/she articulates correctly and clearly	shows minor mistakes in pronunciation, but is quite easy to understand	needs more concentration on the part of the partner because of certain problems in his/her pronunciation	has considerable defects in articulation which rather seriously complicate the understanding of his/her communication	has so serious defects in articulation that he/she is difficult to understand or cannot be understood at all
1	2	3	4	5	6

The „*singing tendencies*“ seem to be connected with the quality of pronunciation as well. The „S“ group is mostly assessed with „marks“ 1 and 2 on the scale (35.29 % and 51.47 % respectively) (see CHART 9), while the dominance of the most favourable assessments is even more obvious in the „DS“ group (50 % and 42.11 %) (see CHART 10). The proportions of „N“ and „DN“ do not basically change.

CHARTS 8 and 9. The assessment of articulation in „S“ - „N“ and „DS“ - „DN“



Similarly to the preceding cases, an analysis of the spread of the median values disproves the zero hypothesis on the equality of choices and suggests that (after verifying the current results on a greater number of examined persons, which is in progress now) it will be most probably possible to classify a good level of articulation as one of the features and skills denoting people with „singing tendencies“.

## Modulation

We supposed that the modulation of voice (in speech) will be more obvious in „singing“ people (ie that the transfer of the characteristics and skills connected with the voice control while singing will manifest themselves positively).

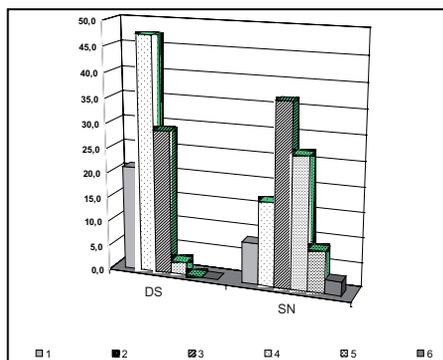
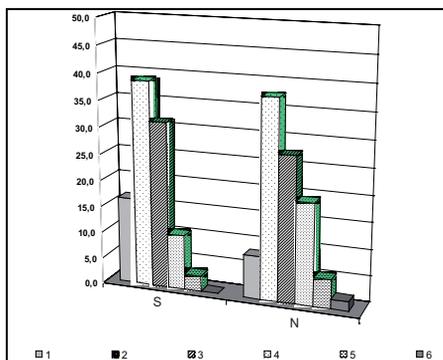
The evaluating scale has been formulated as follows:

Speech modulation)					
<i>His/her speech</i>					
very markedly accentuates its content with changes of intonation, the intensity of voice, the speed of speech etc	mostly quite adequately supports the content of communication with changes of intonation, the speed of speech, voice intensity etc	makes the content of communication clearer by means of changes in intonation, the speed of speech etc	supports the content of communication with modulations of the speed of speech, intonation and voice intensity only in cases where the speaker is really interested in something	ie its speed, in tonation and voice intensity are not dependent on the content of communication	is monotonous, as if without any feeling
1	2	3	4	5	6

The difference between „S“ and „N“ is not really great (see CHART 10). It has also been found out that unlike the other characteristics of speech (and communication), *the*

*modulation* of speech is assessed with the focus on the 2nd and 3rd grades of the scale. This seems to give evidence of the fact that, in contrast to the other characteristics, *modulation* is not given such parameters by population that would be needed in optimal communication. As far as the comparison of „DS“ and „DN“ is concerned, the difference in favour of *the „singing tendencies“* is evident here. In the „DS“ group the majority of assessments correspond with the 2nd and 3rd grades of the scale (47.37 %, 18.95 %), while in the „DN“ group the spread of the evaluating assessments is shifted towards the grades 3 and 4 (36.62 %, 26.76 %). The difference in the dispersion of the median values of the two choices is, similarly to the preceding characteristics, evident on the 0.05 % level of importance.

CHARTS 10 and 11. The assessment of voice modulation in speech in „S“-„N“ and „DS“-„DN“



## The technique

The item expressing „*the technique of speech*“ has been oriented towards finding out whether communication is supported by certain „singing tendencies“, „musicality“ or „pleasantness“ of voice – that is to say, by non-verbal voice characteristics (and is therefore a kind of control question to the items that *measure* intonation, modulation etc individually).

The evaluating scale has been formulated as follows:

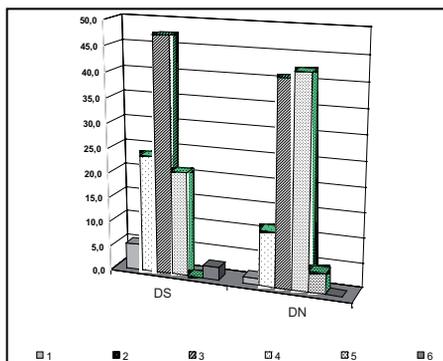
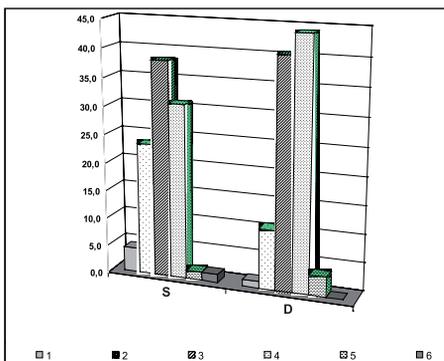
(The technique of speech)					
<i>The speaker</i>					
can handle his/her voice so well that he/she sounds like a speech professional	can manage his/her voice so much that the very „music“ of his/her voice is a communication	can attract people’s attention with his/her voice and the technique of its control, even though the content of his/her speech needn’t be very attractive	has a voice whose pleasantness is comparable to most people’s usual voices	has a voice which seems not to be connected with the content of communication and hardly helps to understand it	has voice characteristics that do not accentuate the content of communication, or sometimes even distort it
1	2	3	4	5	6

The comparison of „S“ with „N“ as well as „DS“ with „DN“ shows a considerably different dispersion of evaluating assessments on the scale (and in the T-test).

The assessment of all the groups is relatively „stricter“ here than in the preceding items (the most favourable assessment only occurs in 4.41 % of the „S“ group and in 1.19 % of the „N“ group), but on the whole the „singing“ respondents get more positive assessments than the „non-singing“ ones. The „S“ group and even more the „DS“ group seem to project better into the technique of speech their ability to express more clearly (or to support more markedly) the content of speech with the formal characteristics of voice.

CHARTS 12 and 13 show that in the „S“ and „DS“ groups the work with voice is automatically or intentionally more intensive and that their communication is perceived as „more interesting“ or „pleasanter“ and consequently „more communicative“. 23.53 % of the „S“ respondents and 23.68 % of the „DS“ ones have been given „mark“ 2, which means that the very „music“ of their voices brings a certain communication; the assessors have evaluated 38.24 % of the „S“ group and 47.37 % of the „DS“ group as capable of holding the listener’s interest by means of their *voice technique*. The „N“ and „DN“ groups are placed in the 4th grade of the scale (meaning that *the pleasantness* of their speech is comparable to „usual“ voices that can be found in the majority of population).

CHARTS 12 and 13. The assessment of the technique of the work with voice in „S“ - „N“ and „DS“ - „DN“



## The sonority of voice

The most frequent phoniatric classifications of the basic parameters of voice usually enumerate *purity*, *intensity*, *timbre* and *pitch*, and sometimes also *flexibility*, taken as „the complex perception of all the given parameters together“. <sup>10</sup> The given parameters can directly be derived from the physical quantities of the measured phonation. Nevertheless the perception of the human voice (not only the singing voice, but the speaking voice as well) needs a more colourful terminology to express its characteristics based

<sup>10</sup> Cf, eg, Novák, A. 2000, p. 11.

on the requirements and criteria for the communicativeness of communication (taking into account both the form and the content), for example: a full voice, a sonorous voice, a resonant voice; the voice can be metallic, fruity, mellow; it can be perceived as a well set voice, a badly set voice (the voice in a mask) etc.

The *sonority* of voice in our research means especially its *richness*, *clearness* and *regard to details* and is one of the prerequisites of a good communicativeness in communication. Sonority cannot be directly derived from the physical attributes of voice, since it mostly depends on the technique of the work with voice.

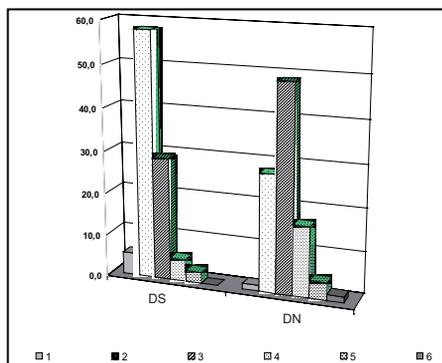
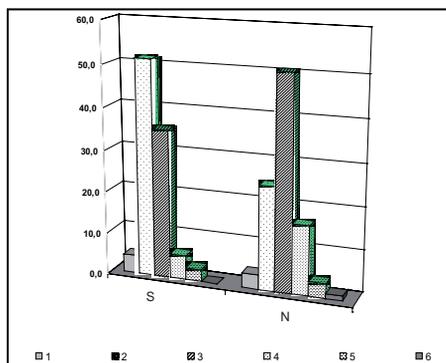
The almost natural assumption that „singing“ people’s voices will be perceived more favourably than „non-singing“ people’s voices has not been corroborated. An important role can be played here by the fact that in the perception schemes people do not usually pay sufficient attention to details so as to perceive the separate parameters of voice (which often holds good even about „singing“ people introspecting themselves).

The assessors in our research have perceived the differences between the „S“ group and the „N“ group only in regard to *sonority*, as characterized on the following scale:

(The sonority of voice)					
<i>His/her voice is</i>					
really very sonorous, rich and „detailed“	expressive and sonorous regardless of the intensity	adequately sonorous, quite rich	not very sonorous, it could be more expressive	rather weak, not very variable/ detailed	rather „subdued“, lacks the needed sonority
1	2	3	4	5	6

CHARTS 14 and 15 show that especially the assessments evaluating the „decidedly singing“ respondents are shifted to the left (ie the most favourable) edge of the scale. The voices of 57 % of the „DS“ respondents have been perceived as „*expressive and sonorous regardless of the intensity*“ (grade 2) and almost 30 % as „*adequately sonorous – rich*“ (grade 3). The „N“ and „DN“ groups show that their assessments are dominantly placed in the middle of the scale (grades 3 and 4).

CHARTS 14 and 15. The assessment of the sonority of voice in „S“ - „N“ and „DS“ - „DN“



## Condition

The assessment of the condition (ie of the manifestations of tiredness projected into voice and speech) is based on the assumption that people training their vocal cords by means of singing<sup>11</sup> will be better at managing the load that is evoked by a certain communicative situation.

(Condition)					
<i>If the speaker is tired,</i>					
it is not at all noticeable in his/her voice or speech	the influence of the tiredness on his/her voice is hardly noticeable	the influence of the tiredness can be traced in his/her voice	the tiredness mostly has a negative impact on his/her voice	the influence of the tiredness on his/her voice is audibly obvious	the influence of the tiredness on his/her voice and speech condition is immediately and un mistakably heard
1	2	3	4	5	6

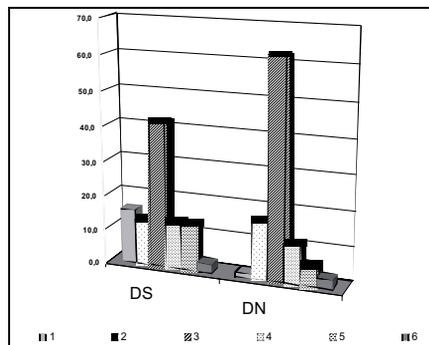
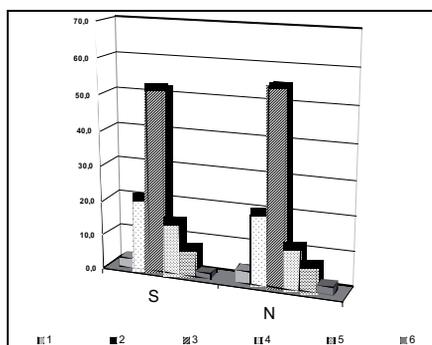
The „DS“ and „DN“ groups show *conditions* where the differences border on the limits of dissimilarity (see CHARTS 17 and 18). To find out whether a significant difference does exist between the groups, it is necessary to enlarge the examined sample (since our sample is, admittedly, relatively small). The assessments of the „S“ group are quite similar to those of the „N“ group. On the other hand, the „DS“ group shows a visible increase of evaluations expressing the best assessment (grade 1 of the scale): while only 2.99 % of the „S“ respondents have the most favourable assessment, the proportion of the „DS“ respondents with the same assessment has risen to 15.79 %.

The overall dispersion of the assessments on the scale is, however, suggestive of the fact (also known from our other investigations) that the voice condition that is influenced by a number of identified voice problems is not very good in teachers.<sup>12</sup> A relatively high percentage of teachers examined during the preceding stages of our research had considerable voice problems (which was also corroborated by the objective DSI examination).

11 We are, of course, aware of the fact that we have no data at our disposal on the technique of singing, and therefore it is impossible for us to identify those examined persons who, eg, have an incorrect technique of singing, or who extremely overload their voice (not observing the rules of voice hygiene); in this way they lower the quality of their voice (primarily of their voice organs) or even destroy it.

12 Cf, eg, Frostová, J. 2008.

CHARTS 16 and 17. The assessment of speech condition (the influence of tiredness) in „S“ - „N“ and „DS“ - „DN“



## Conclusions

- The present study has confirmed the assumption that people who actively (ie with more intensity, depth and cultivation than the other population) devote themselves to singing are, because of some parameters of voice, speech and communication, perceived distinctly differently from people who do not actively go in for singing. The examined characteristics relate to positively perceived and evaluated communicative strategies (procedures and patterns of communicative behaviour).
- The current results of investigation signalize dissimilarities not only in the formal (non-verbal) characteristics of communication that are directly derived from the parameters of voice (trained and cultivated by singing activities), but also in the field of relations (eg in the interaction).
- The evaluating assessments by the partners who know the assessed individuals intimately and for a long time show that it is justified to include voice condition exercises and voice rehabilitation exercises into the project of training that is oriented towards the cultivation of communication and interaction.
- In the future research activities it will be necessary to raise the number of examined persons so as to make the results more exact and general.

It will be suitable to supplement the research with:

- an objective measurement of the „singing“ and „non-singing“ people’s voice parameters,
- a technique that would help to find out whether persons who appear to be „singing“ have a specific set of skills, qualities and features, and what the socializing and educational determinants of their origin are.

## PROJEKCE „ZPĚVNOSTI“ DO PROFESNÍ KOMUNIKACE

**Abstrakt:** Příspěvek je zaměřen na identifikaci zvláštností základních parametrů hlasu, řeči a komunikace, tak jak se jeví partnerům ve formální i neformální komu-

nikaci. Cílem úvah a výzkumného šetření je zdokonalení konstrukce technik výcviku komunikace (interakce) i práce s hlasem v kontextu komunikačních (problémových) situací profese, v nichž je hlas jedním z pracovních nástrojů (výchova, péče, vedení, řízení, terapie).

Autoři stati se zabývají technikami výcviku ve svých profesních oblastech. Soustředili se na průnikovou oblast: lidský hlas a řeč v komunikaci (komunikačních situacích).

Vycházejí z představy, že základní parametry hlasu a specifika řeči vytvářejí jeden z předpokladů úspěšné komunikace, zvláště v jejich formálních charakteristikách (využití barvy hlasu, modulace, artikulace, kadence) a dalších charakteristikách, řazených obvykle mezi charakteristiky *metakomunikační*. Inspirací pro zaměření šetření byla i účast na konferenci ISME (Mezinárodní společnosti pro hudební vzdělání) v Bologni 2008.

**Klíčová slova:** hlas, řeč, komunikace, interakční cvičení, kondiční hlasová cvičení, rehabilitace hlasových poruch, zpěvnost.