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ABSTRACT

Data from 33 teachers, responding on 12 semantic differential scales to 80 speech samples from 16 different kinds of children, were collected in a study of teacher evaluation of children's speech as related to race, sex, social status of the child, and topic of discourse, as well as to teacher race. A factor analysis was accomplished by use of a form of inverted matrix factor analysis. On the basis of this study it can be concluded that teachers can be grouped into four types on the basis of their attitudinal responses to children's speech. The types are found divided, both between and within type, roughly along lines of teacher race. Pronounciation deviations and pausal phenomena are correlatives of the subjective ratings for all teacher types, but teacher types differ roughly along lines of race, in the correlations between subjective judgments and qualitative versus quantitative variables in the children's speech. This suggests that we could serve the future teachers in our schools best by making clear to them their own attitudes--toward the students in the inner-city or rural school, and toward the language these students are likely to be using. [Not available in hard copy due to marginal legibility of original document.+ (JM)

TEACHER DIFFERENCES IN ATTITUDES TOWARD CHILDREN'S SPEECH CHARACTERISTICS

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As the two previous reports in this series indicated, we have evidence that teachers can provide reliable evaluations of children's speech. However, when the data for the northern sample had been analyzed, we noticed that each individual teacher tended to vary substantially in her actual ratings of the children. That is, while the overall analysis, divided only by teacher race, revealed a general picture of a two-dimensional judgmental model, the individual teacher differences were left unexplained and uninterpreted. With this in mind, a further analysis of the data for the northern teachers was undertaken. (No analysis of the type reported here has been performed for the southern teacher data.)

The specific aim of the present phase of the investigation was to ferret out a picture of the individual teacher differences. Stated in question form, the problem was: (1) to what extent could the teachers be grouped together in terms of commonality in their attitudinal responses? Put another way, this question asks whether underlying the gross picture provided in the earlier analysis there might be a more detailed and accurate picture of the specific types of teachers as defined by the commonality of their rating behavior. Additionally, if groups or types of teachers could be defined or isolated, (2) to what extent could they be contrasted and compared in terms of teacher characteristics, child characteristics, rating scale characteristics, and selected characteristics of the speech samples themselves?

As was explained in the first paper of this series, the data for the teacher attitude study consisted of the responses of 34 teachers to 80 stimulus tapes of children's speech on a set of 22 semantic differential scales. For the present analysis, these data were refined in the following way: One teacher was dropped from the analysis, because she did not fit into either of

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the two races involved in the comparison. In examining the two factor arrays yielded by the first study, it was discovered that the two dimensions which emerged from this study were made up of 12 scales. Because these 12 scales were apparently the most salient for the teachers in responding to the children's speech, it was decided to use only this group in the present study. The data for the analysis consisted, then, of three dimensions: 33 teachers, responding on 12 scales, to 80 speech samples, from 16 different types of children. (These 16 child types are made up of all possible combinations of child race, sex, social status, and topic of discourse.) Two separate analyses were performed using these data. The first of these was a factor analysis designed to group the teachers on the basis of their responses to the 16 different types of children on the 12 semantic differential scales. The second analysis was designed to provide the intercorrelations between the teachers' subjective responses on the semantic differential scales and selected objective characteristics of the children's speech.

The factor analysis was accomplished by use of a form of inverted matrix factor analysis, related to Stephenson's Q-analysis. The analysis yielded four factors, which are shown in Table 1. This table contains a listing of the teachers by identification number, arranged according to the types, or factors, into which the teachers can be divided. The letter to the right of each teacher identification denotes the race of that teacher. The loading of each teacher on each factor is presented in the four columns headed 1-4. Thus in reading the table, it can be seen that teacher number 26, who is white, is a part of Factor 1. Her loading on the factor is -.717. As Table 1 shows, the four factors are bi-polar, and the bi-polarity is closely related to teacher race, except in the first factor, where all the teachers are white.

Before proceeding further with the discussion of the factor analysis, two words of caution are in order. First, it should be noted that among the

teachers who make up any given factor, there appear to be differences in the degree of their "belonging" to the factor. For example, teacher 26 is clearly a part of Factor 1, as her loading here is substantial, and is also much higher than her loading on any other factor. Teacher 10, however, has a very low loading on Factor 1, as she does on all factors. It might be said that she is not really a substantial part of any factor. Teacher 9, on the other hand, has a reasonably high loading on Factor 1, but loads almost as high on Factor 3. It might be said that she is almost as much like the type 3 teachers as she is like the type 1 teachers. Although these teachers and others like them could have been eliminated from the analysis, they were not, because a weighting procedure in the computer program assured that no entire teacher type would be described in terms of the behavior of these factorally complex teachers. However, because the complexity does exist, it will be well to bear in mind the following reminder: The remarks which will be made in this paper concerning the behavior of any teacher type cannot and should not be taken as descriptions of teachers as a whole, or of any individual teacher. The teacher types discussed in this study are, to that extent, abstractions. The second word of caution relates to the discussion of teacher race in the study. As a brief examination of Table 1 shows, the teacher types are divided roughly along lines of teacher race, but it should be noted that all the types except type 1 are racially mixed. Thus the use of the qualifier "roughly".

With these cautions in mind, we can now examine more closely the results of the factor analysis. It is evident that the first major question of the study--can teachers be grouped on the basis of their rating behavior--can be answered in the affirmative. That is, the teachers' responses were neither totally idiosyncratic, as would have been indicated by a large number of factors, each composed of one or two teachers; nor were the responses totally global, as would have been indicated had most of the teachers fallen into one

large factor. We can, then, turn to the second question--to what extent can the types of teachers found be compared and contrasted in terms of teacher characteristics, child characteristics, rating scale characteristics, and characteristics of the speech samples themselves? The factor analysis program employed in the study provided a breakdown of the rating behavior of each teacher type, which makes the answers to this question readily available.

First, how do the types differ in terms of the teachers found in each type? Although the teachers in the study differed in terms of their degree of teaching experience, their length of time spent in inner-city schools, the type of training they had, and such other factors as sex, religion, and marital status, the one teacher characteristic which serves to differentiate the types in any way is teacher race. For type 1, the teachers are all white, and in the other types, the bi-polarity of the factor tends to split the type along lines of teacher race. As Table 1 shows, type 2 was split with the positive loading segment being all white and the negative segment being predominantly black--only two white teachers were in this negative segment. Examination of the backgrounds of the teachers found in this type revealed that the two white teachers grouped in the negative segment with the five black teachers were the only two white teachers in the sample who indicated having had experiences with inner-city children outside the school. Regretably, no such explanation exists for the racial mix in any of the other type splits. Type 3, for example, has four white teachers loading positively and three black and one white teachers loading negatively. There does not appear to be anything in the information we have about that one white teacher which would explain why she behaved like those three black teachers. The same applies to the teachers in type 4. However, there are a number of reasons for expecting teacher race to influence the subjective responses a teacher might have to children's language. Most black teachers have undoubtedly had more contact

with, and even more experience with, standard English than most white teachers have had with black speech patterns. One would expect the black teachers, then, to be more sensitive to the details of the speech of both white and black children, and the white teachers to respond to the speech of the black children on a fairly gross level, not being sensitive to the subtle details of the dialect. It isalso likely that black teachers might be more willing to recognize a black child as high status than the white teachers in this study. Since the white teachers are likely to have had most of their contacts with black speech in the schools, and since these teachers work in inner-city, often economically deprived school areas, they are likely to associate sounding black with sounding low status. The black teachers, in contrast, are more likely to have had experience with middle-class blacks, and are not so likely to associate race and social status in this way.

A second area of type contrast is that of teachers' ratings of different types of children on the semantic differential scales. The only scale which stood out in type contrasts was the pronunciation standardness scale, which served to differentiate between the positive and negative loading segments of each type. That is, where the positive loading segment of a type tended to rate most children low on this scale, the negative loading segment would tend to rate them high, or vice versa. The various types of teachers also differ in the accuracy of their judgments on the scales--that is, in the degree to which these judgments conform to objective measures of the children's performance. The most accurate ratings of the child types were those of type 2 teachers, both segments of which rated high status children of both races above low status children of both races across the scales. This behavior is in agreement with results of previous analyses which indicated that the high status children generally exceeded the performance of low status children on both syntactic and functional measures of language. In no case did any

group of black teachers consistently rate children of their own race above white children, although two segments of white teachers (the positive segments of types 1 and 3) exhibited this kind of racial bias in rating white children above black children. Additionally, there was a type of teacher whose behavior could be labelled "overcompensation," in the sense that she rated children whose performance was actually low (low status children) above children whose performance was actually high (high status children).

In order to examine the final area of contrast among the teacher types--that of differences in the objective correlates of the subjective ratings assigned by the teacher type--a correlation analysis was performed. The correlation analysis was performed separately for each teacher type. One question of major interest in this analysis was how well the two-factor model found in previous analyses would hold up. The answer to this question can be seen in Table 2, which shows, for each teacher type, the three highest correlations between ratings on the family status and pronunciation standardness scales and objective characteristics of the children's speech. As this table indicates, pronunciation deviations and pausal phenomena in the child's speech are salient correlates of these ratings for all the teacher types. This finding bears out the earlier interpretation that the teachers responded to the children's speech in terms of the two gross dimensions of non-standardness -ethnicity and confidence-eagerness. The most salient objective measures found in the correlation analysis are directly related to those two gross dimensions of judgment. The subjective-objective correlations involving pronunciation deviations and pausal phenomena appear also to be fairly undifferentiated. That is, there are no clear cut correlations of pronunciation variables with the pronunciation scale or pausal variables with the confidence scale. Rather, it is more the case that every scale correlates significantly with most of these variables across the four teacher types.

Beyond this commonality of response to pausal and pronunciation variables, the teacher types do differ in terms of the saliency of other types of variables. The predominantly white teacher types (1 and 3) have high correlations between their judgments and such qualitative variables as verb constructions, while the predominantly black teacher types (2 and 4) have high correlations between their judgments and such quantitative variables as total words in the message. The difference in the degree of correlation of these variables suggests that there is one kind of teacher who is concerned primarily with details in a child's speech. She might be characterized as being a kind of "detail oriented" rater. On the other hand, there is a kind of teacher who is able to apprehend the totality of a child's performance--his willingness to participate in an interview situation, and his ability to become involved in a topic to the extent of having a great deal to say about it. This kind of teacher might be characterized as a "communication oriented" rater. The question arises here as to why the white teachers seemed more likely to be detail oriented raters. One can only speculate, but it could be related to the fact that so much of language education in the American school system is of a prescriptionist nature. That is, what the child is taught in school is that there is a right way to use language, and this right way consists of using certain details of syntax and vocabulary in prescribed ways. The point at which the white and black teachers differ here is that the white teachers have never encountered another language system which was of any importance to them, which contained its own set of expectations for the right way to talk. That is, the white teachers, by virtue of being essentially monolingual, have always found their standards applicable. The black teachers, on the other hand, are of necessity bi-cultural and bi-lingual, and so probably discovered long ago that the prescriptionist rules of good standard English did not apply in many situations they encountered. Hence, they are more likely than white teachers to have dropped these rules for use of language details as

viable bases for judgment of people.

The conclusions arising from the results of this study can be summarized by reference to the two questions which the study was designed to answer.

1. To what extent can teachers be grouped together in terms of the commonality of their attitudinal responses to children's speech? On the basis of this study, it can be concluded that teachers can be grouped into four types on the basis of their attitudinal responses to children's speech.

2. To what extent can groups of teachers be contrasted and compared in terms of teacher characteristics, child characteristics, rating scale characteristics, and selected characteristics of children's speech? Three conclusions of the present study relate to this question. First, the teacher types found in this study are divided, both between and within types, roughly along lines of teacher race. Second, the teacher types differ in kinds of judgments they make and in the accuracy of those judgments across different kinds of children and different semantic differential scales. Third, pronunciation deviations and pausal phenomena are correlates of the subjective ratings for all teacher types, but teacher types differ, roughly along lines of race, in the correlations between subjective judgments and qualitative versus quantitative variables in the children's speech.

Given these results, what kinds of suggestions can be made concerning teacher training? If our teachers are this different, and in many cases this inaccurate, in their reactions to children's speech, something needs to be done. But rather than make specific curriculum suggestions--there are too many of those floating around now--I would prefer to make two statements advocating a change of direction. This is a change of direction not aiming toward some overall abolition of present training, but rather a change in the direction of flexibility. Let us first of all make it clear to every student who leaves our schools of education that he takes with him a set of attitudes as well as

a set of instructional methods. Let us make it clear to him that these attitudes of his will have as great an effect, if not greater, on his bility and effectiveness as a teacher as anything else he brings to the task. If we could do only one thing for the future teachers in our schools, I would suggest that we could serve them best by making clear to them their own attitudes--toward the students in the inner-city school, or the rural school, and toward the language these students are likely to be using. I do not suggest that we can change these attitudes, although that would be commendable in many cases. But I believe we would accomplish a great deal by simply making students aware that they have them. Further, I suggest that our teachers would be trained more effectively, and our students would be immeasurably benefitted, if we could get across one idea in addition: that language is not something you teach for an hour a day. It is a tool that you use, whether you want to talk about decimal fractions, poetry, or civil rights, or whether you want to tell jokes in the corner at recess or harangue a crowd in a demonstration. The tool is judged by how well it does what you want it to do, by how well it serves the purpose, not be some absolute standard of grammatical detail. Let us recognize the fact that language is not some abstraction. It does not exist in a vacuum. It is functional. Shouldn't our standards for judging it be functional as well? If we could only get across these two ideas in our teacher training programs, we might not solve all our problems, but we would at least be able to talk about them together.

Table 1

Variable Loadings by Factor

	Factor: I	II	III	IV
FACTOR I - 9 white teachers				
26W	-.717	.192	-.003	-.039
25W	-.684	.195	.023	.169
24W	-.619	.018	.147	.190
27W	-.663	-.099	.104	-.264
10W	.248	-.113	-.025	.134
23W	-.574	-.032	.266	-.451
12W	.497	.157	.398	-.355
6W	.487	.391	-.068	-.402
9W	.483	.361	.410	-.258
FACTOR II - 5 Negro, 5 white teachers				
17W	-.004	-.514	-.106	.040
2W	.171	.707	.013	-.002
11N	.179	-.480	-.051	.022
4N	.103	-.604	.112	-.200
5W	.071	.573	-.264	-.002
7N	.295	-.605	-.060	-.246
3W	.092	.526	-.046	-.328
1N	.302	-.520	-.091	-.193
20W	.148	-.251	.076	.237
16N	-.118	-.132	-.103	-.102
FACTOR III - 3 Negro, 5 white teachers				
30N	.160	-.006	-.758	-.106
29W	.263	-.071	-.664	-.032
32N	.071	.184	-.568	.152
13W	.223	.274	.416	.068
22W	-.296	-.038	.347	.141
33N	-.361	.208	-.438	.294
14W	.432	.246	.474	.332
8W	.165	.464	.466	.437
FACTOR IV - 4 Negro, 2 white teachers				
21W	-.040	.039	.101	.489
19N	.061	-.090	.119	.590
15N	.068	-.041	.084	-.270
31W	.080	.165	-.194	.545
18N	-.290	-.196	.079	.538
28N	-.134	-.353	.009	-.403
TOTAL VAR. - PER FACTOR	.1186	.1128	.0879	.0873
- CUMULATIVE	.1186	.2314	.3193	.4066
COM. VAR. - PER FACTOR	.2916	.2774	.2163	.2147
- CUMULATIVE	.2916	.5691	.7853	1.0000

Table 2

Three Highest Correlations Between Objective Variables and Pronunciation Standardness and Family Status Scales

	Pronunciation Standardness		Family Status
Type I Teachers			
s, z Deviations	-.448	θ Deviations	-.429
Main Verb Deviations	-.447	Verb Constructions	.363
Silent Pauses	-.444	Main Verb Deviations	-.338
Type II Teachers			
t, d Deviations	-.486	t, d Deviations	-.434
Silent Pauses	-.486	Silent Pauses	-.429
s, z Deviations	-.466	Intro. Interjections	.417
Type III Teachers			
Filled Pauses	-.454	θ Deviations	-.564
Silent Pauses	-.436	Filled Pauses	-.471
t, d Deviations	-.428	t, d Deviations	-.457
Type IV Teachers			
s, z Deviations	-.562	Silent Pauses	-.411
Main Verb Deviations	-.519	s, z Deviations	-.395
Silent Pauses	-.505	t, d Deviations	-.366