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A Sociolinguistic Analysis of Multiple Demands on the Pediatrician in Doctor/Mother/Child Interaction

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The topic "Language and the Medical Professions" could be approached from several perspectives. Our first concern in this study is to present a holistic view of problems and issues currently being addressed in research on the delivery of pediatric services. After developing a sense of the empirical and theoretical issues from a number of fields concerned with delivery of medical services, we will present preliminary findings of our current work in a sociolinguistic analysis of communication among doctor, mother, and child in a pediatric examination/interview.¹

Primary attention will focus on microanalysis of conversation between a pediatrician and the mother of a handicapped child during an examination of the child. We will show that the pediatrician balances multiple and sometimes conflicting demands, addressing three audiences and accomplishing at least three tasks, each requiring a distinct "footing" (Goffman, 1979), and associated with an identifiable linguistic register. She must, in addition, suppress her emotional response and monitor the amount as well as impact of information she imparts.

This analysis is intended to suggest the impact of parent involvement in a professional setting. Before presenting our analysis, we will sketch some of the trends of recent research which have led to calls for increased parent involvement in pediatric settings. The four perspectives we will consider are:

1. Public opinion,
2. Professional responsiveness,
3. Medical service research, and
4. Pediatric practice.

¹We are grateful to the Child Development Center staff and Jody's family for their generous cooperation and support. We especially appreciate the extra time taken by the mother and doctor to participate in replay sessions.

PUBLIC OPINION

Many Americans have a view of modern medicine based on a TV or film image of powerful technology that can be used as weapons against disease, pain, and premature death. Unlike earlier times when the prevailing expectation was that a doctor could provide only minor palliatives, modern health service expectations have been described by one health policy expert as "infinite" (Callahan, 1977:23). He points out that expectations held by consumers reflect utopian thinking about the possibility of and right to complete physical, mental and social well-being. Associated with utopian thinking is a general public dissatisfaction with the ability or willingness of medical professionals to meet their perceived needs.

PROFESSIONAL RESPONSIVENESS

It is the medical profession's viewpoint, however, that great strides have been made in responding to patient demands. Several research and sociopolitical trends have begun to affect changes in medical professionals' procedures and attitudes. Health research paradigms have been expanded to include recognition of possible influences of the patient's family and community on health. Sociopolitical trends have resulted in funds being made available for social science researchers to evaluate whether health services are accomplishing greater accessibility, more communication about the purposes and procedures of medical interviews and examinations, and more consumer involvement in determining costs and methods of delivery.

The results of such funded research are well-documented studies which indicate that at least 50 percent of those entering the health care system present problems that reflect primarily social and emotional rather than medical needs, and that doctors are, in fact, responding to this public expectation (Sears, 1978). One medical professional said, in a call to his colleagues, "We must have a system that does not define quality care in terms of our ability to treat serious disease well, especially when the overwhelming majority of our patients do not have serious diseases" (Sears, 1978:16).

MEDICAL SERVICE RESEARCH

It remains problematic how medical practitioners can best meet the demand for treating the "worried well" (Fox, 1977). Much attention in medical service research has focused on surveys of quantitative indicators of community involvement or "maximum feasible participation" (Lipsky & Lounds, 1976) in public projects such as community health centers. These global measures of health serv-

ice evaluation seem to implicitly accept the ideology that more involvement by the public in institutional functions is good (Grubb & Lazerson, 1980).

The perspective of medical service delivery research thus makes a conceptual leap from increased doctor-patient contact to effectiveness outcomes, such as overcoming alienation or stemming the crisis of confidence that exists between the public and institutions. Unfortunately, research has shown that when participants' expectations are not shared, increased contact only reinforces negative impressions and stereotypes (Gumperz, *in press*; Triandis & Vassiliou, 1967).

PEDIATRIC PRACTICE

Nowhere is the call for "maximum feasible participation" more evident than in pediatric practice, because of the age of the patients being served. Communication about the child's condition has always focused on the family—at least on the mother. The pediatric literature is grappling with questions about the extent of parent involvement in the pediatrician's task, as well as the pediatrician's involvement in family decision-making.

Korsch (1976) notes that the pediatrician's awareness of the significance of broad behavioral factors may not be shared by the parents, who may need on-the-spot explanation and education in order to understand the pediatrician's questions. On the other hand, parents may look to pediatricians as a "first line resource for dealing with psychosocial problems" (Metz, Allen, Barr & Shinefield, 1976: 595).

While these and other basic questions regarding training, service delivery and medical evaluation are being examined, the call for family involvement has already reached the status of public law, calling upon the pediatrician to participate in more and more decision areas—for example, educational placement. PL94-142 was passed by Congress in November, 1975. Intended to protect the rights of the parents of 8 million physically and/or mentally handicapped children in the United States, the law prescribes that parents have the right to help develop an Individualized Educational Plan (I.E.P.) with professionals for their child. Programs developed in response to such legislation have brought together family members and a wide variety of professionals in daily interaction. The effect of such interaction on participants has not yet been examined. What cognitive, social, and emotional demands does such involvement place on participating professionals and family members? For example, what happens when a pediatrician and a mother meet for the purpose of solving a child's medical and related problems?

The answer to this question can only come from close analysis of actual interaction. That is what we have set as our task. The analysis we will present here is based on video tapes made in a community outreach facility designed to comply with legislated calls for family participation and rights. It is offered as a step toward understanding that process.

THE STUDY

Our theoretical and methodological framework is in the tradition of sociolinguistic microanalysis as pioneered by Gumperz and extended by others (Gumperz, 1977, in press; Gumperz & Tannen, 1979; Tannen 1979b, 1981a, in press; Green & Wallat, 1980). This method involves an analysis of recorded interaction in natural settings (home, school, work place), and a replay of key segments in interview sessions with participants. (For detailed presentation and discussion of methodology, and implications for linguistic and communication theory, see Green & Wallat, 1979; Tannen, 1979b, in press; Wallat & Green, 1979).

With the goal of obtaining or creating video tapes of actual pediatric interaction, we were extremely fortunate to begin working with the Georgetown University Child Development Center, a division of the Department of Pediatrics of the GU Medical Center. The Child Development Center is an exemplary interdisciplinary training, service, and research facility constructed with funds provided under Public Law 88-164, to help children with developmental disabilities.

We were unusually fortunate in gaining access to a series of video tapes already made by the Child Development Center, which documented examinations and interviews with a nine-year-old physically and mentally handicapped child whom we shall call Jody, her parents, and two sisters. The tapes available included the following:

1. Initial interview with a coordinator
2. Examinations by a psychologist, social worker, occupational therapist, physical therapist, nutritionist, speech pathologist, audiologist, dentist, educational advisor and pediatrician
3. Home visit by two nurses
4. A staff meeting at which the staff reported their findings and discussed recommendations and
5. A parent interpretive, where the staff met with the parents to present and interpret their findings.

After repeatedly viewing the above data, we decided to focus on two themes which were discussed in a number of settings, including the initial interview, pediatric examination, staff meeting, and parent interpretive. One is the presence of an arteriovenous malformation in the child's brain and hemangiomas visible on her face.² The other is the child's raspy respiration, which causes the parents to fear that she is having trouble breathing.

²*Hemangioma* is a congenital anomaly or tumor—a mass composed almost entirely of capillary type vessels, blood filled channels. Hemangiomas occur anywhere in the body, but are most frequently noticed in the skin. *Arteriovenous*: relating to both an artery and vein. (Stedman's Medical Dictionary. Baltimore, MD; Williams & Wilkins Co., 1972).

The primary focus of our discussion will be the pediatrician's examination of the child in the presence of the mother. We will refer, as relevant, to interaction in the other settings, as indicated above.

COGNITIVE AND SOCIAL DEMANDS

After viewing the interview/examination, we were overwhelmed by the complexity of potentially conflicting demands on the pediatrician, particularly during the examination of the child. The pediatrician balances three audiences, each with its own requirements. Each of these audiences, moreover, requires multiple levels of functioning. The pediatrician, serially or simultaneously, is engaged in all of the following:

1. Examination of the child:
 - a. Entertaining the child.
 - b. Examining the child.
 - c. Noting findings and formulating hypotheses about the child's condition.
2. Consultation with mother:
 - a. Asking mother for information as suggested by the examination.
 - b. Answering questions mother asked during the interview.
 - c. Answering questions mother asks as they arise during the examination.
 - d. Informing mother of findings.
3. Television camera/training audience:
 - a. Monitoring readiness of camera crew.
 - b. Reporting medical procedures, their purpose and findings.

The pediatrician directs 19 questions and 46 comments to the mother; directs 29 comments to the training audience; and fields 18 questions and 26 comments from the mother in the twenty minute exam. These complex and varied demands burden the pediatrician's attention and cognition at best, and the demands clearly conflict in some cases. For example, the pediatrician must monitor her ongoing diagnostic report to the video audience, so as not to frighten the mother. The more time spent answering the mother's questions, the more restless the child may become.

The following excerpt will illustrate such a conflict. The pediatrician has explained to the mother that the child's breathing sounds noisy because of her weak muscle control, a direct result of cerebral palsy. Then she returns to the examination, resuming the running commentary to the camera. After this, she moves back to the examination mode and begins engaging the child's attention in order to examine her ears. The mother, however, is operating in only one "frame" (Tannen, 1979a): conversation with the doctor. At this point, she follows up her questions about the breathing. This represents no shift in focus for her. However, for the doctor, the mother's question is an interruption of the examination mode, and requires a sudden shift in focus, or break in frame. She stops the examination, turns

away from the child, purses her lips, and covers the ophthalmoscope (ear light) with the palm of her other hand—the only moment at which she evidences (and it is ever so slight) the strain placed on her by audience-shifting. (Note: In the example transcripts, D = Doctor, M = Mother, C = Child.)¹

D: Jody? . . . I wanna look in your ears . . . Jody?

M: This problem that she has, . . . is not . . . interfering with her breathing, is it?

C: /Hello.
no. / [Spoken to P's earlight]

D: No.

M: It just appears that way?

D: Yes. It's very . . . it's . . . really . . . it's like floppy you know and that's why it sounds . . . the way it is.

M: She worries me at night.

D: Yes

M: Because uh . . . when she's asleep I keep checkin' on her so she doesn't

D: [As you know the important

M: [I keep thinking she's not breathing
[chuckle-----]

properly.

-----]

D: As you know, the important thing is that she does have difficulty with the use of her muscles.

M: mhm

This taxing of the pediatrician's attention occurs because she is balancing three audiences while the mother is dealing with only one.

¹The following transcription conventions are used, as gleaned from Schenkein (1978), and from those developed at the University of California, Berkeley by John Gumperz and Wallace Chafe and their respective collaborators.

- indicates speech continued without pause.
- . . . half second pause. Each extra dot represents another half second of pause.
- ' marks primary stress
- ˆ marks high pitch on word
- . sentence final falling intonation
- , clause-final intonation ("more to come")
- ? yes/no question rising intonation
- : lengthened vowel sound. The more :s, the longer the sound is held.
- // inaudible or uncertain transcription.
- ace spoken quickly
- [Panned brackets connecting lines shows overlapping speech.
- [Two people talking at once.
- Panned bracket with reversed flap] indicates latching (no pause between speaker turns.)

Even when there is no outright conflict, managing three audiences in one setting has significant cognitive, social, and emotional consequences for an individual. This kind of demand is subtle and is not evident from a content analysis of interaction. It can, however, be made visible by sociolinguistic microanalysis.

LINGUISTIC EVIDENCE FOR DIFFERING REGISTERS

The pediatrician addresses each of her three audiences in a different linguistic register; that is, she switches among three distinct codes, each with its own intonation, voice quality, lexical and syntactic structures, and content. Each of these registers represents a different "footing," associated with a different "frame" or interactional activity in Goffman's (1979) terms. We will illustrate with excerpts from the transcript.

When talking to the child, the pediatrician uses the classic features of "motherese" (Newport, Gleitman & Gleitman, 1977): high pitch, elongated vowel sounds, sing-song intonation, teasing. While examining the child's ear through an ophthalmoscope, for example, she teases, and the child responds with delighted laughter:

D: Let me look in your ear. Okay? Do you have a monkey in your ear?

C: [laughing] No:::.

D: No:::?. . . . Let's see. . . . I . . . seea 'birdie.
acc_____]

C: [laughing] No::.

D: [smiling] No.

Immediately after this, with no perceptible break in timing, the pediatrician turns her body toward the camera and says,

D: Her canals are-are fine, they're open,

This is an example of a pattern of speech recurrent throughout the examination: a running account of the procedures performed and resultant observations. This register, constituting 29 of the pediatrician's comments during the examination, is characterized by easily observable para-linguistic and non-verbal cues: flat intonation, rapid rate of speech, relatively low pitch, absence of marked facial expressions and gestures. All these cues give this register an unmistakable character that may be called "reporting." Talk uttered in this register is generally directed toward the video camera, apparently with the training audience in mind. It is clear that the mother perceives the special cues associated with this register, since none of her comments and questions is interjected when the pediatrician is talking in this mode.

When the doctor talks to the mother she looks at her and uses yet a third register—a mode of talk similar to that heard in everyday conversation.

The following example shows the pediatrician shifting among these modes. She is examining the child's throat:

- | | |
|--------|--|
| | D: Let's see. Can you open up like this, Jody. Look. [Opens mouth] |
| to | C: Aaaaaaaaaaaaaah |
| child | D: Good. That's good. |
| | C: Aaaaaaaaaaaaaah |
| to | D: /Seeing/ for the palate, she has a high arched palate, |
| camera | C: Aaaaaaaaaaaaaaaaaaaaaah |
| | D: but there's no cleft, [maneuvers to grasp J's jaw] |
| to | . . . What we'd want to look for is to see how she . . . moves her palate. |
| mother | . . . Which may be some of the difficulty with breathing, that were talking about. |

First the pediatrician looks inside the child's throat—an endeavor that requires some maneuvering, especially since Jody has cerebral palsy and consequent poor muscle control. After the doctor succeeds in looking in the child's throat, she reports her findings to the camera, using the "reporting" register. She then gradually shifts her gaze and addresses the mother to explain how these findings relate to the child's noisy breathing, a matter the mother expressed concern about during the preceding interview.

Before we leave our discussion of these three registers, we would like to comment further on the "reporting" mode. Obviously, most pediatric examinations are not carried out in the presence of a video camera. Nonetheless, it is our hypothesis that the "reporting" register makes observable a cognitive process that is always present in an examining doctor's consciousness, by virtue of the diagnostic process. The doctor must follow a set of procedures prescribed by the medical training. Furthermore, any professional acting in a professional role must refer for a behavioral model to his/her perception of the expectations of colleagues. The professional, in other words, has a "frame" or set of expectations (Tannen, 1979a) for behavior in this role and setting. This is similar to Goffman's (1959) notion of "team" as the basic unit of analysis in human interaction, and underlies the analysis of professional socialization among doctors by Bucher & Stelling (1977). The use of a "reporting" register by medical professionals, a natural consequence of professional demands such as training, diagnosis and report, may have significant implications for doctor/patient communication. The fact that the mother in our data never initiates interaction with the doctor when she is operating in this mode is a suggestive finding.

EMOTIONAL DEMANDS

Another demand on the pediatrician is to conceal her emotional response during the examination/interview. Whereas an emotional response to a medical problem

might be appropriate when expressed by a friend, it is quite another matter coming from a doctor, because the point of reference differs. When a friend responds emotionally to a medical condition, the negative evaluation is interpreted as relative to good health. A doctor's reference, however, is assumed to be a range of examples of bad health. Hence, an emotional reaction from a doctor implies that this is a terrible condition relative to the great number of terrible conditions the doctor has witnessed.

The pediatrician, in our data, clearly seeks to avoid such implications. She repeatedly stresses during the interview/examination that Jody's condition is 'normal' and 'common' for a child with cerebral palsy. Here again, the Child Development Center's complete set of video tapes is an invaluable resource. In the examination/interview, the pediatrician seems relatively unconcerned about the danger of the arteriovenous malformation in the child's brain. She explains in simple language and with graphic gestures that the a-v malformation is an abnormal blood vessel connection which puts pressure on the brain, causing the child's seizures. The mother asks,

M: I often worry about the danger involved too→

D: Yes

M: 'cause she's well I mean like right now, . . . uh. . . in her present condition. I've often wondered about how dangerous they are to

D: mhm
her right now.

D: We'll . . . um. . . the only danger would be from bleeding. . . . From them. If there was any rupture, or anything like that which 'can happen. . . . um . . . that would be the danger . . . for that. But they're . . .

M: mhm

mm . . . not going to be something that will get worse as time goes on.

M: Oh I see.

D: But they're just there. Okay?

[returns to exam]

The pediatrician minimizes the danger of the a-v malformation by using a syntactic construction with 'only': 'the only danger.' She stresses the positive side, that 'they are not going to . . . get worse.' She uses fillers (um, hm); repetition and paraphrase ('bleeding,' 'rupture'; 'the only danger,' 'that would be the danger'; 'they're not going to . . . get worse,' 'they're just there'); conditional tense (*would* in 'the only danger *would* be from bleeding,' and 'that *would* be the danger'); and buffer language ('or anything like that').⁴ All this is linguistic evidence of the pressure of cognitive processing in verbalizing the diag-

⁴We have coined the term 'buffer' language to characterize what has been called 'empty language,' because such words and phrases serve a purpose, as demonstrated, and therefore are not empty.

nosis, the need to monitor the diagnosis which is not yet complete, and the desire not to upset the mother. The pediatrician does not yet have all the relevant medical evidence but is in the process of formulating hypotheses about the child's condition. Furthermore, she does not have time to prolong the digression from the examination, in order to deal with the mother's emotional response to information she receives.

The effects of these production demands on the pediatrician's discourse have important implications for the mother's participation and response. (Too often analysis focuses on one or the other). The halting quality of the pediatrician's discourse mitigates the effect of the information conveyed on the mother, and leaves plenty of space for the mother to insert further questions if she feels the need.

The earlier segment shows that the mother and the pediatrician often interrupt each other and finish each other's sentences, using overlap in a cooperative way (Tannen, 1980b). There is nothing in the pediatrician's delivery, bearing or tone that communicates noticeable distress or concern. She herself, on viewing the segment during replay, expressed surprise at her use of the word "only" and at the effect of her words on the mother, who, she commented, seemed visibly reassured, despite the ominous message conveyed.

The pediatrician's deep concern about the danger of the a-v malfunction is evident in her report to the CDC staff. At the end of the staff meeting, she returns to the issue of the malformation and stresses that she would like to communicate with the child's regular doctors, follow her condition, and make sure that the parents get necessary counseling—in an appropriate setting. The following is an excerpt from her comments at the staff meeting:

P: [portion omitted] . . . uh: I'm not sure about how much counseling has been done, . . . with these parents, . . . around . . . the issue . . . of the AV malformation. Mother asked me questions, . . . about the operability, inoperability of it, . . . u:m . . . which I was not able to answer. She was told it was inoperable, and I had to say well yes some of them are and some of them aren't. . . . And I think that this is uh . . . uh . . . an important point. Because I don't know whether . . . the possibility of sudden death, intracranial hemorrhage, if any of this has ever been discussed with these parents,

The use of the terms "sudden death" and "intracranial hemorrhage" contrast sharply with the words used in addressing the mother ("bleeding," "rupture"). Along with the lexical choice, there is a difference in syntactic structure: "the possibility of . . ." vs. "the only danger would be . . .". The former asserts the danger, while the latter conditionalizes, and thereby mitigates the danger. Finally, the pediatrician's speech in the staff setting is faster and more assertive; it is not characterized by the hesitation and circumlocution that were seen in the segment addressed to the mother. Furthermore, when she says "sudden death, intracranial hemorrhage," she uses listing intonation, indicating that these are two of a series

of dangers, in direct contrast to the use of "only." The doctor's deep concern is apparent throughout. It seems clear that, when talking to the mother during the examination of the child, she was monitoring her comments, so as not to cause alarm before she had all the relevant information in a setting not designed to accommodate the mother's reaction.

CONCLUSION

Public opinion, now reinforced by law and the goals of the medical professions themselves, all contribute to a general call for parent involvement. What research there has been, however, has focused on measuring outcomes in terms of children's development. Until now, as Merton (1976) has observed, there has been no analysis of the demands on professionals created by parent involvement. As Merton points out, in the absence of such studies, the behavior of medical professionals is "condemned or applauded . . . (or) morally judged, not systematically investigated" (39).

We have suggested that a sociolinguistic analysis of actual interaction in a pediatric setting can furnish such investigation. We have demonstrated that preliminary analysis in this paradigm has shown the complexity of cognitive, social, and emotional demands on the pediatrician posed by parent involvement in the examination of the child. Other findings of our preliminary analysis suggest the direction for continued investigation. These include mismatches due to differing experience, needs, and goals of participants in this setting, and the possibility of misunderstanding due to choice of phrasing, intonation, and other linguistic and paralinguistic cues, which result from differing expectations in this setting, as well as individual and social differences in conversational habits, which arise in all interpersonal interactions.

The process of interaction in a pediatric setting is an instance of face-to-face interaction, subject to all the pitfalls and successes of that process, as well as an instance of a particular kind of event, structured by the requirements of participants and their expectations and associations. Our analysis indicates that we have dealt with exemplary participants—a staff of professionals who are highly trained, compassionate, and sensitive to issues of parent and community involvement. They are not constrained by inordinate financial nor time limitations, and have at their disposal the superior facilities of the Georgetown Medical School and the Child Development Center. The parents are intelligent, articulate, and very concerned; and they provide for the child a financially and emotionally stable family. Our analysis turns up no deficiencies in the behavior of participants. We are engaged, rather, in uncovering processes inherent in the structure of the interaction in particular and communication in general. These are forces at work that can, at times, create problems in the best of all possible pediatric worlds.

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