THE INFANT AS A PROJECTIVE STIMULUS

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In the course of a microanalytic study of mother-infant play during the first six months, all of our home visitors and videotape coders were struck by the mothers' frequent repetition of certain statements to their infants, as well as by individual mothers' preoccupation with particular themes. These themes—sometimes implicit, sometimes explicit—were familiar from the psychological literature: rejection/love, activity/passivity, etc. Upon reflection, it was not surprising that such themes should arise spontaneously: The babies were clearly emotionally significant objects to the mothers. Furthermore, the mothers were in a sense confronted with a projective test, for though the explicit instructions were "try to get the baby's attention and play with him as you normally do," the implicit instructions were "look at the baby and say something," the kind of instructions one would give to a subject with a Rorschach or a TAT card. This paper will demonstrate that virtually everything mothers say under such conditions can rather easily be reduced to a small number of themes, and that there are stable individual differences in the apparent importance of particular themes to individual mothers.

METHOD

Our sample of mothers was recruited at the time of their infant's birth in a Catholic community hospital on Chicago's North Side, for a three-year longitudinal study that included interactions in feeding, play, imitation, and instruction. Face-to-face play was videotaped in the subjects' homes when the infants were six, 13, and 26 weeks old. The present analysis includes the 36 mothers with whom we had sessions at all three ages.

All of the mothers were English-speaking, white, U.S.-born, and carried their babies to full term without major complications. Only 17% were college graduates, while 25% had not graduated from high school; ten percent were unmarried at the time of the infant's birth. In short, the sample represented a fairly typical range of working-class Chicago families from many different ethnic backgrounds (except that 63% were Catholic and all the rest Protestant). There were 17 girls and 20 boys, including a set of fraternal twins.

In the face-to-face play sessions each mother sat in a straight chair holding her infant freely in her lap for four to seven minutes with the instructions quoted above. She understood that it

Table 9-3

RELATIVE FREQUENCY OF ISSUES (N=37)

	% OF ISSUE CHANGES INFANT AGE (WEEKS)			% SESSIONS (ALL AGES)
	6	13	26	
Dyad-World	27.3%	29.4%	32.4%	95.5%
"Can I get your eye?"				
"See your puppy?"				
Strong-Weak Baby	26.2	20.4	18.3	91.9
"Can you sit up?"				
"You're so tired."				
Happy-Sad Baby	21.0	19.7	18.5	84.7
"What's the matter?"				
"Give us a smile."				
Smart-Dumb Baby	7.9	8.9	7.2	55.9
"You're not going to talk no more?"				
"Wave bye-bye."				
Allies-Opponents	2.9	5.2	9.0	52.3
"We're on camera."				
"Don't bite my finger."				
Good-Bad Baby	5.0	5.6	4.9	40.5
"Such a good boy."				
"You're going to be a stinker."				
Cute-Ugly Baby	5.3	2.8	2.8	36.9
"You little muffin."				
"Fat like your father."				
Loving-Rejecting Baby	2.0	2.4	2.5	26.1
"Now you love Mama again."				
"Are you making raspberries at me?"				
Loving-Rejecting Mother	0.8	2.8	2.7	22.5
"Who's Mama's favorite?"				
"I'm going to give you back to the stork."				
Good-Bad Mother	1.5	2.8	1.6	28.8
"Mommy understands you."				
"I'm not doing too well today, eh?"				
Total	100.0%	100.0%	100.0%	

was the baby, rather than herself, who was being studied.

The videotaped interactions have been analyzed in great detail and reported elsewhere.[1] The goal of the present study was a mutually exclusive, exhaustive set of categories into which all 13,574 utterances could be classified reliably. Usually the topic persisted over a number of utterances. Phatic utterances ("Yeah," "Hi," etc.) and exhortations ("Come on!", "Hey, Valerie!", etc.) were considered continuations of whatever topic preceded them. The final set of categories is listed in TABLE 1, with examples. Each of the ten categories is an issue: It consists of a pair of alternative propositions such as "You are smart" and "You are dumb." The reason for classifying each such oppositional pair together was that many utterances might have either meaning.

For example, "Can't you talk?" seems to mean both "You are smart enough to be able to talk" and "You are dumb not to be talking"; it raises the issue of the baby's mental capability without stating a conclusion. In fact, even a clear statement such as "You are smart" or "You love Mommy" or "Mommy loves you" cannot be taken at face value, but one can count the fact that the mother chose to raise the issue at all.

The relative frequencies of the ten issues were computed in terms of *changes* of issue: A code was entered only when the mother switched from one issue to another. (Preliminary comparisons had shown that this method yielded almost the same relative frequencies as the more laborious method of coding every utterance.) The number of issue changes per session ranged from one (a mother who did nothing but call the baby's name or "Hey!") to 69, with an average of 16, about one every seven utterances or about one every 19 seconds.

Within-coder reliability was achieved at a level of 92% agreement (within each category, code by code) and remained consistently high even after a lapse of two weeks between codings. To test whether the categories could be taught to another person, a colleague was given a detailed manual (available from the author). She first checked her agreement with ten sessions coded by the author, discussing each questionable case. Then she coded another ten sessions on her own, matching 85% of the author's codes. For further investigations, intercoder reliability could no doubt be improved with a more rigorous training procedure. All of the present data were coded by the author.

RESULTS

The relative frequency of each of the ten issues is shown in TABLE 1. Three of the issues accounted for 71% of what the mothers said to their babies; each of these issues occurred in nearly every session at least once, as the right-hand column shows. The four least frequent issues together accounted for less than ten percent of what the mothers said; but they were raised at least once, in a considerable number of sessions. The three most frequent issues—*dyad-world, strong-weak baby,* and *happy-sad baby*— were of little interest because the nature of the situation itself focused attention upon the baby's gaze direction, his energy vs. fatigue, and his smiling vs. crying. The more interesting results, therefore, are those involving the other seven variables.

The analysis was performed in three different ways: by correlating each variable between sessions, by factor analysis of the seven least frequent issues and correlation of the factor scores over sessions, and by a chi-square test of the significant stability in subjects who raised each issue at least once per session. The different methods led to the same conclusions, most simply shown in the straight correlations (TABLE 2). All ten variables were stable over at least the three-month period between the second and third sessions, and six (plus a seventh at the $p < .10$ level) were stable from six weeks to six months. The factor analysis merely confirmed these results: Most of the variables loaded on separate factors, and the factor scores showed significant stability over time. The dichotomous variables (*i.e.,* Was this issue raised at all during the session?) also showed stability, but rather

Table 2

STABILITY OF VARIABLES OVER TIME

ISSUES	WEEKS		
	6–13	13–26	6–26
Dyad-World	NS	.58***	NS
Strong-Weak Baby	.23	.52***	.32*
Happy-Sad Baby	NS	.30*	.28*
Smart-Dumb Baby	.49**	.30*	.25
Allies-Opponents	NS	.55***	NS
Good-Bad Baby ·	.56***	.64***	.32*
Cute-Ugly Baby	.33*	.41**	.38**
Loving-Rejecting Baby	.45**	.24	.52***
Loving-Rejecting Mother	NS	.73***	NS
Good-Bad Mother	NS	.38**	.43**

* p<.05; ** p<.01; *** p<.001.

weaker stability than the variables expressed as percentages of each session.

A 3(age, repeated measure) x 2(sex) analysis of variance on each of the ten variables found that *allies-opponents* increased with the infant's age ($F(2, 70)$ $=9.08$, $p<.001$) at the expense of some other issues (see TABLE 1): *strong-weak baby* ($F(2, 70)=5.19$, $p<.01$) and *cute-ugly baby* ($F(2,70)=3.67$, $p<.05$). There was a sex x age interaction in the case of *loving-rejecting mother*, an increasing issue with girl infants but one that rarely came up with boys ($F(2,70)=3.14$, $p<.05$). *Good-bad baby* occurred more than twice as often with girls as with boys at every age, but the within-sex variability was great ($F(1,35)=3.74$, $p=$ .062).

The issue of *smart-dumb baby* was raised by more than twice as many mothers in the high school or college graduate groups as among those who had less than a high school education (NS at 6 weeks; chi-square$=7.7$, $p<.05$ at 13 and at 26 weeks). This was the only way in which education related to any of the issues.

The inclusion of a pair of twins in this sample has supplied us at each phase of the project with the opportunity to explore the behavior of one mother with two different babies. Her boys were extremely different from one another, from birth. One was small, delicate, alert, calm, easy to cuddle, and had handsome features. His brother was stocky, somewhat dazed-looking, with a protruding lower lip, cranky and a poor sleeper; larger at birth, he was also a better eater throughout the first year. Since they were only one pair, our observations can merely be suggestive, but they help to put the data on the sample as a whole in perspective.

At the 13-week session this mother raised only the three issues *dyad-world, strong-weak baby,* and *happy-sad baby.* They accounted for not 71% but 100% of the topics to both infants. One has to conclude that this was a matter of how the mother happened to be feeling or what she was (and was not) thinking about on that particular day. Similarly the issue *allies-opponents,* which was only raised at the 26-week visit, occurred with both infants. It accounted for 11% and 14% of what she said to them, respectively. As TABLE 1 shows, these figures are near those of the sample as a whole at that age; the issue came up much less frequently with younger infants.

A different picture emerged with respect to the issue of *loving-rejecting baby,* which was raised at six and 26 weeks but only in the dialogues with the second, less cuddly twin. Finally, at all three ages the *strong-weak baby* issue occurred with twice the frequency to the first, smaller twin as to the second.

DISCUSSION

Considering the small sample obtained from each of our subjects—five minutes on each of three occasions—the existence of individual differences in the prevalence of particular themes is surprising. On the average, more than 25% of the variance in any issue's frequency at 26 weeks was predictable from the extent to which mothers had raised the issue at previous sessions. The effects of infant's age and sex and of mother's education were few in comparison with individual differences.

Those effects that were significant suggested that a theme arose when something was called into question: the *allies-opponents* issue increased and *strong-weak baby* declined as infants became more independent in terms of preferences and motor skills. (Similarly, the *loving-rejecting* baby issue was raised with the less cuddly twin.) When the issue did come up, it might be expressed either positively or negatively; but its true meaning more often seemed to be the negative one.

The issues coded in this study were merely a first approach to the problem of classifying the content of mothers' speech to babies. It is probable that selected themes can be isolated in which individual mothers (or fathers or siblings) would show even greater stability.

For the present, our findings have confirmed a casual impression formed by all of the project staff members, that something meaningful was being revealed by each mother when one subjectively paraphrased her patter. The author, like others, is skeptical about the empirical validity of projective tests; but here we have found at least the empirical reliability of certain features of mothers' projective behavior in an everyday situation.

REFERENCE

1. KAYE, K. AND FOGEL, A. 1980. Temporal structure of face-to-face communication between mothers and infants. Develpm. Psychol. 16: 454–464.