**TURNING THE TABLE ON ADVICE PROGRAMS FOR PARENTS:
USING PLACEMATS TO ENHANCE FAMILY INTERACTION
AT RESTAURANTS**

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There are many opportunities in a family's daily routine to enrich the interactions among its members. One such opportunity arises at family restaurants. Surveys of restaurant personnel and customers suggested the possibility of enriching family interactions by redesigning indigenous materials such as table placemats. Accordingly, we developed Table-Talk placemats that provided conversational topics and illustrated games in which the entire family could participate. After some testing of these placemats in a preschool, a field experiment was conducted with families dining in restaurants. Table-Talk placements occasioned more social and educational dialogue among family members than either traditional-placemat or no-material conditions. Social validation ratings provided by mental health counselors and the parents suggested that Table-Talk placemats occasioned healthy and enjoyable interactions among family members.

DESCRIPTORS: advice programs, parent training, community setting, stimulus control, restaurant skills

To improve child-rearing practices, some applied behavioral research has shifted attention from the treatment of recalcitrant clinical problems to the improvement of common but troublesome situations. Although many of these situations (such as family shopping excursions and preparing for school in the morning) seem to present natural occasions for enjoyable interactions, they are often associated with high levels of interpersonal friction between parents and children (Risley, Clark, & Cataldo, 1976). Accordingly, Risley et al. (1976) have advocated the development of situation-specific advice programs for parents to use to suppress children's disruptive behavior and to engage all family members in mutually reinforcing activity.

In a study illustrative of this approach, Clark, Greene, Macrae, McNees, Davis, and Risley (1977)

observed that numerous opportunities were available during shopping excursions for family members to interact constructively and pleasantly. However, children often misbehaved at these times and parents typically responded in a coercive manner. This analysis led to the development, evaluation, and marketing of an advice manual (Greene, Clark, & Risley, 1977) that parents used to eliminate their children's misbehavior and, most notably, to promote a social/educational dialogue among family members.

Other aspects of the family's daily life could benefit from the use of similar advice programs. For example, an excursion to a restaurant offers all family members an excellent opportunity for a stimulating and collective interaction. However, according to popular and technical literatures, the family's dinner time at restaurants is often mundane and sometimes hectic. Rarely is conversation collectively shared among all family members; rather, dinner conversation tends to be dominated by adults whose limited attention to children is generally perfunctory or coercive (Hardison, Green, Greene, & Renshaw, 1981; McManmon, Davis, & Clark, 1979; Pogrebin, 1981).

Only a few relevant studies have been reported and most of these either were conducted exclusively in the home (Jewett & Clark, 1979) or con-

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sidered only the disruptive manners of a single child instead of the interaction among all family members (e.g., McMahon & Forehand, 1978). In one restaurant study, the disruptive behavior of one young child in each of several families was analyzed (Bauman, Reiss, Rogers, & Bailey, 1983). Parents read an advice program recommending that they praise their children's appropriate table manners and that they provide the children with toys during the premeal period. The target child's disruptions were suppressed during the maximum of two meals in which they were studied. Effects on other behaviors or other family members were not considered.

Advice programs for restaurant dining and other aspects of the family's routine are appealing because of their potential for broad, cost efficient dissemination. Nevertheless, parents still must: (a) seek or obtain the advice (e.g., from psychologists, bookstores); (b) read, understand, and embrace its recommendations; and (c) use it in the prescribed manner. Such a complex chain of behavior may preclude families from ever accruing the benefits of the program.

In some cases, however, there may be simpler alternatives to advice programs. That is, to some extent, child care can be facilitated independent of parents or other care providers if the architecture and indigenous elements in the child's environment are carefully designed. For example, open day care environments have been designed that promote supervision of children without disrupting their sleep (Twardosz, Cataldo, & Risley, 1974) and toys have been selected that facilitate children's social play (Quilitch & Risley, 1973).

A similar approach was taken in this study to determine whether desirable interactions among family members at restaurants could be facilitated with specially designed table placemats. Prior to the study we interviewed restaurant customers, including parents ($n = 103$) and personnel ($n = 28$). Respondents generally agreed that: (a) it is during the premeal period at restaurants that children are most likely to be bored, disruptive, or passive spectators of adult-dominated conversation; (b) children in the 3 to 5 year range are particularly prone to boredom, disruption, and isolation from family

conversation; (c) collectively shared conversation among all family members could improve the premeal period; and (d) specially designed placemats or tablecloths might stimulate such conversation (Hardison *et al.*, 1981).

Therefore, we created new placemats (Table-Talk placemats), containing a variety of colorfully illustrated, conversational activities. The activities included popular children's games selected from books and magazines and other activities that we created from experience with children. Most of the latter activities (and some selected from books or magazines) were informally tested by attempting to engage two to three preschool children in the prospective activity. Only those activities that seemed to engage children substantially were included on Table-Talk placemats.

Subsequently, a pilot study was conducted in a preschool setting. Two mock families, consisting of "parents" (graduate students) and preschool children, participated in simulated restaurant dining sessions. During sessions the "families" were provided with either Table-Talk or traditional placemats (e.g., Pizza Hut placemats). Results from this pilot study suggested that Table-Talk placemats occasioned greater amounts of socially desirable comments among the children. (Detailed results of pilot tests and copies of all placemats used in the study are available from Brandon F. Greene.)

Based on this preliminary work, our experiment was conducted to analyze the effect of Table-Talk, traditional and no-placemat conditions on various behaviors of natural families at restaurants. This analysis considered not only the disruptions of particular children, but also studied the degree to which enriching conversation was shared among all family members.

METHOD

Families and Setting

Four families were recruited through a local newspaper advertisement. The criteria for participation required a two-parent family with at least one child between the ages of 3 and 5 (i.e., the target age range). Of the 12 families who responded to the ad, only four met these criteria.

The Stafford family included two boys, ages 1 and 5. (The 1-year-old child dined with the family each time but was not a target of observations.) In the Keegan family, there were two boys, ages 5 and 7; in the Danon family, two boys, ages 4 and 5; in the Garrett family, two boys, ages 5 and 13 and a girl, age 9.

All four families resided in southern Illinois and were lower-middle to middle income. The parents' level of education ranged from 13 to 19 years ($M = 16$ years). The experimenters paid for one-half of the meals in exchange for each family's participation.

Families were videotaped during several 26-min premeal periods at two family-style restaurants. (Prior observations of 46 families at three different family-style restaurants indicated that the premeal period lasted an average of 26 min. Therefore, a 26-min premeal period was used in this study.) Most of the meals were taken at one of these restaurants (designated the "primary" restaurant). At the primary restaurant, families dined in an empty, partitioned room that adjoined the main dining area but was normally used only after the larger area had filled with customers. The videotape equipment was situated in full view of the families (approx. 5 m from their table) and the microphone hung directly above their table (approx. 2 m).

To ensure that experimental effects were not setting specific, some dining trips were made to a second restaurant (designated the "probe" restaurant). Premeal interactions at the probe restaurant were taped in the main dining room. The videotape equipment was concealed behind a curtain so that only the experimenter, the restaurant personnel, and the subjects were aware of the videotaping. The microphone was camouflaged by a hanging plant.

Materials

Two types of placemats were used. Traditional placemats (available from various paper products distributors, including Springprint, Inc. and Pizza Hut) contained a variety of popular games (e.g., riddles, matching tasks, mazes). A psychologist and five elementary/preschool teachers reviewed over 100 of these designs and rated their entertainment

value and age appropriateness for the target children (3–5 years old). Because very few traditional placemats seemed particularly designed for this preliterate population, any design that a specialist identified as appropriate was used in the study. There were five such designs: (a) a Pizza Hut design that displayed stimulus-matching tasks and tic-tac-toe games; (b) three Springprint placemats (one displayed a maze; one had riddles, mazes, and animal shapes; and one was an eyeteaser scene); and (c) a Hoffmaster placemat, which featured animal shapes, riddles, and mazes.

The second type of placemats were Table-Talk placemats. There were five such placemats (an example appears in Figure 1). Both types of placemats (traditional and Table-Talk) were laminated for durability.

Behavior Definitions

Several behaviors were adapted from Clark et al. (1977) to assess family interactions during the premeal period.

Discussion of food. This included parents or children requesting or providing information about food in the restaurant (except where such statements referred to past or future social occasions such as dining experiences in other restaurants; these statements were scored as social and educational comments).

Social and educational comments. These included parents or children requesting or providing information about objects in the restaurant (excluding food); remarks about work, school, social occasions; complimenting, praising, or making affectionate remarks to another family member; commenting to or questioning another in relation to placemat games or other games invented by family members; and laughing.

Interaction with materials. This included parents or children physically interacting with a placemat (e.g., pointing at placemat; looking at own placemat or another's placemat) or assisting another to interact with the placemat (e.g., pointing to an activity on child's placemat).

Parental coercive comments. These included parents warning, threatening, arguing, cursing, prompting a child to discontinue inappropriate be-

Figure 1. Sample Table-Talk placemat.

havior, and stating a child's name repeatedly (twice within 3 s) or once with no subsequent remark within 3 s. Examples included, "sit quietly"; "I'm warning you"; "Laura . . ."

Children's distracting comments. These included children complaining, whining, crying, arguing (with parent or another child), tattling (referring to another child's misbehavior), yelling, cursing, repeatedly requesting something that the parent had already denied, repeatedly calling the parent's name (twice within 3 s, e.g., "Mom, Mom . . .") and interrupting another's speech.

Children's disruptive behaviors. These included children using an object (including food) to make noise or strike others, throwing objects, hitting, pinching, biting, hair pulling, standing on a chair, and leaving the dining area without permission.

Observation System

All sessions were videotaped. During taping a series of observation/record intervals were dubbed

onto the videotape (from a prerecorded cassette tape "in line") for purposes of scoring when the videotapes were subsequently replayed. A 10-s observe, 5-s record, partial interval recording system was used. The observations alternated from parents to children so that both parents were observed during the odd numbered intervals and all children were observed during the even numbered intervals. Interaction with materials, however, was scored differently. On the completion of each even numbered interval (i.e., every 30 s), each family member was observed in sequence within a 5-s interval which was broken by the announcement of "mom" (at which time the observers momentarily observed and scored the mother for interaction with materials), "dad" (at which time the father was scored), and then by the numbers one, two, and three, (which corresponded to children in the family). After scoring interaction with materials, observation resumed of parents and children during odd and even numbered intervals, respectively.

Finally, to provide a more sensitive measure of

family interaction, the direction of social and educational comments was noted. That is, the recipient of the parent's or child's social and educational comment was categorized as: (a) a child or more than one child, (b) a parent, or (c) collective, (i.e., to all family members). (In determining the recipient, observers attended to the source's eye orientation and the content of the remark, as well as to who responded.) This directional analysis reflected the extent to which children were active participants (e.g., parents and children speaking collectively with one another) or passive witnesses to the prevailing conversation (e.g., parents speaking exclusively with one another). Social and educational comments that were directed to the entire family (i.e., collective social and educational comments) were of particular interest in this study because they reflected conversation in which all family members participated.

Reliability

All videotapes of premeal interactions were scored by a trained observer. A reliability observer independently scored 40% of these tapes. Reliability tapes were selected randomly for each family so that at least one tape was chosen from each experimental condition and at least one of the tapes represented the premeal period at the probe restaurant.

Observer reliability was assessed interval by interval for each condition, behavior, and family member. The number of agreements on the occurrence of each behavior was divided by the total number of intervals for that behavior and multiplied by 100. Interobserver agreement percentages for each condition (separately averaged across parents and children) are presented in Table 1.

Experimental Procedures

All dining trips took place during the families' regular dinner hour. Prior to their first meal, the parents were simply informed that placemats would be provided to determine their entertainment value during the premeal period.

After seating the families at the restaurants, the experimenter either left the room (primary restaurant) or sat at another table (probe restaurant). A

Table 1
Mean Percent Agreement for Parents' and Children's
Target Behaviors

Target behavior	Experimental condition		
	No-materials	Traditional	Table-Talk
Social/ed comments			
Children	85	67	76
Parents	70	88	84
Material interaction			
Children	—	79	82
Parents	—	87	64
Child. distract. comment	97	67	73
Child. disrupt. behavior	70	92	100
Parent coercion	76	73	75
Discussion of food	67	83	83

Note. "Material interaction" could not be scored in no-materials condition.

waiter or waitress took the family's order and then cued the experimenter to activate the videocamera. Depending on the experimental condition, the experimenter either left immediately (when no placemats were provided) or approached the table and said, "Here are some placemats for you."

When either traditional or Table-Talk placemats were distributed, the specific design was selected randomly, without replacement, until all placemats of that type had been selected. During traditional placemat conditions, each family member received a different placemat design; during Table-Talk each received the same design. This was done for two reasons. First, pilot work indicated that during traditional conditions, social and educational comments from the children were actually facilitated when everyone had a different placemat. This seemed to be due to the fact that no single traditional placemat appeared to be of enduring interest to young children. When different designs were available, children often traded and compared their designs, and thus interacted more. Second, for this very reason, placemat distributors often package their designs in a mixed sequence so that different designs are placed on each table (J. Middleton, June 24, 1980). The opposite was true of Table-Talk placemats. Pilot work indicated that social and educational comments were facilitated when each member had the same Table-Talk

design. Thus, the arrangements of both placemat conditions were deliberately structured to ascertain their ability to promote family interactions under the best circumstances for each (cf. Yeaton, Greene, & Bailey, 1981).

The analysis with some families involved an alternating treatments phase in which two different experimental conditions (either Table-Talk, traditional, or no-materials conditions) alternated within meals. Therefore, in these cases the experimenter reentered the dining area at the end of 13 minutes, collected any placemats that had been distributed, and either distributed new placemats before leaving or simply left. After an additional 13 minutes (i.e., completing a 26-min premeal period) the videotaping was discontinued and the family was served the meal.

Experimental Design

Various within-group experimental designs (and combinations of designs) were used in the experiment. Each served to reveal different aspects of the within- and between-meal effects of Table-Talk, traditional, and no-materials conditions.

Stafford family. Initially, the Staffords dined on two occasions under a no-materials condition. Subsequently, the family dined on several occasions during which no-materials and Table-Talk conditions alternated (counterbalanced for order) across meal halves. The final meal was entirely under Table-Talk conditions.

Keegan family. An A-B-A reversal design was used in which a baseline was established under Table-Talk (A) for several entire meals. Then traditional conditions (B) were implemented for several meals. Subsequently, Table-Talk conditions (A) were reinstated.

Danon and Garrett families. A combination within-meal alternating treatments and multiprobe (across families) design was used. The initial baseline involved a within-meal alternation of no-material and traditional placemat conditions (counterbalanced for order). The second condition involved a within-meal alternation of traditional and Table-Talk placemat conditions.

Consumer and Social Validation

On finishing their last meal, parents completed a consumer satisfaction questionnaire. They were presented with examples of each type of placemat while responding to items asking them to rate (on a 5-point scale) such variables as the degree to which each type of placement stimulated conversation and was enjoyed by the family.

In addition, six family counselors (four with master's degrees and two with bachelor's degrees in human service disciplines), employed at a local community mental health center, viewed a composite tape of videotaped segments of the families dining during various experimental conditions. The counselors were unaware of the nature and purpose of the study.

The composite tape presented pairs of 1-min segments from each family's dining trips. Where alternating treatment designs had been used, each pair of segments represented the two experimental conditions in effect during the premeal period. The selection of the particular premeal period was random from all premeal periods when those two conditions were in effect. Thus, for the Danons and Garretts, the pairs of 1-min segments represented no-materials vs. Table-Talk; Table-Talk vs. traditional; and traditional vs. no-materials. For the Keegans, two pairs of 1-min segments were shown, both of which contrasted Table-Talk vs. traditional. The selection of all 1-min segments from the particular premeal period was random excluding the first and last 2 minutes of this period. The order of their placement on the composite tape was also random.

After viewing each pair of segments the counselors rated the segments along such dimensions as the degree to which the family's interaction was educational, creative, and characteristic of a healthy family relationship.

RESULTS

Stafford Family

Figure 2 presents the collective social and educational comments of the Stafford family. With

this family, an initial baseline of no-materials was followed by a phase in which no-materials and Table-Talk alternated within meals. For the entire final meal, Table-Talk placemats were provided.

Target child (Ben). Ben made no collective social and educational comments during the first two meals of the no-materials condition. His collective social and educational comments continued to be infrequent during no-materials ($M = 12\%$) as contrasted with Table-Talk ($M = 42\%$). (On the sixth meal, the mother was frequently off camera tending her 1-year-old child. By definition, this precluded the opportunity for collective social and educational comments, i.e., comments to all family members. Nevertheless, the data point for this meal is based on the entire set of intervals and is included in the means reported for that condition.) When Table-Talk placemats were provided during the entire final meal, Ben's collective social and educational comments remained at a relatively high 69% of the intervals.

Stafford parents. The Stafford parents' collective social and educational comments have been grouped (i.e., a comment from either or both parents is reflected). Their collective social and educational comments did not occur in the initial no-materials condition and occurred in only 13% of the intervals when this condition alternated with Table-Talk. However, such comments occurred in 40% of the intervals during the Table-Talk condition and 57% of the intervals during the final meal (Table-Talk).

Keegan Family

Figure 3 presents the results from the Keegan family who experienced traditional placemat and Table-Talk placemat conditions in a between-meals A-B-A design. The Keegans dined at the primary and probe restaurants in each condition.

Target child (Jimmy). Regardless of the restaurant, Jimmy's collective social and educational comments were clearly affected. During the initial Table-Talk condition they averaged 41%, dropped to 5% during traditional placemats, and returned to 40% during the final Table-Talk condition.

Figure 2. Percentage of intervals in which the Staffords emitted collective social and educational comments (i.e., to all family members). Mrs. Stafford was off camera for most of the sixth meal.

Nontarget child (Billy). Although Billy (age 7) was not a primary target, his collective social and educational comments occurred during 55% (first Table-Talk), 5% (traditional), and 36% (second Table-Talk) of the intervals.

Keegan parents. The parents' collective comments were substantially affected. These comments dropped from 63% (first Table-Talk) to 16% (traditional) and recovered to 68% during the final Table-Talk condition.

Danon and Garrett Families

The results for the Danon and Garrett families are presented in Figure 4 (children) and Figure 5 (parents). These families dined at the primary and probe restaurants. For both families, an initial baseline was established in which no-materials and traditional placemat conditions alternated within

Figure 3. Percentage of intervals in which the Keegans emitted collective social and educational comments (i.e., to *all* family members.). Open symbols denote probe restaurant dining occasions.

meals. No substantial differences between these conditions were observed except in the Garrett parents' collective social and educational comments, which were noticeably greater during no-materials. The Danons then dined for two meals under Ta-

Figure 4. Percentage of intervals in which the Danon and Garrett children emitted collective social and educational comments (i.e., to *all* family members). Open symbols denote probe restaurant dining occasions.

ble-Talk conditions and subsequently under an alternating treatments phase (Table-Talk vs. traditional). This alternating treatments phase was then replicated with the Garretts.

Target child (Leon Danon). Leon was the only child among all the families whose collective social and educational comments did not appear to be enhanced by Table-Talk conditions. Specifically, these comments occurred in the initial phase during 8% (no-materials) and 10% (traditional) of the

intervals; during the second phase they occurred during 11% (Table-Talk) and 8% (traditional) of the intervals.

Target child (Cory Danon). During the initial phase in which no-materials and traditional placemat conditions alternated, Cory's collective social and educational comments averaged 11% and 3% of the intervals, respectively. When traditional placemat conditions alternated with Table-Talk, these comments occurred in 0% and 49% of the intervals, respectively.

Target child (David Garrett). David's collective comments occurred at low levels throughout baseline (10%, no-materials; 9%, traditional), dropped to 5% during the continuation of traditional conditions, but rose to an average of 34% during Table-Talk.

Nontarget children (Ken and Maggie Garrett). Although not the primary targets of the study, Ken's and Maggie's (ages 13 and 9) comments appear to have been facilitated by Table-Talk conditions. Specifically, Ken's and Maggie's mean (there were no substantial differences between them) collective comments were 17% (no-materials) vs. 8% (traditional) in the first phase and 17% (traditional) vs. 39% (Table-Talk) during the second phase.

Danon and Garrett parents. The Danon parents emitted collective comments during 7% and 10% (no-materials vs. traditional) and 10% vs. 40% (traditional vs. Table-Talk) of the intervals.

Similar differential effects were evident in the occurrence of the Garrett parents' collective comments which averaged 18% (no-materials) vs. 7% (traditional) and 9.1% (traditional) vs. 30% (Table-Talk).

Other Behaviors

The occurrence of other target behaviors is presented in Table 2 (averaged for parents and children within families). There are some notable points. First, social and educational comments of a noncollective nature (i.e., *exclusively* between parents or a parent and a child) occurred to a lesser degree during Table-Talk than the other conditions. That is, during Table-Talk conditions, such

Figure 5. Percentage of intervals in which the Danon and Garrett parents emitted collective social and educational comments (i.e., to *all* family members). Open symbols denote probe restaurant dining occasions.

exclusionary conversation was supplanted by the greater occurrence of collective social and educational comments. Second, traditional placemats occasioned greater amounts of interaction with materials. In contrast, families physically interacted with Table-Talk placemats only to choose a conversational activity. Third, Table-Talk conditions were associated with reductions in such undesirable behaviors as children's disruptions, distracting comments, and parental coercions. One exception was the Garrett children whose distractions and disruptions were higher during Table-Talk.

Social and Consumer Validation

The results of the mental health counselors' ratings of videotaped dining segments corroborate the findings regarding the impact of Table-Talk. That is, counselors consistently rated family interactions during Table-Talk as more educational, creative, and enjoyable than family interactions during either traditional or no-materials conditions. In contrast,

Table 2
Mean Occurrence of Various Target Behaviors

Target behavior	Staffords		Keegans		Danons			Garretts		
	No-ma- terials	Table- Talk	Tradi- tional	Table- Talk	No-ma- terials	Tradi- tional	Table- Talk	No-ma- terials	Tradi- tional	Table- Talk
Soc/ed comments										
Collective ^a	8	45	9	57	9	4	33	15	9	34
Between parent & child ^a	32	17	18	7	38	30	22	19	23	6
Between children ^b	0	0	9	0	0	1	0	6	3	4
Between parents	21	4	20	0	6	4	2	6	17	0
Material interaction										
Children ^b	—	24	30	27	—	26	11	—	38	21
Parents	—	3	23	20	—	21	14	—	16	12
Child distract. comment ^b	8	3	3	1	2	1	0	2	3	7
Child disrupt. behav. ^b	6	5	0	0	3	0	0	0	1	2
Parental coercion	10	1	4	1	9	6	2	5	3	2
Discussion of food	1	2	3	1	4	8	2	1	0	0

Note. "Material interaction" could not be scored in no-materials conditions.

^a Means are based on both odd and even numbered intervals (i.e., when parents and children, respectively, were observed).

^b Means are based on target and nontarget children.

when counselors compared traditional and no-materials conditions with one another, no consistent differences in ratings were observed.

The parents' evaluations also indicated a preference for Table-Talk placemats. Parents suggested that these placemats contributed to a more enjoyable dining occasion with their children. (Detailed results of the counselors' and parents' ratings are available from Brandon F. Greene.)

DISCUSSION

The results of this experiment rendered several interesting findings. First, placemats, materials indigenous to restaurants, transformed the premeal period from a time in which conversation was ordinarily limited and exclusionary to a time in which all family members collectively offered and received mutually interesting comments. In contrast with no-materials and traditional placemat conditions, Table-Talk placemats seemed to occasion comments both from children (e.g., "What does this say?") and parents (e.g., "Do you want to play some games?"), effectively trapping all in a mutually reinforcing interchange (cf. Baer & Wolf, 1967). This differential effect was, in some in-

stances (e.g., David Garrett), more evident when placemat conditions alternated within the same session than when they alternated between sessions.

Second, reductions in negative interactions, particularly parental coercive comments and children's distracting comments, were obtained during Table-Talk. Although these comments were relatively infrequent during other conditions, even low rates of such behaviors can spoil the entire outing. Because no direct consequences were applied to such undesirable behaviors, they presumably decreased in competition with the positive interactions during Table-Talk.

Third, the data from the probe restaurant indicated that the benefits of Table-Talk were not restricted to one restaurant setting. The effects of each experimental condition were consistent across two different restaurants.

Finally, an initial concern that parents would be less satisfied with Table-Talk placemats, which somewhat reduced exclusive parent-to-parent dialogue, was allayed for several reasons. First, parents were not actually precluded from interacting with one another during Table-Talk; rather, their greater participation in collective conversation allowed them to interact with spouse and children simul-

taneously. Furthermore, both the social and consumer evaluations suggested that parents enjoyed the company and conversation of their spouses during Table-Talk as much as during other experimental conditions.

It is uncertain how these findings may be limited by reactive effects, which are potentially problematic in most studies of family interactions. As in previous studies (Bauman et al., 1983; Clark et al., 1977), families in this study were aware of being videotaped/observed. It is not clear whether any of them behaved differently than he or she ordinarily would have. Debriefing interviews might have helped in examining this possibility, but additional research will still be necessary to determine whether families respond favorably to various interventions under nonexperimental situations. This issue is sufficiently important that it warrants the time and technical ingenuity needed to surmount the practical and ethical problems that make researchers, research committees, and concerned citizens reluctant to permit surreptitious audiovisual recordings.

Such limitations notwithstanding, this study of family interactions at mealtimes has broadened the scope of previous research (e.g., Bauman et al., 1983; McMahon & Forehand, 1978) by considering a wider range of target behaviors (i.e., positive and negative interactions), among more family members (including the father who is often not available for study), over several more meals than has been possible to arrange in earlier studies. The study also highlights the advantages of using indigenous materials to promote family interaction. That is, carefully designed materials such as restaurant placemats do not require parents to make special efforts to obtain advice programs, or to bring materials from home, or to acquire a special skill (e.g., providing contingent praise). Moreover, each of a dozen restaurant managers and franchise executives indicated to us that the disposable placemats in current use are costly, that reusable laminated placemats would reduce this cost, and that if given the choice, they would prefer to purchase placemats that contributed to an enjoyable premeal period for customers.

The development of Table-Talk placemats did not render a concrete set of principles or elements that we could propose for the design of any placemat or other indigenous material. However, these placemats were the products of a fairly consistent creative *process* which has been integral to the creation of other programs, ranging from *Shopping with Children* (Clark et al., 1977) to *Sesame Street* (Lesser, 1974). The process, therefore, may have general applicability for designing similar materials. It involves brainstorming sessions in which two to five child behavior specialists propose ideas for activities and illustrations. Their proposed activities are then presented to two or more target age children to determine, in an informal way, the degree to which each activity engages the children. Observations made during these informal tests often provided ideas for new or modified activities.

In this study, this process often led to the selection of colorfully illustrated, humorous or incongruous situations and objects (e.g., animals dressed as people dining at restaurants). Such illustrations often seemed to occasion spontaneous questions or comments from children. Activities were also selected that were amenable to participation and apparent enjoyment by all family members regardless of age even after repeated use (e.g., the "Where Am I" game, Figure 1). This contrasts with traditional placemat activities that often require a degree of literacy (thus precluding participation by target age children) or that offer games typically good for only a brief period of use (e.g., mazes).

Enhancing family interaction simply through the careful selection and design of indigenous materials is an intriguing idea, shown to have promise in this and related studies (cf. Risley et al., 1976). In a small way such research captures the spirit of one social engineer's vision of a community in which even the nuances of dining halls and corridors are selected for the subtle pleasure they offer its inhabitants (Skinner, 1948).

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