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Changing Children's Food Preferences: Parent Opinions

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This study is the first systematic survey directed at discovering the beliefs and practices of parents with respect to the creation of likes or dislikes for food by their young children. Seventy-six American parents completed a questionnaire that asked for their spontaneous suggestions about ways to create food likes and dislikes, and probed their opinions of the effectiveness, and frequency of use, of 11 possible methods for creating food likes and six for creating dislikes. Favored methods for creation of likes most commonly invoked a positive social-affective context, such as indication to the child that parents like the food in question, or involving the child in preparation of the food. Coercive methods were thought to be ineffective. Contrary to the overjustification literature, parents thought that rewarding ingestion of a target food would be at least as likely to produce an increased liking for the food as using the target food as a reward. Parents were more forthcoming with suggestions for creating likes than for creating dislikes. While parents believe that mixing a target food with a highly desirable or undesirable food can change the preference for the target food, they rarely use this technique. Parents of children who were problem eaters showed no characteristic differences in training practices or attitudes.

Introduction

Food choice may play three important roles for the developing child. First, since the amount and quality of nutrients is determined by food choice, it is an important component in the health and growth of the child. Second, early food choices may establish habitual patterns of relating to foods, which might influence food choice in later childhood or adulthood. Third, food choice is one of the critical arenas for conflict between parents and children. Parents often have strong ideas about ideal diets, and try to impose them on their children. Nutrition aside, parent–child disagreements about eating may have implications for their relations in other domains, and for the developing personality of the child. Indeed, it is striking that one of the most common complaints to pediatricians by parents of children in the 2–4-year old range concerns the amount of food eaten or food choice (Bakwin & Bakwin, 1972; see Pelchat & Pliner, 1986, for more recent data on degree of parental concern about feeding problems in their children).

Given the centrality of food choice, it is surprising how little research had been done on the factors that determine adult's or children's food preferences. The literature

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suggests that enduring preference changes among adults can occur on the basis of mere exposure (Pliner, 1982), social influence (e.g. Krondl & Lau, 1982), Pavlovian pairing of neutral foods with already liked foods (Zellner *et al.* 1983) or pairing of target foods with certain positive, postingestional consequences (Booth *et al.* 1982) (see Rozin, 1984 or Rozin & Vollmecke, 1986, for reviews).

Some of these factors have been implicated as causes of changes in children's food preferences. Mere exposure has been shown to be effective in young children (Birch & Marlin, 1982). Early work with preschool children suggested a major role for social influence (Duncker, 1938; Marinho, 1942; Dunshee, 1931). This work has been confirmed and significantly extended by Birch and her colleagues (reviewed by Birch, 1986). Positive social contexts seem to induce liking. More specifically, perception by preschoolers that their teacher (or another respected adult) values a particular food (Birch *et al.* 1980) or that peers prefer it (Birch, 1980 a) induces an enhanced preference for that food.

Birch's research reveals a counterintuitive aspect of preference acquisition: rewarding a child for eating a particular food works against establishing a preference for it (Birch *et al.* 1982). This finding fits with research by Lepper (1983) and his colleagues, which suggests that liking (increase in intrinsic value) is reduced when a child perceives an extrinsic reason (e.g. a bribe) for performing some action. On the contrary, when a target food is used as a reward (if you do X, I will give you a stringbean), the target food tends to become enhanced in value (Birch *et al.*, 1982). Within Lepper's framework, the interpretation of this effect is that the enhancement occurs because the child perceives that the reward item is valued by a parent or teacher.

The above review touches on most experimental studies of changing food preferences in children. There are, in addition, a few studies that include information about parent opinions or practices with respect to children's food preferences, although the problem has not been systematically explored. Kram & Owen (1972) report greater uses of physical reward and physical discipline in attempts to shape food preferences by lower class as opposed to middle class parents, but provide no data on parental evaluation of the efficacy of the various techniques. Ritchey & Olson (1983) explore 4-year-old's attitudes to and preferences for sweets, as a function of parental attitudes and practices. They report that American parents are reluctant to use sweets as a reward. They also report no significant relations between parental attitudes or practices with respect to sweets, and their children's sweet preferences. This surprising finding is congruent with results suggesting weak relations between food preferences of parents and their children (Birch, 1980 b; Pliner, 1983; Rozin *et al.*, 1984). Finally, Pelchat & Pliner (1986) report a positive association between feeding problems in children and parental use of reward and punishment in the feeding situation.

The present study is, so far as we know, the first attempt to get systematic information from parents on their beliefs about factors that induce changes in liking and their practices in this regard.

Methods

Subjects

The subjects were parents of children in a University-based private pediatric practice. Based on examination of pediatric records, questionnaires were mailed to the first 200 parents who had at least one child three or more years of age. Nine

questionnaires were returned because of incorrect address. Seventy-six parents (73 mothers) returned completed questionnaires, of whom 71·1% were white, and 28·9% were black; 57% of the mothers and 62% of the fathers had "professional" occupational status.

Questionnaire

The first part of the questionnaire assessed the degree of feeding problems with all children above 3 years of age in the family. These items are discussed in the problem eater score in the methods section, under analysis of results. The second part solicited spontaneous methods for getting children to like or dislike a food. Since the like vs. eat distinction is critical, we quote the instructions:

> "Our concern in this question is with liking, and not just eating. For example, you could get a child to eat a food by force, or threatening severe consequences. We are not interested in that. We are concerned with getting the child to actually like the food. If you believed that forcing a child to eat a food might get him to like it, then that might be an appropriate answer to the question below. Remember, our concern is liking, not eating.
>
> Think of trying to get a 4-year-old to LIKE a vegetable, that he/she rejected the first time it was offered (for example, bean sprouts, sweet potato or lima beans). Write down how you would go about getting the child to like the food, over a period of weeks."

The comparable text for creation of a dislike was as follows:

> "Our concern in this question is with disliking, and not just failure to eat. For example, one can prevent a child from eating a food by not letting him have access to it. We are not interested in that. We are concerned with getting the child to actually dislike the food. If you believe that preventing access to a food might cause a child to come to dislike it, then that might be an appropriate answer to the question below. Remember, our concern here is disliking as opposed to not eating.
>
> Think of trying to get a 4-year-old to DISLIKE a food that he/she is eating too much of, or that you think is unhealthy (e.g. potato chips, a particular candy bar). Write down how you would go about getting the child to dislike the food, over a period of weeks."

The third part of the questionnaire probed specific techniques for instilling likes or dislikes in children. The techniques were assembled through common sense, knowledge of the literature, and pilot questionnaires. (The word in capital letters in parentheses after each technique did not appear in the questionnaire, but is a code word for reference to each question.) The instructions were as follows:

> "We are going to describe 11 different ways one might go about getting a 4-year-old to LIKE a vegetable (which we will call PRUST). For each one indicate how effective you think it is, and how much you have used it. Remember, we are interested in getting this child to LIKE the food. Don't think about what will get him to EAT it, unless you think that's a way to get him to like it.
>
> Rewarding the child for eating PRUST. For example, 'Bobby, if you eat your PRUST, I'll let you have some candy (or let you play a video game)' (REWARD FOR EATING).
>
> A. I think that this technique is
>
> (1) very likely to make him like it more; (2) might make him like it more; (3) will have no effect; (4) might make him like it less; (5) very likely to make him like it less.
>
> B. I have used this technique
>
> (1) never; (2) rarely; (3) sometimes; (4) often."

Questions A and B were asked about each of ten other methods. The methods were described as follows:

"2. Using PRUST as a reward. For example, 'Bobby, if you do a good job cleaning up your toys, I will let you have PRUST.' (USING AS A REWARD)
3. Having adults eat PRUST and appear to enjoy it. (ADULTS LIKE)
4. Saying PRUST is good for you. 'Bobby, PRUST is good for you. The doctor said you should have one every day. Here's your PRUST for today.' (GOOD FOR YOU)
5. Giving PRUST at the same time as a favorite food or flavor. 'Bobby, I've mixed some PRUST with ice cream (sugar, honey, etc.). It will taste yummy. Try some.' (MIX W/ LIKED FOOD)
6. Just leaving some PRUST around in a bowl in the house. (LEAVE AROUND)
7. Threatening a bad consequence if PRUST is not eaten. 'Bobby, if you don't eat your PRUST I won't let you watch TV today.' (THREATEN)
8. Indicating that you (the parents) would be happy and pleased if the child ate PRUST. (PARENTS HAPPY)
9. Referring to siblings or peers who eat the food, e.g., 'Your friend Harry loves PRUST and asks his mommy to get it for him all the time.' (SIBS LIKE)
10. Serving PRUST as the only food in a meal, and making it clear that there will be nothing else unless PRUST is eaten. (ONLY FOOD OFFERED)
11. Involving the child in the preparation and serving of PRUST. (HELP PREPARATION)"

A similar sequence was presented for acquired dislikes:

"We are going to describe six different ways one might go about getting a 4-year-old to DISLIKE a food (which we will call PRUST) that he/she eats, or eats too much of (e.g. candy bars). For each one, indicate how effective you think it is and how much you have used it. Remember, we are interested in getting the child to DISLIKE the food. Don't think about what will PREVENT him from eating it, unless you think that's a way to get him to dislike it."

Questions A and B, and the choices, were identical to the corresponding items for acquired Likes. The methods suggested were:

"1. Telling him it is bad for him. (BAD FOR YOU)
2. Telling him only younger children or babies eat it (or eat much of it). (ONLY BABIES EAT)
3. Punishing him when he eats it (e.g. withdrawing privilege, spanking). (THREATEN PUNISH)
4. Giving him all he wants of it and more; overloading him with it. (OVERLOAD)
5. Mixing it with a bad tasting (e.g. bitter) item. (MIX W/ BAD TASTE)
6. Indicating that you (the parents) would be unhappy and displeased if the child ate the item. (PARENTS UNHAPPY)"

Through an oversight in reproduction of the questionnaire, a seventh negative reason (adults eat and appear to dislike the item) was omitted.

For all subjects, spontaneous like and dislike reasons preceded the multiple choice items, for obvious reasons. For half of the subjects, dislike questions preceded like questions, and for the remaining half, the opposite order was followed.

Analysis of Results

Spontaneous reasons were tabulated, and classified. The classification included the 11 like and 6 dislike reasons in the third part of the questionnaire. In addition, when

spontaneous reasons did not correspond to these reasons, new categories were created. The names of the full set of spontaneous categories are in the left column of Table 2. These categories were created by the authors based on examination of the reasons. Questionable items were individually discussed, and classified by mutual agreement or placed in a miscellaneous category. For example, the spontaneous category "CAJOLE, ASK" included both techniques of cajoling and asking; the spontaneous category, GOOD FOR YOU, included: "good for you", "eating different foods to grow big and strong", and "explaining the value of the food".

From a set of initial questions on feeding habits of the children, a problem eating score was computed for each family. This had five components, one corresponding to each question, as follows:

(Number of children who went through a period of not eating enough)/(total number of eligible children in family)

(Number of children who went through a period in which all new foods were rejected)/(total number of eligible children in family)

(Number of children who went through a period in which he/she would only eat a small number of foods)/(total number of eligible children in family)

"Overall, which of the following statements best applies to each of your children over 3 years of age: (a) frequent problems with feeding; (b) occasionally problems with feeding; (c) rarely problems with feeding." The composite score for this question was three times the number of children with a "frequent" response, two times the number with an "occasional" response, and the number with a "rare" response, all divided by twice the number of children (to make the possible range on this question more similar to the range on the other questions).

The final item was: "Have you every worried that the health of your children was endangered because of their eating habits".

The first three scores vary from 0 to 1, the fourth from 0·5 to 1·5, and the fifth was either 0 (no) or 1 (yes). Higher scores always indicate problems. The maximum possible score was 7, and the mean score for all subjects was 2·3.

RESULTS

For the multiple choice items, we report two measures. One is the mean rating, assigning the numbers 1–5 (or 4) to the five ordinal effectiveness (or four frequency) categories. The other is the percent of subjects passing a particular criterion (Table 1 footnotes).

There are five methods on the fixed list for creating likes that can be conceived as invoking a positive social-affective context (association of the food in question with positive social expressions/environment, or indications of positive valuation by significant others). These are "help preparation, adults like, parents happy, sibs like, and using as a reward" (Table 1). The five methods rated as effective ("likely more" or "might more") by more than 50% of subjects include all but one of the five positive social methods (excluding "using as a reward"). The only non-social method that is rated effective is "mix with liked food". The two methods that most clearly lack a *positive* social context, "only offered" and "threaten", were the lowest rated (Table 1).

The basic measure for spontaneous methods is the percent of the 76 subjects who mention a particular method (Table 2). The most common method was "prepare differently" (36·8%). This did not appear in the fixed list. Only one of the top four reasons ("adults like", 23·7%) involves positive affective context. The other two most common methods were "mix with liked food" and "good for you". In correspondence

TABLE 1
Ratings of effectiveness of methods for changing preferences

Method	Likely more (1)	Might more (2)	No eff (3)	Might less (4)	Likely less (5)	Mean	%+[a]	%−[b]
Positive								
Reward for eating	7	31	34	3	1	2·47	50·0	5·2
Using as a reward	7	24	35	5	3	2·64	41·9	10·9
Adults like	11	45	19	1	0	2·13	73·7	1·3
Good for you	9	29	26	8	1	2·49	42·1	12·4
Mix w/ liked food	7	35	19	2	11	2·66	56·8	17·6
Leave around	4	28	37	2	2	2·59	43·8	5·4
Threaten	1	7	26	27	14	3·61	10·7	54·7
Ma & dad happy	4	41	26	2	0	2·36	61·6	2·7
Sibs like	8	34	34	0	0	2·34	55·3	0
Only food offered	2	13	13	26	22	3·70	19·7	63·1
Help preparation	24	44	7	1	0	1·80	89·5	1·3
Negative								
Bad for you	3	2	31	32	8	3·53	6·6	52·6
Only babies eat	3	6	35	27	4	3·31	12·0	41·3
Threaten punish	4	16	38	14	3	2·95	26·7	22·7
Overload	7	16	28	21	2	2·93	31·1	31·1
Mix w/ bad taste	0	2	15	35	23	4·05	2·7	77·3
Parents unhappy	1	6	26	36	4	3·53	9·5	54·0

[a] Percent rated as "likely more" or "might more".
[b] Percent rated as "likely less" or "might less".

with the fixed list of methods, "only offered" and "threaten" were two of the three lowest rated methods. Considering the 11 reasons common to the fixed list and spontaneous list, there is a modest, nonsignificant correlation ($\rho = 0{\cdot}40$, $t = 1{\cdot}30$, *NS*) between rankings of effectiveness of the fixed-list items and the frequency of mention of the corresponding spontaneous list items.

The 76 subjects suggested 146 methods for inducing preferences. Eighty-nine of the 146 methods corresponded to methods on the fixed list. The most common exception was "prepare differently", which appeared frequently among the spontaneous methods but was not on the fixed list. However, the fixed list method, "mix with a liked food", might be considered to overlap with this item. The biggest disparity between the two measures was "parents happy", which scored high on the fixed list (61·6% effective) but low in spontaneous reasons (1·3%).

The frequency data are generally in accord with data on effectiveness (Tables 2 and 3). The rank orderings of frequency and effectiveness for the 11 fixed methods were closely related ($\rho = 0{\cdot}87$, $t = 5{\cdot}36$, $p < 0{\cdot}001$), while the frequency vs. spontaneous methods showed a more modest and non-significant correlation with the frequency of use data from the fixed-list methods ($\rho = 0{\cdot}47$, $t = 1{\cdot}60$, *NS*). The most commonly used methods (>50% "sometimes" or "often" used) were "adults like" (89·3%), "parents happy" (74·7%), "help prepare" (72·4%), "good for you" (58·6%) and "reward for eating"

TABLE 2

Spontaneous suggestions of methods for changing preferences and rankings of three different measures (146 positive methods, 105 negative methods)

Method	Frequency	% All SS	Rank spont	Rank fixed	Rank frequency
Positive					
Reward for eating	8	10·5	7	5	5
Using as a reward	0	0	11	8	10
Adults like	18	23·7	1	2	1
Good for you	16	21·0	2·5	6	4
Mix w/ liked food	16	21·0	2·5	9	8
Leave around	9	11·8	5·5	7	7
Threaten	1	1·3	9·5	10	9
Ma & dad happy	1	1·3	9·5	4	2
Sibs/peers like	10	13·2	4	3	6
Only food offered	2	2·6	8	11	11
Help preparation	9	11·8	5·5	1	3
Prepare differently	28	36·8			
Limit quantity	7	9·2			
Cajole, ask	11	14·5			
Miscellaneous	7	9·2			
Miss val., can't	3	3·9			
Negative					
Bad for you	32	42·1	1	2·5	1
Only babies eat	0	0	5·5	4	3
Threaten punish	3	3·9	3	5	5
Overload	8	10·5	2	6	4
Mix w/ bad taste	1	1·3	4	1	6
Parents unhappy	0	0	5·5	2·5	2
Prepare differently	2	2·6			
Others dislike it	11	14·5			
Restrict, forbid	31	40·8			
Offer alternatives	8	10·5			
Unknown/misc.	10	13·2			
Cannot	5	6·6			
No response	6	7·9			

(55·3%). Lowest scores were for "only offered", "using as a reward" and "threaten" (Table 3). The biggest disparity between frequency and effectiveness (fixed list) ratings was for "mixed with liked food": this technique is used infrequently (36% some or often) given its high effectiveness rating (56·8%).

The contrast between "reward for eating" and "using as a reward" is of interest because it maps on to the over justification issue in the literature. As indicated in Table 4, contrary to the results from controlled experiments, parents favor "reward for eating" to "using as a reward" as a technique for inducing likes, but neither technique is among the most popular techniques.

TABLE 3
Ratings of frequency of use of methods for changing preferences

Method	Never	Rare	Some	Often	Mean	% Some or often
Positive						
Reward for eating	20	14	35	7	2·38	55·3
Using as a reward	41	17	11	7	1·79	23·7
Adults like	4	4	40	27	3·20	89·3
Good for you	17	14	34	10	2·49	58·6
Mix w/ liked food	32	16	22	5	2·00	36·0
Leave around	33	14	22	6	2·01	37·3
Threaten	31	22	20	3	1·93	30·5
Ma & dad happy	8	11	45	11	2·79	74·7
Sibs like	22	16	27	11	2·36	50·0
Only food offered	56	11	8	1	1·40	11·8
Help preparation	14	7	38	17	2·76	72·4
Negative						
Bad for you	5	15	36	20	2·93	73·7
Only babies eat	36	15	22	3	1·90	32·8
Threaten punish	60	7	8	0	1·31	10·7
Overload	64	2	7	3	1·33	13·1
Mix w/ bad taste	69	4	2	1	1·14	3·9
Parents unhappy	29	13	27	7	2·16	44·7

TABLE 4

Method	Fixed list % effective	Spontaneous % Ss mention	Frequency % some/often
Reward for eating	50·0	10·5	55·3
Use as reward	41·9	0	23·7

In summary, the results on likes support positive social context and improvement of acceptability by addition of favored foods or modified preparation as major factors. Coercive forces are seen as having neutral or negative effects. Overall, there is a tendency to rate reward for eating over use as a reward.

For acquiring dislikes, by far the most effective fixed list technique is "mix with bad taste" (77·3% effective). "Parents unhappy" and "bad for you" also rate over 50%. "Overload" and "threaten punishment" have the lowest ratings. The most common spontaneous reason is "bad for you", with "restrict/forbid" (not on the fixed list) as the next most common. This corresponds, roughly, to "threaten punishment", the lowest fixed list method. There is no agreement between ranked six spontaneous and fixed list methods ($\rho = -0{\cdot}25$).

The major disparity between the two measures is "mix with bad taste", which is rated high in effectiveness (77·3%) when probed, but it not mentioned at all spontaneously. Only 45 of 105 spontaneous dislike reasons fell into the fixed list categories. The two major exceptions were restrict/forbid and others dislike.

The frequency data show highest scores for "bad for you" (73·7%) and "parents unhappy" (44·7%). "Mix with bad taste", although rated high for effectiveness (77·3%), is rarely used (3·9%).

There is a tendency for parents to be more interested in and optimistic about creating likes than dislikes. They offer more spontaneous like (146) than dislike (105) reasons. This disparity is enhanced if we eliminate restrict/forbid as an appropriate spontaneous reason for producing dislike, since it probably represents a confusion between use and liking. The total dislike reasons then drops from 105 to 74. Although parents are about equally optimistic about the effectiveness of the 11 positive (mean 2·62, between no effect and might make him like it more) and six negative methods (mean 3·38; between no effect and might make him like it less), parents employ the like methods more frequently (like: 2·28, between rare and sometimes) than the dislike methods (dislike: 1·80, between rare and never).

The relation of method of liking training to problem eating in the children was explored by calculating correlations between the problem eating scores and the results for each fixed list item. None reached statistical significance ($p < 0{\cdot}01$). The number of spontaneous like or dislike methods (perhaps related to how much thinking a parent has done on this subject) was not significantly related to problem eating.

Discussion

Our findings are, understandably, in accord with common sense, and moderately in accord with experimental data. In line with the literature, results suggest a perceived importance for positive social context (including participation in preparation) for producing likes. Parents are out of accord with the overjustification literature, preferring reward for eating to use as reward. It is possible that the very infrequent use of a target food as a reward is not an "error" on the part of the parents. On the one hand, it may represent a practical realization that it is very difficult, in the natural eating situation, to use a less favored food as a reward. On the other hand, it may be that parents recognize a fundamental role for mere exposure in the genesis of liking (see Birch & Marlin, 1982; Pliner, 1982). In that case, they may favor techniques like rewarding ingestion of the food in question, because this would temporarily increase ingestion. Perhaps, when consistently applied, under home as opposed to experimental conditions, reward for eating might foster liking.

On the negative side, there are no substantial theories or laboratory data (except for taste aversions) to measure parental opinions against. "Bad for you", "parents unhappy", and "mix with bad taste" are rated as relatively effective.

There is one striking disparity between rated effectiveness and frequency of use. For both likes and dislikes, mix with good/bad taste is rated quite effective on the fixed list, but is relatively rarely mentioned spontaneously, and is used very infrequently. Perhaps this technique involves too much preparation; in addition, on the negative side, it may be too unpleasant. However, "prepare differently" is frequent among the positive spontaneous suggestions, and may overlap with mix with good taste.

We are surprised at the absence of a relation between problem eating and techniques employed. One might expect not only that certain techniques (perhaps threat) might induce problems, but that problem children would induce certain types of behavior (e.g. threat) in parents. There is sufficient variation and range in the problem eating score to generate substantial correlations. Furthermore, Pelchat & Pliner (1986) do report a significant positive correlation between problem feeding and the use of reward and punishment in the feeding situation. Such a relation within our data base may have been obscured by the fact that we related parental techniques in general to the level of problems in all of their children combined.

There are many problems with the results we report. The sample is not representative of Americans, though it has a modestly broad base. Since many subjects did not return questionnaires, there may be an additional bias. The fixed lists lacked some important methods, especially in the dislike case.

The data consist of self-reports, which are subject to a variety of inaccuracies. In spite of the fact that we clearly state in the instructions to the questionnaire (in four different parts) that our interest is in liking, and not simply ingestion (with two salient examples), and in spite of the fact that each question is couched in terms of changing of liking, it is quite possible that parents evaluated methods in terms of effectiveness in causing or deterring ingestion. This is a natural tendency, which often affects researchers on food choice. The high incidence of "forbid or restrict" as methods for creating dislikes suggests that many parents made this "error". On the other hand, less than half of the parents listed this method even though it is by far the most obvious and effective way to discourage current ingestion. Furthermore, the fact that "limit quantity" or "threaten" was given a very low rating for changing of liking suggests that many parents were concentrating on preference, as opposed to ingestion. Finally, the data on frequency stands independent of a liking/ingestion confusion, and is generally in accord with the ratings of effective methods. Of course, there are at least some conditions in which inducing ingestion and increasing liking go together. It would be advisable to confirm this study with the much more labor-intensive interview technique, to be sure that parents continually distinguished liking from ingestion.

Another problem that also derives from the questionnaire format is that we cannot guarantee that the subjects answered the questions in the order of presentation. We placed the spontaneous methods questions before the list of specific methods, so that the specific methods would not contaminate the spontaneous suggestions. We have reason to believe that there was relatively little effect of the specific questions on the prior spontaneous questions. There are substantial disparities between the two data bases: in particular, (1) while 61·6% of subjects rated "parents happy" as effective in the specific methods, only 1 of 76 subjects mentioned it spontaneously; (2) while 77·3% of subjects rated "mixing with a bad taste" as effective for creating dislikes in the specific methods, no subject mentioned it spontaneously. These and other less dramatic disparities indicate that specific methods are not feeding back on to spontaneous methods to any great extent.

These imperfect results constitute the fullest survey of parental knowledge and attitudes about changing food habits. The results add significantly to the small but expanding experimental literature on children's food preferences (Birch, 1986), and support the most central finding, the role of social affective context in the development of likes, that arises from this literature.

There are two types of practical implications of these results. First, in so far as parental beliefs may be erroneous, it may be worthwhile to educate parents in order to

improve their effectiveness. Parents seem to underestimate the value of using a target food as a reward, and to overestimate the effectiveness of rewarding ingestion of a food. In addition, in accordance with their own beliefs, parents underutilize the technique of pairing (combining) a food with an established good or bad taste. Second, parent's beliefs may be correct, and hence can provide suggestions for research to substantiate these beliefs and improve methods for changing preferences. Most striking in this regard is the importance of helping in preparation of foods and changing the preparation of foods to enhance preference.

It is our belief that there is something to be learned from parents about the establishment of likes and dislikes for foods and other items. It is hard to believe that this is the first study that systematically attempts to explore parental wisdom. Given the important issues at stake, and the many imperfections of this study, it is hoped that further studies will add to the quantity and quality of information we have provided.

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