Family Food Decision-making: An Ecological Systems Framework

A family food decision-making conceptual framework within an ecological context is described. This framework has applications for research, education, and action in family and consumer sciences (FCS). The family food decision-making cycle includes: (a) identifying a food event that required considering alternatives outside the usual routines and established food rules; (b) identifying and assessing alternatives perceived to be available to meet family goals; (c) deciding by evaluating and choosing among alternatives; and (d) implementing the chosen alternative. The framework guides families, practitioners, and researchers in identifying effective points of intervention and salient goals for programs and actions to support thoughtful food decision-making.

Food related decision-making is a key aspect of positive dietary changes. Decision-making in the family context is a social process. For example, Neumark-Sztainer, Hannan, Story, Croll, & Perry (2003) found a positive relationship between frequency of family meals during the previous week and adolescents' intake of fruits and vegetables, grains, and calcium-rich foods. They also found a negative correlation with soft drink consumption. A clear association was found between parents' and their adolescent children's food intake as well as that between spouses (Feunekes, de Graaf, Meyboom, & van Staveren, 1998), suggesting the significance of interactions on food decisions among those who share the same household food resources.

Although each family member exerts some level of influence on family decisions, a family's food patterns are not merely the sum of individual members' food preferences and decisions. Riportella suggested that a family perspective leads to different solutions for fostering health. She argued that "behaviors and attitudes learned in families of origin and then carried forward into our current families affect all aspects of one's health" (2005, p. 14). She also noted that, "Those communities that seem to be most successful at behavior change are those that use an ecological rather than an individual approach." Similarly, De Bourdeaudhuij and Van Oost emphasized "the necessity of the involvement of the entire family for the introduction and adoption of healthy eating . . ." (1998, p. 80).

To better understand the role of families as whole functioning entities in interaction with external cultural and social forces, the processes and contexts for family food and eating decision-making were studied. The ecological framework in Figure 1 addresses family food decision-making as a function of family units as subsystems within community food and health systems. In this framework, family members interact among themselves considering individual goals and food and eating preferences, as well as the opportunities and constraints of community systems.

According to Deacon and Firebaugh, "ecological systems (ecosystems) are the totality of organisms and environments that interact interdependently" (1988, p. 28). Within an ecological system, changes in one component influence other components. Families and family members as participants in food systems are depicted in the overall context of society (see Figure 1). The family microenvironment includes the physical and social surroundings where a family lives and how its members interact with one another and with others. The

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micro food and eating environment may include extended family or other primary group members such as neighbors or friends. Social aspects of the microenvironment would include internal interactions about food and eating among family members and interactions with others in meaningful food-related relationships in the family microenvironment. Physical aspects include cooking equipment, for example. It may also include the homes of others. Societal systems, represented by the ring outside of the family microenvironment, function within the macroenvironment of natural and structured components. These include physical, biological, and human made systems. Societal systems include not only the community food system, but also transportation, healthcare, and other systems that affect families and influence their food decision-making. The societal systems operate within the natural systems represented by the outer ring in the figure. Natural or structured systems include physical, biological, and human made or built systems.

METHODS
"Family" was defined by a social rather than legal or biological relationship as *any configuration of people who regularly eat together, or eat from the same household food resources, and who mutually influence decisions about their food.*¹ To assess family food decision-making contexts and probe underlying decision-making processes, a series of ethnographic studies was conducted with groups of families with diverse lifestyles, ethnicities, and socioeconomic status. One study was with working mothers using a group interview probing technique (Kirk & Gillespie, 1990). In-depth qualitative interviews also were conducted (Gillespie & Gillespie, 2006) with purposive samples of mothers who were not working outside the home, a group of dual-working parents, and parents from three ethnic groups living in the inner city. Professionals and paraprofessionals who work with families through food related programs were interviewed. The key purposive sampling criterion for participating families was having children living at home. Interview guides were developed and adapted to particular interviewees and interview transcripts were analyzed using grounded theory methods (see sidebar) (Gillespie & Gillespie, 2006). Consistent with a grounded theory approach, themes emerging from each interview built on themes discerned from previous interviews to identify and explicate common principles of family food decision-making.

FINDINGS
Family food decision-making processes include an array of simultaneous activities related to acquiring, transforming, and
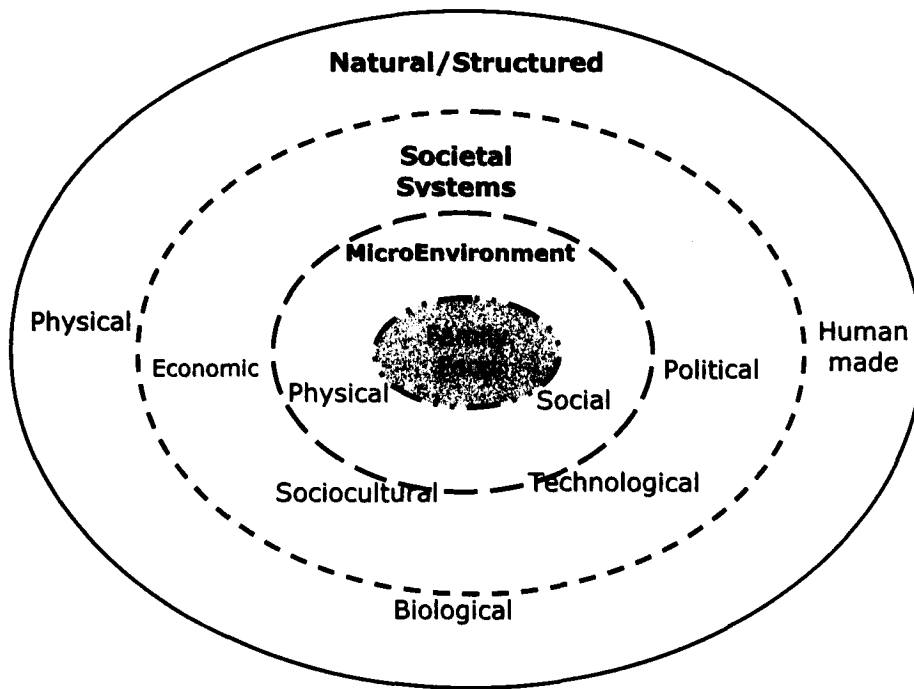
Figure I. Ecological Systems Approach to Family Food and Eating.

maintain harmony). Routines and policies for food and eating as well as family roles emerge over time and through family experience and communication. Examples of topics are suitable meals for special occasions, expected behavior with new foods, and when, if at all, foods someone dislikes should be served and who would be expected to eat them. Some food decisions may be more spontaneous such as, "everyone got home late and we're all hungry," or "there's no food in the house and no plan for dinner."

consuming food. They range from explicit to implicit: (a) choosing from the foods practically available[2]; (b) negotiating limits on family resources and trade-offs among competing food and eating goals; (c) choosing where to acquire particular foods; (d) developing strategies for mobilizing family food resources, such as how foods will be acquired, prepared, and presented; (e) creating the contexts for eating at home or eating out, (f) choosing with whom to eat; and (g) enacting family roles (i.e., implementing scripted strategies to acquire, prepare, and serve food, and clean up afterward).

Most food decisions are routine, drawing on established patterns of consumption and requiring little discussion (e.g., Thursday is pizza night, or particular foods are not served in order to

As illustrated in Figure 2, stages identified in the family food decision-making process were: (a) identifying a food event that required considering alternatives outside the usual routines and established food rules; (b) identifying and assessing alternatives that they perceive to be available practically for meeting family goals; (c) deciding by evaluating and choosing among the alternatives; and (d) implementing the chosen alternative. Decisions may be choice of foods, eating environment, food roles, strategies for mobilizing family food resources, or expected child food behaviors (i.e., family food policies).

IDENTIFYING FOOD EVENTS

Food events are situations, events, or conditions involving food (e.g., a snack or a meal or a discussion about food.) Food events provide contexts in which food and eating goals and priorities are applied and particular situations are judged to be more or less in line with those goals and priorities. Such assessments may be ambiguous due to conflicts among the goals (e.g., taste vs. healthfulness). Most of the time, however, the foods involved reflect satisfactory accommodations of the various

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[2] Even for foods present in the food system, some may not be effectively available to a particular family because the foods cost too much, the family doesn't have the equipment or the skills to prepare them, or transportation and/or social constraints inhibit getting to their outlets. For example, some low-income families report being constrained from shopping at their local upscale farmers market even when they have food coupons, because they "feel uncomfortable" there or that the farmers' market is "not a place for them."

priorities. This state reflects food routines—established patterns of food acquisition, transformation, and consumption—and family food policies—the implicit and explicit shared rules relating to food.

However, when particular events or conditions in the micro or macro family environments lead people to question established ways of thinking and practice, they begin to attend to their food decisions more consciously and to consider alternatives. The level of thoughtful decision-making will vary from event to event; decisions are influenced by family members' available time and information and their collective decision-making skills.

ASSESSING ALTERNATIVES TO MEET FAMILY GOALS

Once engaged in conscious decision-making processes, families begin to consider the "practically available" alternatives for meeting their food goals. Considerations involved in these processes may include the normative-affective as well as the rational. Family goals are shaped by preferences and shared values and experiences. These goals may be negotiated and articulated through family communication or defined by one or more adult decision-maker(s) who may or may not consider the perceived goals of others. Often the goals that drive decisions have been neither explicitly articulated nor necessarily agreed upon by all family members. These goals are considered simultaneously with the alternatives the decision-maker(s) perceives to be available practically to them (see the two-way arrows in Figure 2). For some families this requires trade-offs. Some families cope with differences by providing a variety of choices that encompass each person's preferences. Also, some family goals may be mutually exclusive, for example, a desire for regular ice cream and for a diet low in saturated fatty acids.

CHOOSING AMONG ALTERNATIVES

Once sufficient alternatives that meet some family goals are identified, they are weighed (consciously or not consciously) according to criteria such as utility, perceived feasibility, and opportunity costs. Some families referred to this as a "balancing act." These considerations vary depending upon the resources available, the decision-makers' knowledge of these resources their abilities to access them, and whether they are able to expand alternatives by overcoming constraints. An alternative is chosen based on these considerations.

IMPLEMENTING CHOSEN ALTERNATIVES

Family decision-makers and nutrition educators both identified implementing a decision as the most difficult stage because of numerous barriers. The most often cited constraint on implementation was acquisition. Sometimes the main constraint was preparation, service, or consumption. Success of implementation depends upon the congruence between perceptions of feasibility and actual feasibility in the current family or community contexts. Feasibility is influenced by awareness of who needs to know about the decision, who will take action to implement it, and whether the context (e.g., availability of a food) will support
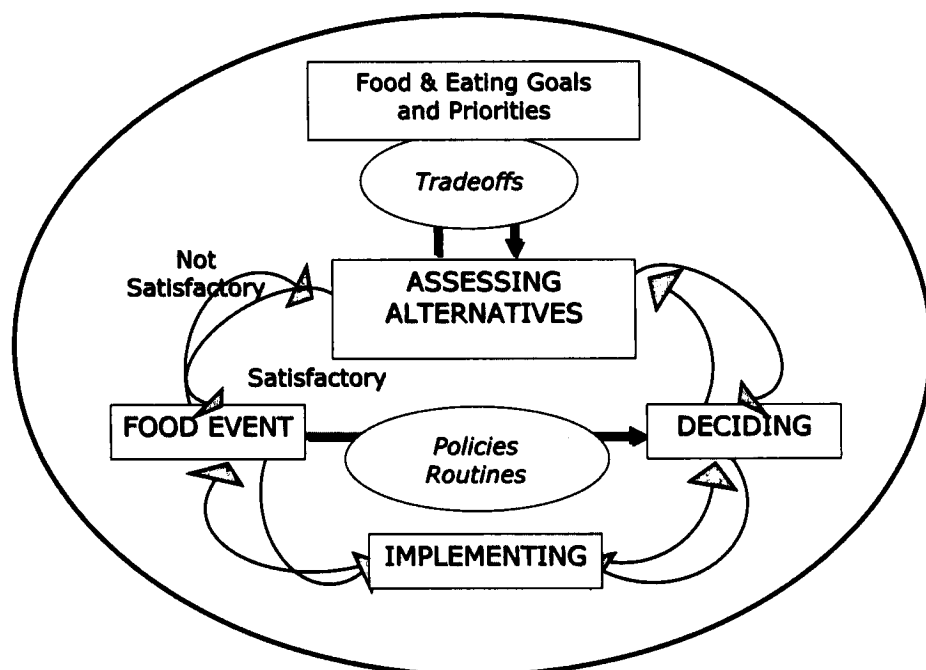

Figure 2. Family Food Decision-making Framework

implementation. If implementation of an alternative is blocked, it may be necessary to choose another alternative, as noted by the two-way arrows.

DEVELOPING ROUTINES AND FAMILY FOOD POLICIES

Successes and failures in implementing decisions influence future decisions. If the outcome of a particular decision is satisfactory to all, over time it may become part of the family's food policies. If an outcome is unsatisfactory, not doing it again may become part of the family's food policies (in which case neither offering the food nor changing the eating situation becomes the satisfactory outcome). Collective memories influence future decisions.

As unsatisfactory food events are eliminated, family food policies and routines evolve and an equilibrium is reached. Decisions about particular foods, their preparation, and related family roles become routine in making family food policy. As long as the outcomes of food policies are within acceptable limits of satisfaction, equilibrium tends to be maintained.

In summary, family food decision-making is heavily influenced by past experiences. Food decision-making is a cyclic process with experiences and outcomes from each decision becoming part of the context of the next decision-making event. The two-way arrows in Figure 2 illustrate that some steps involve interactive processes as contexts are simultaneously shifting and unanticipated constraints are encountered. Families may begin at any stage of the cycle when making food decisions depending upon preexisting food and eating goals within the family subsystem.

DISCUSSION

The family food decision-making framework provides a basis for discerning and describing different food decision-making styles, assessing a particular family's food decision-making processes, identifying opportunities and constraints in family micro and macroenvironments, and establishing goals for change. It guides families, practitioners, and researchers in identifying effective points of intervention and assessing priority research questions. This framework can help professionals improve

intervention and, if appropriate, actively involve families in identifying their food and eating goals and strategies—an alternative to professional, goal-driven interventions (Gillespie, 2003). This alternative engagement and empowerment approach can improve leadership "for the common good" (Schuchardt, 2006) because it challenges some of the assumptions that have shaped health and nutrition education.

APPLICATIONS

The implications of this research for FCS go beyond individual behavior change strategies to opportunities and constraints within family and community food decision-making contexts. This framework guides families to be more autonomous in their food decision-making as they:

- Become more thoughtful about their food decisions (i.e., more conscious about what they are eating and why) and, therefore, improve food routines and engage more family members in food decision-making.
- Articulate and negotiate family food and eating goals and, in the process, identify conflicting goals and develop strategies to achieve balance among them.
- Identify additional alternatives for meeting their food and health goals.
- Identify goals and strategies for change within or outside the family.
- Develop strategies for overcoming constraints and more effectively engaging resources in their family and community environments.
- Engage in civic decision-making to influence community food environments.

Educator roles might include expanding perceptions of alternatives practicably available or increasing awareness of inconsistencies between family goals and food practices. Family food decision-making discussion guides can be found at the Family and Community Food Decision-making Website: http://familyfood.human.cornell.edu/toolbox.htm.

CONCLUSIONS

Programs based on this family food decision-making conceptual framework—which honors family goals and values—can guide development of decision-making skills for fostering sustainable

improvements in family food and eating. These processes can have long-term impact on how families make decisions about food, health, and well-being throughout life and across generations. Families and educators can take active roles in changing policies, food systems, transportation, or other community systems in the macroenvironment, which also may have long-term effects on family food decisions. This co-learning, co-creating approach challenges traditional assumptions about nutrition education.

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ADDITIONAL RESOURCE

Family and Community Food Decision-Making Program: Linking Nutrition, Health, & Agriculture in Communities. http://familyfood.human.cornell.edu/index.htm

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Data Analysis and Interpretation

Each interview was transcribed for analysis by the interviewer and other research team members. The analysis procedures (Gillespie & Gillespie, 2006) involved a variety of intellectual activities including formulating concepts, connecting concepts with other concepts in theories, discerning reasons for what was observed, and identifying what cases tended to share or not share. The general strategy for analyzing the data was influenced by Glaser and Strauss (1967), Strauss (1987), and Glaser (1992). The analysis took place in three stages:

- Early analysis, with primary focus on individual interviews
- Middle analysis, with primary focus on comparing and contrasting across interviews
- Late analysis, with primary focus on systematically testing theory developed in the earlier stages of the analysis

EARLY ANALYSIS

After the interview, the interviewer recorded comments about the setting and conditions of the interview and observations made during the interview. For example:

A: ."..And we usually eat as a family. I'm sorry" [observer comment: "A apologized for R's attempt to interrupt"

As part of the early analysis, the researchers also wrote analytical comments. This is an excerpt from one of the analytical comments related to priorities and trade-offs:

"Perhaps when one really likes fruit (though maybe not quite as well as ice cream or candy bars), that in itself serves as sufficient motivation and the idea of health benefits is a little 'plus' that resides in the background and helps to justify the choice of fruits over

the alternatives, as opposed to intentionally eating fruits to obtain particular health benefits such as reducing cancer risk."

Notes also were made about the research methodology, suggesting additional information to be gathered in subsequent interviews or ideas for doing things better. For example, in the study of inner-city families, middle class Caucasian females (as interviewers) were better able to establish trust with families regardless of their ethnicity as compared to Black and Hispanic students paired with similar families. Finally, a general description was prepared for each family interviewed.

MIDDLE ANALYSIS

This was initiated when the interviews were completed. Analytical and methodological memos and constructed coding categories were written. The analytic memos defined concepts and linked them to particular segments of field notes. Analytic memos also were used for describing when and how concepts related to each other in building theory drawing from the early analysis notes and the transcripts. One analytical memo by an

interviewer reflected upon the patterns she saw emerging:

> "as I interview families and individuals. Some of the recurring themes can be illustrated by the following [a page and a half of paraphrased descriptions of the situations of different interviewees]. People I've interviewed are very preoccupied with food. ... "

The methodological memos followed the same form, but pertained to the research process.

LATE ANALYSIS

Researchers assessed whether the available data supported emerging hypotheses and they looked for negative cases and coded segments of field notes. These segments were extracted, sorted, and compared with other segments with the same codes. This stage yielded a set of principles upon which the first version of the family food decision-making framework was built. One principle was: "Food decisions reflect families' often-unarticulated goals and values which are affected by a complex and changing set of social psychological factors."