Food Choice: A Conceptual Model of the Process

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Interviews examining the food choice process were conducted with 29 adults, primarily individuals making grocery store food choice decisions, who were sampled for their diversity. These people were asked about how they chose foods when shopping and in other settings, and what influenced their choices. Verbatim transcripts of the interviews were analysed using qualitative methods that included constant comparison, concept mapping, and case summaries, and a conceptual food choice process model was developed. Data from the interviews are presented to illustrate the structure of this conceptual model. People's life course experiences affected major influences on food choice that included ideals, personal factors, resources, social contexts and the food context. These influences informed the development of personal systems for making food choices that incorporated value negotiations and behavioral strategies. Value negotiations weighed sensory perceptions, monetary considerations, health and nutrition beliefs and concerns, convenience, social relationships and quality of food choice decisions. Strategies employed to simplify the food choice process developed over time. The conceptual food choice process model represents the rich and complex bases of food practices, and provides a theoretical framework for research and practice in nutrition.

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INTRODUCTION

The choices people make among foods determine which nutrients enter the body, and influence food production systems through consumer demand. Specific food choices lay the groundwork for long term food habits. How people consider and select foods and beverages affects their acquisition, preparation or consumption of food in a wide variety of settings including grocery stores, restaurants and vending machines; parties and social events; and meals and snacks at home. The food choice process incorporates not only decisions based on conscious reflection, but also those that are automatic, habitual and subconscious.

Many previous studies have explored selected aspects of food choice from a wide variety of disciplines and perspectives (Booth, 1994; Glanz *et al.*, 1992; Mennell *et al.*, 1992; Axelson & Brinberg, 1989; Shepherd, 1989, 1990; Thompson, 1988; Murcott, 1983). Pioneering work by Lewin (1943, 1951) proposed that several specific frames

of reference are involved in food choice: taste, health, social status and cost. Later investigations examined these and other values, focusing on cognitive and motivational factors involved in food choice (Bell *et al*., 1981; Betts, 1985; Cosper & Wakefield, 1975; Krondl & Lau, 1982; Lau *et al*., 1984; Michela & Contento, 1986; Rappoport *et al*., 1993). Both individual and social factors are involved in food choice, and research has considered the influence of norms and relationships (Shutz, 1988; Worsley *et al*., 1983). Food habits research has presented several models that outline factors, influences and eating patterns (Sanjur, 1982), and several attempts have been made to develop more comprehensive portraits of the food choice process (Parraga, 1990; Shepherd, 1989). Nonetheless, food choice remains a topic that is not well understood (Rozin, 1980; Rozin & Fallon, 1980; Stellar *et al*., 1980). In our present study of the complex food choice process, we have integrated and built upon the work of others within a variety of fields and disciplines who have observed and described factors and processes germane to food choice.

In applying a constructionist orientation and qualitative research methods to understand the food choice process, this investigation used theory and methods that differ from those typically chosen in studies examining food choice. We selected a constructionist approach because the conceptual and analytic techniques it employs are designed to acknowledge and illuminate the complexities of food choice rather than reduce information according to the requirements of quantitative methodologies. A constructionist approach (Berger & Luckman, 1966; Goffman, 1959) allows for a rich expression of the ways people engage in the food choice process, by incorporating the meanings and understandings that they create in their food choice negotiations, including elicitation of the range and strength of the factors affecting food choice. The research methods used in this study focused on collecting conceptual knowledge about the food choice process in order to provide new insights into this topic from the point of view of particular people making food choices (Patton, 1990; Guba & Lincoln, 1989; Miles & Huberman, 1994). Other researchers have seen this approach as a powerful way of understanding food practices (Sims, 1987; Achterberg, 1988; Beardsworth & Keil, 1993; Chapman & Maclean, 1993; Janas *et al*., 1993).

The goal of this study was to understand more fully the complexity of the food choice process by describing it and placing it within the framework of a working model. Our purpose in developing a conceptual model emerging from the perspectives of the public was to provide a wholistic perspective of the factors influencing the way people constructed the process of choosing foods. Such a model can illustrate concepts underlying the food choice process and its components, as well as provide a tool to facilitate understanding how people make food choices. This model might be useful to researchers as well as nutrition practitioners and policy makers interested in nutrition interventions.

METHODS

Qualitative methods were used to collect and analyse the data according to an emergent constant comparative research process (Glaser & Strauss, 1967; Miles & Huberman, 1994; Strauss & Corbin, 1990). Qualitative methods are increasingly being used to examine food and eating (Achterberg, 1988; Beardsworth & Kiel, 1993), and the reliability and validity of qualitative work has been established (Miles & Huberman, 1994). Analysis was ongoing during the course of the study, and

emerging data were examined according to an iterative process that served both to inform the interviewing and establish concepts for subsequent analysis.

Members of the research team initially recruited seven adults (six women and one man) for individual in-depth pilot interviews in the participants' homes. Four participants were interviewed once only, and three each participated in one follow-up interview. The pilot interviews ranged in duration from 30 to 45 min. Analysis of these pilot interviews identified key issues and concepts that were used to develop an interview guide for the primary phase of the data collection. The interview guide was pretested and revised before its use in the field. The main data collection involved 20 intercept interviews that were conducted in a local grocery store while shoppers were engaged in making food choices. Two other interviews with women were conducted at sites other than the grocery store, for a total of 29 interviews for this study.

Participants in the intercept interview phase of the study were sampled purposively (Guba & Lincoln, 1989; Kuzel, 1992; Miles & Huberman, 1994). Maximum variation was sought by selecting participants serially, with the selection of each participant contingent upon the characteristics of others already intercepted and interviewed. Our aim was to interview adult men and women of different ages with different household situations and having varying eating patterns.

We chose primarily middle-income Caucasian participants because this is the largest socioeconomic group in the geographic region where we did our work, and sought variety in this sample along the dimensions of age, gender, economic status, family situation and role in their household food system (for example, usual vs. occasional food procurer). Because most meals are consumed in the home, we decided to approach people in a grocery store setting because that is where many of people's food choices for provisioning for home and family occur. We also expected that greater diversity within the selection criteria would be found among grocery store shoppers than would be available among people in most other accessible settings where food choices occur, such as homes or restaurants.

Of the 20 grocery interviews 18 were with people shopping alone (11 women and seven men), one was with two women shopping together, and another was with a married couple. The interviewer intercepted shoppers in the grocery store, introducing herself and explaining to them that she was interviewing shoppers for a study on how people choose the foods they buy, and asking if they would consent to be interviewed while they shopped. Having obtained their permission, she then proceeded with the interviews. Less than five of the people whom the interviewer approached declined to be interviewed. Participants ranged in age from their twenties to their seventies, and lived in one community in central New York State in the U.S.A. All participants signed consent forms approved by the University Committee on Human Subjects.

All intercept interviews, including the two conducted away from the grocery store, were one-time interviews ranging from 20 to 30 min each. By using semi-structured guides to questioning, the interviewer was able to keep the conversation focused upon food choice while encouraging participants to elaborate upon the themes that were salient to them, such as shopping strategies, food adventurousness, food preferences and changes in eating habits, as well as allowing themes to develop during the interview. This depth interviewing approach allowed people to focus, for example: on a particular product and the factors considered in choosing such an item; on foods they eat or do not eat at home or when eating out; or on specific

situations such as choosing "treats" or foods for special occasions. In addition, participants were invited to talk freely about other food choices they may have made in the past. While the setting for the interview was the grocery store, the interview itself was intentionally broad-ranging, and included discussions of food choices in a variety of home, restaurant and other environments. The interviewer used probes to elicit additional information on topics of interest that emerged. No interview was identical to another because each conversation was in large part directed by the participant, and themes for different individuals varied. During the course of the interviews, member checks ("My understanding of what you've said is. ... Is that right?") and peer debriefing ("Some people have said. ... How does that sound to you?") were used to establish the credibility of the research data (Guba & Lincoln, 1989).

All interviews were conducted by research team members trained and experienced in qualitative interviewing techniques, and were audio taped and transcribed verbatim for analysis. Members of the research team first analysed the transcripts individually, and then again in a group setting, where categories, concepts, codes and emergent themes were identified and discussed. Using the constant comparative method to implement a grounded theoretical approach to data analysis (Glaser & Strauss, 1967; Miles & Huberman, 1994; Strauss & Corbin, 1990), original categories arising from the interviews were applied to the cumulative data and revised multiple times until there was group consensus about their fit. The research group members also used introspection to draw from and reflect upon their own food choice experiences, and their personal insights contributed to interpreting data from this study.

Once members of the research team agreed upon the categories developed from analysing the interview data, they examined relationships among categories in order to develop a model of the food choice process. Case summaries and concept maps (Novak & Gowin, 1984) were constructed from each interview transcript to isolate concepts, themes, patterns, and associations characteristic of individual participants, and these factors contributed to the development of the final food choice model. Once a preliminary model was developed, it was applied to the data and revised repeatedly until the current version was agreed upon by the research team.

RESULTS

Figure 1 presents a conceptual model of the food choice process that emerged from the data analysis. The model represents the types of factors and the process involved in a single choice event. Factors involved in food choice were grouped into three major components: (1) life course, (2) influences and (3) personal system. The relationship of these components to one another generates the process or pathway (indicated by arrows) leading to the point of choice.

The life course includes the personal roles and the social, cultural and physical environments to which a person has been and is exposed. A person's life course generates a set of influences: ideals, personal factors, resources, social framework and food context. These influences inform and shape people's personal systems, including conscious value negotiations and unconsciously operationalized strategies that may occur in a food-related choice situation.

The model's funnel shape illustrates several attributes of the food choice process. First, a single food choice event results from the mixing and separating of the diverse
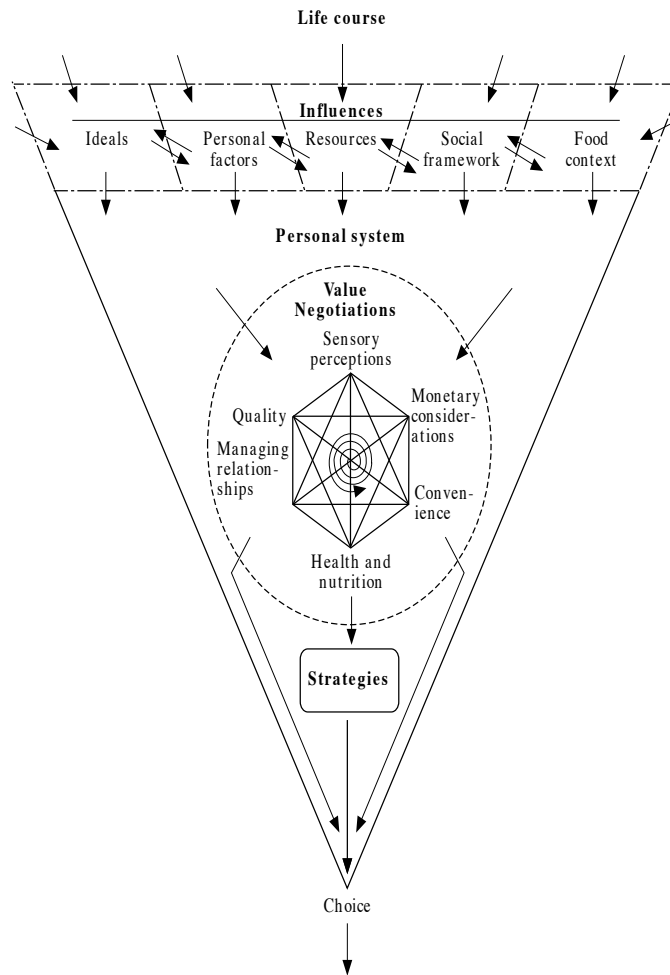
FIGURE 1.   A conceptual model of the components in the food choice process.

set of personal and environmental inputs. The life course, a major ingredient in the process, gives rise to and shapes the influences that emerge in a food choice situation as well as the manner and extent to which the social and physical settings affect how people construct and execute personal systems of food choice. The value negotiation process within such a personal system is very dynamic, while strategies are more routine. Finally, the boundaries between components and processes are highly permeable, and much mutual shaping occurs between and within components.

The model outlines the general nature of the food choice process. However, certain influences may be more salient than others for particular people in specific food choice situations. The model represents a process that may be either more deliberate or more automatic. The components of the model and their interaction are described in the following sections using examples from the data.

Life course

A basic and universal factor that provided the groundwork for food choices was the life course, which included past influences of personal experiences and historical eras, current involvement in trends and transitions and anticipations of future events. Several participants referred to ways their upbringing, as members of a given culture during a particular historic period and as participants in a family life course, exerted an influence upon how they made food choices. One woman described how her father "liked to eat all this traditional German food, which is very greasy", and after he died her mother "started getting into this health thing", which had an impact on how her own food choice patterns developed. Another person commented, "I'm Italian, so I guess you could say that [food is a very important part of my life]".

Characteristics of a given age cohort or generation affected the way people regarded and used food, and people's past life roles affected their relationship to food. An elderly man said, "I was in the army years ago. When you ate in the army, you were really hungry and you barely looked sometimes at the food. You just took some of everything". A woman, reflecting on her current shopping practices, explained, "when I was younger. . . . I always had to be careful when I shopped. And it's just a carry-over". A man whose economic status had improved since his childhood noted, "I grew up in a family of five kids, and very low income . . . we ate . . . anything that'd make the meal stretch. We don't have to eat like that [now]. I can go out and buy a nice cut of meat now".

People coordinated the demands of current life roles and activities. Roles they envisioned for themselves in the future were part of their expected life course and also impelled the food choices they made. Future hopes, fears, and expectations had an impact on food choices. One woman described how eating a mango recalled "a situation . . . I want again. I want that feeling again".

Ideas and information acquired through past experiences, such as in "situations where I've . . . had to try different foods", also affected people's approach toward food. The life course provides orientations for food choices through past, present, and future roles and experiences. Thus, the life course is the underlying source of many factors that shape food choice.

Influences

The model includes the five major categories of influences upon food choice that emerged consistently during the course of interviewing participants: ideals, personal factors, resources, social framework and food context (Fig. 1). These influences on food choice mutually shaped one another, and also served to reinforce, interact and compete with one another. Boundaries between influences often were fuzzy. Nonetheless, the central themes of each influence were clearly distinguishable. Each influence appeared to affect the choice process to the degree that it was salient to a given food choice event. Influences also affected the paradigms people brought to food situations, as evidenced by the uniqueness of participants' food choice perceptions to their individual situations, different food settings, social situations and life stages.

Ideals

Perhaps the most pervasive influence was that of ideals: expectations, standards, hopes and beliefs that provided points of reference and comparison by which people

judged and evaluated their food choices. Ideals were rooted in and derived from cultural and symbolic factors. When alluding to ideals, participants referred to abstractions such as "the right way", or "a proper meal", or "what I should be eating", and often felt the need to explain why they were not meeting ideal standards. For example: "This isn't ideal. This isn't what we want to do. If it was ideal, we'd shop ahead".

Ideals incorporated symbolic meanings people associate with food, such as social status, and food choices reflected these meanings. One participant described being better off economically than his parents were in terms of no longer having his food choices restricted to what he called the "poor food" he grew up eating. Symbolic demands prevailed in some settings and food events. Holiday traditions, special occasion meals, or ritual observances involving food called for particular foods, for example "cakes for birthdays". Interviews indicated that ideals may be formed and established within the context of the life course, with expectations and standards for food choice internalized and imprinted on people's consciousness: "how beans should be", or "potatoes, you put sour cream and butter on". Foodways that were learned as people were growing up appeared to provide cultural traditions and images of how things "should be".

Some people's expressions of ideals or standards reflected tacitly understood, unexamined cultural criteria for food choice; for example, eating "well", or selecting food that seems "normal" or "decent". Others' comments demonstrated that ideals were subject to reflection and evaluation: "ice cream, in our family, is a luxury 'cause I buy frozen yogurt. So when I come home with the 'real stuff', you know, everybody's excited". This person perceived the traditional ideal in her culture to be ice cream and saw frozen yogurt as a substitute. The ideal was used as a standard for judging other options.

Ideals underlay the scripts individuals developed to describe how things should be or could be, and reflected aspirations, values and sense of identity. People's responses indicated that ideals changed with reflection and re-evaluation, particularly during times of life transition. Ideals also conflicted with day-to-day realities, such as unconventional work and meal schedules. One woman described her attempts to resolve such a conflict: "because I work nights . . . I find that I'm not . . . ready for dinner at five o'clock at night . . . I'm trying to just commit to having that one meal . . . and not picking on other things during the night . . . it's not ideal for me, because of my night shift schedule . . . so I'm moving toward something that would be more acceptable in my mind for me".

Ideals were expressed clearly when participants described certain types of situations such as times of stress or impulse: "donuts . . . that I'm not supposed to eat"; particular times associated with "a nice big family meal . . . on . . . a Sunday afternoon . . . a roast, mashed potatoes, gravy . . ."; on special occasions such as holidays; and in connection with important life milestones, when "something happened that's wonderful and you get something special".

The influence of ideals in the model included people's expectations, as well as their conscious or tacit assumptions about food. These assumptions were rooted in and derived from cultural and symbolic factors that linked ideals to food.

Personal factors
Personal factors was another influence to emerge as central to food choice, and reflected what was salient and meaningful to individuals based on needs and

preferences derived from psychological and physiological traits. Personal factors shaped the boundaries of food choices that a person was willing to make, and included likes/dislikes, individual foodstyles, food centeredness and emotions; as well as characteristics like gender, age, health status, sensory preferences (or taste sensitivities) and state of hunger.

Personal factors incorporated cravings, preferences for particular foods or types of foods, and aversions. For example, in describing his food preferences, one person noted, "I like Italian food. I like most anything but . . . for some reason, I can't get much into that Chinese food".

Individuals' personal interests or traits played a role in establishing personal food choice parameters. For example, people appeared to have different foodstyles that often expressed themselves as food adventurousness or pickiness. One woman contrasted herself with her daughter, commenting, "I'm just an impulse person. Sometimes it's by the fact that something's new. I've never seen it before. . . . how are you gonna know if you don't like something if you don't try it? . . . [But my daughter]. . . . certain things she won't eat. . . . She's just real fussy . . . [but] my husband and I eat just about anything".

Some people seemed more food centered than others. Factors such as pleasure, health, safety or symbolism contributed to the level of food salience people experienced. One participant said, "I don't make an issue out of having a sit down meal or whatever. . . . I don't think that you have to make like an all out . . . effort to make dinner every day. It doesn't have to be like a main function of your life".

Physiological factors such as allergic response and hunger also affected the food choice process. Emphasizing the effects of heavy physical work, one woman spoke of "starving", saying, "we're starving at twelve, we're starving at two. And we're starving again at dinnertime, you know . . . all of a sudden your stomach starts rumbling. . . . and all of a sudden your energy's gone".

Certain foods were chosen because of emotional cues, moods and feelings that induced a variety of responses to food. For example, a woman attempting to maintain healthy eating habits described how mood swings affected her resolution: "ninety percent of the time I'm pretty good. And then ten percent of the time I just say 'who cares?'"

Resources

The resources available to people making food choices were an influential component of the decision process. Resources were tangible, such as money, equipment and space, as well as intangible, in the form of skills, knowledge and time. Resources were perceived as available or unavailable depending on individual outlooks and situations, and these perceptions demarcated the boundaries in food choice situations.

Money was an important tangible resource because its degree of availability affected the scope and nature of food choice decisions. For example, one woman, describing her "gourmet" food preferences, noted that sufficient financial resources enabled her to indulge her food tastes freely: "we have the income . . . I spend a fortune". Another, by contrast, concluded, "the wallet comes in real hard. . . . I guess the wallet for us is the big thing". Other tangible resources affecting food choice included equipment such as "a big freezer", or "a bread-making machine". The quality and availability of space also was important, with storage facilities affecting food choice strategies. Having "a real small pantry", versus being able to store

home-grown potatoes "down in the cellar ... [on] racks", influenced the quantity and type of food that was brought into the home.

One intangible resource that came into play in making food choices was skill: "I bake all my apple pies in the fall. 35 or 40 of 'em. ... I bake them and freeze them". Knowledge was another intangible resource: "I know that these dinner rolls are low [in cholesterol]. I've got so I read. ... I know that this is only $0·75 and a lot of those are $1·19. They [higher-priced dinner rolls] have more fat and cholesterol in 'em than the cheaper ones". Time was also mentioned: "whenever you get time [you] do whatever you can do".

Some resources, money and time in particular, were regarded as commodities to be exchanged, negotiated, or weighed against one another. Resources were subject to fluctuation over the life course, depending upon people's changing life roles, capabilities, income level, state of health and independence. One woman, citing "the difference in our budget. ... [since] we retired", had become more careful in making food choices because "our budget is so much more limited".

Social framework

When making food choices, people were influenced by the composition and dynamics of their social framework, which often raised issues of conflicting priorities, including power issues. The data indicated that important dimensions of the social framework were the nature of interpersonal relationships, social roles and meaning.

Families and households provided one of the most important sets of interpersonal relationships influencing food choice. People reported enacting or being assigned particular household food roles. For example, one or more persons were usually responsible for providing food to a household. The provisioner's role was to interact and negotiate with the larger food system to acquire food that would meet the needs and desires of the other members of the household. One mother trying to provide food for her fussy daughter described the dilemmas she faced: "[there are] certain things she won't eat ... I notice the difference when I try to [buy a substitute]. Like if I buy something that's on sale and if I try, I just end up throwing it out. So I don't usually do that".

Another household food role involved trying to shape the food choices of others. One woman attempting to control her family's eating habits explained, "I'm trying to incorporate it [low fat] into the entire family". Often, but not always, this role was enacted by the person who was also the provisioner. A man trying to restock family food provisions without direction from his partner admitted, "she'll probably decide that whatever I get isn't quite right anyways. ... She usually makes the list". Household food roles often involved accommodation and negotiating compromise among competing priorities.

Participants expressed different levels of accommodation to household situations in providing foods. One woman reported, " 'cause my one son doesn't eat meat ... we usually have a couple of meals going". In contrast, another woman held a much different perspective: "I don't cook for her [daughter]. I make a meal and if she doesn't want to eat it, then she can make whatever she wants ... but I refuse to make two meals".

Some participants reported a willingness to discount their own preferences. For example, one woman indicated that she sacrificed her own priorities to meet her family's needs, remarking, "if it wasn't for them I probably wouldn't [cook], probably just have apples or something. ... I'd probably just be eating one thing ... I love

doing it [preparing food], but yeah, for them it's . . . fun to do and I do it for them, but it's not a priority for me". And a young man living with his girlfriend commented, "if she doesn't want to eat red meat, fine. I'll eat something else".

Other types of interpersonal relationships important to food choice occurred when entertaining, being entertained or in the workplace. Entertaining often called for patterns of food choice different from everyday practices. For example, one man commented, "if I'm going over to someone's house for dinner, or if some people are coming over, I might want to [buy a cake]".

Food context

Closely related to the concept of social framework was the food context, which provided the environment for food choices that occur in specific behavior settings to which food is supplied by the larger societal food system. The food context encompassed the physical surroundings and social climate of the choice setting, and specific food supply factors in the environment such as types of food, food sources and availability of foods in the food system, including seasonal or market factors. A given food context could offer expanded or constrained choice possibilities, or establish a tone or ambiance that became part of the food choice process. Some people allowed the food context to be a very important influence on their food choices, being sensitive to issues of availability or price reductions, while others were less influenced in their food choices by these contextual factors.

One older man, assessing the influence of the physical surroundings and climate of a food store upon his shopping, said, "I think the type of store and the service . . . goes a long way with old people . . . and the way the store is laid out". Another woman defined particular food choices in terms of a specific meal setting, explaining she was buying "picnic stuff today . . . [because we'll be] outside eating". Two other participants alluded to ways environmental factors impacted on their food choices: one woman stated, "I never had to pack my lunch before . . . [when] I went to college . . . [and was] eating in the cafeteria . . ."

People noted that the availability of certain foods varied according to the season or from one market source to another, and commented on how availability affected their food choices. One woman spoke of craving certain out-of-season foods, especially at "this time of year, when you're sick of winter". People also described feeling constrained when their local market did not have particular foods they wanted to buy. One woman, who appeared frustrated in her attempts to shop for a dinner party, complained, "we got here . . . and the list of ingredients we had, we can't find half of 'em here".

Within the influence of the food context, what was available in the market delineated the boundaries that constrained the operation of people's personal food systems. For example, one woman's family frequently liked to eat lobster tails for dinner. Because her local store did not carry these, she bought frozen lobster tails by the case at a store farther from home, and kept her freezer stocked so that she could have access to this food when she wanted to choose it.

Personal system

The recurring experience of making food choices over the life course led to people's developing personal systems for food choice. Personal systems had two major components: (1) value negotiations that involved weighing of different con-

siderations in making food choices; and (2) strategies that involved choice patterns based on previously resolved deliberations that had become habitual.

Value negotiations

A central component of people's personal systems was the weighing and accommodation of values salient to a person in a particular situation. In reflecting on their food choices, people in this investigation referred most frequently to six values: sensory perceptions, monetary considerations, convenience, health/nutrition, managing relationships and quality. Additional values such as ethics, tradition and familiarity also emerged but were discussed much less frequently than the six other more salient values. Values were weighed and accommodated with varying degrees of conscious reflection during specific food choice events.

The model portrays the interconnectedness of the values in the negotiation process, with the spiral pattern at the center of the value negotiation configuration depicting the process' highly dynamic nature. Values are contrasted with each other and juggled according to their significance for a particular food choice. Data indicated that any value has the potential to be the deciding factor in a given situation and that sometimes values are in harmony. When conflicts among values occur, however, one value typically emerges as dominant.

Sensory perceptions

Often the dominant value, sensory perceptions were driven mostly by taste, and varied widely among individuals. In describing why they chose a particular food, people would often say "taste" and "flavor" with no further explanation or elaboration, apparently expecting that their first priority would be understood by anyone. Sensory perceptions often served as the limiting factor in food choice, and tended to be less negotiable than other values; this value also encompassed dimensions (referred to both directly and obliquely) other than taste, such as texture, odor or appearance: "I don't like the other kind [of cheese]. They're too rubbery"; "the kids don't . . . like spinach . . . liver . . . you know, all the gross stuff".

The ability of sensory perceptions to dominate a food choice characterized the value negotiation process. Sensory perceptions, particularly taste, and monetary considerations were frequently in conflict. For example, one person on a limited budget tried a store brand because it was cheaper, and rejected it because it "had an awful taste. . . . [and added] such an awful flavor to everything. . . . [so] I threw it out. 'Cause I didn't like the taste".

Taste was also often weighed against convenience. One woman arranged the time to bake cakes and pies, explaining that she never bought them "because they don't taste anything like home-made". People also were willing to experiment with taste as they tried to accommodate other values. One woman switched to "fat free [salad dressing]" once she discovered that "[though] I thought it would taste terrible . . . I can't tell the difference".

Taste preferences changed over the life course, and the range of taste acceptability expanded in different circumstances. One person noted "[Spinach] was the one thing that I just couldn't eat. But over the years I've gotten so I can eat a little". Tolerance for food aversions and willingness to accept particular foods were influenced by the foods available and the social setting. One woman said, "I would eat it", if a food she disliked were served to her in someone's home. Another person noted, "as I've

gotten older, I've gotten into situations where I've . . . had to try different foods . . . from that, it turned out that they weren't so bad".

Monetary considerations

Monetary considerations, consisting of price and the perceived worth of food to be bought, comprised another very salient value for many people, and often dominated food choices. One woman was unequivocal in noting that her prime consideration in buying food was "the price", and another woman emphasized that she always "bought the cheapest stuff I could".

People's perceptions of the cost and price of foods underlay the role of price in many food choice situations. An elderly woman noted, "people have to be very careful of what they buy and get the most for their money", and went on to assert that though she wasn't short of money, her prime concern in shopping for food was "cost. . . . people think I'm tight". The worth of something was seen as very important. Some people spoke of "a good deal", or "a good value" when weighing price in their food choices, judging the worth of a product in terms of its cost relative to quality as value received.

Price often conflicted with and accommodated other values, particularly taste and quality, and was an especially important factor in selecting certain types of foods. One person liked the taste of grapes, but only bought them when price accommodated, noting, "we get . . . grapes, when they're reasonably priced. They can be pretty expensive". Price also could be exempted in particular situations, as in the choice of treats, such as ". . . the more costly seafoods . . . [which] I normally wouldn't buy for cost reasons".

Convenience

Time was an important component of convenience, and people often spoke in terms of time as a commodity to be spent or saved, weighing the value of convenience in terms of time in negotiation with other values: ". . . less than an hour [to prepare food] is really what it has to be . . . since we both work, . . . time is a commodity".

People's remarks demonstrated a distinction between long-term and immediate convenience. One man indicated he "would like to buy things in bigger quantities. . . . For convenience. . . .", while another person described "a couple nights when I was really busy . . . and I'd grab a sandwich . . . at the convenience store".

In addition to time, other components of the convenience value also appeared, such as ease of access or preparation. For example, two students preparing lunch noted that "an orange is easy". An older man cited the importance of convenience in choosing particular food items while shopping: "I think what'll turn people off . . . [is] . . . when you go in the store and they've moved it. . . . moved the whole thing somewhere else. . . . [and] you've gotta run all over the store . . .".

Health and nutrition

The health and nutrition value incorporated factors relating to disease avoidance or control (for example, heart disease, cancer or hypertension), weight control (motivated by health or aesthetics), and bodily well-being (energy and optimal health).

While people often alluded to health in terms of avoiding certain foods, they tended to mention nutrition in more positive terms, referring to it expressly in terms of "value". For example, discussing why he tried to learn to eat spinach, a man

noted, ". . . there's a lot of food value in it", and a woman remarked that she "heard [fresh leaf lettuce] has more nutritional value than just regular head lettuce". One person cited nutrition as a rationale for buying fresh produce, commenting, "I guess freshness and nutrition go together". Two people alluded to the concept of nutritional balance, one rather specifically—"we throw an orange in 'cause we . . . want the vitamins and . . . we try to balance . . . our lunch"—and the other by implication in referring to "a good vegetables and meat and carbohydrate dinner".

In reflecting upon health as an outcome or effect of food, sometimes people spoke generally of making prescriptive choices they regarded as "healthy stuff". More often, however, people's choices were proscriptive for specific foods they wanted to avoid. A number of participants were concerned about their fat intake; for example, one woman described her family's growing awareness of fat in commercially-prepared foods, stating, "we try not to eat a lot of processed foods. . . . We've become . . . real conscious of fat intake . . . a lot more aware of labels". Another woman, who was trying to educate herself after having had a cancer scare, noted, "I try to keep up to date with the fat and the cancer-related [foods]". Some people linked the concepts of nutrition and health in deliberating about their food choices. Salt was one substance people chose to avoid for health reasons; one woman emphasized that she would "very rarely buy canned vegetables 'cause of the salt content". People also were wary of other specific food components, such as "starches . . . [that are] not good for you".

Managing relationships

The value of managing relationships often emerged as predominant for people faced with making food choices in situations where others' preferences and needs were factors to be considered. This value was particularly influenced by personal and cultural ideals. Managing relationships appeared to be an important value for people concerned with maintaining harmony in their households by anticipating, addressing and accommodating conflicts over issues of food choice. Participants tended not to articulate explicitly the value of managing relationships. Rather, they would allude to it, generally linking it closely to other food choice values like taste or health.

One man described the role of managing relationships in accommodating family tastes when planning meals and choosing from a variety of foods: "I know . . . what range to operate within. What they [children] will all eat. . . . I do make a point . . . of everyone gets a favorite once in a while. That's important". Another person took a different approach to accommodating diverse family needs: "a little something for him and whatever for the rest of us".

People sometimes were willing to change their own habits to accommodate others. One woman who characterized her husband as "very finicky" said, "I'll do what he enjoys and I'll do what I enjoy . . . [but] . . . what's important to me, is making him happy".

Quality

Our respondents frequently used the idea of quality in considering food choices. In some situations, quality was the most salient value: ". . . the quality! You just can't argue with the quality"; and, "I'm going more for the quality . . . the quality of it". People's understanding of this concept appeared to hinge upon their feelings about, or visions of, some standard of excellence.

Quality had different meanings for different individuals and was usually mentioned in reference to food purchase situations in which various products within a category were being compared, for example, meats and produce. People indicated clear distinctions between the levels of quality in the products they referred to. Comments about quality were often made in the context of what was not acceptable; as one man said, "I don't like low quality meats ... [like] cheap hamburger ... low grade—junk mixed in with it".

Quality was associated with levels of excellence, though the criteria for this judgment were not always articulated. Related to meats, "fatty", "grainy", and "marbly" were frequently-mentioned negative quality attributes. For fruits and vegetables, high quality was commonly associated with freshness and absence of bruises. Quality was sometimes cited as a consideration related to taste and health. One person emphasized, "I usually prepare my own food ... I don't buy quick stuff for my family".

Some people did not mention quality directly but alluded to it, citing, "what looks good"; stating, "I like to eat well ... [i.e.] the best brand of steak"; and preferring to choose "a good [brand] name". Better quality was usually associated with higher price. When price and quality conflicts were mentioned by respondents, quality was indicated as the more salient value for that situation.

Strategies

People developed strategies for making food choices, which became heuristics that guided many food choices that tended to recur and to be relatively routine. These strategies were shaped according to principles and established procedures used in negotiating with the larger societal food system and the factors perceived as dominant for a particular food choice event. While individuals' personal strategies should be considered unique for each food choice event, they generally incorporated similar patterns and rules for making food selections. Strategies tended to be generally stable while allowing for flexibility.

Most personal systems incorporated well-established habits or rules that involved making precommitments for future choices. These rules were derived from previous value negotiations and were used to simplify or expedite the food choice process to minimize time needed to make choices. One woman described her system for using eggs: "I've tried the [egg substitute], which I'm not too fond of. I use them in baking, but not in eating". Another person's rules for buying soy sauce reflected his ideals: "what I need is the light soy sauce and that's what I'm gonna buy. ... Whatever's a good name. I'm not gonna buy a [store] brand or something like that, as long as there's like a [brand name soy sauce] or something like that". A man talked about how he changed one habit to accommodate his limited budget: "say for instance you're used to getting dry cereal and you notice some cooking cereal like oatmeal ... is cheaper than dry cereal. That's why I switched from dry cereal". And a woman trying to avoid wasting food described a rather inflexible system for choosing yogurt: "... there's [a] certain brand of yogurt that my daughter likes ... I will automatically buy that brand. Because I know if I buy the other brand [cheaper] it will just sit in the refrigerator and rot".

Participants employed strategies to simplify the task of making food choices in different settings. One of the most common strategies people used was to limit a particular food on most occasions and then choose to eat that food on less frequent special occasions: "If it's the holidays I tend to think less about the nutrients. ...

This is a holiday and ... I wanna enjoy myself"; and, "Another treat I might get might be some of that really fattening ice cream ... that normally I just try to avoid for the health side of it".

People in families where preferences often conflicted developed strategies like eating certain foods only when eating alone or eating in a restaurant, where everyone's preferences can be more easily accommodated: "a lot of times I'll get something that I like and my husband doesn't. So that ... I can eat what I like and he ... can eat whatever he likes. That's how I usually, what I usually, how I usually decide. Actually we just went out and I got eggplant parmigiana just for that reason. Because he hates it and I love it and that's when I can eat it and enjoy it ... in a restaurant".

Strategies were inclined to vary for different contexts and tasks involving food choices, such as shopping, food preparation, recreational dining, coping with health problems, packing lunches, responding to food cravings, allocating resources, and accommodating others' food preferences. Another context people mentioned was travel: for example, one man indicated that he had developed a different set of personal rules for making food choices when traveling overseas. "I know there are things you're supposed to stay away from. Fresh fruits and vegetables ... there's no problem eating those".

Life course influences were important factors in the development of strategies in participants' personal food systems. An example of social framework is one man's role of provisioner and his need to account for family members' conflicting schedules: "I buy frozen things, ... for snacks for my kids. Because of my schedule and their work schedule, I always make sure that there's something in the freezer or something that they can just ... heat, and eat when they get home".

DISCUSSION

This project examined food choice from the perspectives of the people themselves, and the constructionist approach was useful in understanding what is salient in people's minds in different food-related situations. The resulting food choice process model seeks to portray broadly people's conceptualizations underlying their food choices. Whereas some of the influences and values that emerged in the data were not new findings (such as the roles of personal factors, price, taste, convenience and quality), we gained new insights into the food choice process by taking a wholistic approach. In addition, this study suggests possibilities for exploring how value hierarchies change, what familiar patterns of value negotiation might occur, what values people associate with food categories they identify and name, and how food categorizations might change and in what way such change might influence the outcome of value negotiations.

The data indicate that the role of the life course must be explicitly considered when conceptualizing food choice. Over the life course a variety of experiences, including those associated with the aging process, contribute to a person's choice preferences and patterns (Elder, 1987, 1991; Hagestad & Neugarten, 1985; Clausen, 1986). People's attitudes towards food may form according to the impact of their particular historical era, the cultural and social settings to which they are exposed throughout their lives, and the timing and trajectories of their individual experiences of past and current events (Bourdieu, 1986; Fischler, 1988; Devine & Olson, 1991).

The emergence of ideals as an important influence, and the identification of managing relationships as an important value, are noteworthy issues that are not

emphasized in prior studies. The intertwining of ideals and managing relationships indicated by the data is especially intriguing, and points to the possibility of exploring in greater depth how individuals apply value criteria to negotiating food choices in situations where harmonious relationships with others and personal values may conflict. In addition, participants often expressed ideals when they were discussing personal factors; nonetheless, personal factors and ideals, despite being closely intertwined, emerged as two distinct influences in people's reflections on their food choices.

The conceptual model developed here contributes to theory about food choice expressly because it is grounded in people's experiences, while presenting a comprehensive and integrated perspective on the food choice process that is intended to be applied in different contexts. The model is broader in its scope than most earlier work because it attempts to integrate many social science concepts in a multidisciplinary manner (Sobal & LaChaussee, 1993). The model represents the rich and complex origins of food-related actions and emphasizes the importance of diverse influences that mutually shape each other and may be more or less salient in a variety of settings. The model allows for both inter- and intraindividual variation and reflects a choice process that can be highly reflective or habitual and automatic.

In developing the conceptual model, depth of understanding was accorded a higher priority than breadth in sampling, and to this end a group of people in a particular food choice setting were invited to articulate their own thoughts and reflections on food choice. The sample was not designed to be representative, but was used to examine the range of factors involved in food choice among a group of diverse people. The components and processes represented by the model acknowledge and illuminate considerable variation in many dimensions, such as personal life course, extent of personal system, social setting and food context, even within a relatively small group of people operating within a specific context. In future work the model needs to be further examined in studies with participants who are diverse in geography, socioeconomic levels, ethnicity and life course stage.

Some components of the model presented here have clear linkages with other works. Janas *et al*. (1993) found that a key strategy for people on cholesterol-lowering diets was the development and use of a "game plan", which is not unlike the set of rules often operating within the personal system component of the model developed here. The concept of a personal system that emerged in this project was not necessarily conscious or explicitly goal-driven. However, the concept of individually developed strategies to deal with different food situations is a commonality. Because established game plans or personal systems appear to be important determinants of food choice, they should be studied in greater detail to learn how they are formed and changed.

The value negotiation process in the current model shares a great deal with the hierarchy of values examined in many other studies (Bell *et al*., 1981; Betts, 1985; Cosper & Wakefield, 1975; Rozin & Cines, 1982). While each food choice event is unique, people often negotiate values in food choice according to relatively consistent patterns, although in some circumstances exceptions to such patterns also may occur. The strengths of given values being negotiated during specific food choice events vary according to particular social contexts—for example, at home versus as a guest in someone's house, or choosing from a buffet versus from an á la carte menu. In value negotiations people weigh the benefits of particular choices against the potential risks of bad choices. This weighing and examining of values may or may not derive

from complex thinking; that is, value negotiation may be either a rapid or an extensive process. Most choices involve decisions that pass through value negotiations, with varying intensity of consideration of these values, and having passed through value negotiations in the past become routine or automatic. Negotiation of values was a very important part of the food choice process that emerged from the data in this study. The operation of a hierarchy of values needs more study from the perspective of the individual.

We identified six values that predominated among the value negotiations of people interviewed in our study, plus other values that were less frequent and less salient. While the values we identified were similar to those of many other studies (Bell *et al.*, 1981; Betts 1985; Cosper & Wakefield, 1975), most other studies of values involved in food choice do not specifically consider quality, though some investigations do show that quality is an important concept for food choice (Bisogni, *et al.*, 1986; Schutz & Judge, 1984). Quality is one of the predominant values articulated by participants in our study sample; thus, although the concept of quality is difficult to understand, and the term slippery to define, we could neither ignore it nor subsume it under some other value. Other populations may emphasize other values, and these differences deserve further investigation.

The model attempts to portray conceptually the determinants of a single food choice event. It neither indicates explicitly the relationship of one food choice to another, nor presents categorically any feedback mechanisms. Nonetheless, the model assumes that any food choice provides information and experience that becomes input through the life course for future food choices. This assumption needs to be investigated through studies of a series of food choices over time.

A conceptual model of the food choice process has several potential applications. Conceptualizing food choice as a complex process with a range of influences and values that are negotiated differently by diverse people in a variety of settings will help policy makers, educators and clinicians be wholistic in their view of food practices and efforts to improve dietary behaviors. The model developed in this study is a heuristic—a picture of a process, an aid to understanding the components of a process and conceptualizing and reflecting upon it—both useful to practitioners and shared with clients to aid in bringing into consciousness tacit assumptions about food choice. Such a model can be used to evaluate the appropriateness of different interventions, identify barriers and enabling factors to a specific intervention, set realistic expectations for the impact of an intervention, and develop measures for evaluating outcomes. For example, a practitioner who becomes aware of a client's dominant value can work from within that value to find avenues for change in managing that client's food practices.

Greater understanding of the interplay of their clients' life course influences, values, and personal systems during food choice can improve practitioners' diagnoses of problems in implementing dietary recommendations and suggest ways to resolve these difficulties (Janas *et al.*, 1993). This model might also be useful to individuals seeking greater understanding of their own food choices, as such insights can facilitate behavior change (Bell *et al.*, 1981).

CONCLUSIONS

Developing conceptual models of food choice contributes to the understanding of food practices and the interaction between individual food-related acts and the

larger food system. Such models have implications for theories about food choice as well as policies and interventions for changing food choices to influence health and the environment. As evidenced in this study, a broad view of food choice and a constructionist approach can yield insights about factors influencing food choice as well as the process. The model proposed in this paper is one step toward an improved understanding of food choice, and should be examined further through similar studies with a variety of participants in different settings.

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