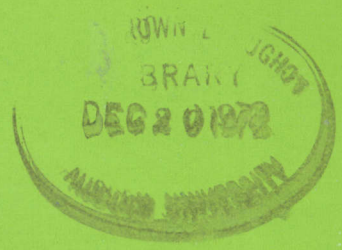
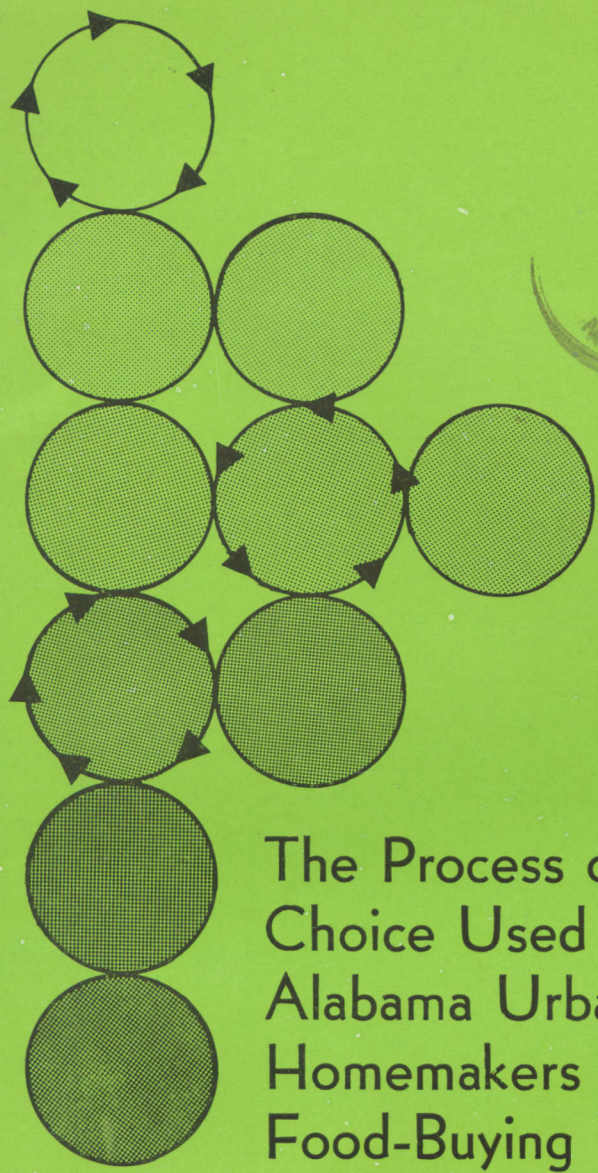


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BULLETIN 438
NOVEMBER 1972



The Process of Choice Used by Alabama Urban Homemakers in Food-Buying Decisions

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SUMMARY

Sixteen surveys that collected information from a total of 8,713 Alabama urban families between 1954 and 1968 contributed to the Southern Regional Food Marketing Projects SM-13 and SM-35. The earliest of these studies sought means of increasing purchases of dairy, meat, or poultry products. In 1958 emphasis shifted to decision-making procedures used by food purchasers and the factors shaping attitudes and practices.

The wide range of research topics contributed to formulation of a model for consumer behavior based on recognized steps in decision-making, which evolved into the "process of choice."

The process of choice includes acceptance of the role of food selection by the homemaker or other persons, the search for information on which to base decision-making, the event of choice that includes product evaluation and mental projections, the event of purchase, and the event of consumption. All of these are responsive to learning, which influences present and future food-buying decisions.

Included in the process are benchmarks that have proven to be reliable indicators of probable performance, along with consideration of certain interrelationships of family characteristics identified in consumer studies. The major immediate benefit from the theory was organization of the vast amounts of Alabama information into a form that views the purchaser as a complete entity with motivations and restrictions that influence food selections.

Findings indicated that the food purchaser, whether buying for family or personal use, repeatedly utilizes the process of choice, although the emphasis changes for each food, group of foods, shopping trip, or selections from a menu. Use of the theory provides those responsible for educational or promotional programs with a multidimensional framework in which the complete consumer is the target.

The report should be of interest to marketing research personnel, professional home economists, consumer specialists, homemakers, and those in all aspects of the food industry who desire a more complete understanding of motivations of the consumer in the food market.

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The Process of Choice Used by Alabama Urban Homemakers in Food-Buying Decisions¹

RUTH A. HAMMETT and MILDRED S. VAN DE MARK²

INTRODUCTION

THROUGHOUT 18 YEARS of Southern Regional Food Marketing Projects SM-13 and SM-35, 16 surveys were made in which data were collected from 8,713 Alabama urban families. Technical committees in the projects were members from the departments of Home Economics Research and Agricultural Economics of agricultural experiment stations in five or more Southern States.

The studies made in 1954 (1), 1955 (2), and 1956 (3) were commodity oriented with the aim of discovering means of increasing use of dairy or poultry products. By 1958 the consumer, or more properly the purchaser of food for family use, became the subject of inquiry. The "why" of consumer behavior, the forces that shape attitudes and practices in food purchase and consumption, and homemaker decision-making procedures became more important in the research than methods of increasing commodity use.

Many of the same personnel served on the technical committees for the five major projects, and sampling methods, schedules, and analysis procedures were basically uniform. Analysis and reporting of data based on Alabama families was the responsibility of J. Homer Blackstone and Ruth A. Hammett, Department of

¹The studies reported were supported by Hatch and State research appropriations. The report is based on contributing projects to the Southern Regional Food Marketing Research Projects SM-13, SM-13R, SM-13 2R, and SM-35, in which Alabama, Georgia, Kentucky, Mississippi, South Carolina, Tennessee, Texas, and Virginia cooperated.

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The regional food marketing studies touched on many aspects of consumer behavior. However, none of the studies attempted to describe the consumer as a functioning entity surrounded by motivation or restraining factors in situations in which action was obligatory in the food-related homemaker roles. In the approach used, the completed schedule was a compilation of questions that reflected the diverse interests of the regional technical committees. Even so, the fragmented studies were a pioneering attempt to explain food selection before consumers began to demand a more active role in the marketing system.

The unique character of the Alabama contribution to regional projects made possible the formulation of a theory of consumer behavior in food-buying situations based on recognized steps in decision-making. With inclusion of the role of learning and experience, the theory became an experiment in the "process of choice." Reports listed in the Chronological Bibliography provide illustrations of the practical nature of the theory. These publications may suggest topics for future research, although specific findings may be outdated.

Through use of the "process of choice" steps it becomes possible to examine groups of food selectors in which influences other than those related to income may be located and utilized in consumer education programs. Thus, homemakers will be studied as actors in the total environment rather than as participants in a single step without reference to other elements in the decision-making process.

Objectives of the report are: (1) To present findings from research based on Alabama urban families in which steps in decision-making and the role of learning in future decisions were used to develop a theory of consumer behavior in food buying, (2) To describe benchmarks that have proved to be reliable indicators of probable performance for use in further research in consumer choices, and (3) To emphasize the importance of interrelationships in anticipating probable consumer behavior, and in planning educational or promotional activities.

The report was designed to be of interest to marketing research personnel, professional family economists, consumer specialists, and those in all aspects of the food industry who wish information

that will lead to a more complete understanding of the motivations of homemakers in the market place.

SURVEY DATA

All Alabama cities with more than 10,000 population were included in field surveys of urban families at least once between 1954 and 1968. The 1958 sample, stratified by race and four city sizes, included 18 per cent of the Alabama towns with populations between 2,500 and 10,000. The 1956 home economics survey was made in seven counties midway along the eastern boundary of Alabama, and was the only one that included rural, rural nonfarm, and urban families, by race. Pertinent data as to time of survey, city, test food, racial distribution in the sample, and lists of published reports are summarized in Table 1.

With the exception of the 1963 mailed advertising survey, which accepted 1-person households, eligible families consisted of 2 or more persons who had eaten at least one meal a day in the home during the 7 days previous to the interview (study week). The majority of the families included husband and wife, with or without children. Other families were made up of parent and adult or younger children, grandparent and grandchildren,

TABLE 1. SURVEY SUMMARY, 1954-68

City and survey date	Test food	Families, by race			Literature cited
		White	Non-white	Total	
Anniston ¹ , 1954	Milk.....	378	124	502	1
Gadsden ¹ , 1955	Eggs.....	500	129	629	2
Rural-urban ² , 1956 10,000-25,000 population ³ , 1958	Meat, poultry.....	314	87	401	3
10,000 up ³ , 1958	Meat, poultry.....	229	207	436	4
10,000 up ³ , 1958	Milk.....	832	----	832	5, 6, 12
Phenix City ¹ , 1963	Cottage cheese.....	511	239	750	7
Birmingham ⁴ , 1963	Poultry.....	769	164	933	8, 9
Anniston ¹ , 1963-64	Poultry.....	901	308	1,209	8, 9, 10
Montgomery ¹ , 1965	Poultry.....	897	322	1,219	8, 9, 10
Dothan ⁵ , 1968	Milk.....	120	30	150	11 to 14
Tuscaloosa ⁵ , 1968	Milk.....	201	55	256	11 to 14
Huntsville ⁵ , 1968	Milk.....	480	39	519	11 to 14
Birmingham ⁵ , 1968	Milk.....	14	41	55	11 to 14
<i>Total families</i>		6,146	2,567	8,713	

¹ Sample from city directory, single or clusters of adjacent addresses.

² Stratified sample by urbanization; seven counties, east Alabama.

³ Stratified sample by race and four city sizes, block sample.

⁴ Store customer.

⁵ Block sample.

⁶ Special sample of teenage parents.

or unrelated adults. The respondent was usually the wife or mother, but in a few families food was selected and prepared by men.

All persons who lived in the home, such as relatives, were considered family members. The male head of the house was usually the husband or a male contributing the major part of the income, such as a father, son, or brother. In a typical sample, about 10 per cent of the families would be headed by a woman.

In the 1968 survey taken in three cities of 35,000 to 135,000 population, income of nonwhite families was approximately 43 per cent of white families. Ratio of nonwhite to white family income has been similar in previous surveys, although dollar values have doubled because of inflation and rising income.

THE PROCESS OF CHOICE

A process is a sequence of interrelated actions directed toward some goal, purpose, or end. Implicit in this definition are ideas of a time sequence, subprocesses, and overlaps in the sense that one process often contains components of others. The process of choice in the use of a food commodity is a type of problem-solving that requires a series of decisions.

The socio-economic structure of food consumption is formed by the processes of consumer selection, purchase, and use of products and services. Included are the behavioral aspects (psychological, sociological, and anthropological phenomena related to consumer behavior), technical and economic aspects of quality, quantity and value of one or more products, a temporal dimension, and the aggregative dimensions in terms of space, number, and sizes (one family, a region, a country). The processes of buying and using consumer goods are interrelated with all of them.³

Theories of decision-making developed by the behavioral scientists were modified to fit data collected from Alabama urban families between 1954 and 1968. Organization of the report is based on the five sequential steps in every situation in which a choice must be made:

1. Identifying the problem
2. Obtaining the necessary information on which to base a decision

³ BURK, MARGUERITE C. 1968. *Consumption Economics—A Multidisciplinary Approach*. New York: John Wiley & Sons, Inc. Ch. 9.

3. Weighing the alternatives
4. Selecting a strategy for the course of action
5. Negative or positive performance

A sixth step, learning and revision of strategy, comes about as the result of experience gained in events of choice, purchase, and consumption.⁴

The Newell, Shaw, Simon theory of problem-solving includes provision for alternate strategies necessary when the process of choice is part of a continuing event, rather than an isolated instance. It suggests that a number of memories with symbolized information act as controls for procedures to be used, that sets of basic processes make use of information stored in these memories when searching for and making selections among alternatives, and that rules for combining information processes into primitive computer programs are developed by each individual.⁵

The commonly accepted steps in problem-solving or decision-making were adapted to the path taken as the homemaker prepares for a shopping trip, goes to the market, selects the food products, and returns home where the food is served to the family or otherwise disposed of, Figure 1. A description of these steps follows:

1. Recognition that family members require food at frequent intervals for health and social development, and that selection and preparation are traditional elements in the homemaker role. Selection of products is related to probable number and kind of meals to be served, and the pantry inventory.

2. Consideration of food information available from family members, friends and relatives, store personnel, cookbooks, newspapers and magazines, television and radio, advertising and promotion, health agencies, and experience.

3. Evaluation of product acceptability, quality, price, brand name, inspection and grade labeling, or consumer standards.

4. Mental review includes the effect of restrictor agents, such as income and family type, preference barriers, and items on hand. Evaluations also consider probable success of the product in filling a specific need, suitability, cost, previous experience, and

⁴ BRIM, ORVILLE G. JR., DAVID C. GLASS, DAVID E. LAVIN, AND NORMAN GOODMAN. 1962. *Personality and Decision Processes*. Stanford, CA: Stanford Univ. Press. pp. 9-10.

⁵ NEWELL, ALLEN, J. C. SHAW, AND HERBERT A. SIMON. 1958. Elements of a Theory of Human Problem Solving. *Psychological Review* 65: 3:151-166.

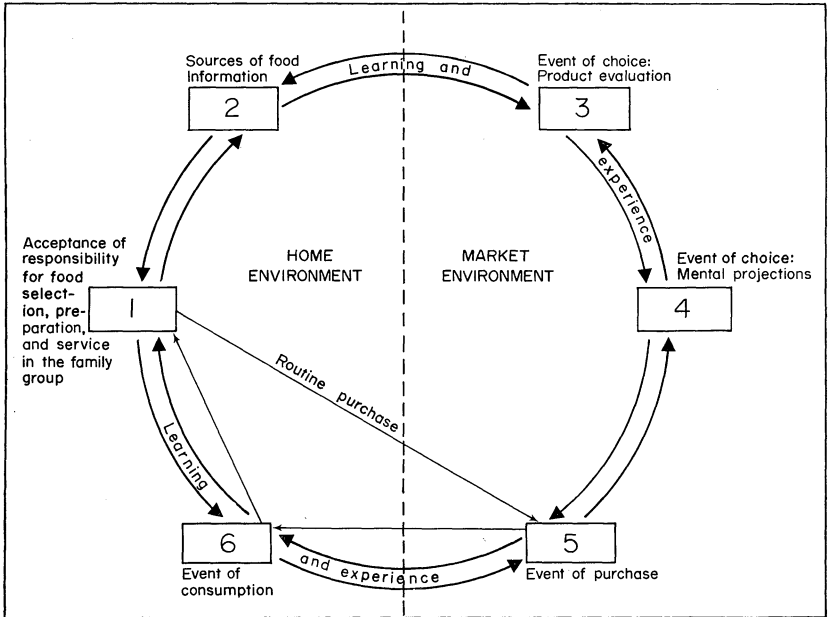


FIG. 1. Dynamics of choice process used by Alabama urban homemakers in food-buying decisions.

family reaction to alternate choices or new products. At this point the item may be rejected temporarily or permanently.

5. Relationship of income-related characteristics of the family to food purchase decisions in which money is exchanged for the food items.

6. Experience with the product in the home environment may lead to habitual purchase or permanent rejection if it does not fulfill expectations. Changes in family size, income, type of meal, health, or residence may require extensive decision making, while low income or stability in family characteristics subsidize routine purchase patterns.

Foods with acceptable attributes become habitual purchases, and take the 1, 5, 6 pathway on the chart. Some objections to the first Food Stamps were based on the disruption of habitual pathways, requiring acceptance of the 1 through 6 steps. Often homemakers buy foods each week with such slight variation that decisions at steps 2, 3, and 4 are minimal.

Steps 1 and 6 occur largely in the home. Step 2 includes a wide range of information sources that may result in better food

management, more healthful foods, or use of new products. Steps 3, 4, and 5 occur in the market environment, where research in consumer behavior has been concentrated.

In buying food the homemaker draws on information collected at each step in previous buying trips and the reaction of family and friends to the selections. It is experience, or the learning effect, that unifies steps in the process of choice. Learning affects current selections and subsequent choices of a similar product, it shapes attitudes and wants, and changes technological knowledge and expectations. Learning or experience is a separate but related phenomena in all stages of the selection and consumption of food and food-related products.

Obviously there are many gaps in the SM-13 and SM-35 data in which other research results are on record. However, the decision was made to limit illustrative examples to Alabama urban families except for pertinent data from governmental sources. Multidisciplinary research in steps 1, 4, and 6 is needed to provide a clearer understanding of personality traits, attitudes toward role performance by homemakers and families, and other affective factors that require inquiry beyond usual marketing considerations. In the rapidly changing food marketing and consumption areas, there are unlimited possibilities for research in consumer decision-making in food purchases.

STEPS IN THE PROCESS OF CHOICE USED IN FOOD-BUYING DECISIONS

1. Acceptance of Responsibility for Food Selection, Preparation, and Service in the Family Group

Before a choice can be made, someone in the family group must accept the responsibility for making the selection, preparing the food, and serving the meal. Traditionally, the wife or mother in the married couple or two-generation family has assumed this role as part of her normal duties and responsibilities in marriage. In other living-together relationships, someone, usually an adult female, became the "homemaker" by virtue of responsibility for food selection and use.

The homemaker's opinion about her performance in the role of food provider, as well as the attitude of those in and outside the family as to the importance of food in daily living, affects approaches to the constant problem of meal planning, and food selection, purchase, and use. Childhood and other environmental

influences, formal training and education, attitudes of friends and relatives, social class, stage in the family life cycle, and personalities of family members influence role perceptions of homemakers.

It requires only superficial observations to recognize widely differing attitudes toward the whole spectrum of housewifely duties, and to the importance surrounding food in family life. There are countless gradations of role perception, ranging from the "perfect housekeeper" whose house is in exquisite order at all times to the woman whose abode and family exhibit few signs of interest, order, or control.

The homemaker with young children often becomes so concerned with the physical aspects of their care that she may neglect her other functions. For many lower income homemakers, the family is the center of their lives, and their only outside interests are in affairs that directly affect family members.

The ideal of many upper class families is the homemaker who provides a wholesome home atmosphere while developing personal interests and promoting community activities. Other women have so little interest in homemaking requirements that they have outside employment to provide food services with purchased meals, convenience foods, or fulltime maids.

Homemaker Attitudes

In the 1968 survey an attempt was made to learn more about attitudes of homemakers toward facets of their profession other than those related directly to food. Nearly all of the respondents replied that woman's place was in the home, two-thirds of the homemakers said the wife and mother should be at home when the family was there, and half believed outside activities should not interfere with home responsibilities. However, about half of the respondents objected to subordination of outside activities to a clean house. Around one-third of the women indicated that a job outside the home was good for other aspects than increased income, nearly half disagreed, and the remainder had no opinion.

Three-fourths of the homemakers in the same survey reported that they were satisfied with the number of meals their families ate together, that enough attention was given to their own and the families' food preferences, and food served to guests was not restricted in kind or quantity. More than half were satisfied with the healthfulness of food eaten by family members, and said time spent in food shopping or preparation was not excessive.

Over half of the women reported they would use a mix when making a cake, but would not use instant coffee or tea in regular meals.

About half the homemakers used food in special celebrations, but fewer used food to comfort those in distress. Three-fourths of the respondents were unhappy about the amount of money that must be spent for food, and about the same percentage seldom taught family members to be good shoppers.

Homemaker Types

Homemakers in the 1963-65 survey were classified as habitual, rational, and innovative or impulsive types. From a list of 18 prescored practices selected as being typical of such homemakers, the respondent selected three from each of two lists of nine items that best typified her behavior.

Habitual type homemakers were thought to serve the same dishes every week, serve only food the family liked, use a complete shopping list, have meals at the same time every day, and shop the same time and day of the week.

Rational type homemakers were assumed to have family help in planning meals, varied menus with new products, bought whatever brand was on sale, used food advertisements in buying, made up their own recipes, and shopped in several stores.

Innovative or impulsive homemakers enjoyed entertaining, especially the unexpected guest for a meal, bought food from store displays, served original and unusual meals, used an incomplete shopping list, liked to try all kinds of food suggestions, and planned meals when ready to serve them.

Total orientation scores included questions about nutritional and marketing knowledge. Three-fourths of the homemakers were predominately rational types, and the remainder were about evenly divided between habitual and innovative. While it was not possible to correlate total scores with family characteristics or purchase habits, individual items showed some relationship to homemaker age or education.

The more highly educated women in families with greater annual or per capita incomes were more likely to use food advertisements, to try new products, and to enjoy entertaining guests. Grade school educated respondents were more likely to seek family help in planning meals, buy brands on special, and decide

what to buy after going into the store. In addition, low income homemakers served only food the family liked and bought items from store displays.

Further analyses were based on data from nearly 3,400 homemakers tabulated by single age years. High or low adjacent percentages from the prescored practices suggested that some were typical of homemakers at certain stages of the family life cycle. Although exact age groupings were reported, they were used as guides in attitudes and practices as the homemaker grew older and family composition and income changed.

Homemakers under 30 most often used a complete shopping list, made up recipes, enjoyed entertaining, bought from store displays, and planned meals when ready to fix. They were least likely to serve only food the family liked, serve the same dishes every week, and use family help in planning meals.

Respondents in the most active food buying years, 25 to 40, most frequently tried to shop the same time every week, varied the menu with new products, made up their own recipes, shopped in several stores, used partial shopping lists, and tried all kinds of food suggestions. These homemakers were least likely to serve the same dishes every week.

Respondents between 38 and 43 years most often selected as typical behavior that of asking for family help in meal planning. Homemakers in their fifties most often bought brands on special, shopped several stores, and liked unexpected guests. They were less likely to use family help in planning meals, try out all kinds of food suggestions, and plan meals when ready to fix. Homemakers past age 60 were most likely of all the age groups to use a complete shopping list, have predictable meal times, use the same dishes every week, and plan meals when ready to fix. They least often selected such items as varying meals with new products, making up recipes, using an incomplete shopping list, enjoying entertaining, trying all kinds of food suggestions, and enjoying unexpected guests for meals.

The habitual homemaker was most often of low income level and over 50 years of age. Rational type homemakers were generally under 45 years of age, whereas the innovative type was most often under 25 or between 47 and 64. Habitual types were less frequent among those under 42 years, while there were fewer innovative homemakers than would be expected among those between 42 and 46 and over 65 years.

Food Shopping Attitudes

Most of the respondents in the 1963-65 surveys enjoyed food shopping. Such trips provided a legitimate excuse to get out of the house, to visit with friends on an informal basis, and to see what was new in the food store.

<i>Positive attitudes toward food shopping</i>	<i>Per cent</i>
Choosing preferred quality, kind, price.....	33
Likes to cook and/or eat food.....	21
Likes to see what's new in food stores.....	19
Part of the homemaker's job.....	14
Shop with or see friends.....	13

Some homemakers explained that food shopping would be more enjoyable if certain conditions were changed, such as being able to leave the children at home or being able to spend money more freely for food or for other than necessities. Others were frustrated because of uncertainty in making choices, or because the number of items in the store was so large that desired items could not be located.

<i>Negative attitudes toward food shopping</i>	<i>Per cent</i>
Limited money, uncertain choices.....	39
Have to shop in rush hours.....	25
Health bad, seldom go out, hate to dress.....	14
Too tired to enjoy after working all day.....	11
Has to take children.....	11

These reasons were quite similar to those of women who enjoyed shopping, which indicated that a change in certain conditions might make shopping enjoyable. Some indicated they liked to shop for food because it was a legitimate way to spend money. Several reported they liked to buy food, but dreaded storing the items after bringing them home. A 1972 study might reveal a different image of food shopping.

When respondents named the three factors most closely related to food choices, quality or variety was more important to the higher income women, whereas price, specials, or economy appealed to the low income homemakers. Family food preferences, nutritional values, and purchase for regular needs were not influenced by income level.

Food Store Practices

According to the 1958 survey, nonwhite homemakers chose a food store on the basis of food prices, convenience, and habit. White homemakers listed convenience, cheaper foods, and pre-

ferred brands. Other reasons included better selection, credit, and fresher or better quality foods.

While fewer stores now give trading stamps, they are still collected by many homemakers. In 1958, one-third of the homemakers said trading stamps had some influence on the choice of a food store, but more than half liked to receive them. About one-third were indifferent or claimed they had never heard of trading stamps, especially the nonwhite women. "Free gifts" were the major reason for approving of trading stamps, though some used the stamps to provide gifts for others or for luxury items. Two-thirds of those who disliked the practice said they paid more for food where stamps were given. Some said they bought too little food to bother with stamps.

Trading stamps were most often collected by homemakers with several children. Money may have been ample for controlled spending for food, but was insufficient for minor luxuries or decorative objects. Middle-aged women most often thought food was higher if stamps were given. Objections were more numerous among the more highly educated women.

Prepackaged meat and poultry were studied in the 1958 survey to test consumer reaction to a marketing practice that forced changes in the process of choice. Two-thirds of the respondents approved of prepackaged meats and nearly as many liked prepackaged poultry. However, about two-thirds wanted butcher service available for special cuts and meats not in the display or for advice about selection and cookery methods.

Homemakers under 40 years of age liked prepackaged products because they did not have to wait for service, the meat was ready to cook, all available cuts were visible, the package showed the exact weight and cost, and the meat display was more sanitary and attractive. In the case of poultry, being able to purchase only the parts preferred by the family appealed to the higher income and the older homemakers with small families.

Much of the objection to prepackaged meats came from homemakers over 40 years of age who were accustomed to having meat cut to order by a butcher who was relied on to give them preferential treatment. In both races, women with upper levels of income and education were most likely to approve of butcher-cut meat, but prepackaged poultry.

Objections to prepackaged meat and poultry were largely that the customer liked to see the butcher cut the meats, prepackaged

meat did not have a fresh color, the contents could not be inspected on both sides, and the cut or size of package was unsatisfactory. Many of the objections have been remedied, but these attempted solutions have met with consumer complaint.

The major difference in the two groups of homemakers seemed to be the pride in personal selection shown by the older homemakers and the importance of "time-saving" among the younger women. The latter group appeared willing to shift product selection and evaluation to the marketing system.

Marketing Knowledge

Meat is the main dish in menu planning, and as much as one-third of the food dollar may be spent for meat items. Homemakers often choose a food store because of the presumed quality of meats.

All respondents in the 1963-65 surveys were shown an outline of the shield used as the background for government meat or other animal product grades, and to a certain extent in the continuous inspection of fruit and vegetable products. One-third did not remember seeing the shield, an equal number thought it was a brand name or seal of approval, and most of the remainder indicated it meant the meat had been inspected.

Marketing knowledge scores were based on identification of the shield used for government beef grades, naming of grades for eggs, milk, and beef, and comparison of package size and price. One-third of the homemakers were able to name one or more beef grades, but an equal number suggested incorrect designations, such as A-1 or Grade A. Three-fourths gave the correct grades used on milk or eggs.

Between one-third and one-half of the homemakers with less

TABLE 2. RELATIONSHIP OF EDUCATIONAL LEVEL OF THE HOMEMAKER TO MARKETING KNOWLEDGE SCORE, 3,338 FAMILIES, THREE ALABAMA CITIES, 1963-65

Education of homemaker, years completed	Proportion according to marketing knowledge score			Number of homemakers
	0-3 (low)	4-5 (average)	6-8 (high)	
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>No.</i>
Under 9 (grade school).....	48	26	26	820
9-11 (some high school).....	36	32	32	843
12 (high school graduate).....	30	32	38	884
13 or more (beyond high school)....	25	31	44	791
<i>Number of homemakers</i>	<i>1,166</i>	<i>1,003</i>	<i>1,169</i>	<i>3,338</i>

than 12 years of education had low scores in marketing knowledge. The same proportion of those having 12 or more years of education had high scores. Percentages in the middle score ranges also increased with greater education, Table 2.

About half of the homemakers with low per capita incomes had low scores in marketing knowledge, while one-third or more having larger incomes scored high. Homemakers who scored high in marketing knowledge usually scored high in nutritional knowledge, and high scores in both tests were more frequent among women of greater education or higher per capita incomes.

Nutritional Knowledge

Homemakers were actively engaged in providing their families with what they termed "balanced meals." The 1958 survey revealed that virtually all the homemakers preferred foods served to them as children, pointing up that early food habits are deeply ingrained and affect buying practices. How homemakers correlate the pressures of early food habits, family preferences, recommendations of nutritionists, promotional efforts of the mass media, and food store offerings are important to the well-being of families and the entire food industry.

Homemakers surveyed in 1954 said meat, green vegetables, and milk were foods that families should have nearly every day, followed by bread and cereals, eggs, starchy vegetables, and fruit. Two-thirds mentioned milk as a food needed daily — usually after meat in white families or third after meat and green vegetables, such as collard greens, by the nonwhite homemakers. Of those who did not mention milk as a food, four-fifths thought of it as a beverage.

Homemakers suggested that adults should consume 1.5 pints, and children 1.8 pints of milk per day, or an average of 1.6 pints per person. Nonwhite homemakers suggested smaller amounts than white respondents. Actual consumption by families in the study was reported to be 1.3 pints per person, about four-fifths of the amount recommended by the homemakers.

Slightly over half the 1956 survey respondents mentioned eggs as a food needed almost daily. One-fifth did not mention eggs, although the interviewer asked "Anything else?" as long as the homemaker would reply. These respondents may not have served eggs as a breakfast main dish, or thought of them only as a recipe ingredient.

Slightly over half the homemakers indicated that a male adult should have 2 eggs a day. Three-fourths of the white and one-half the nonwhite homemakers suggested females needed an egg a day. Comparison of the suggested with the actual consumption showed that white families used 85 per cent and nonwhite families 49 per cent of the suggested number. Nutritional recommendation in 1956 was 6 eggs per person per week for all except those under 3 years or over 60.

Substitutions are sometimes necessary in meal preparation, because the item is missing from the home supply, or for economy reasons. Respondents were asked if eggs, cheese, or dry legumes (like beans or peas) would be most acceptable to the family for a meatless meal. About half chose the dry legumes, especially the nonwhite women. Substitution for milk products was thought of in terms of use rather than nutritional equivalent, such as evaporated milk for whipping cream or tea instead of coffee if cream was not available. Bread or cereal was most often mentioned as substitutes for eggs, reflecting their predominant use for breakfast in 1955. Meat or milk products were less frequently mentioned, usually by those who used few eggs.

In the 1963-65 surveys, nutritional knowledge of homemakers was tested by pairing of 12 functions or sources of food nutrients with protein, carbohydrates, fat, and vitamins. The percentages

TABLE 3. PERCENTAGE OF HOMEMAKERS GIVING CORRECT ANSWERS, BY FUNCTION OR SOURCE OF NUTRIENTS AND EDUCATION OF HOMEMAKERS, 3,325 FAMILIES, THREE ALABAMA CITIES, 1963-65

Function or source of nutrients- correct answers ¹	Proportion answering correctly, by education of homemaker				Average
	Under 9 yr.	9-11 yr.	12 yr.	13 yr. and over	
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
General good health-protein, vitamins.....	89	94	96	96	94
Bacon-protein, fat.....	86	95	85	93	93
Cottage cheese-protein, vitamins.....	69	78	82	87	79
Cantaloupe-carbohydrates, vitamins.....	68	79	83	88	80
Chicken-protein, vitamins.....	64	71	85	93	79
Pecans-protein, fat.....	79	82	83	88	83
Growth and repair-protein, vitamins.....	76	83	80	82	80
Tomatoes-vitamins.....	58	65	72	83	70
Potatoes-carbohydrates, vitamins.....	36	48	60	77	56
Bread-carbohydrates, vitamins.....	31	42	56	74	51
Quick energy-carbohydrates.....	34	33	45	59	41
Concentrated energy-fat.....	14	18	23	26	21
<i>Per cent of homemakers.....</i>	<i>22</i>	<i>21</i>	<i>34</i>	<i>23</i>	<i>100</i>
<i>Number of homemakers.....</i>	<i>740</i>	<i>689</i>	<i>1,116</i>	<i>780</i>	<i>3,325</i>

¹ First named 3 points, second named 2 points. High score 30 to 36 points.

of correct answers at four education levels are shown in Table 3. The widest difference between the grade-school and college-educated homemakers was in identification of the major nutrient in bread and potatoes, followed by chicken, tomatoes, quick energy, and cantaloupe. The most frequently missed items were the pairing of concentrated energy with fat and quick energy with carbohydrates.

The more highly educated women had greater knowledge of food values, such as the nutritional equality of fresh and frozen broilers and the importance of low-calorie broilers in weight control. Chicken was identified as a protein food by four-fifths of the white and two-thirds of the nonwhite homemakers. Slightly over half knew that chicken was a good source of the B vitamins. About one-third of the homemakers thought that a serving of broiler meat was the nutritional equivalent of a serving of beef, pork, or milk, about one-third said broilers were less nutritious, and the remainder had no opinion.

Broiler meat has one-half the calories, about the same protein, and one-third as much fat as a 3½-ounce serving of lean beef or pork. A serving of whole milk, 8 ounces, is highest in calcium, vitamin A, and riboflavin. Of these foods, the red meats are highest in calories, fat, phosphorus, and iron. Lean pork is highest in thiamin, and broiler meat is highest in niacin.

About half the homemakers in the 1958 survey thought milk was fattening. When asked to suggest a beverage for a weight-watcher's lunch of a lettuce and tomato sandwich, three-fifths of the white and two-fifths of the nonwhite homemakers suggested some form of milk because it was nourishing or it contained protein. Suggestions of milk were more prevalent as per capita income or educational level increased, and as frequency of milk drinking increased among the respondents.

Homemakers least likely to know about the constituents of milk were those with education below the ninth grade, age beyond 60 years, low per capita income, and per capita meal costs in the lowest expenditure groups. Uncertainty or lack of awareness of the vitamin content of milk was greatest when per capita meal costs were low, the respondent was under 30 years of age or had less than 12 years of education. Knowledge of the constituents of milk tended to rise with an increase in the use of cheese equivalent, a product especially popular with the older or higher income families.

TABLE 4. REASONS GIVEN BY HOMEMAKERS AS TO WHY COTTAGE CHEESE IS A HEALTHFUL FOOD, BY RACE, URBAN AREAS OF ALABAMA, 1958

Reason given	Percentage of homemaker replies among those who believed cottage cheese a healthful food			
	Total sample		Families using cottage cheese often	
	White	Nonwhite	White	Nonwhite
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
It is low in calories	30	22	38	40
It is made from milk	24	19	15	8
Contains calories, proteins, minerals, and vitamins	17	10	28	18
Recommended for diets, easy to digest	14	17	17	24
Don't know or not answered	15	32	2	10

Most homemakers in the 1958 survey said cottage cheese was a healthful food, but only 29 per cent of the white and 10 per cent of the nonwhite families had used this dairy food during the study week. Percentages were reported separately for those who thought cottage cheese was a healthful food and for those who often served it. Nonwhite homemakers were less likely to be able to justify their answers, except for the respondents who were frequent users, Table 4. Respondents who knew only that it was made from milk were usually younger women who seldom or never purchased cottage cheese.

As years of formal education or per capita income increased, a

TABLE 5. RELATIONSHIP OF FREQUENCY OF USE OF COTTAGE CHEESE TO WEIGHT CONTROL PRACTICES OF HOMEMAKERS, BY RACE, URBAN AREAS OF ALABAMA, 1958

Weight control practice	Proportion, by frequency of using cottage cheese			Total
	Often	Seldom	Never	
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	
White families				
Lose weight	49	19	32	100
Gain weight	19	37	44	100
Keep weight same	44	41	15	100
Average, weight watchers	42	26	32	100
Average, not watching weight	29	29	42	100
AVERAGE BOTH GROUPS	32	28	40	100
Nonwhite families				
Lose weight	31	33	36	100
Gain weight	25	20	55	100
Keep weight same	17	28	55	100
Average, weight watchers	28	31	41	100
Average, not watching weight	9	23	68	100
AVERAGE BOTH GROUPS	12	24	64	100

TABLE 6. PROPORTION OF HOMEMAKERS WHO GAVE "YES" ANSWERS TO STATEMENTS ABOUT MILK PRODUCTS, BY PERCENTAGE MILK EQUIVALENT USED OF RECOMMENDED AMOUNTS, 832 WHITE FAMILIES AND 822 NONWHITE FAMILIES, URBAN AREAS OF ALABAMA, 1958

Statement	Proportion correct, by percentage used of recommended milk equivalent ¹			
	Under 50 (very low)	50-89 (low)	90-109 (me- dium)	110 and over (high)
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
White families				
Milk is a good source of protein.....	81	88	92	92
Milk is a good source of calcium.....	97	98	99	99
Milk is a good source of some B vitamins.....	46	52	57	58
Yellow cheese is a good meat substitute.....	54	84	83	84
Butter has more food value than oleomargarine.....	11	20	17	28
Nonwhite families				
Milk is a good source of protein.....	73	79	79	80
Milk is a good source of calcium.....	96	95	95	98
Milk is a good source of some B vitamins.....	55	53	63	48
Yellow cheese is a good meat substitute.....	70	63	66	68
Butter has more food value than oleomargarine.....	8	13	18	24

¹ See page 54 for explanation.

greater percentage of homemakers thought cottage cheese was a healthful food. Homemakers actively trying to control weight used cottage cheese more often than other respondents, especially among the nonwhite women. Data in Table 5 indicate that use of cottage cheese had become associated with a dietary practice, which may have resulted in a restricted market.

Three-fourths of the homemakers whose families were consuming less than half the amount of milk products needed for good nutrition knew that milk was a good source of calcium. Percentages of respondents who were aware that milk was a good source of some B vitamins were nearly as high among low as high users of milk equivalent. The low relationship between use of recommended amounts of milk products and knowledge of nutritional values showed that factors other than health considerations affected purchases, Table 6.

2. Sources of Food Information

Although about three-fourths of the homemakers in the 1963-65 series of surveys were satisfied with their food-buying competence,

nearly all suggested a favorite method of receiving food information. One-third of the possibilities were for ideas or timely food news in newspapers that could be read leisurely, and perhaps clipped for future reference.

A considerable number liked cooking demonstrations on television that show how to prepare a dish. The third most popular source was magazines which, with newspapers, accounted for more than half the preferred food information sources.

In a typical urban sample of families, about 20 per cent read no newspaper with a food section. Readership tended to be higher in the smaller cities served by a local daily newspaper. Non-readers were most frequent among the nonwhite, the poorly educated, and the low income families.

Of the women who regularly read a daily newspaper, four-fifths read the food store advertisements, two-thirds read the food section and the society pages, one-third usually read the sports pages, and one-fifth scanned the farm page. Homemakers over 45 years of age were the most likely to read all parts of the newspaper. Respondents most interested in food store advertisements were those with some high school education, no male head of the house, or those with teenage children; least interested were homemakers under 35 years of age, those with education beyond high school, or gainfully employed women.

About half of the low income women read the society page, as compared with nine-tenths of the higher income respondents. The most frequent reader was the older homemaker in a small family. Infrequent readers of the society page were young, had per capita income below the average for the sample, and had less than 12 years of education. In most instances, placing food information on the society page would limit coverage to women of higher income and education. With consistent location in the newspaper, a food column by a well-known personality would draw readers regardless of placement.

Homemakers were more concerned with buying and preparation of food than with nutritional values. Meal planning ideas and food buying information, primarily "specials," were more important to the homemaker with average or low income; those of higher income were more receptive to recipes and food preparation methods. About half the respondents in the smaller city were influenced by food store advertisements in the choice of a store, but those in the larger cities were less responsive. Rela-

tively few homemakers used food advertisements in making shopping lists or planning meals.

The weekly food section in the newspaper was most useful in providing homemakers with current prices of some foods. A 1968 analysis of content of several sections of newspapers revealed: (1) major parts of the food section were devoted to area-wide prices; (2) single food advertisements, often with price-reduction coupons, occupied about one-sixth of the space; (3) nonfood advertising, syndicated columns, or news usually occupied as much as one-fourth of the food section.

Consumer lures, such as news about prizes, games, or stamp coupons, were used either separately or in food store advertisements. Amount of space devoted to such lures depended on aggressiveness of the store or the stage in the game cycle. There was virtually no information that would enable the homemakers to become more proficient in choosing and preparing food.

Perhaps homemakers were suggesting that food advertisers take on the task of supplying information when they indicated that advertisements would be more useful if stores listed new food products, how to buy and cook meats, or the nutritive values of foods. They wanted more variety in advertised foods related to local needs, and more complete identification in advertised foods as to weight, size, brand, grade, or quality.

Homemakers felt that "specials" should have the usual as well as the marked-down prices. They resented advertised "lowest prices in town" without proof, or other deceptive practices and misleading descriptions. Some women reported they wanted stores to advertise foods on special that would fit into a bargain meal, perhaps with a menu or recipes. Space used for games or other consumer lures brought few adverse comments, and some wanted more foods with added trading stamp value.

In recent years some newspapers have improved food information in midweek issues. While food sections still remain largely "canned" advertisements with a few recipes, news about food and nutrition is being placed in other parts of the newspaper as part of their service to all readers. Food selection is no longer the homemaker's prerogative, and much is chosen without regard to regular meal times or nutritional value. Hopefully, the increase in food prices will focus more attention on food selection related to nutrient content as well as taste and preferences, which is needed for informed decision making.

Mass Media Food Information Studies

Eight surveys were conducted over a 2-year period, 1963-65, to test the effectiveness of mass media in providing consumers with food information. Pre-studies located appropriate media, probable populations, and consumer habits, knowledge, and attitudes. Post-studies were made following educational presentations about broilers and other poultry.

The educational material used in Birmingham was part of a broiler promotion project utilizing store displays. Moving balloons, colored pictures of prepared dishes, and posters using the themes of economy, high protein content, and low calories of broiler meat surrounded the display. An attendant distributed folders featuring poultry recipes.

In Anniston and Montgomery, a 3-week series of newspaper articles and radio programs presented information about broilers, including nutritional value, economical source of protein, suitability for every meal and occasion, and cookery principles. Facts about production, market forms, and grade and inspection labeling were also included. Recipes using poultry were given or offered.

Response of homemakers could be negative or positive. A negative response might be the result of lack of exposure or insufficient attention. Accordingly, homemakers in each of the five post-studies were placed in three groups: Nonexposed, exposed nonresponsive, and exposed responsive. Characteristics of each group were as follows:

1. Nonexposed: Did not listen to experimental radio stations or control programs, or did not read the experimental newspapers and control articles.

2. Exposed nonresponsive: Listened to experimental radio station and control programs, read experimental newspapers and control sections, was a customer in the stores featuring the experimental displays, but did not remember any of the educational messages.

3. Exposed responsive: Listened to experimental radio station and control programs, read experimental newspapers and control sections, or visited the stores featuring the displays, and recalled one or more items from the presentations.

Store Display

Of the 470 homemakers who participated in the store display post-study, 41 per cent recalled the presentation. About half the women between 35 and 60 years, but two-thirds of those below or above these ages, did not remember seeing the display. Percentages of respondents that recalled the display increased from about 30 per cent to around 50 per cent with an increase in income or educational level of the homemaker.

Of the 192 exposed homemakers who recalled something about the display, 43 mentioned two items; the remainder were about evenly divided between those who recalled one item and those mentioning several. Homemakers under 35 years usually remembered but one item and few over 60 mentioned more than two items. The most responsive homemakers — those between 35 and 60 years of age — were characterized by high per capita incomes, education beyond high school, small families, and high scores in marketing or nutritional knowledge.

The educational material had three levels: Attention attracting, actual and pictorial displays, and food information themes. The pictured broiler dishes and balloons moving in air currents accounted for 25 per cent of the total items recalled. The attendant who handed out recipes and the mass display of broilers were credited with 17 and 15 per cent, respectively. The "message" carried by the three themes was responsible for 18 per cent of the recalls. In the following table the "a" level indicates the attention attracting items, and the combinations represent the percentage of respondents recalling more than one item.

<i>Recall of store display items</i>	<i>Level</i>	<i>Per cent</i>
Attention attracter only.....	a	29
Display, food information themes.....	b,c	23
Attention attracter, broiler display.....	a,b	17
Pictorial and actual broiler display.....	b	15
Food information themes.....	c	8
Attention attracter, broiler display themes.....	a,b,c	5
Food information themes, attention attracter.....	a c	3

Addition of the "a" levels in the table shows that about half the respondents had remembered the attention attracter portion of the display. Sixty per cent of the homemakers recalled the broiler display, and 39 per cent could name one or more of the food information themes. With an increase in income level, percentages of women who failed to recall the themes declined from 50 to 12 per cent.

Of the three themes of "Stretching the Food Dollar," "High Protein Content," and "Low Calorie Content," the first theme accounted for 40 per cent of the answers, the second for 37 per cent, and the third for the remaining 23 per cent. Four-fifths of the 125 women who mentioned a theme recalled two of these items. Respondents that could identify the themes were usually between 35 and 44 years of age, had educations beyond high school, or per capita incomes above the average of all families in the sample.

Newspaper

The potential coverage based on the audience in the pre-study survey and the actual coverage in the post-study radio and newspaper samples from adjacent addresses in the two cities are shown in the following table:

<i>Coverage experimental media</i>	<i>Anniston Pct.</i>	<i>Montgomery Pct.</i>
Potential audience		
No radio, newspaper.....	11	17
Radio only.....	7	31
Newspaper only.....	32	21
Newspaper and radio.....	50	31
Actual newspaper audience		
Nonexposed.....	62	66
Exposed nonresponsive.....	20	20
Exposed responsive.....	18	14
Actual radio audience		
Nonexposed.....	65	75
Exposed nonresponsive.....	28	17
Exposed responsive.....	7	8

There was little difference between cities in the number of homemakers who recalled items from the newspaper articles, but there was some variation in coverage. Montgomery had about four times the population of Anniston at time of the survey.

Analysis of the various identifying items recalled from the newspaper articles showed differences that could be measured by family or personal characteristics of the respondent. Among the exposed responsive homemakers, one-half could remember 1 item, one-third recalled 2 items, and the remainder 3 to 7 items.

Homemakers recalling one item were most frequently under 35 years of age, had less than 12 years of education, were non-white, or had low per capita incomes. Respondents between 35 and 59 years generally remembered more than one item, and percentages rose with increasing per capita income.

Themes from the newspaper articles most frequently recalled were as follows:

<i>Newspaper article themes recalled</i>	<i>Per cent</i>
Broilers are economical protein source	22
Purpose of grade or inspection labels	21
Broilers suitable for all meal types	18
Nutritive value of broiler meat	17
Cookery methods for poultry	11
Marketing and purchase of broilers	11

Nonwhite and low income homemakers more often recalled the articles about grade labeling and use of broilers in all types of meals. Economy was most interesting to older homemakers and those of high income levels. The relatively few young women most often mentioned the use of broilers in all types of meals. Higher income homemakers most frequently mentioned nutritive value of broiler meat. Cookery methods were most appealing to younger women and those of lower income ranges. The few who recalled information about production or marketing were almost entirely between 35 and 59 years of age or had education beyond high school.

Radio

The educational messages were broadcast over early morning farm programs in both cities, and over a live interview program in Anniston. In Montgomery, 1-minute tapes narrated by the local home agent were put on the air 3 days a week between 9:00 a.m. and 3:00 p.m. Of the 235 homemakers who usually listened to the experimental station and control programs, 26 per cent remembered an item. In both cities, exposed responsive homemakers were more likely to be nonwhite and to have high marketing knowledge scores. Respondents who recalled several items were usually between 35 and 44 years of age with average per capita incomes. Food information recall was distributed as follows:

<i>Food information recalled on radio</i>	<i>Per cent</i>
Cookery methods for poultry	27
Broilers suitable for all meal types	22
Nutritive value of poultry meat	22
Broilers economical protein source	18
Meaning of grade and inspection labels	7
Marketing, purchase, storage of broiler meat	4

Cookery methods were most often recalled by respondents with low per capita incomes and those between 45 and 59 years

of age. That broilers were suitable for all meal types was most appealing to homemakers over 60 years and those with both low and liberal per capita incomes. Nutritive value was most often mentioned by women with more than a high school education and with average marketing but high nutritional knowledge. Economical source of protein was most important to homemakers with 12 or more years of education and high per capita incomes. Grade and inspection labeling appealed to homemakers with some high school education, and to the nonwhite respondents.

Queries as to what form food information should take brought little response. Many nonwhite women listened to a radio station that carried some food information, largely prices. Interest shown by the nonwhites in the broiler information programs indicated that radio might effectively reach these groups with regular programming and more publicity.

Evaluation

In the newspaper survey, 25 per cent of those who thought they had seen the articles could not recall a detail. In the radio surveys, 14 per cent failed to remember an identifying item. It is possible that recall percentages would have been higher if the material had been presented in a more dramatic manner, or if the series had been publicized.

In presenting food information, either by personal communication or the mass media, it should be recognized that the greater the socio-economic restraint, the less likely is the homemaker to use suggested changes or even be aware that changes are necessary. The more closely the information fits homemaker needs, the more likely it is to attract attention, be remembered, and put into practice.

Information Sources That Influenced Food Purchases

To determine how homemakers decide what to buy and what to reject in the food store, homemakers in the 1958 survey were asked which of 18 possible information sources had influenced purchase of a specific food. Four of the sources (meetings or demonstrations, for example) were used very little. The remainder could be grouped into the mass media, such as radio and television; printed sources, such as newspapers, magazines, recipes and cookbooks; personal influences like friends, relatives, or sales persons; and the merchandising practices in stores. Percentages

who were influenced by the various food information sources are shown in Figure 2.

Recipes on food containers were popular with most homemakers, except white respondents over 60 and nonwhite women beyond 45 years of age. Recipes on labels appealed most to homemakers with young children, and those with family size between

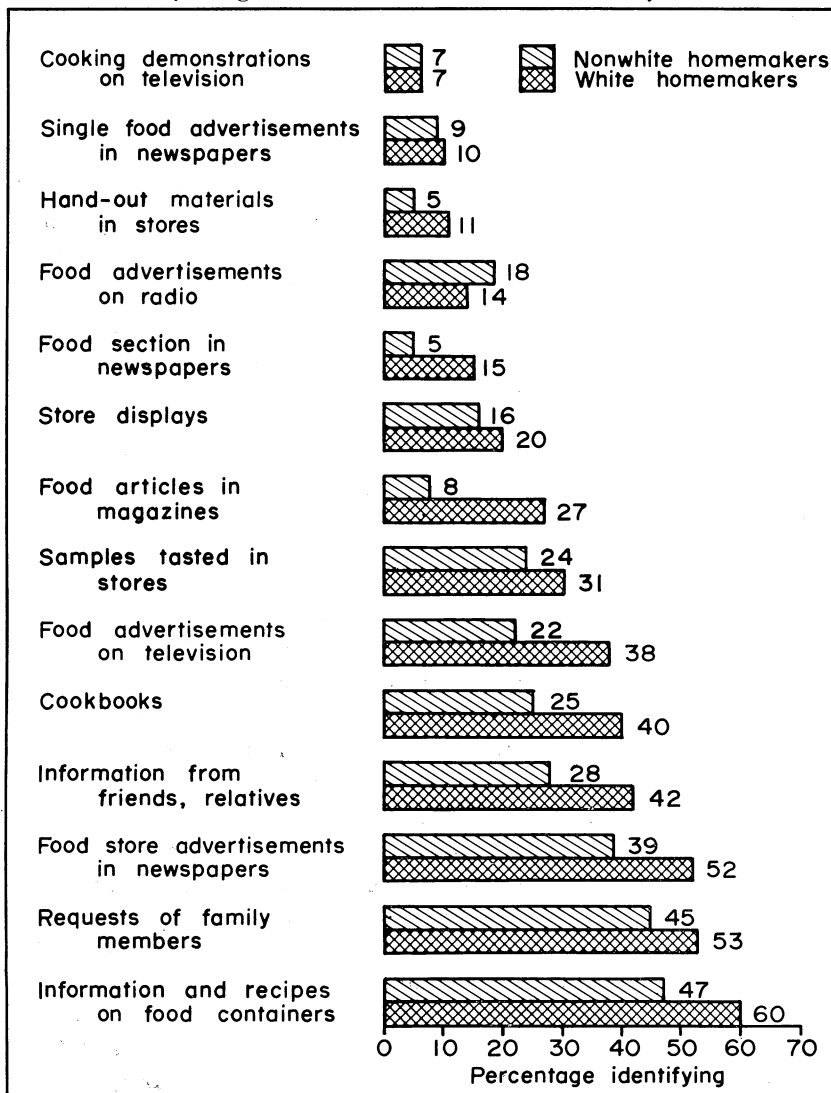


FIG. 2. Percentages of white and nonwhite urban homemakers reporting a recent food purchase that they identified with a specific media.

2 and 6 persons. Package recipes were most often mentioned by respondents in the middle range of per capita income and meal costs, and by those with more than a fourth grade education.

Nonwhite homemakers were attracted to recipes on cookie packages or flour bags, but were less interested in other containers. Cans of beans, soup, vegetables, and stew often suggested menus. Cereal containers supplied recipes for cookies, hot breads, or spaghetti sauce. In the case of a new food form, directions or a recipe on the package helped ensure a successful dish. Labels on evaporated milk cans had recipes for a wide range of dishes, and condensed milk labels supplied recipes for a popular lemon pie not usually available elsewhere.

Cookbooks were used primarily by homemakers under 45 years of age, especially those with growing children. The typical user had 12 or more years of education, medium to high per capita income, and above average per capita meal costs. Use of cookbooks declined with age but increased with education. In nonwhite families, cookbooks were more often used as larger amounts were spent for food per person. Recipes used most often were those for desserts, dishes prepared infrequently, special meals, or ideas to vary meal monotony.

Because homemakers buy and prepare food for family use, the assumed or expressed desires of all family members must be considered. Of the requests of family members that resulted in a food purchase, four-fifths came from children. Requests were most frequent in low income families, and their influence was more prevalent as family size increased.

Requests of husbands were more important in high income families (small size and usually older families). Granting of children's requests while shopping was highest in moderate per capita income families. Television advertisements seen in the home stimulated requests from children, but did not necessarily lead to purchases.

Desires of family members had the strongest influence on homemakers under 45 years of age. Children 6 to 12 were most likely to have requests granted, but other age children were also important in this influence. In white families, income or education of homemaker was unrelated to granting of family requests. In nonwhite families, younger homemakers or those spending above the racial average for food were most likely to be influenced by family suggestions. Homemakers often mentioned that a par-

ticular food was purchased because they thought the family would like it.

Information about cost or quality of a food usually came from friends or relatives of homemakers in low income families. Social occasions and sharing recipes were more common in moderate and high per capita income families. In families with low income, particularly nonwhites, food was seldom shared with persons outside the family. Except for the oldest age groups, friends and relatives were popular information sources with white homemakers, especially those with 12 or more years of education, moderate to high per capita incomes, and small size of household.

While food store advertisements were used by many homemakers in deciding what to buy, other families were not reached by this type of information. One-fourth of the families in the 1958 survey had no newspaper that regularly carried food advertising, largely the younger, low income, and nonwhite families. When buying meat, poultry, and eggs, however, two-thirds of the families used information from the newspapers with a food section. Three-fifths of the white and two-fifths of the nonwhite homemakers used information in the food store in making meat and egg purchases.

Food store advertisements were most popular with homemakers between 30 and 60 years of age in white families, and up to 50 years in nonwhite families. Such advertisements were used most frequently by the more highly educated women, those with moderate to high per capita incomes, average size families, and average or above per capita meal costs.

Influence of food store advertising on white families increased with age of the youngest family member up to 20 years, and with greater per capita meal costs. In nonwhite families, food store advertising appeal increased with greater education of the homemaker and larger per capita income or per capita food expenditures.

The newspaper food section was used largely by homemakers with more than a high school education, and its use increased with higher per capita meal costs. Such homemakers usually had a small family and ample income. A few respondents mentioned noticing the government publicity given foods in season or in ample supply, but recipes were more often the purchase stimuli.

Nearly one-third of the homemakers reported buying a food because they "liked" a sample tasted in the store, usually foods

such as sausage or cheese. Responsiveness to such samples was related to an increase in per capita meal costs. In nonwhite families the more highly educated homemakers in their thirties most often purchased a food because of a sample tasted in the store.

Hand-out materials, such as tear-off recipes, folders, 2-for-1 deals, and coupons on or in packages, appealed more to younger homemakers and the better educated nonwhite homemakers. Single food advertisements usually included a price reduction coupon. Cooking demonstrations were primarily of the "quickie," commercial type, in which the recipe is given but listeners are encouraged to write in for copies.

3. Event of Choice—Product Evaluation

In the event of choice the homemaker carries with her to the food market information about the family, food on hand, market offerings, and experience with previous selections. Each product selected is evaluated as to attributes that will fill a real or an anticipated food need. Estimates based on previous experience, such as the usual amount of bread or milk purchases, require little attention. New products or brands, guest meals, infrequent purchases, or an unfamiliar store require more prolonged evaluations.

Selection of Meat Classes and Cuts

At the time of the 1958 survey, if extra money had been available, 40 per cent of the nonwhite and 21 per cent of the white homemakers would have spent more for food, especially meat. Conversely, if the budget had to be cut, less would be spent for food, especially meat. Younger families bought more meat cuts to be fried or broiled. Older homemakers or those with young children used cookery methods that would result in meats easy to chew. Older homemakers bought smaller amounts of beef, pork, and poultry than those under 60.

Based on selection from color photographs of U.S. Choice, Good, and Standard grades of a beef cut, the Good grade was preferred by most homemakers. White homemakers with upper income or education more often selected the Choice grade. Meat was selected on the basis of color, ratio of fat to lean, and percentage of lean to bone. Few understood grade labeling or the qualities associated with beef grades.

During the study week in the 1963-65 surveys, meats from four

classifications had been used by one-third and from three classifications by half the families. Major meats purchased in each case had been beef, pork, and poultry. The fourth meat was usually seafood, lamb, or cold cuts, as shown below:

<i>Meat classes purchased previous week</i>	<i>Per cent</i>
Beef, pork, poultry, other.....	35
Beef, pork, poultry.....	27
Beef, poultry, other.....	15
Beef, pork, other.....	9
Beef, pork.....	7
Pork, poultry, other.....	2
One meat only ¹	2
Beef, poultry.....	2
One meat, other.....	1

¹ Pork only had been purchased by 32 families, poultry only by 14, and beef only by 8 families.

With increasing education of the homemaker, there was a slight decrease in use of the beef-pork-poultry and pork-poultry combinations. A more marked trend was the relationship of the beef-pork-poultry-other combination that rose from 15 to 30 per cent with greater education of the homemaker, indicating a wider selection of meats by the more affluent women.

Poultry Products

The 1963-65 surveys revealed that three-fourths of the homemakers decided before going to the store that they would buy a broiler. Half the respondents served broilers once a week, one-fourth several times a week, and the remainder less frequently. Regardless of income, broiler meat was purchased because the family liked it. Economy was most important among the low income families, while nutritive value, variety, and versatility of broiler meat were more important to higher income families. Infrequent purchasers were influenced by newspaper advertising or price reduction placards in the store.

Low income homemakers usually purchased a whole broiler and served poultry several times a week. The moderate income homemaker purchased cut-up chickens and high income respondents more frequently selected broiler parts, especially the breast.

Size or weight was the most important criteria in broiler selection. A chunky appearance with a broad breast was the next most important consideration, and yellow skin was attractive to some purchasers. Buyers also looked for a clean bird with no pin feathers, hair, bruises, or broken bones. A heavy fat layer and a firm breast bone were selected as indications of quality by some

TABLE 7. PERCENTAGE OF HOMEMAKERS REPORTING BROILER PURCHASE, BY PER CAPITA INCOME, 3,352 FAMILIES, THREE ALABAMA CITIES, 1963-65

Broiler purchase by families	Proportion reporting purchase, by per capita income group				Average
	Under \$900	\$900-1,799	\$1,800-3,299	\$3,200 & more	
	Pct.	Pct.	Pct.	Pct.	Pct.
When last broiler purchased					
Within last 7 days.....	79	75	74	73	75
8-13 days.....	8	10	10	9	9
14 or more days ago.....	12	14	15	17	15
Don't purchase—gift, grow own.	1	1	1	1	1
Form of last broiler purchase					
Whole chicken.....	73	54	44	42	54
Cut-up chicken.....	20	27	26	27	25
Parts.....	6	18	27	29	19
Several forms, part in freezer.....	1	1	3	2	2
Frequency of serving broilers					
Once a week.....	42	53	58	58	52
Twice a week.....	43	25	16	15	26
Every two weeks.....	11	16	20	20	16
Less frequently.....	4	6	6	7	6
Reason buys broilers, first mention					
Family likes it.....	36	41	41	39	39
Economy.....	42	32	23	17	30
Variety of ways to prepare.....	7	10	13	18	11
Protein, food value.....	4	8	11	14	9
Easy to prepare.....	9	6	8	9	8
Other: package, size, appearance of other meats.....	2	3	4	3	3

respondents. No homemaker mentioned use of grade or inspection labels or brand name, Table 7.

Eggs were habitually purchased in standard units at regular intervals. Only a change in number of persons fed from the home food supply would cause any deviation in the customary number of eggs used, according to most respondents. For the majority of families, eggs were purchased in routine numbers except when planning for guest or holiday meals. Low income or a seasonal rise in egg prices sometimes limited egg purchases, particularly in nonwhite families.

In the 1955 survey, consumers had a choice. If the family liked high quality eggs for breakfast main dishes, the competent housewife depended on "yard eggs" or "country eggs" supplied by the producer or a peddler. For those who preferred brown or yellow or "colored" eggs, a choice was available. Homemakers who purchased eggs in the larger chain stores could buy brand name, dated, cartoned, Grade A, white eggs. Others were suspi-

cious of eggs in the refrigerator as possible "cold storage" and preferred to pick the largest or whitest from a 30-dozen case on the counter or floor. Packaging of eggs ranged from a cardboard carton to a basket on the arm of a farmer who placed the eggs in the customer's container.

While egg prices have declined since 1955, consumer choice is largely restricted to Grade A, brand name, cartoned, white eggs in one to three sizes. Egg quality has been standardized to the extent that few cooks have experience with eggs of poor quality. For most consumers, improvements in production and marketing of eggs have removed the necessity for product evaluation or the use of special purchase methods.

4. Event of Choice—Mental Projections

Prestige of Meal

The importance of the meal for which a meat was being purchased was shown in a hypothetical situation in which respondents selected from a prepared list the item considered most suitable. Meals listed were in order of increasing prestige: Family meal, informal meal for church friends, special dinner for the husband's birthday, and a guest meal for a business friend. Chicken was selected most often for the family dinner or the informal meal, followed by beef roast. Steak was most popular for the husband's birthday dinner and for serving to the business friend, presumably male.

Chicken was selected because it was an economical protein source and easy to prepare. Beef roast was chosen because cooking failure was almost impossible, and beef was equated with prestige. Steak was considered the man's favorite meat.

Level of income was closely related to meat choices in which men's preferences were considered. Selection of beef for the husband's birthday dinner or the guest meal for a business acquaintance rose 30 percentage points with increase in per capita income. With lower per capita income, selection of chicken for the dinners for men increased 25 percentage points for the husband and 14 points for the business friend.

With increase in income, roast beef or steak would be most popular at all meals. Chicken, pork, or hamburger increased in popularity as per capita income declined. Meats such as fish, seafood, lamb, and casseroles were more often selected by homemakers with higher per capita incomes, Table 8.

TABLE 8. PERCENTAGE OF HOMEMAKERS REPORTING MEAT CHOICES FOR MEALS OF VARYING PRESTIGE, BY PER CAPITA INCOME, 3,352 HOMEMAKERS, THREE ALABAMA CITIES, 1963-65

Meat choices for meals of varying prestige	Proportion reporting choice, by per capita income group				Average
	Under \$900	\$900- 1,799	\$1,800- 3,199	\$3,200 & more	
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Family meal					
Chicken	36	30	26	24	30
Beef roast	21	22	24	26	23
Hamburger	18	20	17	12	17
Steak	6	9	16	23	13
Pork—chops, ham, roast	14	13	10	5	11
Other ¹	5	6	7	10	6
Husband's birthday dinner					
Steak	22	40	48	51	39
Chicken	39	26	15	14	24
Beef roast	10	16	19	17	15
Pork—chops, ham, roast	18	9	7	7	12
Hamburger, other ¹	11	9	11	11	10
Church friends are guests					
Chicken	53	47	41	43	46
Beef roast	17	22	28	30	24
Hamburger, steak	14	12	13	11	13
Pork—chops, ham, roast	13	12	10	6	11
Other ¹	3	7	8	10	6
Business acquaintance is guest					
Steak	24	33	41	43	35
Beef roast	17	25	31	29	25
Chicken	30	22	15	16	21
Hamburger, other ¹	15	10	8	8	11
Pork—chops, ham, roast	14	10	5	4	8

¹ Fish, seafood, lamb, miscellaneous.

Purchase Barriers

It is important to know why consumers do not buy products, a factor sometimes overlooked in consumer behavior research. In the 1963-65 surveys, homemakers were given a list of beef, pork, and poultry cuts from which they selected those not purchased because of high price, possible poor quality, or too much kitchen preparation. They also selected those not liked by the family and unfamiliar meat products.

One-fifth of the homemakers had no reservations about meats as to acceptable price or quality, about one-third were familiar with all the meats, and an equal number did not consider any of them too much trouble to prepare. Three-fourths said their families would eat any of the suggested meats.

Among the meats not purchased because of high price, half mentioned round steak and one-fourth broiler breasts, which were 79¢ a pound at time of the survey. About the same proportion reported these meats were unfamiliar, which indicated price may have been the reason. About half of the replies about poor quality involved hamburger and one-fourth concerned pork chops. Hens and whole fryers accounted for virtually all the replies about "too much trouble to fix." Pork chops, broiler legs and thighs, and whole broilers were most often mentioned as meats the family did not like.

Most white homemakers considered cottage cheese an inexpensive food, but three-fourths of the nonwhite respondents in the 1958 survey either thought it was expensive or they had no opinion. The major reason for nonuse of cottage cheese was that the homemaker did not care for it or she was afraid it would not be eaten by the family.

Of the 759 families in the 1963 survey, only 37 per cent reported that all family members liked cottage cheese. Distribution of family members not liking cottage cheese in the remaining 63 per cent of families was as follows:

<i>Family member not liking</i>	<i>Per cent</i>
Male head only.....	16
Male head and other members.....	42
Homemaker only.....	8
Homemaker and other members.....	47
Children only.....	21
Children and other members.....	66
All members disliking.....	22

In the 1955 survey, homemakers in 31 per cent and husbands in 13 per cent of the families seldom or never ate eggs in main dishes. In three-fourths of the homes in which the wife did not eat eggs, the husband had eggs for breakfast nearly every day. Half the women and two-fifths of the men who did not eat eggs in main dishes said they disliked the flavor, and most of the remainder liked variety in the breakfast menu. In 7 per cent of the families, no family member ate breakfast.

Family Characteristics

Many aspects of homemakers and their families have been investigated to determine their impact on types and kinds of foods purchased for home use. The most consistent relationships found

during the 18 years of these studies were related to income (such as per capita income), per capita meal cost, size of family, education of homemaker, or age of youngest family member up to 20 years. Family type and age of homemaker have also been implicated.

The importance of family interrelationships became apparent when, for example, the events of choice or purchase were analyzed. Increases in per capita income or per capita meal cost were accompanied by greater use of dairy products, and the question then arose as to what differences apart from income may have been involved. By grouping families with related characteristics it becomes possible to visualize a typical family with low or high income in several dimensions.

An understanding of the interrelationships aids greatly in interpretation of homemaker behavior in the use of information sources, food choices, and reaction to restrictor agents. Per capita income, for example, was a major barrier in free food choices because of such contingency factors as family size, per capita meal cost, education of the principal provider, or age of youngest family member.

An interesting relationship of family characteristics and use of a dairy product such as cottage cheese is an example. Cottage cheese, in 1958, 1963, and 1968, was most likely to be used by families with high per capita income, high per capita meal costs, small size of household, and better educated homemakers. Conversely, families that never used cottage cheese were characterized by low per capita incomes, grade school educated homemakers, low per capita meal costs, and large size of household.

Almost all studies used race as a major analytical tool. The nonwhite segment of a random sample usually had about half the annual and per capita income of white families, but spent about two-thirds as much for food and dairy products. Small families in both races spent about the same amount for dairy or poultry products, but the mix of items was different.

Age of homemaker was an obvious characteristic, but it was relatively meaningless unless related to stage in the family life cycle. The five stages most relevant to consumer economics as it applied to food expenditures were establishment, expansion, stable, contraction, and aging or retirement. In general, the average woman marries at about age 20, her last child is born when she is 26, and the last child marries when she is 47. If her hus-

band dies first she will be 64, and she can expect to live to be 77 years old.

When the homemaker was under 25 the family usually had 2 or 3 persons, and all children would be under 7 years of age in the normal two-generation household. Irregularities in the table result from inclusion of other types of households in the surveys, such as grandparent and grandchildren, children of a previous marriage, or unrelated adults.

If the homemaker was between 25 and 34 years old, half the families would contain 4 or 5 persons, and most children would be under 13. With the homemaker between 35 and 44, family size tended to be larger and the range of children's ages greater.

After age 25, adults-only families regularly increased until half the middle-aged and four-fifths of the homemakers over 55 had no persons under 20 living in the family. Most families in which the homemaker was above 45 years contained 2 or 3 persons, Table 9.

Family size was a characteristic basic to understanding food buying behavior. Annual income divided by the number of per-

TABLE 9. PERCENTAGE OF HOMEMAKERS HAVING SELECTED CHARACTERISTICS, BY AGE OF HOMEMAKER, 921 FAMILIES, THREE ALABAMA CITIES, SPRING 1968

Selected family characteristics	Proportion reporting, by age of homemaker ¹					Average age
	Under 25	25-34	35-44	45-54	55 and over	
	Pct.	Pct.	Pct.	Pct.	Pct.	
Age youngest family member						
Under 7 years.....	76	76	34	13	3	42
7-12 years.....	0	15	36	19	7	18
13-19 years.....	3	3	19	23	7	11
20 years and over.....	21	6	11	45	83	29
Family type						
All children under 7 years.....	71	36	3	3	1	20
All children under 13 years.....	5	41	20	11	8	20
All children under 20 years.....	0	14	47	19	1	20
All children 13-19 years.....	3	3	19	22	7	11
All persons 20 years and over.....	21	6	11	45	83	29
Size of family						
2.....	22	6	8	35	72	25
3.....	47	18	17	31	20	24
4.....	24	36	28	17	4	24
5.....	4	24	21	9	2	14
6.....	3	16	26	8	2	13
Per cent of families.....	12	28	26	17	17	100
Number of families.....	111	259	238	154	159	921

¹ Homemaker could be wife, mother, sister, or unrelated individual.

sons dependent on it is per capita income, the family attribute most closely related to purchase of food.

While Table 10 was based on the 1968 survey, the relationships of size of family to per capita income, per capita meal cost, and family type were typical of other surveys. With an increase in family size, proportion of per capita meal costs under 30¢ increased but those over 50¢ declined. Per capita income decreased as family size increased. Data on family composition show that children under 7 years are most numerous in 4-member families, those in the extended age range were mostly in large families, and 2-member families were usually adults only.

The importance of homemaker educational level has been noted repeatedly in consumer behavior. However, related characteristics were more important than years of schooling. The 1963-65 surveys provided a large-scale example of the distribution of homemakers by educational level. Among the respondents with a grade-school education, half were nonwhite and two-thirds

TABLE 10. PERCENTAGE OF FAMILIES HAVING SELECTED CHARACTERISTICS, BY FAMILY SIZE, 925 FAMILIES, THREE ALABAMA CITIES, SPRING 1968

Selected family characteristics	Proportion reporting, by family size					Average Pct.
	Two Pct.	Three Pct.	Four Pct.	Five Pct.	Six and over Pct.	
Family type						
All children under 7 years.....	0	40	56	11	3	20
All children under 13 years.....	4	19	26	42	27	20
All children under 20 years.....	0	2	19	41	67	20
All children 13-19 years.....	1	20	16	6	3	11
All persons 20 years and over.....	95	19	3	0	0	29
Age youngest family member						
Under 7 years.....	1	43	56	62	73	42
7-12 years.....	1	17	25	29	25	18
13-19 years.....	3	21	16	9	2	11
20 years and over.....	95	19	3	0	0	29
Per capita income						
Under \$900.....	4	8	5	8	29	9
\$900-\$1,799.....	10	21	27	21	33	21
\$1,800-\$3,199.....	28	30	38	70	38	38
\$3,200 and over.....	58	41	30	1	0	32
Per capita meal cost						
Under 30¢.....	2	12	18	36	60	24
30¢-39¢.....	21	26	30	27	21	25
40¢-49¢.....	23	27	22	26	13	22
50¢ and over.....	54	35	30	11	6	29
<i>Per cent of families</i>	25	24	24	14	12	100
<i>Number of families</i>	230	218	218	132	127	925

were 45 years or older. Income from nonwork sources was reported by a third of the families, in another third the male head was the chief support, and in most of the remaining families the homemaker provided some or all of the income. Four-fifths of the families had annual incomes under \$5,000 and per capita in-

TABLE 11. PERCENTAGE OF HOMEMAKERS HAVING SELECTED FAMILY AND PERSONAL CHARACTERISTICS, BY EDUCATION OF HOMEMAKERS, 3,325 HOMEMAKERS, THREE ALABAMA CITIES, 1963-65

Family or personal characteristic	Proportion reporting, by education of homemaker				Average
	Under 9 yr.	9-11 yr.	12 yr.	13 yr. or more	
	Pct.	Pct.	Pct.	Pct.	Pct.
Race					
White	54	70	85	92	76
Nonwhite	46	30	15	8	24
Age of homemaker					
Under 25	2	12	10	6	8
25-34	11	20	24	21	19
35-44	19	29	29	30	27
45-59	35	27	27	32	30
60 and over	33	12	10	11	16
Source of income					
Homemaker only	11	9	5	5	7
Male head	33	51	57	54	50
Homemaker and male head	21	22	29	29	26
All or part from nonwork	35	18	9	12	17
Size of household					
2-3 (small family)	64	50	53	55	55
4-5 (average family)	18	31	35	36	31
6 or more (large family)	18	19	12	9	14
Annual income					
Under \$3,000 (very low)	53	29	10	4	22
\$3,000-\$4,999 (low)	29	33	20	9	22
\$5,000-\$7,999 (average)	14	29	41	25	29
\$8,000 and over (high)	4	9	29	62	27
Per capita income					
Under \$900 (low)	55	37	14	4	25
\$900-\$1,799 (average)	29	37	36	20	31
\$1,800-\$3,199 (high)	12	20	32	44	28
\$3,200 and over (liberal)	4	6	18	32	16
Marketing knowledge score					
0-3 (low)	53	37	36	25	37
4-5 (average)	35	39	34	31	35
6-8 (high)	12	24	30	44	28
Nutritional knowledge ranked score					
0-2 (very low)	69	25	16	7	27
3 (low)	25	38	27	18	27
4 (average)	5	26	37	43	29
5 (high)	1	11	20	32	17
Per cent of homemakers	22	21	34	23	100
Number of homemakers	740	690	1,115	780	---

comes under \$1,800. Two-thirds of the families had 2 or 3 persons.

As educational level of the homemaker increased, the proportion of nonwhite respondents declined markedly, annual and per capita income increased, the percentage with female heads of the household declined but that of working wives increased, and the percentage of large families decreased. Marketing and nutritional knowledge scores increased with greater education of the homemaker, Table 11.

Education of the husband was closely related to education of the homemaker. Two-thirds of the husbands with grade school education had wives with similar education. One-third of the husbands with some high school education had wives who were similarly educated, about half were married to high school graduates, and most of the remainder had wives with grade school educations. Three-fourths of the college-educated husbands were married to women with equal or slightly less education, Table 12.

The close relationship of income and education of the husband was a major factor in food buying decisions of the homemaker. In the 1968 survey, about half the grade-school educated hus-

TABLE 12. PERCENTAGE OF FAMILIES HAVING SELECTED CHARACTERISTICS, BY EDUCATION OF HUSBAND, 820 FAMILIES, THREE ALABAMA CITIES, SPRING 1968

Family characteristics	Proportion reporting, by education of husband					Average
	Under 9 yr.	9-11 yr.	12 yr.	13-15 yr.	16 yr. or more	
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
Education of homemaker						
Under 9 years.....	63	15	2	2	1	12
9-11 years.....	26	34	12	7	2	12
12 years.....	8	47	71	44	20	39
13-15 years.....	2	4	13	38	38	22
16 years and over.....	1	0	2	9	39	15
Annual income						
Under \$3,000.....	17	1	1	4	0	3
\$3,000-\$5,999.....	52	35	18	6	3	18
\$6,000-\$9,999.....	26	46	48	29	14	31
\$10,000-\$12,999.....	4	13	22	33	26	22
\$13,000 and over.....	1	5	11	28	57	26
Per capita income						
Under \$900.....	26	6	4	2	0	6
\$900-\$1,799.....	31	41	28	18	4	21
\$1,800-\$3,199.....	34	29	43	44	42	40
\$3,200 and over.....	9	24	25	36	54	33
<i>Per cent of families</i>	14	10	29	15	32
<i>Number of families</i>	115	83	238	126	258	820

bands had incomes of \$3,000 to \$6,000, whereas two-thirds with educations beyond high school had incomes over \$10,000.

Four-fifths of the young husbands earned under \$10,000. Two-thirds of the husbands between 25 and 34 years had incomes

TABLE 13. PERCENTAGE OF HOMEMAKERS HAVING SELECTED FAMILY AND PERSONAL CHARACTERISTICS, BY PER CAPITA INCOME, 3,352 HOMEMAKERS, THREE ALABAMA CITIES, 1963-65

Family or personal characteristic	Proportion reporting, by per capita income group				Average
	Under \$900	\$900-1,799	\$1,800-3,199	\$3,200 & over	
	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>	<i>Pct.</i>
Race					
White.....	38	81	94	98	76
Nonwhite.....	62	19	6	2	24
Age of homemaker					
Under 25.....	8	9	6	5	8
25-34.....	20	24	19	10	19
35-44.....	26	30	31	17	27
45-59.....	25	21	33	52	30
60 and over.....	21	16	11	16	16
Education of homemaker					
Under 9 years (grade school).....	48	21	10	6	22
9-11 years (some high school).....	30	25	15	8	21
12 years (high school graduate).....	19	39	38	38	34
13 years or more (beyond high school).....	3	15	37	48	23
Source of income					
Homemaker only.....	15	6	4	2	7
Male head of house.....	38	56	53	50	49
Homemaker and male head.....	16	22	31	39	26
All or part from nonwork.....	31	16	12	9	18
Size of household					
2-3 (small family).....	39	44	63	91	55
4-5 (average family).....	28	43	33	9	31
6 or more (large family).....	33	13	4	0	14
Annual family income					
Under \$3,000 (very low).....	70	14	0	0	22
\$3,000-\$4,999 (low).....	26	40	13	0	23
\$5,000-\$7,999 (average).....	4	41	38	30	29
\$8,000 up (high).....	0	5	49	70	26
Marketing knowledge score					
0-3 (low).....	48	39	32	29	37
4-5 (average).....	37	36	32	32	35
6-8 (high).....	15	25	36	39	28
Nutritional knowledge ranked score					
0-2 (very low).....	35	22	13	11	21
3 (low).....	36	30	24	22	29
4 (average).....	22	31	39	44	33
5 (high).....	7	17	24	23	17
<i>Per cent of homemakers</i>	25	31	28	16	100
<i>Number of homemakers</i>	851	1,039	930	532	---

between \$6,000 and \$13,000, and half of those 35 to 54 made over \$10,000. Income tends to rise until the husband is in the fifties, but declines sharply on retirement.

Disposable family income after taxes was most useful in food studies when it was known how many persons, without regard to age and sex, were supported by that income. Per capita income was interrelated with annual family income, size of family, income and education of the male head of the house, stage in the family life cycle, and employment of the homemaker.

Usually per capita income became larger as the family matured, and this tendency continued as the children left home or the wife became the second earner. Per capita income tended to be higher when the homemaker was in the forties and fifties, and family size was 2 or 3 persons. The better educated household head had the more lucrative job and a smaller family. The second earner often had a higher income classification, and liberal income levels continued into the retirement years.

Relative differences in families at four levels of per capita income are shown in data from the 1963-65 surveys. In the lowest per capita income group, two-thirds were nonwhite and about half had homemakers or male heads with a grade-school education. A larger proportion of these families were of larger size and nearly three-fourths had annual incomes below the poverty level. Low marketing and nutritional knowledge scores were common in low income families.

Almost all families with high per capita incomes were white, with half the homemakers in the middle years and many gainfully employed. Virtually all such families were of small size and almost three-fourths had annual incomes in the liberal range, Table 13.

5. Event of Purchase

The decision to accept or reject individual products was made after the customer weighed attributes in meeting needs, income and tastes, nutritional knowledge, marketing techniques, pantry inventory, meal patterns, and competition of other goods and services.

National Surveys of Food Expenditures

The pattern of spending for milk and poultry products by the Alabama surveyed families is made more meaningful by examin-

ing data from governmental studies that provide a more comprehensive picture of expenditures for all food groups. The 1965 Household Food Consumption Study and consumer expenditure studies by the U.S. Bureau of Labor Statistics showed that the amount spent for food by families varied by income, place of residence, region, and family size or composition.

Families in the Northeast spent the most for food, those in the South the least. These differences were related to income, family composition, meals away from home, and food prices. Regional spending patterns show that families in the Northeast spent more for meat, Western families more for fruits and vegetables, and those in the North Central more for milk and its products. Families in the South spent relatively more for cereals, bakery goods, or the items used in baking, such as fats and oils, sugar or eggs, and beverages.

Higher income families spent a few more cents of the food dollar for the meat and fruit-vegetable groups and less for cereals and bakery goods, sweets, and beverages. Larger families had higher food bills, but spent less per person than small families. With at least one child under 6 years, the family spends more like large families. As the family becomes more adult, less is spent for cereals, bakery products, and milk, but more for meat, fruits and vegetables, and beverages.

In general, variations in spending patterns were associated with differences in amount spent per person for food. Comparison between low- and high-income families, families in the Southern and Northeastern regions, large and small families, and families with and without children were all comparisons between one group of families that averaged less than \$6 per person for food at home and one that averaged \$7 or \$8 per person per week (1965 prices).

Groups that spent less than \$6 per person per week generally used a larger share of each food dollar for cereals and bakery products and a little less for meat, poultry, fish, and fruits and vegetables than those spending larger amounts. There were a few exceptions: Large families and families with small children spent a larger share of their grocery dollar for milk and less for other beverages than other families with the same per person expenditure. Southern families spent more for beverages than other regional groups spending similar amounts for food at home.

According to the 1965 Household Food Consumption Study,

TABLE 14. AVERAGE VALUE OF PURCHASED FOOD PER PERSON PER WEEK AT HOME AND AWAY FROM HOME IN SOUTHERN URBAN FAMILIES, SPRING 1965¹

Annual family income Southern urban families	Value food per person per week		
	At home	Away from home	Total
	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>
Under \$3,000	6.09	.78	6.87
\$3,000-\$4,999	6.85	1.17	8.02
\$5,000-\$6,999	8.11	2.01	10.12
\$7,000-\$9,999	9.47	2.88	12.35
\$10,000 and over	10.22	3.61	13.83
<i>Average value, South</i>	7.89	1.90	9.79
<i>Average value, United States</i>	8.19	1.86	10.05

¹ *Family Economics Review*, ARS 62-5, December 1968, page 5.

the average urban family in the South spent \$7.89 per person per week for food at home and \$1.90 for food away from home, a total of \$9.79. The average for all families in the United States was \$8.19 and \$1.86, respectively, or a total weekly food cost per person of \$10.05. In the South, as in other regions of the United States, the value of food eaten at home and away from home increased with annual family income, Table 14.

Southern families divided the food dollar about the same as families in other regions:

<i>Food group</i>	<i>Per cent</i>
Meat, poultry, fish, eggs	35
Fruits and vegetables	17
Flour, cereal, baked products	13
Milk and milk products	13
Fats, oils, sweets, other foods	22

To determine the income required for a family to live decently in an urban environment, the Bureau of Labor Statistics uses a reference family of two adults aged 38, a boy of 13, and a girl of 8. For this family in 1970 a typical \$100 would be distributed as follows:

<i>Item</i>	<i>Dollars</i>
Food at home and purchased meals	22.70
Shelter	20.10
Home furnishings	2.80
Household operation	2.30
Transportation	8.70
Clothing	8.10
Personal care	2.30
Medical care, insurance	5.00
Miscellaneous	7.70
Gifts, contributions	2.70
Life insurance	1.70
Occupational expenses90
Payroll deductions	3.10
Personal taxes	11.90

TABLE 15. PER CAPITA FOOD COST PER WEEK, PER MONTH, AND PER YEAR FOR BUREAU OF LABOR STANDARD FAMILY BASED ON COST OF FOOD AT HOME AT THREE COST LEVELS, JUNE, 1968^{1, 2}

Bureau of Labor Statistics family members	Food cost per week at three levels		
	Low cost	Moderate cost	Liberal cost
	<i>Dol.</i>	<i>Dol.</i>	<i>Dol.</i>
Girl, 8 years of age.....	6.00	7.70	9.50
Boy, 13 years of age.....	8.20	10.70	12.70
Woman, 38 years of age.....	6.70	8.60	10.30
Man, 38 years of age.....	7.60	9.60	11.70
Total per week.....	28.50	36.60	44.20
Total per month.....	114.00	146.40	176.80
Total per year.....	1,482.00	1,903.20	2,298.40
<i>Average per capita meal cost</i>34	.44	.53

¹ *Family Economics Review*, ARS 62-5, September 1968, page 23.

² Figures in the table are taken from Appendix Table 1.

To provide a base line for food costs in an average family for the 1968 survey, the measure of food quantities and costs utilized in the marketing studies was employed. Estimates in the "Cost of Food at Home at Three Cost Levels" (prepared by the Consumer and Food Economics Research Branch, ARS, USDA) were based on quantities of food necessary for good nutrition by sex and age groups, if all meals were eaten at home. Costs for urban families are adjusted to current levels by use of "Retail Food Prices by Cities" (from Bureau of Labor Statistics). Costs of food per person per week for the BLS reference family members at three cost levels, expanded to monthly and yearly amounts, are given in Table 15 and Appendix Table 1.

Per Capita Food Costs Per Week

The per capita weekly food cost concept brings together a large number of factors that the housewife considers in making food purchases and in gathering information to assist her in making the ultimate decisions. Per capita meal cost was a combined measure of family income, size of family, stage in the family life cycle, and amount spent for food per person or per meal. As reported in the governmental data, differences in per capita food costs per week result in different product mixes, and were related to family size and composition.

In all of the surveys, per capita food costs were related to per capita income, per capita meal cost, and size of family. However, these characteristics were so interrelated that to analyze each one without regard to the others produced distorted results.

Typical characteristics of the 1968 survey families at four levels of weekly per capita food costs are shown below:

Per capita food cost less than \$6 (234 families)

Homemaker under 35 years of age, education less than 12 years, 5 or more persons in the family, annual income less than \$6,000, extended age range in children, youngest family member under 7, per capita meal costs less than 30¢. Spent less than 60¢ per person, but more than 17 per cent of the food cost for dairy products.

Per capita food cost \$6 to \$8 (278 families)

The "average" family in most respects when measured against the total sample. Homemakers most often between 25 and 34 years of age with high school educations, 4-member families, annual incomes of \$6,000 to \$10,000, per capita incomes \$1,800 to \$3,200. All children under 7, per capita meal costs 30¢ to 38¢. Used 14 to 20 quarts of milk equivalent, spent 60¢ to 99¢ per person for dairy products, or 13 to 24 per cent of the food bill.

Per capita food cost \$8 to \$11 (259 families)

White homemaker 35 to 44 years of age, 12 or more years of education, 2- to 4-member family, \$10,000 or more annual income, often an adults-only family. Used about 20 quarts of milk equivalent, spent more than \$1 per person for dairy products, or 9 to 16 per cent of the food bill. Spent 40¢ to 52¢ per person per meal.

Per capita food cost more than \$11 (154 families)

White homemaker over 45 years of age, 2-person family, \$13,000 and over annual income, per capita income above \$3,200. Adults only or a teenager, per capita meal cost above 52¢. Spent more than \$1.40 per person for dairy products, but less than 13 per cent of the food bill.

Based on the relationship of family characteristics and purchase of milk products to per capita food expenditures per week, it was observed that increasing amounts were spent for food per person per week with (1) increasing age of homemaker, education of the homemaker, annual income, per capita income, age of youngest family member up to 20 years, per capita meal cost, and expenditures for dairy products; and (2) decreasing household size and percentage of food cost spent for dairy products.

Additional data on the relationship of per capita weekly food costs to family characteristics and expenditures are given in Appendix Table 2. A recent bulletin based on the 1968 survey (13) reports on effect of income and food costs in purchase of milk equivalents, and another (14) on effect of stage in the family life cycle and family size on per capita purchases of the most important dairy products.

Cost Levels of Meat Purchases

All meats used by the families in the 1963-65 surveys were classed as low, moderate, and high per pound cost. Low-cost meats included most forms of poultry, hamburger, some pork cuts, and some types of fish that retailed for less than 50¢ a pound. Moderate-cost meats, those that retailed for 50¢ to 75¢ per pound, included chuck roasts, sausage, wieners, and some types of ham. High-cost meats retailed for over 75¢ per pound, and these included steaks, roasts, and boneless cuts of beef, cold cuts, ham slices, and chicken breast. Analysis was made including and excluding poultry forms retailing for less than 50¢ per pound to determine families who used poultry on other than an economy basis.

About half the families in the three-city sample had used meats from all three cost levels, and had included another low-cost meat if broilers had been served. One-fourth of the families had used high- and moderate-cost meats, with poultry as the only low-cost meat. Eighty per cent of the families had used at least one high-cost meat, 93 per cent had used a moderate-cost meat, and 67 per cent a low-cost meat.

Exclusive use of moderate- and low-cost meats tended to increase as income level declined, while the use of high- and moderate-cost meats, plus low-cost poultry, increased with income

TABLE 16. PERCENTAGE OF HOMEMAKERS REPORTING COST PATTERNS OF MEATS PURCHASED THE PREVIOUS 7 DAYS (WITH RESPECT TO POULTRY AS THE ONLY LOW-COST MEAT USED), BY PER CAPITA INCOME, 3,349 HOMEMAKERS, THREE ALABAMA CITIES, 1963-65

Cost pattern of meats purchased during previous 7 days	Proportion reporting, by per capita income group				Average
	Under \$900	\$900-1,799	\$1,800-3,199	\$3,200 & more	
	Pct.	Pct.	Pct.	Pct.	
High, moderate, low cost.....	36	53	57	47	49
High, moderate + low cost poultry ¹	14	17	22	30	21
Moderate, low cost	33	19	9	7	13
High, moderate only ²	4	4	6	9	6
Moderate + low cost poultry ¹	6	3	1	---	4
High, low cost.....	2	2	3	3	3
Low only.....	3	1	---	---	2
Moderate only ²	1	1	---	0	1
High + low cost poultry ¹	---	---	---	2	1
High only ²	---	---	---	---	---

¹ In these families, poultry was the only low-cost meat purchased.

² No poultry or other low-cost meat purchased.

³ Dash indicates some families, but less than 1 per cent.

level. Major users of meats at the three cost levels were the middle per capita income groups, Table 16.

6. Event of Consumption

A number of concepts and analyses from marketing can be applied to food use by the consumer. When the food arrives in the kitchen there is production scheduling, manufacturing, inventory, management, and distribution. The starting phase of the event of consumption is the event of purchase, which terminated the choice event. The use process terminates when the food is served to the family as part of a meal or snack.

Production scheduling causes the newly purchased food to be consumed at once or put into the refrigerator, freezer, or cupboard for future use. Manufacture or meal preparation involves processing of foods, singly or combined, in which labor, utilities, kitchen supplies, and equipment are utilized and which requires management of timing and selection of compatible colors, textures, and flavors. Service may be simple or complicated. "Few food manufacturing firms would cater to the whims of even their best customers the way many housewives do as a matter of course," commented Dr. Burk.

Throughout the process of use there are provisions for discard resulting from spoilage because of overbuying, failure to meet expectations, and plate discard. During use, consumers learn more about the attributes of products they bought, and how well the qualities match or fulfill specific conditions. Learning affects subsequent stages in the use of a particular product and subsequent choice of a similar product, as well as shaping expected attributes and changing technological knowledge and expectations.

Time is an important element in the use process as unanticipated changes in meal type, use of leftovers, omitted meals, failure of equipment, or many other factors in feeding families require adjustment of inventory control. Family interaction, cultural patterns, and values or goals cause many families to be extravagant in the use of food, equipment, and energy. The selling price in the process of consumption or use is the satisfaction of family members in the items selected by the food buyer, and the success of the food in promoting physiological and psychological health of the family unit.

If the product selected fulfills consumer expectation during the

process of consumption and gives indication of meeting present and future needs more advantageously than alternative products, the item becomes a repeat purchase. The major decision in future purchases becomes when, not what, to buy. Satisfaction derived from use reinforces the purchase choice, while dissatisfaction is a negative reinforcer and results in disuse or selection of alternative choices.⁶

Consumption of Protein Foods

In the 1956 and 1958 surveys, four-fifths of the white and one-half of the nonwhite homemakers felt their families were eating enough meat. Calculations made from estimated amounts in 1958 showed that 48 per cent of protein consumed during the study week had come from red meats and fish, 10 per cent from poultry, and 10 per cent from eggs. Added protein would be obtained from dairy products, legumes, and grains. In nonwhite families, 36 per cent of ingested protein came from red meat and fish, 11 per cent from poultry, and 7 per cent from eggs.

Beef consumption increased from 0.6 to 1.4 pounds per person with increasing income level in white families, and from 0.4 to 2.3 pounds in nonwhite families. Consumption of beef increased with educational level in both races. In white families, fish use increased with educational level because of greater use of shrimp. Nonwhite families showed much higher fish use among those with the least education.

In the 1955 survey, white families consumed an average of 5.9 eggs per person per week, slightly above the recommendation of the National Research Council. Nonwhite families averaged 5.2 eggs per person, about 20 per cent below optimum.

Males of all ages, except nonwhite teen-age boys, ate eggs more often than females in the same age range. A larger percentage of older than younger males were habitual egg consumers. White persons consumed slightly more eggs and ate them more often than nonwhite persons.

Family characteristics most closely related to per capita use of eggs were the frequency with which the husband or homemaker ate eggs, family age distribution, per capita meal cost, and the source from which the eggs were purchased. If the homemaker ate an egg nearly every day, the family was above average in egg use, but if she never ate eggs then average use dropped to

⁶ Burk. Ibid. pp. 145-150.

about three-fourths of optimum. Homemakers who did not eat eggs may not have included them as main dishes in family meals, especially breakfast. A third of the homemakers infrequently ate eggs, though they may have served them to other family members. The largest number of eggs per person was consumed in adults-only families, especially the nonwhite couples.

In the 1955 survey, three-fourths of the eggs were consumed as a main dish item. Fried eggs were preferred by 55 per cent of the white and 38 per cent of the nonwhite families in the 1956 survey. In the 1958 survey, about half the white and a third of

TABLE 17. PERCENTAGE EGGS USED OF RECOMMENDED AMOUNT,¹ BY RACE, 509 WHITE AND 120 NONWHITE FAMILIES, GADSDEN, ALABAMA, FALL 1955

Family characteristics	Percentage eggs used of recommended amount, by race	
	White families	Nonwhite families
	<i>Pct.</i>	<i>Pct.</i>
Age of homemaker		
Under 20.....	91	106
20-39.....	95	85
40-59.....	105	119
60 years and over.....	112	127
Age youngest family member		
Under 1.....	75	67
1-5.....	97	85
6-12.....	100	106
13-15.....	117	90
16-19.....	118	108
20 and over.....	110	171
Age of husband		
Under 40.....	93	83
40-59.....	105	106
60 and over.....	112	144
Per capita meal cost		
Under 10¢.....	29	60
10¢-19¢.....	88	92
20¢-29¢.....	100	112
30¢-39¢.....	103	138
40¢-49¢.....	103	177
50¢ and over.....	127	138
Size of household		
Under 2.0.....	127	142
2.0-2.9.....	108	156
3.0-3.9.....	98	104
4.0-4.9.....	92	104
5.0-5.9.....	97	75
6.0 and over.....	93	83

¹ National Research Council recommendations—6 eggs per person per week for all except those under 3 or over 60 years, for whom 5 eggs per week were recommended.

the nonwhite families used eggs as a main dish for other than breakfast once or twice a week. Four-fifths of the white and about half of the nonwhite families usually had eggs in some form at breakfast.

Per capita use of eggs increased with more years of education of the homemaker in nonwhite families, and with increasing income in both races. Per capita use of eggs tended to increase with age of youngest family member. Three-fourths of the nonwhite families containing only adults used more than 6 eggs per person per week, and the greater numbers were used in older families, Table 17.

More than half the white families in the 1968 survey had used whole milk, process cheese, and ice cream. In nonwhite families more than half had used whole milk, buttermilk, and evaporated milk. Although percentage of users of whole milk were similar by race, nonwhite families used half the amount consumed by white families. Racial use differences were slight with process cheese and buttermilk, but nonwhite families used larger amounts of evaporated milk.

Dry milk and ice milk were used by larger percentages of nonwhite families, but amounts were similar by race. Other dairy products were used by a larger percentage of white families. Products such as cream, natural American cheese, and chocolate milk were used by fewer nonwhite families, but quantities were greater, Table 18.

Use of more than one form of dairy products is the usual practice, and families may use a large variety. For analysis purposes, the calcium content of individual products measured against that of a quart of whole milk was used to estimate its contribution to total milk equivalent used in the family. All products were then placed in five classifications. Sweetmilk equivalent included all fresh milk forms, such as whole milk, chocolate milk, and skim milk. All forms of cheese were placed together. Evaporated milk, condensed milk, and infant formulas were the canned milk group. Dry milk forms were grouped together, and all frozen desserts were the ice cream equivalent.

Reduction of dairy products to milk equivalent classes provided a nutritional yardstick that measured adequacy of milk use in each family. Milk requirements in the USDA moderate cost food plan supplied the standard for recommended milk equivalent. Adjustments for age of family members and percentage of meals

TABLE 18. PERCENTAGE OF TOTAL SAMPLE USING EACH MILK PRODUCT, AVERAGE QUANTITY USED DURING 7-DAY PERIOD BY CONSUMING FAMILIES, 801 WHITE AND 124 NONWHITE FAMILIES, THREE ALABAMA CITIES, SPRING 1968

Selected milk products used during 7 days previous to interview	Percentage families using		Average quantity per family using	
	White	Nonwhite	White	Nonwhite
	<i>Pct.</i>	<i>Pct.</i>	<i>Unit</i>	<i>Unit</i>
Whole milk, qt.....	88	83	8.0	3.8
Process American cheese, oz.....	59	47	12.2	11.0
Ice cream, pt.....	54	45	4.9	4.4
Buttermilk, qt.....	36	59	2.6	2.0
Evaporated milk, oz.....	34	53	33.3	41.8
Skim milk, qt.....	30	6	3.9	2.8
Miscellaneous cheese, oz.....	29	11	7.9	3.0
Cottage cheese, pt.....	27	5	1.6	1.5
Cream, all forms, ½ pt.....	24	2	1.9	2.4
Ice milk, pt.....	19	27	5.1	4.7
Natural American cheese, oz.....	18	7	11.7	24.1
Dry milk, oz.....	15	18	21.9	20.8
Ice cream bars, 6/pt.....	12	7	2.5	.7
Chocolate milk, qt.....	10	8	2.6	3.3
Half and half, pt.....	7	0	1.3	0
Condensed milk, can.....	5	1	2.3	1.0

eaten at home fitted the recommendations to the needs of each family. Requirements for children were 6 to 7 quarts of milk equivalent per week, and for adults, 3.5 quarts. Total milk equivalent used divided by the recommended amount measured the degree of adequacy expressed as "percentage milk equivalent used of recommended" or "percentage use of milk equivalent."

In the 1968 survey, sweetmilk equivalent accounted for nearly three-fifths of the milk equivalent used by white families and a little over one-third in nonwhite families. Cheese equivalent accounted for 17 per cent of the milk equivalent used in all families. Buttermilk, canned milk, dry milk, and ice cream made up the greater share of the nonwhite family dairy product consumption. The small amount of sweetmilk consumed by nonwhites was the more important difference in milk consumption by race.

Presentation of characteristics associated with use of a milk product makes possible the visualization of a typical family in more than one dimension. By age of homemaker as a stereotype, it was found that products such as whole milk, ice cream bars, and chocolate milk were most popular in families having homemakers under 40 years of age. The various cured cheeses were usually purchased by homemakers between 25 and 45, as were ice cream, cottage cheese, and cream cheese.

Young homemakers were low consumers of cottage cheese, skim milk, cream, ice milk, dry milk, and the cured cheeses. Skim milk and dry milk were used by greater percentages of homemakers older than 40. Respondents over 55 years of age used relatively more buttermilk, evaporated milk, and ice milk, but less whole milk, process cheese, ice cream, cream, chocolate milk, and whip topping (nondairy product). Typical users of the more popular dairy products had the following characteristics:

Buttermilk (350 families)

Nonwhite homemakers, 55 years and over, adults-only families.

Evaporated milk (326 families)

Nonwhite homemaker, less than 12 years of education, annual income less than \$6,000, per capita income less than \$1,800, per capita meal costs less than 30¢.

Cottage cheese (243 families)

White homemaker, education beyond high school, male head support, annual income more than \$13,000, per capita income more than \$3,200, per capita meal costs more than 50¢. High to very high use of milk equivalent. Very high percentage use of milk equivalent.

Cream – whipping, sour (190 families)

White homemaker, 25 to 34 years of age, education beyond high school, male head support, annual income more than \$13,000, per capita income more than \$3,200, per capita meal cost more than 50¢. High use of milk equivalent, high percentage use of milk equivalent.

Ice milk (197 families)

Homemaker 35 to 44 years of age, annual income between \$6,000 and \$10,000.

Natural American cheese (147 families)

White homemaker, male head support, 4-member family, annual income more than \$10,000, per capita income more than \$1,800, per capita meal costs more than 50¢. High use of milk equivalent, high percentage use of milk equivalent.

Dry milk (145 families)

Homemaker 35 to 44 years of age, 5 or more family members, youngest child 7 to 12, per capita meal cost less than 30¢. High use of milk equivalent, high percentage use of milk equivalent.

Nondairy whip topping (126 families)

White homemaker, 35 to 44 years of age, high school graduate, male head support, 4-member family, annual income more than \$13,000, per capita income more than \$3,200, youngest child more than 12 years. High use of milk equivalent, moderate to very high percentage use of milk equivalent.

Cheese topping (112 families)

White homemaker, 25 to 34 years of age, education beyond high school, male head support, annual income more than \$13,000, per capita income more than \$3,200, youngest child under 12. High use of milk equivalent.

One-half the white and three-fourths of the nonwhite families were using less than 90 per cent of the recommended equivalent. Few classifications of white families had groups that were much below optimum limits. The converse was true of nonwhite families who were using an average of 59 per cent of recommended milk equivalent.

The relationship of family characteristics and use of milk equivalent was reported in two recent bulletins (12,13). Increased amounts of milk equivalent were used with increasing annual incomes, household size, age of children, per capita milk product expenditure, number of dairy products used, per cent milk products cost was of food expenditures, and percentage milk equivalent used was of recommended amounts.

It has been indicated that families using low amounts of fresh milk, usually consumed as a beverage, frequently do not use sufficient milk equivalent for good nutrition. In the 1958 survey, a study was made of beverage choices at meal and snack times by all family members. Race, season of the year, and age exerted considerable influence on the snack beverage. Most white families had some beverage other than water with meals, and most white children had an afternoon snack drink. Adults were more likely to have a snack beverage in warm weather, usually coffee or a soft drink in the case of employed homemakers.

Milk, coffee, and fruit juices were used more often by families with ample food money. Tea and soft drinks or beverage powder drinks were the preference of families with lower incomes. Major racial difference noted was the lower percentage of beverage use by nonwhites, reflecting the lesser use of all beverages other than water.

The general pattern of beverage use showed coffee to be the breakfast choice for adults the year round. More boys than girls drank coffee for breakfast, especially after age 16. The major beverage at other meals in summer was iced tea. Children who drank iced tea in summer usually changed to milk in winter, but adults were somewhat more likely to shift to coffee. Soft drinks were more often used as snack beverages in warm weather by teenagers and adults.

Milk was consumed primarily as a beverage with the noon and evening meals, especially in cold weather. If adults drank milk at all, it was usually at these meals. Some older persons and younger children drank milk before going to bed. Milk as a snack beverage was used largely by boys of all ages and girls under 13, Table 19.

At a guest meal for adults, nine-tenths of the white homemakers would serve iced tea in summer and coffee in winter. The relatively few nonwhite hostesses would serve coffee in winter, but "other beverages" in warm weather. Most respondents did not offer milk with other beverages at a party or evening meal, but would serve it if the guest asked for it.

Homemakers of higher education and income said it was quite all right for a guest to ask for milk. Lower income respondents considered it rude since the hostess might not have milk on hand. Major reasons given for failing to offer milk along with other beverages were that the hostess did not drink milk, adults "don't drink" or "don't like milk," or it was too expensive.

TABLE 19. PERCENTAGE OF MILK DRINKERS AMONG FAMILY MEMBERS AT MEAL AND SNACK PERIODS, BY RACE, URBAN AREAS OF ALABAMA, 1958

Meal and snack periods	Proportion of family members drinking milk, by age and sex							
	Home-maker	Male head of house	Boys			Girls		
			Under 13 yr.	13-15 yr.	16-19 yr.	Under 13 yr.	13-15 yr.	16-19 yr.
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
White families								
Breakfast.....	6	8	73	64	40	72	42	44
Noon meal.....	29	34	84	87	67	86	79	75
Evening meal.....	39	47	81	74	69	83	65	75
Morning snack.....	4	4	18	6	1	16	2	3
Afternoon snack.....	5	5	23	15	14	25	11	11
Evening snack.....	10	16	22	19	13	19	12	15
Number of people ¹ .	831	754	420	69	76	429	81	62
Nonwhite families								
Breakfast.....	9	10	70	46	33	68	51	39
Noon meal.....	22	23	72	69	58	73	74	54
Evening meal.....	21	31	63	40	37	57	46	37
Morning snack.....	2	3	13	2	3	10	3	2
Afternoon snack.....	3	4	16	10	5	14	7	6
Evening snack.....	3	8	2	4	4	12	6	5
Number of people ² .	818	662	567	89	71	665	110	100

¹ Accounts for 93 per cent of family members; excludes 76 other males and 135 other females 20 years and over living in the family.

² Accounts for 90 per cent of family members; excludes 118 other males and 238 other females 20 years and over living in the family.

Place of Recipes in Food Consumption

Each year promoters of food products invest millions of dollars in campaigns centered on recipe ideas. Many homemakers filled boxes with clippings, leaflets, and hand-written recipes. Recipes are a source of interest, excitement, and inspiration. But what kind of homemakers will use recipes in planning meals and shopping, or in food preparation?

The 1958 survey determined homemaker attitudes toward use of a hypothetical new recipe and an actual recipe with or without a photograph of the completed dish. Three-fourths of the homemakers would try a new recipe in which a combination of familiar foods was listed, and about half would try the recipe if one or more of the ingredients were unfamiliar. However, more homemakers would want to taste a sample or ask someone's advice if the recipe had an unfamiliar ingredient. Recipes with unusual ingredients were more appealing to college-educated white homemakers.

White homemakers were more likely to try new recipes. They were more likely to give a qualified answer if the ingredient had never been tasted, implying future use after more was known about the recipe, whereas nonwhite women relied on their own judgment and were more positive in trying or not trying the recipe. Regardless of race, responsiveness to recipes of both types increased with education of the homemaker. White homemakers with average or higher per capita incomes were attracted by recipes, but only nonwhite homemakers with high per capita incomes.

Respondents were also shown an actual recipe for "Peach Trifle," based on an old-time recipe using stale sponge cake, soft custard, and jelly for which convenience foods such as instant pudding had been substituted. Half of the homemakers were shown only the recipe, while others saw the recipe plus a black and white photograph of the completed dish. Homemakers reacted to the actual recipe about the same as to the hypothetical recipe with the unfamiliar ingredient. Younger homemakers were more likely to approve of the recipe when accompanied by the picture.

As with the recipe having the unfamiliar ingredient, the updated Peach Trifle recipe appealed to the homemaker with higher per capita income and education beyond high school, and

to those between 40 and 60 years of age. With an increase in per capita income or per capita meal cost, new recipes of all kinds were more likely to be used. However, homemakers with small families or those over 60 years of age were seldom attracted to recipes of any kind.

In the 1963-65 survey, 45 per cent of the respondents had tried at least one new recipe during the previous month. Nearly half the new recipes had been for desserts, especially cakes. Friends and relatives were the most frequent source of new recipes, while printed material (newspapers, magazines, cookbooks, and package labels) accounted for most of the remainder. Foods especially purchased for use in the new recipe were usually spices or other flavoring agents, but purchase of fruits, vegetables, and combinations of foods, such as soup or mixes, were also reported for new recipe use.

Income level was closely related to the use of a new recipe, but not to type, source, or food purchased. About twice the percentage of higher income homemakers had tried a new recipe as those with the lowest income. The difference was even greater in the use of several recipes.

With increase in educational level, more homemakers tried new recipes and more had tried several recipes, Table 20. Cake and cookie recipes were most popular with homemakers having

TABLE 20. PERCENTAGE OF HOMEMAKERS HAVING SELECTED FAMILY AND PERSONAL CHARACTERISTICS, BY NUMBER OF NEW RECIPES TRIED, 1,416 HOMEMAKERS, THREE ALABAMA CITIES, 1963-65

Family and personal characteristics	Proportion reporting, by number of new recipes tried		
	One <i>Pct.</i>	Two <i>Pct.</i>	Three <i>Pct.</i>
Per capita income			
Under \$900 (low).....	77	17	6
\$900-\$1,799 (average).....	59	30	11
\$1,800-\$3,199 (high).....	45	37	18
\$3,200 and over (liberal).....	46	36	18
Education of homemakers			
Under 9 years (grade school).....	80	17	3
9-11 years (some high school).....	64	28	8
12 years (high school graduate).....	51	34	15
13 years or more (beyond high school).....	39	39	22
<i>Per cent of homemakers</i>	56	32	12
<i>Number of homemakers</i>	998	267	151

less than 12 years of education. Casserole and salad recipes appealed to those with education beyond high school.

Homemakers were asked if they saved printed recipes from newspapers, magazines, or package labels. Three-fourths had clipped such recipes, and had placed them in a favorite cookbook, a drawer or box, a recipe file, or a loose-leaf binder. Forty-four per cent of those who saved recipes said those for a cake or casserole were most often used.

A leaflet with 12 prize-winning poultry recipes was given to interested visitors at the broiler display. Of the 192 women who remembered the display, 27 per cent had tried one recipe; 16 per cent had tried two, and 3 per cent had tried three or more. About half of each homemaker age class up to 60 years had tried a recipe, but only a fourth of the older ones. Among the grade-school educated respondents 20 per cent had tried a recipe, as compared to 68 per cent of those with education beyond high school.

Broiler information broadcast on radio mentioned poultry recipes by name only. A sample of those who asked for recipes was interviewed to determine characteristics of homemakers who were motivated to request a recipe. Half of the 29 respondents were between 45 and 59 years of age, two-thirds were high school graduates, two-thirds had families of 2 or 3 adults, and two-thirds had per capita incomes over \$1,800. Most of these homemakers used complete shopping lists and food store advertisements in planning shopping, enjoyed entertaining guests for meals, liked to try all kinds of food suggestions and new products, and often made up their own recipes. They had regular times for meals, and usually shopped the same time every week. Half had tried at least one of the recipes. (The most popular recipe was "Easy Oven Chicken" — broiler parts baked with mushroom soup in aluminum foil.)

Homemakers had asked for a recipe because the name or description was unusual or interesting, they wanted a new way to fix chicken, or the suggested use was timely. Half the women put the mimeographed recipes in the active file, such as a favorite cookbook, a loose-leaf scrap book, a "try soon file," or on the bulletin board. The remainder put the recipes in a shoe box or a kitchen drawer.

In 1963, recipes for using cottage cheese were mailed to speci-

fic names and addresses in one of the smaller Alabama cities. These homemakers were then personally interviewed to determine what had happened to the six recipes. One-third of the respondents were sent a mimeographed single page and one-third a folded card with color illustrations of some of the completed dishes. The remainder were sent no recipes and constituted the control group. There was little difference between the mimeograph page and the card in the numbers of homemakers who remembered getting the recipes or in their disposition.

Homemakers who discarded the recipes said it was because their families did not like cottage cheese. Respondents who reported they had never used cottage cheese were less likely to remember receiving the recipes. They were also more likely to throw out or give the recipes to someone, or to say they "might use" them. "Saving" the recipe was not related to familiarity with cottage cheese, except the "seldom" user appeared to be somewhat more interested in trying the recipes at some future time.

There were nearly equal numbers to whom the recipes appealed and did not appeal. Major differences between the groups were related less to family income or type than to attitudes of family members toward the product. When all family members liked cottage cheese, about half the homemakers liked the recipes. If some family member disliked it, over four-fifths of the homemakers were not attracted by the recipes.

Respondents to whom the recipes did not appeal varied by age groups and frequency of use of the product. More than half the homemakers who were frequent users but who did not care for the recipes were over 50 years of age. More than half who were occasional users but who did not like the recipes were between 30 and 40. Most of the respondents who never used cottage cheese and who did not care for the recipes were under 40 years of age. More than one-fourth of the homemakers who liked the recipes had cottage cheese in the refrigerator when interviewed.

In the groups to which no recipes were sent, or who did not remember receiving the recipes, one-fourth of the respondents said they would save such recipes, but more than two-thirds of the actual receivers saved the recipes. Although half the homemakers said they would use the recipes, only 3 per cent had done so when interviewed.

Recipes having variations of habitual food combinations were most often recalled, such as cottage cheese with fruit in salads

rather than its use in cooked dishes. The recipe for frozen fruit salad appealed to homemakers who used cottage cheese infrequently and saw an opportunity to serve it for a special occasion. The regular user more often mentioned peach salad or the creamy cheese dressing that was quick and easy to fix. One-fourth of the regular users did not like the recipes, largely because they were using the product in restricted diets.

Cottage cheese and scrambled eggs or the pancake recipe was more often mentioned by the occasional user who was interested in using cottage cheese in cooked dishes. Ninety per cent of the nonusers did not like any of the recipes, although they recalled names or description of at least one.

Among families that used cottage cheese regularly, it was most often served in salads with fruits, such as peaches or pears, or with vegetables like tomatoes. Cottage cheese was also served plain as a snack or with a meal; on bread, toast, or crackers; and in sandwiches with mayonnaise. Other mentions include addition to cooked dishes, with gelatin in a dessert or salad, and as a dessert with cream, sugar, or spices.

Homemakers usually depend on their own experience in judging the practicality of a specific recipe, or in coping with most food situations. Recipes were selected for saving or using because they "looked good," or "sounded good." "Seeing how it would turn out" was a powerful incentive for some homemakers whose families appreciated variety in foods.

Recipes were evaluated in terms of the combined effect of flavors, cost, meal situation, and family acceptance. For many respondents, a new dish praised by the family elevated self-esteem. Variations on familiar food combinations were most likely to be used. Recipes with a long list of ingredients or complicated instructions were less acceptable. A major reason for not trying new preparation methods was the fear of wasting food, time, money, and energy. Recipes known to contain ingredients disliked by the family were used only if the homemaker's curiosity overcame fear of criticism by the family.

New food combinations were most attractive to homemakers with sufficient income for some freedom in food choices, a size of household that fitted the usual recipe size, and young enough to be in the acquisitive stage of collecting the "tools" of the profession. Homemakers with a growing family and three meals a

day to prepare used new recipes to break the monotony of endless food preparation. Older homemakers could visualize the probable taste of food combinations, but younger respondents liked to see a picture of the completed dish.

Older homemakers and mothers of young children need recipes tailored to their particular needs. Simple, inexpensive, and healthful combinations appeal to these groups. The usual recipe is often too large, too complicated and time consuming, and too expensive. Families in which the homemaker was over 60 years often selected familiar and favorite foods. Aging taste buds, diet restrictions, less efficient digestive systems, small family size, and lack of interest or energy discouraged use of most new recipes, though income may be ample. The older homemaker frequently collects recipes with the expectation of passing them on to others, or the vague feeling that it might be used at some time in the future provides a vicarious feeling of being an active provider of food for a growing family.

Dessert and Snack Foods

Cake, pie, and ice cream were the most frequently used desserts for family meals. Cookies, fruit, and ice cream were most popular snacks. Two-thirds of the families in the 1958 survey had been served ice cream during the study week. Ice cream was the only common dairy food that had not declined in per capita consumption during the time covered by these studies.

Families most apt to have desserts or snacks were those with younger homemakers, several children, moderate per capita income, and average per capita meal costs. Families that seldom or never had snack or dessert foods usually had homemakers over 50 years of age, no children, and either very low or very high per capita incomes. One-fifth of the nonwhite families never had snack foods of any kind.

When homemakers named the two desserts most liked by their families, some form of pie accounted for nearly half the mentions:

<i>Dessert class</i>	<i>Per cent of total</i>
Cake.....	25
Nonfruit pie, such as lemon.....	23
Fruit desserts, mostly pie.....	19
Ice cream, frozen desserts.....	15
Pudding, such as chocolate.....	12
Miscellaneous desserts.....	6

From the list of specific desserts most liked by family members, those mentioned 30 times or more included:

<i>Favorite dessert</i>	<i>Per cent of total</i>	
	<i>White</i>	<i>Nonwhite</i>
Yellow or white cake, chocolate icing.....	16	18
Chocolate pie.....	14	6
Lemon pie.....	12	13
Apple pie.....	12	11
Banana pudding (vanilla wafer).....	12	16
Vanilla ice cream.....	12	16
Miscellaneous—strawberry shortcake, pound cake, coconut cake, plain cake, cherry pie, sweetpotato pie, pecan pie.....	11	10

Serving of ice cream for guest dessert was approved by most homemakers, especially the nonwhite, those of low income, or those over 60 years of age. These women would not have had ice cream as a routine dessert in their homes. Respondents having moderate per capita income or women in their fifties preferred a more specialized dessert that indicated culinary skill. Younger homemakers and those with high per capita incomes were most likely to feel that the hostess took the easy way out if ice cream was served.

Respondents not concerned with weight control approved of ice cream for a guest meal dessert. Older homemakers or those with a weight problem objected because of the caloric content. Homemakers who wanted to gain weight said the ice cream should have been served with pie or cake.

Suggestions for a prestige meal ending in the respondent's home showed that nonwhite homemakers mentioned ice cream as a suitable guest meal dessert more frequently than white women.

<i>Prestige meal dessert</i>	<i>Per cent of total</i>	
	<i>White</i>	<i>Nonwhite</i>
Ice cream alone.....	20	27
Ice cream with pie, cake, etc.....	20	22
Nonfruit pie.....	19	14
Fruit pie or desserts.....	16	11
Cake, pudding, miscellaneous.....	25	28

As with family desserts, economic level of the family and age of the homemaker were reflected in prestige meal endings. Desserts for guest meals were more expensive than those served at regular family meals. If chocolate pudding was served to the family, it became chocolate pie for company. If plain ice cream was

served with family meals, it became pie or cake a la mode for guests.

Suggestion of ice cream for a company dessert was not related to income level in white families, but with nonwhites it was more frequently the choice in upper income families. Fruit pie with ice cream was the ultimate in desserts in nonwhite families. Pecan and sweetpotato pies were more frequently served in nonwhite than white families.

Desserts for prestige meals were chosen largely because they were a "family favorite," or "everybody likes it." Pies or gelatin desserts would be served because they were "special for company," and ice cream because it was "easy to serve."

THE PROCESS OF CHOICE IN FUTURE RESEARCH

Urban families between 1954 and 1968 provided evidence that the process of choice theory aided in understanding the "why" of consumer behavior in food buying decisions. The consumer who purchases food for family consumption will continue to use the process of choice in selecting the most nutritious foods at the lowest cost, in pleasing the family, or in supplying a particular meal or occasion.

It seems probable that the theory would apply in other decision-making situations, such as choosing an eating place and items from the menu when dining out. The recently married couple or students in an apartment may find the role of experience an important part of the event of consumption as the process of choice is used for items which eventually become habitual purchases. Persons on self-imposed or prescribed food plans who purchase organically grown products or diet foods, or who deliberately restrict kinds and amounts of food for any reason, may also be traced through the process of choice, although their motives and information sources may be exotic.

If the consumer has a home garden, the process of choice still operates, although the event of purchase includes seed, pest controls, fertilizer, water, and often "free" labor. The event of choice includes selection of a garden plot, plants to be grown, and utilization of space. In the event of consumption, both preparation and preservation of the food require technical skill, equipment, and "free" labor. Experience plays an important part in evaluating success of the various projects, just as in purchase of food at the store.

The major immediate benefit from the process of choice model was the organization of the vast amount of consumer information collected from Alabama families into a coherent and logical sequence. In further research about consumer behavior in food buying, the theory may provide a basis for project outlines in which the parts fit into a larger picture, thus providing greater coverage in a shorter time span than occurred in the Alabama studies. Exploration of areas beyond the demographic classifications of income, education, age, or family size is needed to locate the reason for the 46 per cent of the amount spent per person for food not explained by per capita income in the 1968 survey. Questions based on the steps in the process of choice, combined with techniques from the behavioral sciences, could promote expansion of knowledge in the total consumer personality.

Step 2 of the process of choice is of great importance to all phases of the food industry, and to agencies concerned with human health. What information to present and how it should be presented is exceedingly complex but immensely important. Changes in social and political structures, pressures of population, new production techniques, and innovations in marketing require a constant flow of information to the entire population.

An expanded process of choice theory could be used to develop a more specialized approach to consumer education in which information is directed to the problems of an individual, a group, or the average buyer, not only of food but also of other goods. Benefits of the consumerism movement will come through actions and responses of the professional. It will take years of consumer education before there will be changes in behavior, except by some of the more affluent and highly educated. The tools needed for intelligent buymanship should be made available to interested consumers by business and government if the process of choice is to function effectively in the market place.

There is need for greater understanding on the part of the consumer as to why the family's food bill may change, why it differs from that of other families with similar incomes, and the effect on the food bill as family members grow up or grow older. Consumers need background knowledge of the effect of supplies, demand, and income on prices, and how creeping or rampant inflation can be controlled by individual or collective efforts. Homemakers need more specific information that will enable

them to shift purchases to different types or quantities of food without sacrificing nutritional content.

Current complaint about beef prices is an excellent example of the effect of these factors. To combat high beef prices by using other meats requires cooperation of family members, who also need consumer information. Use of the theory of the process of choice in providing information will eliminate the possibility of neglecting these areas of influence.

ACKNOWLEDGMENT

Without the cooperation of the 8,713 urban homemakers, 37 homemaker-interviewers, statistical clerks and typists, and Sally Bagwell and Bill Hearn of the Research Data Analysis Office, this report would not have been possible.

Members of the Technical Committees of the Southern Regional Food Marketing Projects SM-13 and SM-35 must accept credit for the project outlines, schedules, and survey plans which provided data on which the findings are based.

The authors are most grateful to members of the Department of Agricultural Economics and Rural Sociology for their assistance, especially Ben F. Alvord, Ben T. Lanham, and J. H. Yeager, who were department heads during the years spent on the projects. Sincere appreciation is extended to J. H. Blackstone, under whose tutelage a home economist acquired knowledge of market research techniques.

Members of the reading committee, Elizabeth Y. Davis, Bessie D. Fick, Edward W. McCoy, Dorothy Overbey, Anne B. Pratt, and R. E. Stevenson, provided valuable suggestions and criticisms that were given thoughtful consideration in the final stages of the manuscript.

Deepest appreciation to Marguerite C. Burk, whose writings provided the inspiration which culminated in two recent bulletins based on Alabama data accumulated since 1954 in the southern marketing projects. Terminology and organization of the survey reports resulted from concepts activated subsequent to contact with Dr. Burk's book, "Consumption Economics — A Multidisciplinary Approach," and summary articles in the *Journal of Home Economics* and the *Journal of Farm Economics*.

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APPENDIX

APPENDIX TABLE 1. COST OF FOOD AT HOME FOR ONE WEEK AT THREE COST LEVELS, BY AGE AND SEX, U.S. AVERAGE, JUNE 1968^{1, 2}

Sex, age groups	Cost for 1 week ³			Cost for 1 month ³		
	Low	Moderate	Liberal	Low	Moderate	Liberal
	Dol.	Dol.	Dol.	Dol.	Dol.	Dol.
Children						
Under 1 year.....	3.20	4.10	4.50	14.00	17.60	19.60
1-2 years.....	4.10	5.20	6.20	17.90	22.40	26.70
3-5 years.....	4.90	6.30	7.50	21.40	27.40	32.70
6-9 years.....	6.00	7.70	9.50	26.00	33.20	41.20
Girls						
9-11 years.....	6.80	8.80	10.20	29.60	38.00	44.40
12-14 years.....	7.50	9.70	11.70	32.70	42.10	50.70
15-19 years.....	7.70	9.70	11.40	33.30	41.80	49.50
Boys						
9-11 years.....	7.00	9.00	10.80	30.40	38.80	46.70
12-14 years.....	8.20	10.70	12.70	35.60	46.40	35.10
15-19 years.....	9.50	12.00	14.40	41.00	51.80	62.30
Women						
20-34 years.....	7.00	8.90	10.70	30.50	38.60	46.30
35-54 years.....	6.70	8.60	10.30	29.30	37.10	44.60
55-74 years.....	5.70	7.40	8.80	24.80	31.90	37.90
75 years and over.....	5.20	6.60	8.00	22.50	28.40	34.60
Pregnant.....	8.40	10.40	12.30	36.30	45.10	53.10
Nursing.....	9.80	12.00	14.00	42.20	52.10	60.80
Men						
20-34 years.....	8.20	10.30	12.80	35.30	44.70	55.60
35-54 years.....	7.60	9.60	11.70	32.80	41.50	50.60
55-74 years.....	6.70	8.70	10.40	29.10	37.50	45.20
75 years and over.....	6.30	8.30	10.00	27.20	36.10	43.40

¹ Estimates computed from quantities in food plans published in *Family Economics Review*, October 1964. Costs of the plans developed by USDA were first estimated by using average price per pound of each food group paid by nonfarm survey families at three income levels in 1955. Prices are adjusted to current levels of use using *Retail Food Prices by Cities* released by the Bureau of Labor Statistics.

² *Family Economics Review*, ARS 62-5, September 1968, page 23.

³ Costs given for persons in families of 4. For other size families, adjust thus: 1 person, add 20 per cent; 2 persons, add 10 per cent; 3 persons, add 5 per cent; 6 or more persons, subtract 10 per cent.

APPENDIX TABLE 2. RELATIONSHIP OF PER CAPITA FOOD EXPENDITURE PAST 7 DAYS TO SIGNIFICANT FAMILY CHARACTERISTICS, 926 FAMILIES, THREE ALABAMA CITIES, SPRING 1968

Item	Proportion reporting, by per capita food expenditures past 7 days, dollars							Average or total	
	Under 5.00	5.00-5.99	6.00-6.99	7.00-7.99	8.00-8.99	9.00-10.99	11.00-40.00	Pct.	No.
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	No.
Race									
White.....	51	88	86	92	96	93	98	87	802
Nonwhite.....	49	12	14	8	4	7	2	13	124
Age of homemaker									
Under 25.....	21	18	15	9	7	10	5	12	111
25-34.....	33	32	40	29	34	19	12	28	259
35-44.....	18	30	24	27	34	28	22	26	238
45-54.....	13	10	10	14	14	23	29	17	154
55 and over.....	15	10	11	21	11	20	32	17	159
Education of homemaker									
Under 9 years (grade school).....	39	21	10	17	8	10	51	16	144
9-11 years (some high school).....	23	18	11	9	8	10	23	13	118
12 years (high school graduate).....	28	38	46	41	45	39	20	37	344
13-15 years (beyond high school).....	8	13	23	20	29	21	5	20	189
16 years and over (college graduate).....	2	10	10	13	10	20	1	14	125
Family type									
Adults only.....	11	16	19	29	18	44	56	29	268
All children 13-19 years.....	8	10	9	8	14	13	16	11	102
All children under 20 years.....	30	24	19	21	21	19	8	20	183
All children 7-12 years. All children under 13 years.....	8	8	5	10	9	6	10	8	73
All children under 7 years.....	23	14	22	9	13	4	3	12	114
All children under 7 years.....	22	28	26	23	25	14	7	20	184
Household size									
2.....	7	13	15	29	11	38	51	25	231
3.....	14	22	29	17	35	26	23	24	218
4.....	23	25	24	31	32	13	20	24	218
5.....	23	17	15	13	12	17	5	14	132
6 and over.....	33	23	17	10	10	6	1	12	127
Per capita income									
Under \$900.....	46	10	3	5	4	1	1	10	87
\$900-\$1,799.....	35	45	25	26	11	7	6	21	197
\$1,800-\$3,100.....	16	35	50	44	51	47	23	38	251
\$3,200 and over.....	3	10	22	25	34	45	70	31	291

(Continued)

APPENDIX TABLE 2 (Con't). RELATIONSHIP OF PER CAPITA FOOD EXPENDITURE PAST 7 DAYS TO SIGNIFICANT FAMILY CHARACTERISTICS, 926 FAMILIES, THREE ALABAMA CITIES, SPRING 1968

Item	Proportion reporting, by per capita food expenditures past 7 days, dollars							Average or total	
	Under 5.00	5.00-5.99	6.00-6.99	7.00-7.99	8.00-8.99	9.00-10.99	11.00-40.00	Pct.	No.
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.		
Per capita meal cost									
Under 30¢	95	73	9	1	1	1	1	24	217
30¢-39¢	1	23	80	59	5	1	2	25	231
40¢-49¢	1	1	8	36	74	39	1	22	207
50¢ and over	3	1	3	4	20	59	96	29	270
Milk equivalent used									
Under 8.0 quarts	27	26	21	19	15	23	26	23	221
8.0-13.9 quarts	32	31	30	26	27	36	37	33	299
14.0-19.9 quarts	23	22	27	30	27	18	19	22	207
20.0 quarts and over	18	21	22	25	31	23	18	22	198
Pct. dairy products of food cost									
Under 9	12	6	7	14	13	21	32	14	128
9-12	13	20	18	26	23	23	36	24	215
13-16	14	19	25	33	33	27	23	23	217
17-24	35	32	33	31	24	25	15	27	254
25-60	26	23	17	6	7	4	4	12	111
Per capita cost dairy product									
Under 60¢	41	19	10	7	8	5	6	13	121
60¢-99¢	34	37	36	37	19	26	15	29	265
\$1.00-\$1.39	19	29	31	29	43	26	23	28	262
\$1.40 and over	6	15	23	27	30	43	56	30	277
<i>Per cent of families</i>	13	12	16	14	12	16	17	100	
<i>Number of families</i>	122	113	145	133	114	145	154		926