

Consumer Perceptions of Meat Products  
And The Marketing Implications For Beef

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Scope and Method of Study:

A survey was conducted to measure consumer perceptions of twelve meat products based upon fifteen product attributes. The primary purpose of the survey was to determine the market position of beef (steak, beef roast, and hamburger) relative to other meat products. The study was limited to the Stillwater, Oklahoma area and 43 surveys were used in the analysis. The results of the completed surveys were tabulated and the data analyzed using a computer program called MDPREF (Multi-dimensional Preference Scaling).

Findings and Conclusions:

The results of the analysis indicate that beef has both weaknesses and strengths in its market position. Beef is perceived as less healthy, heavier, and higher in calories and cholesterol relative to poultry and fish. Also, with the exception of hamburger, beef is perceived as having a high cost, an inconsistent quality, a high failure rate, a short shelf life, and a long preparation time. Beef's main strengths (especially for steak and beef roast) are its perceptions of great taste and high status. This author concluded that these negative perceptions of beef have been partially responsible for the decline in beef consumption over the last 15 years. Beef associations, wholesalers, and retailers around the country must alter the components of their marketing mix, and develop promotional programs to re-position beef in the consumer's mind.

ADVISOR'S APPROVAL

*John C. Mowen*

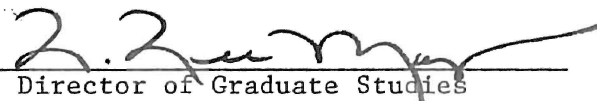
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Cliff Young generously provided his time and expertise in the survey design, tabulation of the results, and computer analysis.

TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION . . . . .	1
II. LITERATURE REVIEW. . . . .	3
III. THEORY/RESEARCH DESIGN . . . . .	12
IV. RESULTS AND ANALYSIS . . . . .	19
V. DISCUSSION AND CONCLUSIONS . . . . .	31
BIBLIOGRAPHY . . . . .	39
APPENDIX . . . . .	40

## CHAPTER I

### INTRODUCTION

Although Americans consumed record amounts of meat and poultry in 1984, the historic domination of beef as a staple in the American diet is being challenged. The United States Department of Agriculture statistics show that in 1984 the average person consumed about 143.5 pounds of red meat (81.9 pounds of beef and 61.6 pounds of pork) and 67.1 pounds of poultry. In 1985 it is expected that red meat consumption will decrease to an average of 138.5 pounds, five pounds less than in 1984, while poultry consumption will increase by 3.8 pounds to 70.9 pounds. The expected decrease in beef consumption would mark its lowest level since 1980, and perhaps the lowest since the mid-1960s (3). The total consumption of meat, poultry, and fish has not varied more than six pounds per capita since 1970, yet the mix has changed: Americans are eating more chicken, turkey, fish, and cheese and lesser amounts of beef (4).

The decrease in consumption is only one of the primary problems facing the beef industry. Consumer views of beef have grown more negative over the past decade because of health concerns and the perception that beef does not fit into an active, time deprived, and health oriented lifestyle (11). Thus, national and state beef commissions around the country are trying to develop programs to influence the demand for beef.

A survey was conducted by this author to measure consumer perceptions of twelve meat products based upon fifteen product

attributes. Multidimensional scaling analysis was performed on the data, and the meat products and attributes were plotted together in a two-dimensional perceptual space. By viewing this perceptual map and the relationships of the products and attributes together one can infer the primary criteria used by the consumer to differentiate his perceptions of the various meat products. This perceptual mapping technique could reveal the inherent strengths and weaknesses in beef's position relative to other products.

The conclusions drawn from this research should provide insights into the nature of the perceptions of beef products in the consumer's mind. The beef industry could in turn use this information to more effectively market beef through the components of the marketing mix: the physical product characteristics, the product's price, the promotion of the product, and the distribution of the product.

## CHAPTER II

### LITERATURE REVIEW

Beef consumption continues to trend downward, and there are a large number of social/cultural, competitive, and health issues affecting this decline. Two of the primary forces affecting the demand for beef are the health issues related to red meat consumption, and the price/value of beef compared to other meats. A review of the literature related to these issues and others should give the reader a feel for what has happened to beef and what factors affect its demand.

#### The Demand For Beef

The 1985 Meat Board Consumer Marketing Plan presents a detailed, concise summary of the marketing environment for beef. Table 1 below shows the historical per capita demand for beef, pork, and poultry and the estimated figures for 1985.

Table 1

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	Per Capita Disappearance 1960-1985 (Retail Weight)				
	<u>Beef</u>	<u>Pork</u>	<u>Poultry</u>	<u>Total</u>	Beef % <u>of Total</u>
1960	64.2	60.3	34.0	158.5	40.5%
1965	73.6	54.7	40.7	169.0	43.6%
1970	84.0	62.3	48.4	194.7	43.1%
1975	87.9	50.7	48.6	187.2	46.9%
1980	76.5	68.3	60.6	205.4	38.2%
1985 est.	75.0	60.0	70.0	205.0	36.6%

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Source: The 1985 Meat Board Consumer Marketing Plan

As evidenced in Table 1 beef demand peaked in 1975 while poultry continued to increase. The 1985 estimates show poultry challenging beef as the number one meat in the American diet. Pork demand has fluctuated since 1960 but has shown a marked decline since 1980. The most significant statistic is the last column showing beef as a percent of the total (beef-pork-poultry). Beef's market share rose from 40.5% in 1960 to 46.9% in 1975, then declined significantly to an estimated 36.6% market share in 1985. Pork's market share has dropped from 38% in 1960 to an estimated 29% in 1985 and poultry grew from a 22% share in 1960 to an estimated 34% in 1985.

An analysis of the disposable income spent on beef, pork, and poultry is shown in Table 2. The percentage of the consumer's income spent on all three meat products has declined; however, the decline for beef and pork was greater than that of poultry.

Table 2

	<u>% of Income</u>		
	<u>Beef</u>	<u>Pork</u>	<u>Poultry</u>
1979	2.42	1.25	.56
1984 (2nd Quarter)	1.74	.89	.49

Source: The 1985 Meat Board Consumer Marketing Plan

In-home usage of beef has also undergone some changes. The percentage of households having served beef during a two-week period dropped from 97% in 1968 to 90% in 1984. Also, the frequency of beef served during a two-week period dropped from 6.2 times per week in 1969 to 4.9 times per week in 1984. It is predicted that household penetration will level off at 90%, but serving frequency may continue to decline (12).

Table 3 analyzes the type of beef served in the home, and the changes in beef serving occasions that have taken place since 1968.

Table 3

<u>Distribution of Beef Serving Occasions (percent)</u>						
	<u>1968</u>	<u>1973</u>	<u>1975</u>	<u>1982</u>	<u>1984</u>	<u>% Change</u>
Roasts	25	23	20	14	15	-40%
Steaks	22	20	25	20	22	-
Ground Beef	37	43	45	55	54	+46%
All Other	16	14	10	11	9	-44%
	100%	100%	100%	100%	100%	

Source: The 1985 Consumer Meat Board Marketing Plan

The most significant trend is the decline in usage of roasts and the increase in the use of ground beef. This trend is credited to the time demands and need for convenience in today's society (12). Roasts take more time to prepare.

Clearly, beef demand has declined in the past 15 years. Yet, it still remains the meat of choice for most Americans, as evidenced by its 90% household penetration level (12). Why is beef so popular in the American diet? Also, why is the demand for beef slowly declining? From a marketing perspective the demand for beef is influenced by three general factors: consumer tastes and preferences, the demographic characteristics of the population, and the cost of beef and its substitutes. To understand the nature of beef demand each of these influences must be understood.

#### Consumer Tastes and Preferences

The demand for beef in the marketplace is affected by consumer tastes and preferences. People hold certain attitudes towards beef and the word "beef" conjures up images in the consumer's mind. Thus,



it is important to investigate consumer attitudes toward beef, and to identify any changes in tastes and preferences. (Much of the information contained in this section can be found in a report published in 1984 by The National Live Stock And Meat Board titled "The Beef Consumer and Marketplace: Summaries of Beef Industry Market Research" and in the 1985 Oklahoma State Beef Commission Marketing Plan).

A 1981 American Meat Institute/Yankelovich study investigated consumer attitudes towards beef. This study concluded that consumer attitudes toward beef were positive, and they favored beef's good taste and the prestige of serving it. Price was cited by 73% of the consumers as their reason for reducing fresh meat consumption. Only 9% of consumers indicated that health concerns were the reasons for decreased usage.

The AMI/Yankelovich study also used beef focus groups in October 1981 to further their analysis. Again, they found positive attitudes toward beef, even among light users. Taste was the major strong point for beef and children in particular rated beef as their number one choice. The consumers did indicate that they were aware of the negative publicity about the health affects of beef consumption (e.g., calories, heaviness, cholesterol) but did not think it altered their consumption habits. Yet, most of the consumers did report a cutback in beef consumption, and cost was the number one factor influencing this behavior change.

A Walker-Benchmark study in March of 1982 used attribute ratings to determine consumer perceptions of beef. The results indicated that only two-thirds of consumers believe beef is high in nutrition and is part of a well-balanced diet. Less than half (48%) of the consumers agreed that

beef is a good source of minerals, and only 47% believed that beef offered a good value for the dollar.

Studies by Walker Tracking indicate that consumer attitudes toward beef became more negative between 1982 and 1984. The percentage of consumers agreeing with the statement that beef can be prepared quickly fell from 74 to 66 percent. The number of respondents perceiving that beef is an important part of a well balanced diet fell from 66 to 58 percent. Also, the number of consumers agreeing with the statement that beef is good when on a diet decreased from 38 to 29 percent (13).

The studies cited above indicate that consumer tastes and preferences and the attitudes toward beef have changed possibly contributing to the decline in beef's market share. This spells trouble for the beef industry as a change in such tastes and preferences could result in the demand curve for beef shifting downward such that at any particular price of beef fewer people would be buying it.

Changing consumer lifestyles are another likely factor causing the shift in the demand for beef. The two-income family puts time constraints on the preparation of meals and more emphasis on convenience. The U.S. Census report for 1984 estimates that over 50% of adult women are employed. Also, more emphasis is being placed on quality leisure time and entertainment in today's family. These factors together make it nearly impossible for a working woman or man to come home after work and take the time to prepare a roast for dinner. This factor may account for the dramatic decrease in the use of roasts, as indicated in Table 3.

The health and physical fitness trends have also had major impact on the lifestyles of Americans. The negative publicity received by beef

concerning its high contents of cholesterol, calories, and additives may have changed the purchase behavior of many Americans. The American Heart Association and nutrition specialists recommend a diet with less red meat to reduce cholesterol and the amount of calories obtained from fat to reduce the risk of heart disease (1). Yet, the September 1983 AMI/Yankelovich study indicated that only 9% of consumers cited health concerns for their reduced consumption of fresh meats. Thus, it is not clear just how much health concerns have negatively affected the demand for beef. However, because of the increasing negative publicity received by beef, one must anticipate that over time more consumers will lower beef consumption for health reasons.

The relationship of beef to physical fitness trends is also uncertain. The concern for good health and physical fitness are related and both may adversely affect the demand for beef. However, a physical fitness segment may exist which focuses on needs for protein, vitamins, and minerals. This segment may value beef as a supplier of these needed nutrients. A study from the National Academy of Sciences on human nutrition training in medical schools due out in July of 1985 may shed some light on this subject.

In summary, it appears that most consumers hold positive attitudes toward beef and value its taste qualities and the prestige associated with serving it. Yet, people are reducing the frequency of eating beef with price cited as the main reason. Other reasons for reducing beef consumption appear to be related to health and fitness, menu variety, and time constraints. These changes in consumer tastes and preferences have contributed to the decline in beef demand.

### Demographics and Beef Demand

Demographics are the vital and social statistics of a population. Demographic statistics include such factors as age, income, male/female, presence of children, education, and employment of a population. Marketers can use these statistics to divide a market into homogenous groups who may be important purchasers of their product or potential consumers who can be reached through the marketing mix.

A 1981-1982 NET study identified a number of characteristics of households in which large amounts of beef are consumed. High beef consumption households were described as follows:

1. A household with an income of \$20,000 and over.
2. The age of the female head is 35-45...especially 35-44.
3. Household size of three or more.
4. The presence of any children under 18 years old.
5. The female is only employed part-time or not at all.
6. The female has a high school degree.
7. The household head is a blue-collar worker.
8. The market area is rural.

Households that meet the above criteria have the potential to consume more beef. It makes sense that a larger family with a high income, a non-working wife who has time to shop, and children under 18 would consume more beef. Although this author did not have access to the actual study, it appears that the demographic factors of lower education, blue-collar employment, and rural residence are all positively related to beef demand.

The important question for the beef industry is: how many of these households are there, and are any social/cultural changes taking place that would increase or decrease the number of these households?

One positive trend for beef consumption is that the baby-boom generation is approaching middle-age and the fastest growing segment of the population is 35-44 years old. On the negative side is that the number of women employed outside the home will continue to grow. More than two-thirds of the women in the 25-44 age group are employed and 57% of the married women with children are in the workforce (12).

Another negative trend is the aging of the American population. The second fastest growing segment of the population is the over 65 group which means more "retired, fixed-income" households. Also, the "education boom" is predicted to continue with more of the population starting school younger and staying longer (12). A general trend toward delayed marriage and smaller families has also adversely affected beef demand.

These demographic trends do not look positive for the beef industry. The increase in working women, the smaller size of families, and a slight decline in the numbers of blue-collar workers all contributed to the fall in beef demand.

The question is: will these trends continue? In favor of beef is that large segments of the baby-boom generation are now in their prime child-bearing years which could cause a mini-boom of children. Nobody knows for certain what will happen, but these demographic statistics must be closely watched by the beef industry.

#### The Cost of Beef and Its Substitutes

The demand function for beef is partly a function of its price and the price of beef substitutes such as chicken or fish. The laws of supply and demand state that if you raise the price of a product then the

quantity demanded for that product may fall, all else equal. The demand for beef is generally price elastic. Price elasticity is indicated by the need for the product, the number and price of substitutes available, and the percentage of the consumer's budget the product purchase represents (7). A study by two agricultural economists from Oklahoma State University analyzed beef demand during the 1970s. They concluded that the increase in the cost of beef accounted for a lowering of the demand for that product.

The average retail prices of beef, pork and chicken from 1964 to 1982 show that the price of chicken relative to beef has decreased substantially. For example in 1964 the price of chicken expressed as a percentage of beef was 49%. In 1982 this percentage had dropped to 30%. Thus, chicken was a much better buy for the consumer, and this fact alone may account for the decrease in beef demand and the increase in the demand for poultry. The price of pork relative to beef varied considerably from 1964-82 ranging from 90% in 1976 to 64% in 1981 (2).

Yet, the question remains: is beef demand purely a function of price, or has a change in consumer tastes and preferences caused the decrease in beef demand? It is likely a combination of both of these factors.

## CHAPTER III

### THEORY/RESEARCH DESIGN

How is beef perceived by consumers relative to other meat products? This question is of critical importance to the beef industry in light of the decreasing market share for beef. A marketer must know how his product is currently perceived by the consumer before he can begin developing a new marketing plan to improve or alter those perceptions. This author conducted a survey to measure consumer perceptions of beef and other meat products.

To collect data on consumer perceptions of various meat products a written questionnaire was designed. (Please refer to exhibit A in the appendix to view an example of the questionnaire before reading further.) Each of the fifteen attributes were presented with the twelve meat products listed below it in a box. The subject was instructed to rate each product on a seven-point Likert scale based upon that attribute. The listing of the products was randomized for each attribute to avoid any ordering bias in the answers of the subject. Also, the pages of the survey pertaining to the attribute ratings were randomized to avoid any fatigue factor whereby the subject might concentrate less or hurry his answers on the latter pages of the survey. The last page of the survey collected demographic data for analyzing the make-up of the consumer sample, and to further the analysis by looking at any differences that may exist in the perceptions of non-professionals versus professionals.

The sample for this survey was basically a sample of convenience in the Stillwater, Oklahoma area. No sampling plan was used and unless this survey is conducted on a much larger scale the results could not be generalized to the population as a whole with a high degree of confidence. A total of 43 surveys were completed for the analysis and a demographic breakdown of the subjects is presented in Table 4.



Table 4

---

<u>Demographic Breakdown of Survey Subjects</u>	
Sex:	Male . . . . . 28.0%
	Female . . . . . 72.0%
Marital Status:	Single . . . . . 20.9%
	Married. . . . . 60.5%
	Divorced . . . . . 16.3%
	Living Together. . . . . 2.3%
	Widowed . . . . . -
	Separated. . . . . -
Formal Study:	Average = 15 years
Occupation:	Professional/Full-Time . . . . . 26.2%
	Professional/Part-Time . . . . . 2.4%
	Non-Professional/Full-Time . . . . . 64.3%
	Non-Professional/Part-Time . . . . . 7.1%
Household:	Average Number = 2.44
	Average Number Under 18 Yrs. = .63
Politics:	Republican . . . . . 47.6%
	Democrat . . . . . 38.1%
	Independent. . . . . 14.3%
Outlook:	Conservative . . . . . 35.7%
	Middle-Of-The-Road . . . . . 42.8%
	Liberal. . . . . 21.5%

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Once the surveys were completed they were coded and entered onto the computer as a data set. Before entering the data from each survey the pages were placed back in an original "master" order so that taste was always attribute number one, cost was always attribute number two and so on. A SAS program was written which would also place the meat products into a "master" order so that turkey was always labeled number one, steak was always labeled number two and so forth (see Table 5).

Table 5

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A Listing of the Master Orders for the  
Attributes and the Meat Products

<u>Attributes</u>	<u>Meat Products</u>
1. Taste	1. Turkey
2. Cost	2. Steak
3. Status	3. Shellfish
4. Modern	4. Pork Roast
5. Calories	5. Lamb
6. Special Meal	6. Tuna Fish
7. Shelf Life/Storability	7. Ham
8. Consistent Quality	8. Chicken
9. Healthfulness	9. Beef Roast
10. Heaviness/Filling	10. Pork Chop
11. Tenderness	11. Fish
12. Cholesterol Level	12. Hamburger
13. Time to Prepare	
14. Failure Rate	
15. Aroma	

---

The SAS statement PROC SORT was used to sort the surveys in the data set by occupation which was coded as either professional or non-professional. The SAS statement PROC MEANS was used to calculate the averages on the Likert ratings for the data set as a whole, the two subsets sorted by occupation code, and the averages on the demographic data.

The three sets of mean scores (the data as a whole and the two subsets) were entered onto an IBM mainframe as three separate 15 x 12 matrices composed of the 15 attributes and the 12 meat products. Each row in the matrix represented an attribute, such as taste, with the 12 columns being the mean ratings based upon taste etc. for the 12 products across all 43 surveys. Table 6 provides an example for the first four lines of a matrix to clarify the above description.

Table 6

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Example of Data Matrix

The four rows of data below represent the attributes taste, cost, status, and modern per the master order.

The mean ratings are extracted from exhibit B in the numerical order of 1 through 12 which puts the meat products in the master order.

5.67	6.35	5.60	4.42	3.91	3.60	4.86	5.56	5.63	5.02	4.58	5.02
4.84	2.93	2.44	3.77	2.65	4.74	3.72	4.84	3.58	3.65	3.65	4.70
4.74	6.48	6.02	4.24	5.00	2.00	4.55	4.07	5.19	4.55	4.48	2.86
1.98	3.81	4.79	2.98	3.21	4.07	2.51	2.26	2.88	3.09	2.79	4.30

---

The three matrices were then ready to be used in the multidimensional scaling analysis.

The software used for the analysis is part of a series of computer programs for multidimensional scaling and conjoint analysis originally were developed by Bell Telephone Laboratories. The specific program used for this study is called MDPREF (Multidimensional Preference Scaling), and it was written by J.D. Carroll and Mrs. Jih Jie Chang of Bell Labs. It is described as a user-friendly program which has also been adapted for the IBM Personal Computer. MDPREF can perform an analysis on any type of dominance data for up to 30 stimuli and 30 subjects, and it develops vector directions for preferences and the configuration of stimuli in a common space called a preference map (9). The reader interested in using MDPREF or other types of multi-dimensional scaling analysis should consult two books: Applied Multidimensional Scaling by Paul E. Green and Vithala R. Rao (1972, Holt, Rinehart and Winston Inc.), and Multiattribute Decisions in Marketing by Paul E. Green and Yoram Wind (1973, Dryden Press).

This study on consumer perceptions of meat products used 15 attributes (stimuli) and 12 meat products (subjects) on which to perform MDPREF and obtain the resulting two-dimensional preference map. The preference map is the result of the MDPREF program jointly plotting the attributes and products in a common space which best represents the input preference matrix. MDPREF uses a metric algorithm to do this, but a discussion of the functions involved with this program is beyond the scope of this paper. The major output categories entailed in a typical run of MDPREF are as follows:

1. First-score matrix.
2. Cross-products matrix of subjects.
3. Cross-products matrix of stimuli.

4. Eigenroots of the first score matrix.
5. Estimates of the first-score matrix after the factorization.  
(This is called the second-score matrix.)
6. Coordinates of stimuli and vector directions for subjects  
in the user-specified dimensionality.
7. Plot of the first two dimensions of stimuli and subject  
vectors. (Green and Rao, 1972)

In addition to the preference maps, plots of the semantic differential scales were constructed. This would facilitate the comparison of the perceptions of certain key meat products on all fifteen attributes. The semantic differential lists each attribute criterion in terms of opposite levels of performance; that is, poor taste-great taste, high cost-low cost, and so forth. The bi-polar adjectives were rated on seven point scales. The semantic differentials were constructed by plotting the mean value for the products on each attribute.

The preference maps from the MDPREF program and the semantic differentials will enable this author to analyze the consumer's perceptions of the various meat products. The following chapter will detail the results of this analysis.

## CHAPTER IV

### RESULTS AND ANALYSIS

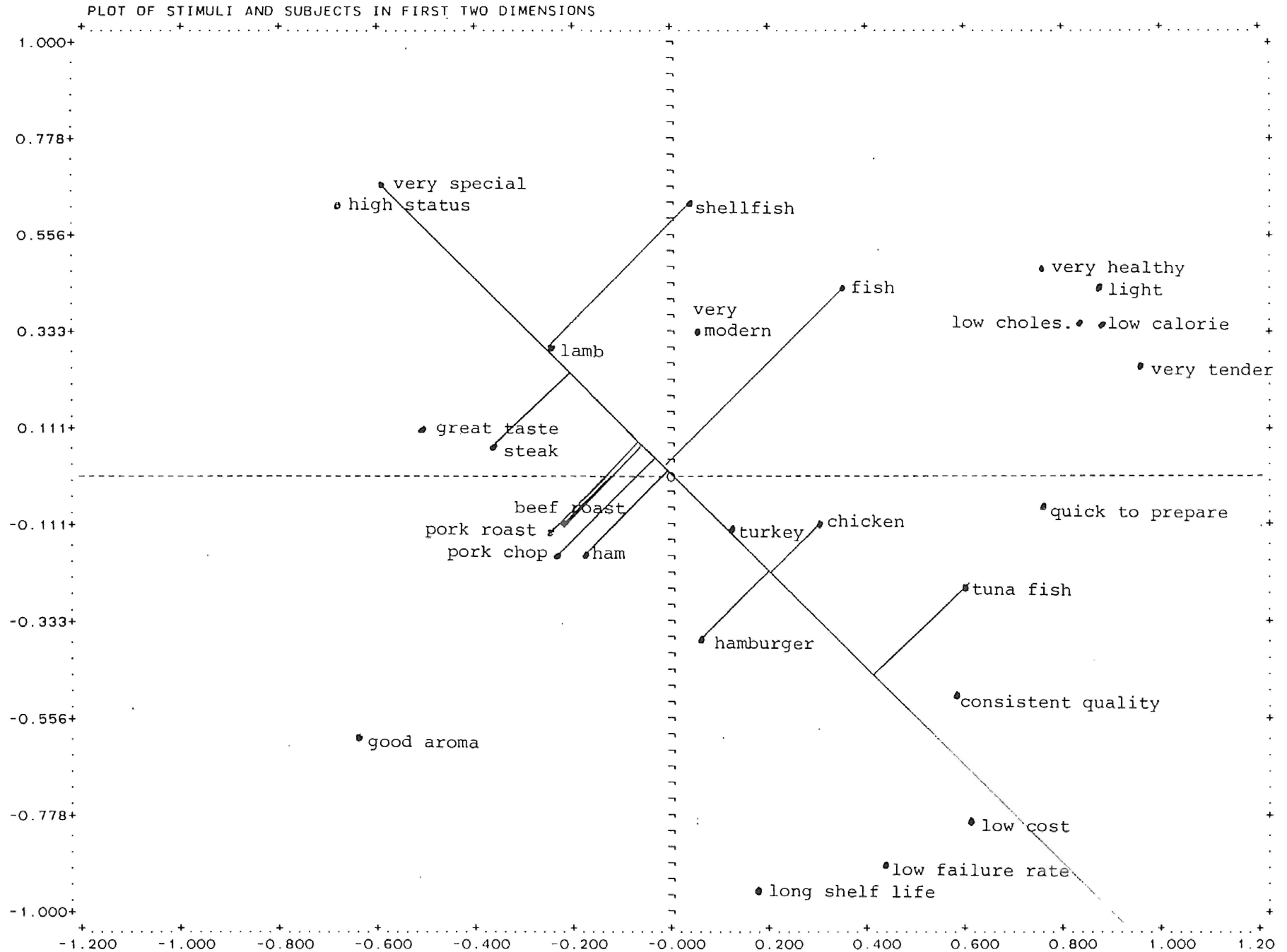
The preference map for the data set of all the survey subjects is shown in Figure 1. This preference map represents the outcome of the first two roots identified by the MDPREF program. Only the first two roots will be analyzed because they were by far the most significant roots, and together they accounted for 66.6% of the variance. In Figure 1, the meat products and attributes have been properly labeled to enhance visual analysis. It is primarily through the use of this preference map that one can attempt to infer the major perceived differences between the 12 meat products.

#### Analysis of Preference Maps

To begin the analysis of the preference maps a line was drawn from the attribute "very special" through the origin in Figure 1. This attribute was arbitrarily selected to provide an example of the analysis. A perpendicular line was then drawn from each meat product to intersect the line through the origin. The closer a meat product's intersection point is to the attribute special, the more that meat product is perceived to possess that quality. Thus, the meat products shellfish, lamb, and steak are perceived to be associated with special meals or occasions. At the other end of the continuum tuna fish, hamburger, and chicken are perceived as not so special. Intuitively, intuitively, this type of analysis makes sense: it seems likely that tuna fish is perceived as less special than shellfish or steak.

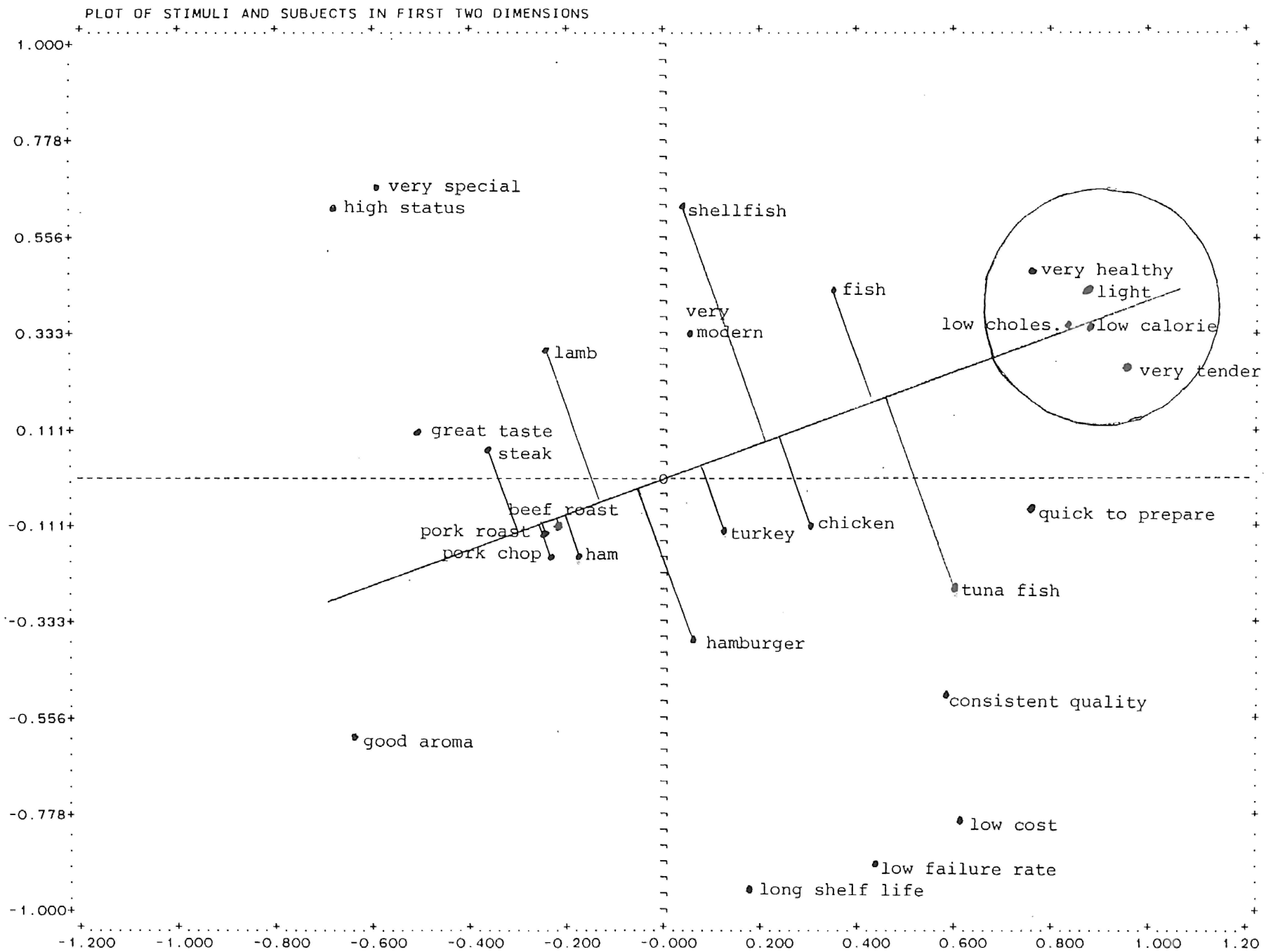
In Figure 2 a line was drawn through the origin from the area of the attributes "very healthy", "light", "low cholesterol", and "low calorie".

Preference Map: All Survey Subjects - Meat Products and Attributes Combined



\*\*\*\*\*IDENTIFICATION KEY FOR PLOTS WITH IDENTIFIED POINTS\*\*\*\*\*

Preference Map: All Survey Subjects - Meat Products and Attributes Combined



\*\*\*\*\*IDENTIFICATION KEY FOR PLOTS WITH IDENTIFIED POINTS\*\*\*\*\*



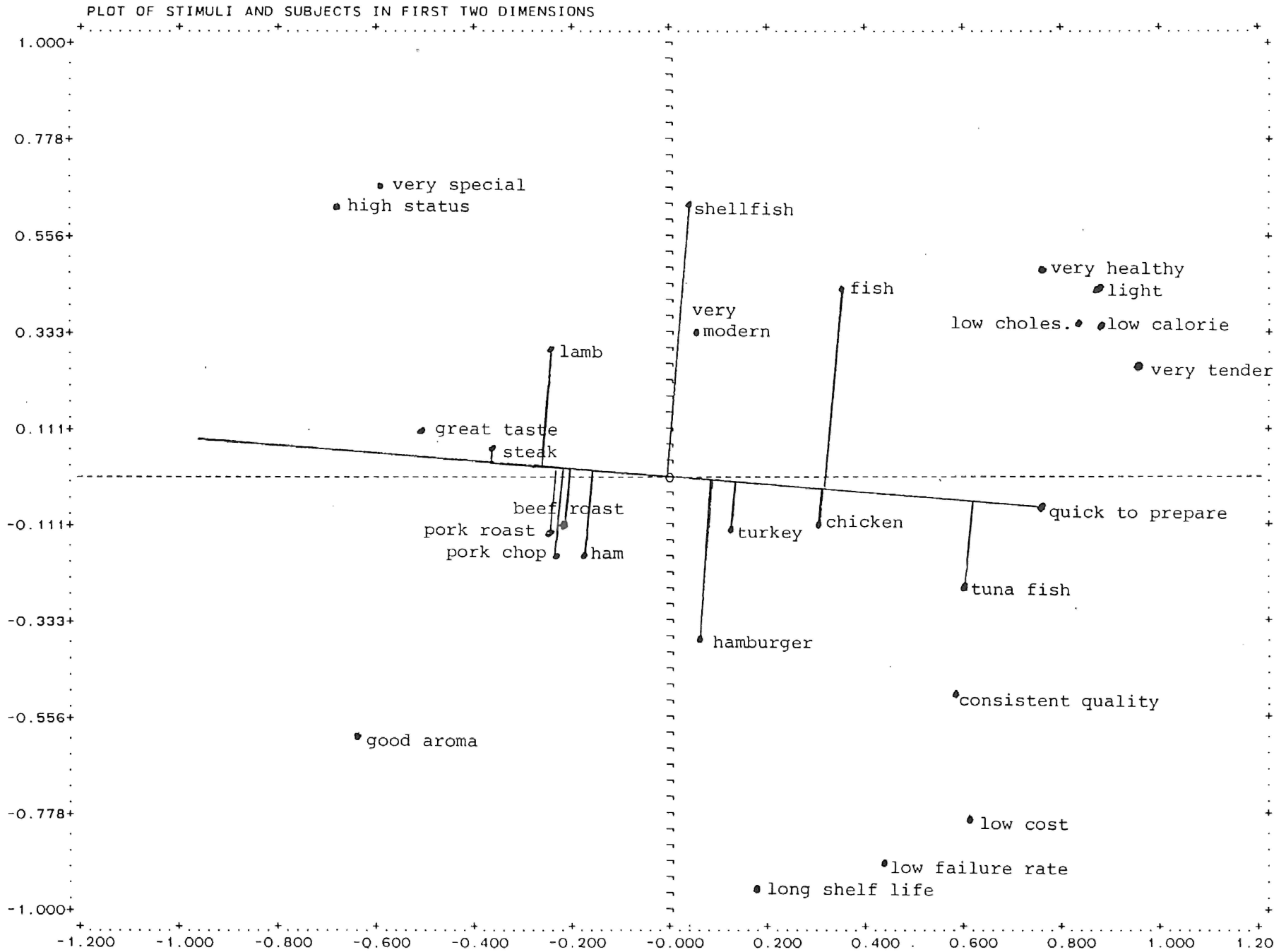
These attributes were grouped together for the line-drawing analysis because they are all related to the health trends taking place in our society. Healthy foods are often described as being light, and low in cholesterol and calories. Their close proximity to each other in the upper, right quadrant of Figure 2 also makes it easy to analyze these attributes together. In viewing Figure 2 it appears that the fish and poultry products are perceived as more healthy than the beef and pork. In general, the beef products (steak, beef roast, and hamburger) are perceived as less healthy, heavier and higher in cholesterol and calories.

In Figure 3 a line was drawn from the attribute "quick to prepare" through the origin. This attribute was chosen for analysis because of the time demands placed upon today's family and the emphasis on convenience. Foods that are perceived as taking a long time to prepare may be at a disadvantage on the market. It is evident in Figure 3 that fish, tuna fish, chicken, and hamburger are perceived as quick to prepare. Products such as beef roast, ham, and steak are perceived as taking a long time to prepare. Turkey appears to be an aberration on the "quick to prepare" line; probably because of the interaction of other variables.

Price was identified in chapter two as a possible, major cause for the decline in beef consumption. In Figure 4 a line was drawn from the attribute "low cost" through the origin. It appears that tuna fish, hamburger, chicken, and turkey are perceived as low cost, and the meat products such as shellfish, steak, lamb, and beef roast are perceived as expensive.

The last attribute to be analyzed using the line-drawing analysis will be "taste". The AMI/Yanklovich study identified taste as being the

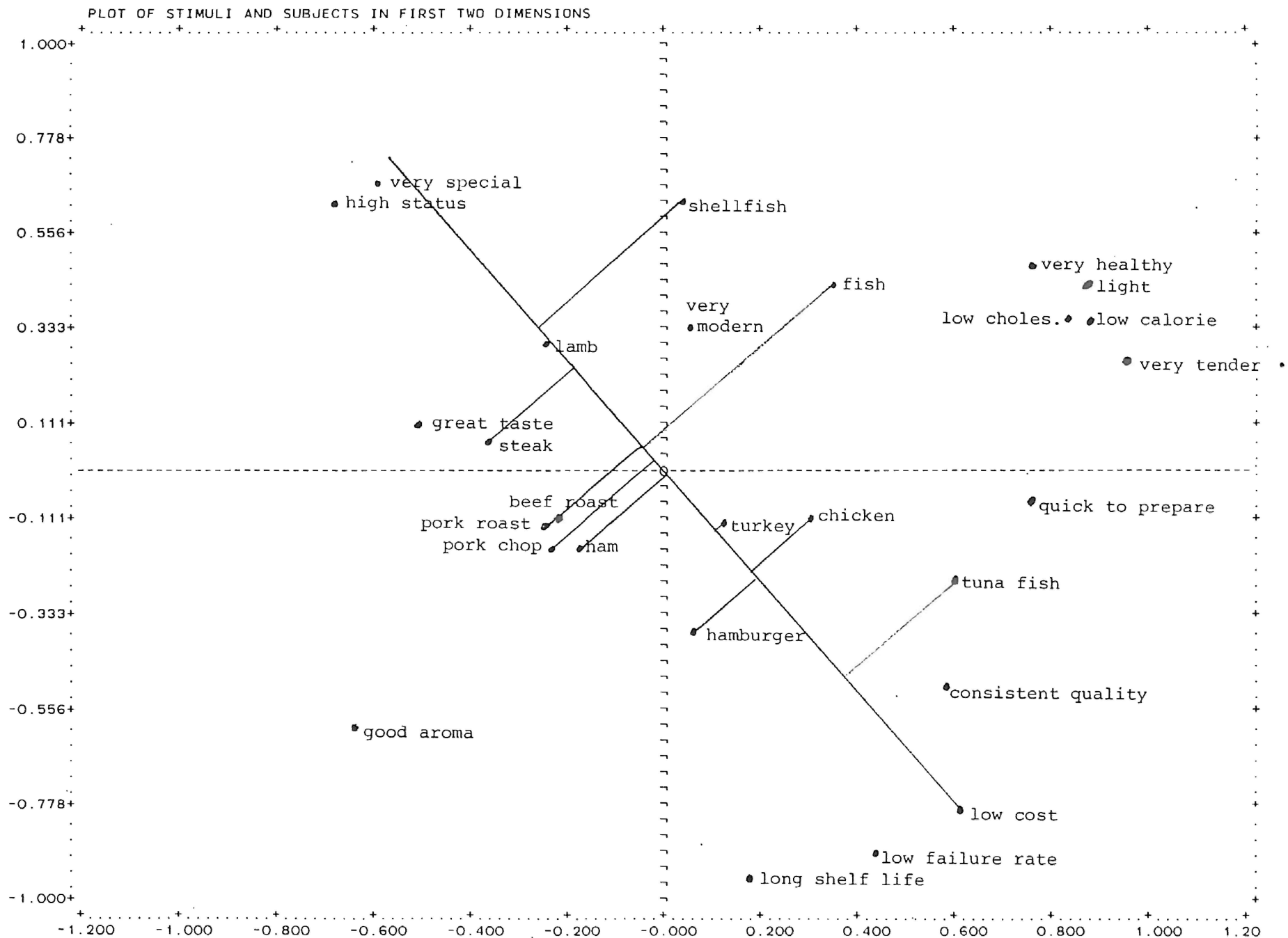
Preference Map: All Survey Subjects - Meat Products and Attributes Combined



\*\*\*\*\*IDENTIFICATION KEY FOR PLOTS WITH IDENTIFIED POINTS\*\*\*\*\*

Figure 4

Preference Map: All Survey Subjects - Meat Products and Attributes Combined



\*\*\*\*\*IDENTIFICATION KEY FOR PLOTS WITH IDENTIFIED POINTS\*\*\*\*\*

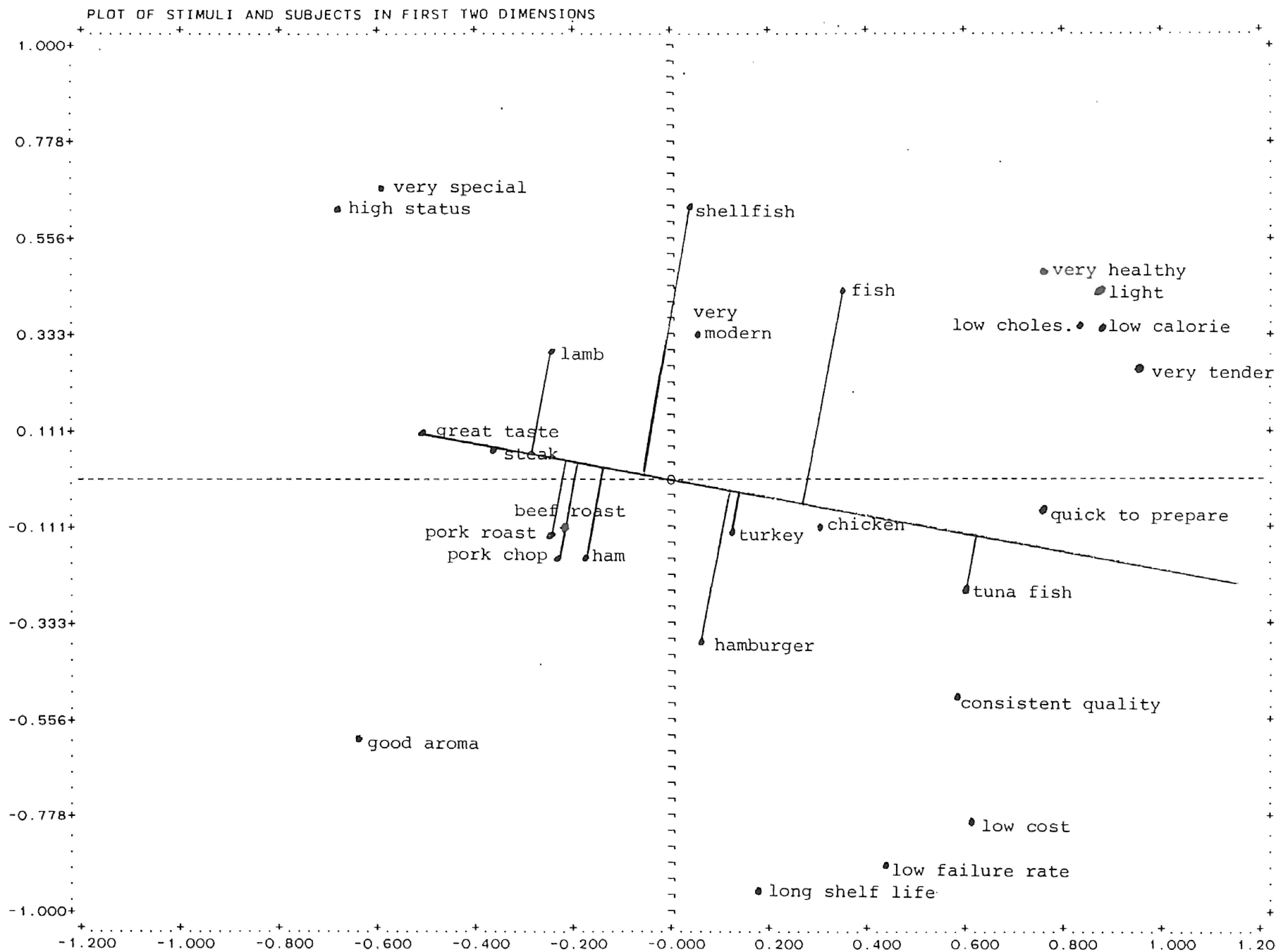
major strength of beef (11). In Figure 5 it appears that steak is perceived as the best tasting meat product; followed closely by products such as lamb, beef roast, pork roast, and ham. The fish and poultry products are perceived as less tasty in comparison.

The next part of the analysis entails the labeling of the horizontal and vertical axis of the perceptual map with the descriptive words or attributes that seem to best describe the configuration of the meat products and attributes. The horizontal axis seems to separate the meat products that are perceived as more modern or have become prominent in the American diet such as shellfish and fish, and the meat products which are perceived as more traditional such as hamburger, roasts, ham and turkey. Thus, the top of the vertical axis could be labeled modern and the bottom labeled traditional.

The vertical axis seems to separate the meat products that are perceived as healthy, and light and follow the trends toward foods that are low in cholesterol and calories such as fish and poultry versus the meat products that are perceived as unhealthy and heavy and high in cholesterol and calories such as pork and beef. Thus, the horizontal axis could be labeled healthy/light on the right side and labeled unhealthy/heavy on the left side.

The preference maps for the two data subsets of professionals and non-professionals were also analyzed. The only significant difference between these two perceptual maps appeared to be in the location of the attributes "great taste" and "very modern". On the professional preference map these two attributes were located nearer to the top of the vertical axis. This indicates that professionals differentiate meat products more on the up-to-date/traditional continuum and perceive the

Preference Map: All Survey Subjects - Meat Products and Attributes Combined



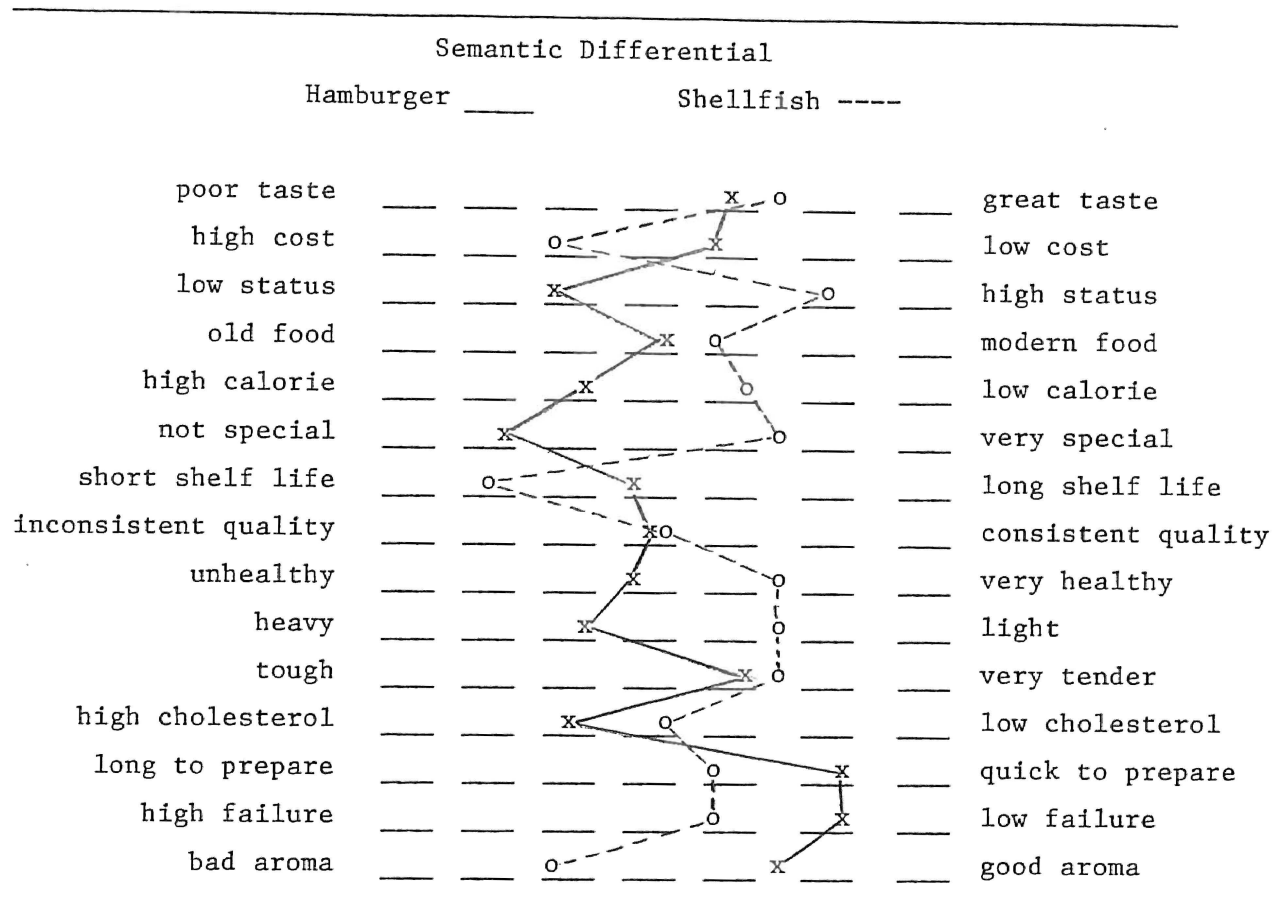
\*\*\*\*\*IDENTIFICATION KEY FOR PLOTS WITH IDENTIFIED POINTS\*\*\*\*\*

modern products to taste better being shellfish and fish. Conversely, on the non-professional preference map the attribute "very modern" was located near the origin indicating that non-professionals do not differentiate meat products on the up-to-date/traditional continuum. The location of the attribute "great taste" was relatively unchanged for non-professionals. For the non-professional preference map the top of the vertical axis was labeled high status and the bottom labeled low status to more appropriately reflect the significance of status versus up-to-date/traditional.

#### Semantic Differential Analysis

The final part of the analysis entails looking at some semantic differentials to show the contrast in consumer perceptions of selected meat products, and to add credence to the first two parts of the analysis. Table 8 shows the semantic differential for the meat products hamburger and shellfish.

Table 8



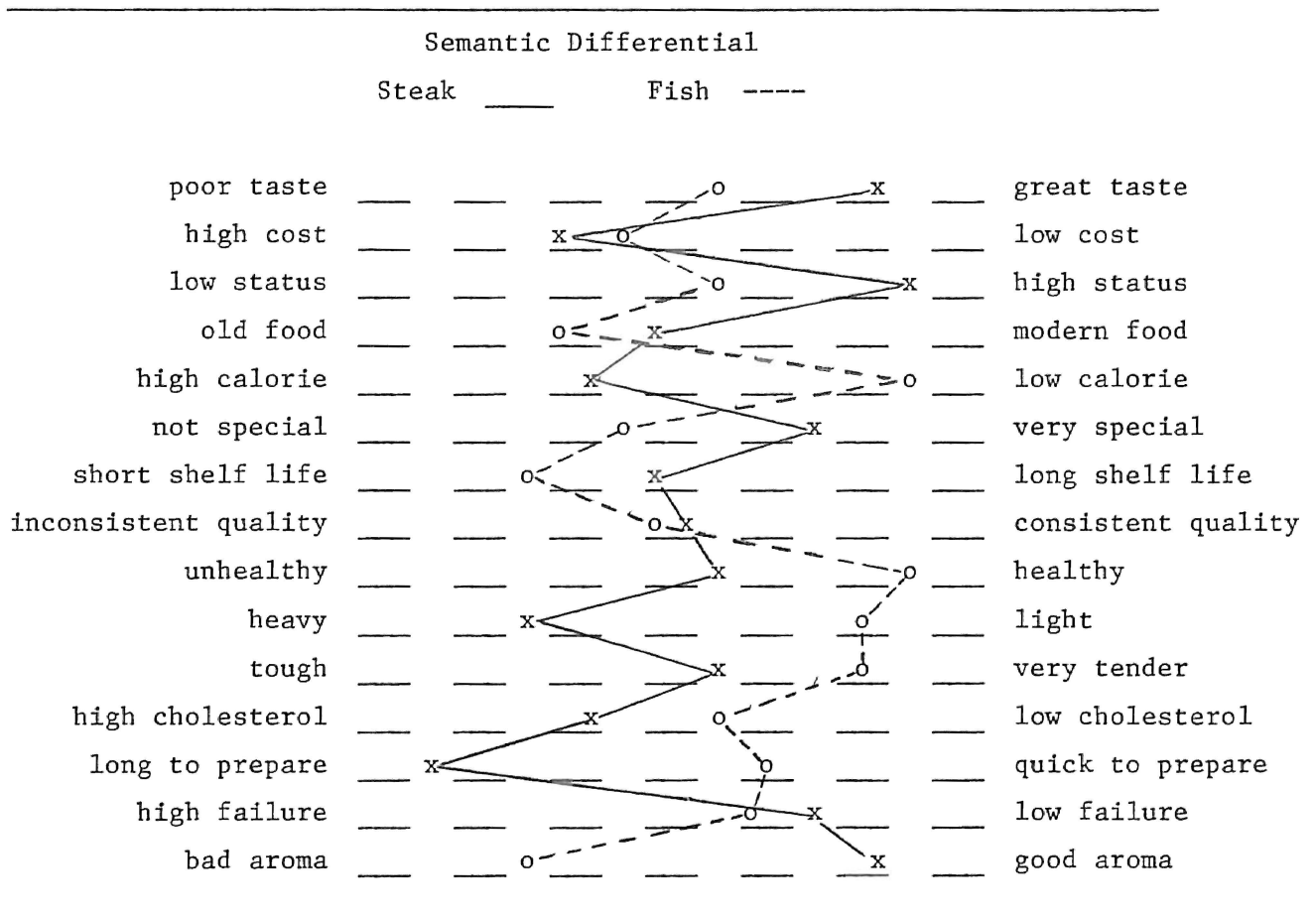
The semantic differential is based upon the mean ratings of all survey subjects and does not differentiate between professionals and non-professionals. Shellfish and hamburger were chosen because they lie at opposite ends of the up-to-date/traditional continuum as described for Figure 1.

As one can see in Table 8, the more extreme perceptions of shellfish are high cost, high status, short shelf life, and bad aroma. Shellfish was also perceived as low calorie, healthy, and light in comparison to hamburger. The more extreme perceptions for hamburger are low status, not special, quick to prepare, and low failure rate. These findings concur with the perceptual map in Figure 1. Yet, the

attribute status seems to differentiate these products more than the attribute modern. This indicates that the vertical axis in Figure 1 would more appropriately be labeled as high status at the top and low status at the bottom as in the non-professional preference map in Figure 3. Thus, the perceptions in the overall perceptual map in Figure 1 lean more toward the non-professional perceptions. This makes sense since 71% of the consumer sample was comprised of non-professionals (see Table 4).

Table 9 displays the semantic differential for the meat products steak and fish.

Table 9



As evidenced in Table 9 the more extreme perceptions of steak are great taste, high status, heavy, long preparation time, and good aroma. The extreme perceptions for fish are low calorie, healthy, light, and



very tender. It is clear that fish is perceived as healthier and lighter than steak, and this agrees with the labeling of the horizontal axis in Figure 1 on a continuum from healthy/light to unhealthy/heavy. Again, status seems to differentiate these two products more than modern.

## CHAPTER V

### DISCUSSION AND CONCLUSIONS

The preceding chapter indicated that the consumers in this study differentiated meat products on a high-status to low-status continuum and on a healthy/light to unhealthy/heavy continuum. The line-drawing analysis revealed some strengths and weaknesses in the position of beef relative to the other meat products. Beef's main weaknesses are that it is perceived as unhealthy and heavy; and, with the exception of hamburger, beef is perceived as taking a long time to prepare. Hamburger is perceived as traditional and low status. The strengths of beef, steak and beef roast in particular, are that it is perceived as having great taste, and it is special and/or high status. The semantic differential scales added credence to these results and showed the contrast in the perceptions of hamburger, shellfish, steak, and fish. The fish products were perceived as low calorie, healthy, and light in comparison to beef. Figure 1 indicates that chicken is perceived much like fish in that it is healthy, light, and quick to prepare. But, chicken is also perceived as more traditional and low-status.

What are the implications of these results for the beef industry, and how could the industry use this information to more effectively market beef through the components of the marketing mix: the physical product characteristics, the product's price, the promotion of the product, and the distribution of the product?

### The Physical Product Characteristics

Beef's main positive characteristics are its taste and the prestige or status associated with serving it. Other product characteristics include the risks in purchasing the product (quality, cost, shelflife, status, and failure rate) and the usage situation, time to prepare and frequency of beef use.

These characteristics, or people's perceptions of these characteristics, indicate consumer tastes and preferences for beef. Again, results of this study indicate that beef is perceived as a more unhealthy/heavy product relative to poultry and fish. Also, beef, with the exception of hamburger, is perceived as having inconsistent quality, high failure rate, long preparation time, and a short shelf life. These perceptions, the health trends in society, and the negative publicity surrounding red meat consumption have adversely affected the demand for beef.

The risks in purchasing beef may be related to the perceptions cited in the previous paragraph. If an expensive steak or roast is purchased and the taste does not meet expectations (inconsistent quality), it spoils on the shelf (short shelf life), or it is not properly prepared (high failure rate) then consumer dissatisfaction results. Many cuts of beef, roasts in particular, take too long to prepare and, therefore, are purchased less frequently. The usage situation refers to the times of day when beef is served, the specific occasion, such as a holiday, or the time of the week such as the weekend. The time constraints imposed on the ever increasing two-income family may only allow the preparation of roasts and steaks on weekends or holidays (long preparation time).

In summary, the product characteristics of beef and the consumer perceptions of these characteristics, as detailed from the survey results, may have a potentially great affect on demand. Consumer tastes and preferences have changed in the last ten to fifteen years resulting in beef being perceived as a more unhealthy/heavy meat product relative to poultry and fish.

One way to change these negative perceptions of beef is to improve the product. Areas in which the product could be improved include: fat content, ease of preparation, and possibly additive content. The ability of beef associations to deal with the product component of the marketing mix is rather limited. Yet, they can support research investigating methods to change the qualities of beef, to encourage ranchers to educate themselves on consumer needs, to produce cattle with the qualities desired by the marketplace, and to support the National Live Stock and Meat Board in their efforts to change the public's perceptions of beef through promotional efforts.

#### The Price Of Beef

No industry wants to lower the price of its product. Yet, one of the major factors causing the decline of beef consumption has been the increase in price of beef relative to its competitors, poultry in particular. The results of this study confirm that consumers perceive beef roasts and steak to be high cost. As noted previously, the purchase of an expensive cut of beef creates risk because of the variability of quality, and uncertainty of preparation. Again, the findings resulting from the preference map also confirm that beef is perceived as having inconsistent quality and a high failure rate.

The beef industry must take steps to remove these impediments to avoid having to make price cuts which would damage industry profitability. These steps would involve the creation of new beef products and packaging which act to: (a) remove the uncertainty in preparing beef, (b) create cost efficiencies in production and packaging to allow some price lowering, and/or (c) add value to the product by improving its taste quality, ease of preparation, and dependability.

These strategies and the goals for accomplishing them should be long-term in nature. This would involve funding researchers who are investigating the methods of producing, distributing, and packaging beef.

#### The Promotion Of Beef

A more concerted, well-researched, and heavier promotional effort will be required to change the negative perceptions of beef. There is a need to insure that consumers recognize the health benefits of eating moderate quantities of beef, and to reposition beef's image so that consumers perceive it to be a lighter, up-to-date food which can be prepared and eaten quickly. The second conclusion of this study that consumers differentiate meat products on an up-to-date/traditional continuum is more appropriate for this purpose than the high status/low status orientation. Given that non-professionals differentiate meat products based upon status, it would probably hurt beef's image to position it as a high-status, upper-class product.

The strategy to change beef's image would involve advertising, consumer education, and public relations. Changing the perceptions of a product through advertising is a long-term, expensive process. State beef associations should support the promotional efforts of the Beef Industry Council and use their advertising themes in local advertising.

The pooled resources of all the beef associations allows for a more concerted, national advertising campaign utilizing the talent of some of the top advertising agencies in the country.

It is critical that the beef industry use advertising to change the perception of beef from that of a heavy, calorie/cholesterol laden food to a perception of a lighter, up-to-date food with high nutritional value. An example of the way this image could be portrayed would be to show advertisements in which healthy, active people are eating beef "on the run".

Of course, any innovations resulting from the research into the beef product itself or methods of packaging and preparing it would greatly enhance this effort. One cannot simply change the image of a product by massive promotion alone; product improvements must be implemented.

The educational and public relations efforts the beef industry already conducts should be continued with renewed effort. The goals of these programs are to provide information to schools, new media, medical personnel, and diet counselors about the nutritional benefits of beef. Public relations would also involve counteracting erroneous information published about beef with up-to-date, accurate information.

The promotional efforts should also emphasize the strengths of beef as identified in this study and others: its good taste, and the prestige associated with serving it.

#### The Distribution of Beef

Unfortunately, the distribution channels for beef are controlled by the meat packers, the retail supermarket chains, and the institutional meat buyers. Cattlemen are not forwardly integrated enough into the

distribution channels to effect the packaging and presentation of beef products. Yet, it is the packaging and presentation of beef to the public that could have the most substantial impact on how beef is perceived. An example would be to place beef products in more colorful, informative packages containing recipes, alternative uses, and nutritional information.

Retailers have traditionally placed beef in bland, cellophane packages surrounding an unsightly meat counter. Yet, a positive trend is now occurring in supermarkets which puts more emphasis upon the presentation of beef and other meat products. The return to a deli style atmosphere where meats are artfully arranged on a bed of greens with helpful personnel to assist the buyer is becoming more prominent.

Beef associations should encourage the efforts of retailers and conduct studies with major beef retailers on alternative methods of presenting beef to the public. A change in packaging and presentation may catch the consumers attention and help position beef as an up-to-date food.

In summary, the beef industry must alter the components of the marketing mix to change the perception of beef. The results of this study indicate that beef is perceived as a traditional, unhealthy, heavy product that is unreliable and expensive. This perception must be changed to stem the slide in the demand for beef. Continued research and promotional efforts are needed to reposition beef as a food that fits into an active, time-deprived, and health-oriented lifestyle.

#### Limitations Of This Study

This study was conducted on a limited scale and therefore should not be generalized to the population as a whole. Yet, it provides some

interesting insights into consumer perceptions of meat products which concur with the findings of much larger studies performed by professional research companies.

The use of programs such as MDPREF and preference mapping analysis is a relatively new tool which is not widely used. Hopefully, this study will lend credibility and usefulness to these methods.

The questionnaire used for this study served its purpose but could be improved. The main complaints from respondents were that the Likert scales were labeled wrong. It did not make sense to them that low cost or low calorie should be a 7 on the rating scale and that high cost or high calorie should be ranked as 1. This author agrees and the scales should have been designed to make sense intuitively. The data could have easily been rearranged at a later time using the computer. Also, some of the attributes were not understood and needed explaining. Many wondered if shelf life should be rated assuming the product was refrigerated, frozen, or stored in the open air. Also, the attributes cholesterol level and calories were often left blank for lack of knowledge.

Missing from the questionnaire was a section where the respondent could indicate the relative importance of each attribute. For example, if 75% of the respondents indicated that the attribute healthfulness was more important than price in the purchase decision of a meat product, then importance weights could have been included in the analysis.

This study should not be considered completely valid or reliable until it is performed on a larger scale.



## Summary

Beef has both weaknesses and strengths in its market position. Beef is perceived as less healthy, heavier, and higher in calories and cholesterol relative to poultry and fish. Also, with the exception of hamburger, beef is perceived as having a high cost, an inconsistent quality, a high failure rate, a short shelf life, and a long preparation time. Beef's main strengths, steak and beef roast in particular, are its perceptions of great taste and high status.

Beef has lost market share in the past 15 years, and it is being challenged by chicken as the number one meat in the American diet. The negative perceptions cited above must have been largely responsible for the decline in beef demand. Consumer perceptions of beef have grown more negative because of the health and physical fitness trends in our society and the emphasis on convenience. There is evidence that consumer tastes and preferences have changed; thus, causing a downward shift in the demand curve for beef. Demographic factors such as smaller families and working women have also adversely affected beef demand.

Beef associations around the country must alter the components of their marketing mix, and develop promotional programs to re-position beef in the consumer's mind as a lighter, up-to-date, nutritional food which can be prepared and eaten quickly. Research should be funded to improve the qualities of beef and/or to create more cost-efficient production methods. Beef associations should also encourage the efforts of retailers and conduct studies with major beef retailers on alternative methods of presenting beef to the public.

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## EXHIBIT A

Respondent Name: \_\_\_\_\_

Date: \_\_\_\_\_

Validated By: \_\_\_\_\_

Your cooperation is requested on a survey designed by an Oklahoma State University Graduate Student. The purpose of this questionnaire is to obtain information on how people perceive or rate various types of food products.

Please try to be candid in all your answers. Work carefully but please remember, there are no "right" or "wrong" answers to any of the questions.

## PART A

In this part of the questionnaire we are interested in your ratings of food items based upon various characteristics, such as taste or cost. Beside each food item will be a seven point scale. You are to circle the number on the scale which best represents your rating of that food item, based upon taste or some other characteristic. Circling a 1 on the scale would indicate a low rating, and circling a 7 on the scale would indicate a high rating for that food item.

For example, suppose you were presented with the characteristic of smell, and you were supposed to rate the food items swiss cheese, broasted chicken, and cottage cheese. In such a case you might think of swiss cheese as having an unpleasant smell, think of broasted chicken as having a pleasant smell, and think of cottage cheese as having an unpleasant smell, but not as bad as swiss cheese. Consequently you would mark the scales as shown below:

<u>SMELL</u>	1 = Bad Smell			7 = Great Smell			
Swiss cheese	①	2	3	4	5	6	7
Broasted chicken	1	2	3	4	5	6	⑦
Cottage cheese	1	2	③	4	5	6	7

Please turn the page and begin Part A.

<u>TASTE</u>	1 = poor taste				7 = great taste			
Turkey	1	2	3	4	5	6	7	
Steak	1	2	3	4	5	6	7	
Shellfish (lobster, shrimp, etc.)	1	2	3	4	5	6	7	
Pork Roast	1	2	3	4	5	6	7	
Lamb	1	2	3	4	5	6	7	
Tuna Fish	1	2	3	4	5	6	7	
Ham	1	2	3	4	5	6	7	
Chicken	1	2	3	4	5	6	7	
Beef Roast	1	2	3	4	5	6	7	
Pork Chop	1	2	3	4	5	6	7	
Fish	1	2	3	4	5	6	7	
Hamburger	1	2	3	4	5	6	7	

<u>COST</u>	1 = high cost				7 = low cost			
Hamburger	1	2	3	4	5	6	7	
Turkey	1	2	3	4	5	6	7	
Fish	1	2	3	4	5	6	7	
Steak	1	2	3	4	5	6	7	
Pork Chop	1	2	3	4	5	6	7	
Shellfish	1	2	3	4	5	6	7	
Beef Roast	1	2	3	4	5	6	7	
Pork Roast	1	2	3	4	5	6	7	
Chicken	1	2	3	4	5	6	7	
Lamb	1	2	3	4	5	6	7	
Ham	1	2	3	4	5	6	7	
Tuna Fish	1	2	3	4	5	6	7	

<u>STATUS</u>	1 = Low Status				7 = High Status			
Turkey	1	2	3	4	5	6	7	
Steak	1	2	3	4	5	6	7	
Shellfish	1	2	3	4	5	6	7	
Pork Roast	1	2	3	4	5	6	7	
Lamb	1	2	3	4	5	6	7	
Tuna Fish	1	2	3	4	5	6	7	
Ham	1	2	3	4	5	6	7	
Chicken	1	2	3	4	5	6	7	
Beef Roast	1	2	3	4	5	6	7	
Pork Chop	1	2	3	4	5	6	7	
Fish	1	2	3	4	5	6	7	
Hamburger	1	2	3	4	5	6	7	

<u>MODERN</u>	1 = Traditional Old Food				7 = Modern Food			
Hamburger	1	2	3	4	5	6	7	
Turkey	1	2	3	4	5	6	7	
Fish	1	2	3	4	5	6	7	
Steak	1	2	3	4	5	6	7	
Pork Chop	1	2	3	4	5	6	7	
Shellfish	1	2	3	4	5	6	7	
Beef Roast	1	2	3	4	5	6	7	
Pork Roast	1	2	3	4	5	6	7	
Chicken	1	2	3	4	5	6	7	
Lamb	1	2	3	4	5	6	7	
Ham	1	2	3	4	5	6	7	
Tuna Fish	1	2	3	4	5	6	7	

<u>CALORIES</u>	1 = High Calorie				7 = Low Calorie		
Beef Roast	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7

<u>SPECIAL MEAL</u>	1 = Not Special				7 = Very Special Meal		
Chicken	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7

<u>SHELF LIFE/STORABILITY</u>	1 = Short Shelf Life						7 = Long Shelf Life
Fish	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7

<u>CONSISTENT QUALITY</u>	1 = Not Consistent						7 = Highly Consistent
Ham	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7



<u>HEALTHFULNESS</u>	1 = unhealthy				7 = very healthy		
Tuna Fish	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7

<u>HEAVINESS/FILLING</u>	1 = Heavy				7 = Light		
Shellfish	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7

<u>TENDERNESS</u>	1 = Tough				7 = Very Tender		
Tuna Fish	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7

<u>CHOLESTEROL LEVEL</u>	1 = High Cholesterol				7 = Low Cholesterol		
Shellfish	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7

<u>TIME TO PREPARE</u>	1 = Long Preparation Time						7 = Quick to Prepare
Pork Roast	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7

<u>FAILURE RATE</u>	1 = High Failure Rate						7 = Low Failure Rate
Steak	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Fish	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7

<u>AROMA</u>	1 = Bad Aroma				7 = Good Aroma		
Fish	1	2	3	4	5	6	7
Shellfish	1	2	3	4	5	6	7
Chicken	1	2	3	4	5	6	7
Tuna Fish	1	2	3	4	5	6	7
Lamb	1	2	3	4	5	6	7
Beef Roast	1	2	3	4	5	6	7
Steak	1	2	3	4	5	6	7
Hamburger	1	2	3	4	5	6	7
Turkey	1	2	3	4	5	6	7
Pork Chop	1	2	3	4	5	6	7
Pork Roast	1	2	3	4	5	6	7
Ham	1	2	3	4	5	6	7

## PART B

The following background information questions are included only to help us interpret your responses on other questions. Your responses here and throughout the questionnaire will be held strictly confidential.

1. What is your marital status?  
 Single       Married       Divorced       Living Together  
 Widowed       Separated
2. What is your current age?  
 18-24       35-44  
 25-29       45-54  
 30-34       55-64  
 65 and over
3. Years of formal study completed by you:  
 8   9   10   11   12   13   14   15   16   17   18   19   20+
4. Years of formal study completed by your spouse:  
 8   9   10   11   12   13   14   15   16   17   18   19   20+
5. Your occupation \_\_\_\_\_ Full time  Part time
6. Spouses occupation \_\_\_\_\_ Full time  Part time
7. Total number of people in your household, including you and your spouse? \_\_\_\_\_ Number under 18 years? \_\_\_\_\_
8. On an approximate basis, what is the total family annual income?  
 Under \$5,000       \$15,000-\$19,999  
 \$5,000-\$9,999       \$20,000-\$24,999  
 \$10,000-\$14,999       \$25,000-\$29,999  
 \$30,000 and over
9. Generally speaking, do you usually think of yourself as a Republican, a Democrat, or an Independent?  
 Republican       Democrat       Independent
10. In terms of your political outlook, do you usually think of yourself as:  
 Conservative       Middle of the road       Liberal

VITA

John Steven Kinskey

Candidate for the Degree of

Master of Business Administration

Report: Consumer Perceptions Of Meat Products And The Marketing  
Implications For Beef

Major Field: Marketing

Biographical:

Personal Data: Born in Portsmouth, Ohio, June 6, 1959,  
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