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A STUDY OF OPEN CODE DATING  
IN GROCERY RETAILING IN  
DALLAS COUNTY

DISSERTATION

Presented to the Graduate Council of the  
North Texas State University in Partial  
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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This study deals with "open code dating," the movement by grocery manufacturers and distributors toward dating perishable food packages in such a manner that consumers can readily determine product freshness or length of time on store shelves. The study explores the desirability and feasibility of open code dating, placing greatest importance upon the response of the consumer to the concept.

Secondary data provide background information and historical perspective in the study. Consumers and grocery retailers in Dallas County were surveyed concerning their attitudes toward and opinions of open dating. Personal interviews elicited information from a systematically drawn random sample of consumers. A limited number of interviews were conducted with Dallas County retail grocers.

The thesis is organized into six chapters. Chapter I provides introductory material; Chapter II reviews the consumer movement. In Chapter III, the supermarket industry

is analyzed. Chapter IV reveals preferences and attitudes of shoppers toward open dating, and Chapter V presents the grocery retailer's position. Summary, conclusions, recommendations, and suggestions for further research are included in Chapter VI.

It was found that consumers were aware of open code dating and generally strongly desired its universal adoption. Shoppers were also confused by open dating and failed to understand freshness dates properly. The strongest desire for open dating was found in shoppers at the upper end of the socio-economic scale.

Grocery retailers expressed satisfaction with open coding, believing it an aid in stock rotation and customer satisfaction. Possible disadvantages, such as increased throwaway costs and large conversion costs, were not perceived as being significant. The businessmen favored widespread adoption of open code dating.

On the basis of data from interviews with shoppers, it is concluded that consumers desire adoption of open code dating and do use this service. It is also concluded that adoption of open code dating would be an economically sound decision which would constitute a desirable marketing strategy.

Recommendations include voluntary industry adoption of open code dating and adoption of a pull date, the last date a product could be sold, as the best type of freshness date to use. It is recommended that proposed mandatory Federal open dating legislation not be enacted unless industry fails to adopt open dating voluntarily. It is finally recommended that industry should take action to inform consumers of the meaning and scope of open code dating.

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## CHAPTER I

### INTRODUCTION

The issue of this study is identified as "open code dating." It refers to the movement by grocery manufacturers and distributors toward dating perishable and semi-perishable food products in such a manner that consumers can easily determine how fresh they are or how long they have been on the store shelves. Over the past few years many food manufacturers and distributors have moved in this direction; however, most have not. Most have retained the old practice of code dating food products in such a manner that only a trained store employee equipped with a code book can decipher them. "Most foods produced in the United States are coded with the date of manufacture, but only a few companies use open dating."<sup>1</sup>

The basic problem involved in moving toward open dating concerns the response of the consumer. Despite some industry

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<sup>1</sup>Department of Food Science, Rutgers University, Food Stability Survey, Vol. I (Washington, 1971), p. 20.

surveys, no one is really sure just how consumers will react. Many industry spokesmen fear that the costs will be prohibitive. They fear that open dating will result in consumers selecting only the freshest or most recently dated package, thus ignoring the others and causing them to spoil. The New Republic reports this attitude when it states:

The food industry does not want customers understanding the codes, because then it would not be possible to unload the stale food. Clarence Adamy, the president of the National Association of Food Chains, said recently that if customers could read the codes they would "tend to buy only the freshest products and that would create monumental waste." If housewives get picky, Adamy says, there would be a substantial increase in costs, hence prices. He feels the stores should be the sole judges of what is fresh enough to market. Should they?<sup>2</sup>

At the present time there is a bill before the House of Representatives in Washington which would, if passed, require mandatory open code dating of all packaged perishable and semi-perishable foods. Introduced by Representative Benjamin Rosenthal (D-NY) and fourteen other Congressmen, H.R. 1655 (see Appendix) is known as the "Open Dating Perishable Food Act." This proposed amendment to the Fair Packaging and Labeling Act would require manufacturers and retailers to

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<sup>2</sup>"Smell It, Then Sell It," The New Republic (April 25, 1970), p. 9.

label such foods with a pull date or face fine and imprisonment. The bill has been referred to the Committee on Interstate and Foreign Commerce.

The importance of open code dating as a part of packaging policy has far-reaching implications for both retailers and manufacturers. Such a policy will call for better packaging, inventory control, and the development of marketing strategies designed to capitalize on and promote this development. The contribution of this study is to prove that as a result of growing consumer awareness and the consumer movement, it would be to the advantage of supermarkets to utilize open code dating. This knowledge should enable retailers, wholesalers, and manufacturers to minimize consumer dissatisfaction. It will also eliminate demands that Federal legislation be enacted requiring the usage of open code dating. In the long run such a move will benefit both consumer and businessman.

### Objectives

In an effort to provide continuous analysis of dynamic marketing, a doctoral research study was conducted on the practice of open code dating. There are three main objectives which the study sought to accomplish. All are designed to enhance the level of knowledge in the field of Marketing:

(1) To define more clearly the roles and responsibilities of businessmen in response to demands made by some consumer groups for more consumer protection.

(2) To determine the need for proposed Federal legislation requiring open code dating.

(3) To gain additional insight into the complex behavior of consumers in their grocery buying habits.

#### Consumerism and Open Code Dating

The 1960's and 1970's have been years in which consumer groups in this country have become increasingly active in their efforts to remedy business injustices. Such efforts by individuals and consumer groups are known as "consumerism." Consumerism means many things to many different people. However, it may be said to refer to the organized activities by groups of private citizens, the purpose of which is to correct perceived inequities in the manner in which business institutions conduct themselves with the consuming public. One author defines consumerism as "(1) the reaction--and an increasingly organized reaction--of consumers to their dissatisfactions and unrealized expectations and (2) their efforts to have these perceived injustices remedied."<sup>3</sup>

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<sup>3</sup>William J. Stanton, Fundamentals of Marketing, 3rd ed. (New York, 1971), pp. 657-658.

Though there have been consumer movements in the past,<sup>4</sup> the present one is not likely to disappear anytime soon. "The atmosphere of consumerism is not at all likely to fade away in the foreseeable future, as many executives seem to think it will."<sup>5</sup>

The consumer movement has been extended to include many areas of business activity. The retail supermarket has not been exempt from the watchful eyes of consumer groups, and there have been boycotts and demonstrations protesting certain supermarket practices.<sup>6</sup> Consumer groups are concerned with many issues in the food industry, and one of these issues is open code dating, the subject of this study.

Consumer's Union is one consumer group which advocates mandatory open code dating as beneficial to both consumers and industry. "Consumers need legislation for clear, consistent and understandable open dating at least as much as the food industry does."<sup>7</sup> The movement toward open code dating has been influenced by the consumer movement. Consumer Reports

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<sup>4</sup>Ibid., p. 658.

<sup>5</sup>Ibid., p. 660.

<sup>6</sup>Jennifer Cross, The Supermarket Trap (Bloomington, 1970), p. 3.

<sup>7</sup>"Food Dating: Now You See It, Now You Don't," Consumer Reports, XXXVII (June, 1972), 392.

stated: "Pressure from consumer groups and newspaper articles started the trend to open dating."<sup>8</sup>

### Needs

The needs for this study are indicated by the following factors:

(1) There is a lack of unbiased, scholarly information on the usage of open code dating. Neither the Journal of Marketing nor the Journal of Marketing Research have had major articles on this subject. Careful research through Dissertation Abstracts has revealed no dissertation on open code dating.

(2) A proposed bill is before Congress to require open code dating. However, little is known at the present time concerning advantages and disadvantages of mandatory open code dating. This study is designed to fulfill that need.

(3) Letters written to Federal agencies received support from government officials. In a letter from the Executive Office of the President, Office of Consumer Affairs, the following statement was made by Frank E. McLaughlin, Director for Industry Relations, regarding open code dating as a suitable dissertation topic:

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<sup>8</sup>Ibid., p. 391.



I think you have made an excellent selection for your dissertation topic. This important consumer issue has received an increased amount of research substantiating the claims by advocates of open dating (as well as its opponents) has been rather limited in scope.<sup>9</sup>

### Methodology

Data from this study were gathered from both primary and secondary sources.

Secondary data were gathered from books, newspapers, periodicals, and government documents. The purpose of the secondary data is to present background information and to establish historical trends.

Primary data were collected from ultimate consumers and grocery retailers in Dallas County by personal interviews. The study used as its universe the names listed in the 1973 Dallas County telephone directory. From this universe a systematic random sample was taken. The sample size was determined using the following formula:<sup>10</sup>

$$N_s = \frac{pq}{\left(\frac{AE}{z}\right)^2}$$

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<sup>9</sup>Letter from Frank E. McLaughlin, Director for Industry Relations, Executive Office of the President, Office of Consumer Affairs, October 19, 1972.

<sup>10</sup>J. B. Spalding, "Statistical Determination of Sample Size," The Business Symposium, (August, 1970), p. 6.

In this formula,  $N_s$  is the necessary sample size; AE will be set at 5 per cent, the allowable or desired accuracy between sample percentage and universe percentage;  $z$  is desired confidence interval for the study. Since  $p$  and  $q$ , percentages for affirmative and negative responses, were initially unknown, they were arbitrarily set at .50 each.

A systematic random sample of 350 names was taken from the universe. Marketing students at North Texas State University conducted personal interviews with consumers living in Dallas County. A total of 232 usable questionnaires were completed for a response rate of 66.3 per cent. By applying the previously stated formula, a confidence interval of 87.23 per cent, with an allowable error of .05 per cent, was determined.

The second phase of the primary data gathering process involved collecting information from supermarket store managers and chain store executives located in Dallas County. A limited number of personal interviews were conducted with these individuals in order to gain further insight into the problems facing supermarkets in open code dating. These twelve case studies were evenly divided between store managers and chain store executives. Chain store executives included in the study represented the following supermarket chains: Minyard's,

Southland Corporation, Cullum Corporation, Safeway Corporation, Kroger, and the Great Atlantic and Pacific Tea Company (A & P). This second phase does not claim to constitute a statistically valid sample and no statistical significance should be given to the findings.

#### Limitations

There are three major limitations inherent in this study.

No outside financial assistance was provided for this study. Therefore, both the consumer and retailer universe was limited to Dallas County.

The study is not intended to be statistically valid for the nation as a whole, because Dallas County does not necessarily contain a valid sample of the nation's population. However, it is a statistically valid sample of Dallas County consumers listed in the telephone directory.

A major limitation of studies of human behavior is that they report only what the respondent says he thinks he will do. There is no guarantee that his actual behavior will conform to this.

### Hypotheses

The importance and usefulness of open code dating was determined by testing the following hypotheses:

Consumers desire the widespread adoption of open code dating of perishable food products.

Consumers would utilize open code dating were it adopted.

Adoption of open code dating by supermarkets would be an economically sound policy. That is, the changeover from coded dating of perishable products to open code dating would not cause "throw-away" costs to soar.

Open code dating would be a sound marketing strategy by supermarkets. Utilization of open code dating would be advantageous to supermarkets by building consumer confidence, thus helping eliminate demands for more restrictive Federal legislation, and also aiding store managers in the task of stock rotation.

### Definition of Terms

Pack date.--Refers to the date food was manufactured, processed, or packaged; it only tells how old the food is when bought.

Shelf life.--Tells consumer how long after the pack date that food will retain its best quality if properly stored.

Pull date.--Is the last day a supermarket may still sell the food, but not the last day it can be eaten without loss of quality; it provides for a reasonable time period of home storage.

Freshness date.--Would be the last date on which food retains its best quality, though not the last date which the food remains edible.

Expiration date.--Refers to the last day on which a food may be safely eaten. For example, after the expiration date milk sours and bacon becomes rancid.

Shelf-display date.--Is the date on which the supermarket puts the food on the shelf. Dating would be done by supermarket clerks and it tells nothing about shelf life, but this date is helpful in stock rotation. Some stores put this date on fresh meat and poultry packaged by the supermarket.<sup>11</sup>

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<sup>11</sup>"Food Dating," op. cit., p. 392.

### Summary

This first chapter has been designed to provide a brief introduction into the nature and scope of this study of open code dating in Dallas County. It gives the needs and objectives of such a study and the methodology employed to accomplish the task. Also, the chapter notes the major limitations inherent in this project, and it lists the hypotheses tested by the study. The chapter concludes with a section defining the different terms or dates facing marketers in the task of converting to open code dating.

## CHAPTER II

### THE CONSUMER MOVEMENT

The purpose of this chapter is to present background information leading up to the significance and value of this study. In order to bring the present study into historical perspective, it is first necessary to review the development of the consumer movement in this country. Also, significant Federal legislation resulting during periods of major consumer activity will be examined. The chapter concludes by examining the role of business and the future of the consumer movement in this country.

#### Early Consumer Movement and Legislation

Although consumerism is a relatively new word in the marketing vocabulary, it is not a new concept and cannot be ignored by either businessmen or academicians. A full chapter is devoted to this subject in one recently revised edition of a Fundamentals of Marketing textbook.<sup>1</sup> Consumerism does

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<sup>1</sup>William J. Stanton, Fundamentals of Marketing, 3rd ed. (New York, 1971), pp. 656-690.

indeed predate Ralph Nader. The early years of this century are considered by many to represent the beginnings of the consumer movement. One author has written: "The basic concept is certainly nothing new to American business. Even in the early 1900's, social leaders led campaigns against fraud, price-fixing, and unsafe or unwholesome products."<sup>2</sup>

The consumer movement can be said to have originated with the Pure Food and Drug Act of 1906. "Actually, one of the earliest pieces of Federal legislation passed in an effort to protect the consumer was the Food and Drug Act of 1906 which forbade the misbranding of foods and drugs."<sup>3</sup> This law was passed as a direct result of the public outcry stemming from the publication of The Jungle by Upton Sinclair, a book exposing scandals in the Chicago meat packing industry.

Actually, the consumer movement in this century can be divided into three phases. The first phase was in the early 1900's and resulted in the passage of several important pieces

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<sup>2</sup>Theodore N. Beckman, William R. Davidson and W. Wayne Talarzyk, Marketing, 9th ed. (New York, 1973), p. 82.

<sup>3</sup>Marshall C. Howard, Legal Aspects of Marketing (New York, 1964), p. 10.



of Federal legislation. In summing up this early consumer movement and the results of it, Philip Kotler wrote:

In retrospect, it is interesting that the first consumer movement was fueled by such factors as rising prices, Upton Sinclair's writings, and ethical drug scandals. It culminated in the passage of the Pure Food and Drug Act (1906), the Meat Inspection Act (1906), and the creation of the Federal Trade Commission (1914).<sup>4</sup>

Though this first consumer movement was not enduring, it showed what could be accomplished by a concerned public when some businessmen were found to be in need of regulation. Inevitably, when some businessmen violate the public's confidence in them, the result is a drive for the enactment of legislation, usually at the Federal level, designed to regulate and control their freedom. The laws passed during this time period and their subsequent amendments, form the basis for much of the protection given to the public today. Despite fears expressed at the time that government regulation of certain business activities would spell the end of the free enterprise system, this situation has certainly not been the case.

The passing of the first consumer movement undoubtedly led many people to believe that consumerism was a dead issue

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<sup>4</sup>Philip Kotler, "What Consumerism Means for Marketers," Harvard Business Review (May-June, 1972), p. 48.

and would not return. However, the decade of the 1930's saw the revival of the consumer movement.

#### Middle Consumer Movement and Legislation

The decade of the 1920's was a relatively tranquil time period between consumer groups and business. The philosophy of the government was to minimize the role of government, especially regarding regulation of business activities. Still, the 1920's did see the establishment of Consumers' Research, an organization founded in 1929 so that "ultimate consumers may defend themselves against the invasions and aggressions of misleading advertising and high pressure salesmanship."<sup>5</sup>

However, it was not until the decade of the 1930's that the second consumer movement was born. This decade saw many changes in business conditions and political conditions. The Great Depression shook the faith of many Americans in the free enterprise system by revealing many abuses and flaws not readily apparent during the prosperity of the 1920's. It also

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<sup>5</sup>Helen Sorenson, The Consumer Movement (New York, 1941), p. 46.

swept the Republicans out of power in Washington and saw the establishment of a new relationship between government and business.<sup>6</sup>

In his explanation of this effect of prosperity and depression on the demand for government regulation of business activities, Joseph McGuire writes:

Reform and new regulations are most often ex post facto, in the sense that they tend to make corrections for poor past performances in business. Thus, the demands for reform in the thirty-year period that began in 1880 led to many regulatory laws, and the Depression of the 1930's resulted in many others. When business is operating smoothly and the nation is prosperous, as it was in the 1920's there seems to be little agitation for new regulations.<sup>7</sup>

Reasons for the emergence of this second consumer movement are numerous and complex. In summarizing the reasons for this second wave of consumerism, Kotler states:

The second wave of consumerism in the mid-1930's was fanned by such factors as an upturn in consumer prices in the midst of the depression, the sulfanilamide scandal, and the widely imitated Detroit housewives strike. It culminated in the strengthening of the Pure Food and Drug Act and in the enlarging of the Federal Trade Commission's

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<sup>6</sup>Joseph W. McGuire, Business and Society (New York, 1963), pp. 73-99.

<sup>7</sup>Ibid., p. 83.

power to regulate against unfair or deceptive acts and practices.<sup>8</sup>

Despite the presence of many factors attributed to the emergence of the second consumer movement, it is believed that all are overshadowed by the presence of the Great Depression. As a result of conditions brought about by the Depression, consumers and government were much more willing to regulate business than during the prosperous decade prior to this time.

The Pure Food and Drug Act of 1906 was strengthened by passage of an amendment known as the Federal Food, Drug, and Cosmetic Act of 1938. Under this amendment, cosmetics and therapeutic devices were brought under the jurisdiction of the Food and Drug Administration. Also, failure to reveal material facts in labeling products covered by the Act can be a violation of the law. "In short, labeling representations may be illegal because of significant omissions as well as because of unjustifiable claims."<sup>9</sup>

The enlargement of the Federal Trade Commission's power to regulate against unfair or deceptive acts and practices

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<sup>8</sup>Kotler, op. cit.

<sup>9</sup>D. Maynard Phelps and J. Howard Westing, Marketing Management, 3rd ed. (Homewood, Illinois, 1968), p. 209.

was accomplished by the passage of the Wheeler-Lea Act of 1938. The Federal Trade Commission Act of 1914, passed during the period of the first consumer movement, had made illegal only those unfair methods of competition or deceptive practices which injured competitors. Under the famous Section 5 of the Federal Trade Act, only businessmen were protected, not ultimate consumers.

But specific protection in behalf of the public had to wait the passage of the 1938 Wheeler-Lea Act. This amendment changed the wording of Section 5 to include "unfair or deceptive acts or practices." No longer did injury to a competitor first have to be shown before the public interest could be protected.<sup>10</sup>

With the passage of these two pieces of consumer-oriented legislation, the second consumer movement came to an unofficial end. This is not to say that activities by consumer groups and government regulatory agencies had ceased on behalf of the individual consumer. However, the decades of the 1940's and the 1950's are not widely known as years of consumerist activity and legislation. Not until the decade of the 1960's would there be a strong revival of the consumer movement.

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<sup>10</sup>Howard, op. cit.

### Present Consumer Movement

The present consumer movement began in the early 1960's. At the present time it shows no sign of having run its course and coming to an end. It is believed by many that the present consumer movement is the strongest of the three major consumer movements of the century. In his explanation of the strength and importance of the present consumer movement, William Stanton writes: "Because this phenomenon shows every indication of growing stronger, rather than abating, in the 1970's, it seems imperative that business executives must understand what it is, what caused it, what it means to them, and what they should do about it."<sup>11</sup>

There are many reasons for the present revival of the consumer movement. A full review of the causes of the present consumer movement would constitute an entire thesis in itself. One author writes: "Consumers are frustrated, dissatisfied, and indignant because of unfulfilled promises, unrealized expectations, and unstated dangers in the products and services they have purchased."<sup>12</sup> Kotler also states: "The third and current movement has resulted from a complex combination of

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<sup>11</sup>Stanton, op. cit., p. 657.

<sup>12</sup>Ibid., p. 658.

circumstances, not the least of which was increasingly strained relations between standard business practices and long-run consumer interests."<sup>13</sup>

Present day consumerism has been defined as "the widening range of activities of government, business, and independent organizations that are designed to protect individuals from practices (of both business and government) that infringe upon their rights as consumers."<sup>14</sup> This definition emphasizes the fact that the present consumer movement is much more important than past movements.

#### The Role of Government

Government at all levels has played an important role in the movement. The role of the Federal Government was defined early by President John F. Kennedy in a message to Congress. Kennedy stated that consumers possessed four basic rights: the right to safety, the right to be informed, the right to choose, and the right to be heard.<sup>15</sup>

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<sup>13</sup>Kotler, op. cit.

<sup>14</sup>George S. Day and David A. Aaker, "A Guide to Consumerism," Journal of Marketing, XXXIV (July, 1970), 13.

<sup>15</sup>Executive Office of the President, Consumer Advisory Council, First Report (Washington, October, 1963).

Kennedy's message to Congress has been translated into action by enactment of consumer protection legislation. One such piece of legislation is the Fair Packaging and Labeling Act of 1966. This act, more commonly known as the "truth-in-packaging bill" was initially opposed by most food and drug manufacturers.<sup>16</sup> Its purpose is to give consumers greater information about the manufacturer of a product, net quantity, and contents of a consumer product.<sup>17</sup> The proposed Open Dating Perishable Food Act would amend this Fair Packaging and Labeling Act.

There have been other consumer protection bills enacted during the past few years. The Consumer Credit Protection Act, otherwise known as the Truth-in-Lending Act, went into effect in 1969. The Consumer Product Safety Act became effective as of December, 1972. This act "is intended to protect consumers against unreasonable risk from hazardous products. . . ."18

The Office of Consumers Affairs was established to serve "as the consumer's input to the President."<sup>19</sup> The Office is

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<sup>16</sup>Phelps and Westing, op. cit., p. 215.

<sup>17</sup>Beckman, op. cit., p. 516.

<sup>18</sup>Ibid., p. 84.

<sup>19</sup>Ibid., p. 83.



directed by Virginia H. Knauer, who serves as Special Assistant to the President for Consumer Affairs. During 1971 the Office handled an average of 2,500 complaints monthly, an increase from 1,500 monthly the previous year.<sup>20</sup>

Federal regulatory agencies have been expanding their enforcement of existing legislation in order to protect consumers. "The Federal Trade Commission and Food and Drug Administration have both taken on a greater responsibility in protecting consumer interests."<sup>21</sup>

It would seem apparent that the Federal government is committed to the goals of the consumer movement. Certainly the Congress would appear to be committed. As of April 1, 1973, there were over 350 consumer protection bills before the 93rd Congress.<sup>22</sup> Seven of these bills introduced in the House of Representatives would require open code dating of perishable food products.

#### The Role of Business

The consumer movement raises a very critical question for business. What shall be the role of business in response

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<sup>20</sup>Ibid.

<sup>21</sup>Ibid., p. 84.

<sup>22</sup>Office of Consumer Affairs, Consumer Legislative Monthly Report (Washington, April 1, 1973).

to consumerist demands? Should the individual businessman ignore, oppose, or comply with demands made by consumer groups?

An initial mistake was made by many businessmen when they thought that the present consumer movement was a temporary fad and could be ignored. "In the early 1960's, consumerism was most often regarded by business executives as a transitory threat to be opposed at every turn by invoking ideology and denying the seriousness of the charges."<sup>23</sup>

Such an attitude completely ignores the concept of customer orientation inherent in the marketing concept. The seriousness and importance of the consumer movement to businessmen cannot be ignored. "To the extent that the phenomenon of consumerism exists in the United States today, the marketing concept has failed. This is perhaps the most serious implication which consumerism holds for marketing management."<sup>24</sup>

Peter Drucker states that consumerism is "the shame of the total marketing concept,"<sup>25</sup> a serious accusation indeed.

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<sup>23</sup>David A. Aaker and George S. Day, "Corporate Responses to Consumerism Pressures," Harvard Business Review (November-December, 1972), p. 115.

<sup>24</sup>Stanton, op. cit., p. 659.

<sup>25</sup>Peter Drucker, "The Shame of Marketing," Marketing/Communications (August, 1969), p. 60.

Unfortunately there will be some businessmen who merit such criticism. When faced by consumer demands for additional product labeling information, these firms will refuse unless forced to by law. "We can expect such firms to oppose open-dating, to refuse explanation of their existing date codes, to fail to state clearly their interest rates on credit accounts, and so on."<sup>26</sup> The result of a negative approach of that nature "will inevitably be increased government intervention."<sup>27</sup> As Stanton writes: "In responding to consumerism, probably the worst course of action which business management can take is to do nothing or act negatively. . . ."<sup>28</sup>

On the other hand, a positive approach toward consumerism can be in the best self interest for business. Businessmen must realize that consumer demands are here to stay for the foreseeable future and that they must be given attention. Positive action by business would include establishing better communications systems with consumers and acting upon consumer complaints. Businesses have established departments of consumer

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<sup>26</sup>Boris W. Becker, "Consumerism: A Challenge or a Threat?" Journal of Retailing, XLVIII (Summer, 1972), 24.

<sup>27</sup>Ibid.

<sup>28</sup>Stanton, op. cit., p. 661.

affairs with "hot lines" for consumer complaints. Also, many firms have advertised their interest in consumer complaints. However, the most positive approach by business would be to eliminate those factors which are causing complaints from consumer groups in the first place.

Positive responses to consumerist demands can constitute an opportunity for businessmen. "The alert company will see consumerism as a new basis for achieving a differential competitive advantage in the marketplace. A concern for consumer well-being can be turned into a profitable opportunity. . . ." <sup>29</sup> By responding to consumer demands a firm has the opportunity to gain a competitive advantage over its rivals. "Open-dating is a good example of such an opportunity." <sup>30</sup>

Thus, the role of business, and especially the role of marketing, in response to consumer demands, may be summed up by the statement: "The enlightened marketer attempts to satisfy the consumer and enhance his total well-being on the theory that what is good in the long-run for consumers is good for business." <sup>31</sup>

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<sup>29</sup>Kotler, op. cit., p. 55.

<sup>30</sup>Becker, op. cit., p. 25.

<sup>31</sup>Kotler, op. cit., p. 57.

## The Future of the Consumer Movement

It is extremely difficult to determine just what the future will hold for the consumer movement. The first two movements were satisfied by the passage of Federal legislation in response to many of their demands.

Whether or not the present consumer movement can be defused by the passage of Federal legislation is something that remains to be seen, as this movement has not yet run its course. Already there have been a number of consumer protection bills that have become law during the past decade. However, over 350 prepared pieces of legislation are still before the 93rd Congress and have not been acted on by the Congress.

Many businessmen claim that industry self-regulation is the answer. However, the public and the government have shown little inclination to accept industry self-regulation. Aaker and Day have written

The effectiveness of self-regulation ultimately depends on the public's willingness to accept industry regulations and standards in lieu of government intervention. This, in turn, requires that the public trusts the intention and effectiveness of business in solving consumer problems. Here, the climate is distinctly unfriendly.<sup>32</sup>

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<sup>32</sup>Aaker and Day, op. cit., p. 123.

If current negative attitudes toward business held by the public continue, then the present consumer movement will be around for a long time. On the other hand, industry self-regulation remains perhaps the most effective way to avoid additional restrictive Federal legislation.

### Summary

There have been three separate and distinct consumer movements in the United States during the Twentieth Century. The third movement is still in progress. All three movements have profoundly affected business. In all three movements restrictive Federal legislation was passed which resulted in a loss of freedom for firms to operate without government regulation. Currently there are over 350 consumer protection bills before Congress. How many of them will ultimately be enacted into law is an unknown factor.

The response of business to consumerism is a critical issue. Though some businesses have adopted a negative approach, more are now reacting positively to consumerist demands. This action can be profitable by providing a competitive advantage. Also, it can be the most effective manner in which to defuse the consumer movement and to cope with demands raised for additional restrictive Federal legislation.

## CHAPTER III

### THE SUPERMARKET INDUSTRY AND OPEN CODE DATING

Today the supermarket industry in the United States is in serious trouble. Never the most profitable of American industries, the supermarket industry is currently faced with rising costs, consumerist demand, price ceilings, increased competition, and shrinking profit margins.

This chapter briefly traces the development of the supermarket industry and examines some of its most critical problems. Also examined are reasons for and types of code dating of products. The last part of the chapter deals with the issue of converting to open code dating by food manufacturers and distributors.

#### Development of the Supermarket

The retail food industry is dominated today by the large supermarket. The retail supermarket is a fairly recent and uniquely American institution. There are a number of definitions as to exactly what constitutes a supermarket. Stanton has defined a supermarket in the following manner:

. . . a large-scale, departmentalized retailing institution offering a wide variety of merchandise (including groceries, meats, produce, and dairy products), operating largely on a self-service basis with a minimum of customer services, and featuring a price appeal and usually ample parking space.<sup>1</sup>

Stanton's definition does not set a minimum sales volume, though other definitions usually specify a \$250,000 to \$500,000 minimum annual sales.

Well into the Twentieth Century the retail food industry was fragmented and inefficient. It was characterized by small "mom and pop" food stores that depended on low volume and high markup. "Prior to the 1920's, food distribution was the most backward of all fields in retailing, with the consumer having to visit many specialty shops to finish her week's shopping."<sup>2</sup>

These independent food retailers were challenged during the 1920's by the chain stores, but it was not until the 1930's that the first real supermarkets were born. The Depression provided the atmosphere for their growth and development. "The Depression-born supermarket was stimulated by the severity of

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<sup>1</sup>William J. Stanton, Fundamentals of Marketing, 3rd ed. (New York, 1971), p. 301.

<sup>2</sup>David Appel, "The Supermarket: Early Development of an Institutional Innovation," Journal of Retailing, XLVIII (Spring, 1972), 40.



the economic crisis."<sup>3</sup> These first supermarkets were referred to as "pine-boards" operations and as "cheapies." These nicknames were "indicative of both their appearance and price structures."<sup>4</sup> In describing these early supermarkets, Appel writes:

They were usually located in large abandoned buildings just outside densely populated areas. The interiors were as cheap as possible, and merchandise was crammed into every available square foot of space. The primary appeal was one of low prices on nationally advertised brands, with heavy advertising and promotion used to gain consumer awareness.<sup>5</sup>

The success of these independent supermarkets did not go unnoticed by the chain stores. By the middle of the 1930's the chain stores were converting to supermarkets. The Great Atlantic and Pacific Tea Company (A & P) was one of the first chains to convert its small stores to supermarkets. Table I illustrates A & P's conversion from small economy stores to supermarkets.

From Table I it may be seen that in 1936 A & P was almost completely dependent on the small economy store in contrast to

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<sup>3</sup>Theodore N. Beckman, William R. Davidson and W. Wayne Talarzyk, Marketing, 9th ed. (New York, 1973), p. 269.

<sup>4</sup>Appel, op. cit., p. 44.

<sup>5</sup>Ibid.

TABLE I  
 NUMBER OF A & P SUPERMARKETS AND SMALL ECONOMY  
 STORES FOR THE YEARS 1936 TO 1943\*

Year	Number of Supermarkets	Number of Small Economy Stores
1936	20	14,426
1937	282	12,776
1938	771	9,900
1939	1,119	7,902
1940	1,396	5,677
1941	1,552	4,490
1942	1,633	4,188
1943	1,646	4,105

\*Frank J. Charvat, Supermarketing (New York, 1961), p. 27.

the supermarket. However, by 1943 the relationship had changed drastically. A & P had increased its number of supermarkets from 20 to 1,646. The number of small economy stores had declined from 14,426 to 4,105 during the same time period.

Despite the passage of legislation designed to slow down the growth of supermarkets,<sup>6</sup> they were well established by World War II with over 9,000 units and a fourth of all grocery store sales.<sup>7</sup>

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<sup>6</sup>Ibid., p. 47.

<sup>7</sup>Frank J. Charvat, Supermarketing (New York, 1961), p. 3.

### The Supermarket Industry Today

The supermarket industry has come a long way since the early days of the 1930's. Food retailing is the largest single segment of the retail industry, accounting for 22.7 per cent of total retail sales in 1967.<sup>8</sup> If sales of eating and drinking places were added, then this figure would be much larger.

The importance of the modern supermarket in our economy cannot be minimized. In his explanation of the magnitude of this industry, Appel writes:

Food distribution is the nation's largest business with sales in excess of \$100 billion. The supermarket occupies the key position within this distribution system. It's the supermarket that permits the American consumer to have the vast variety of items at the surprisingly low cost of less than 17 per cent of the family income. Without the great changes on retailing brought on by this institution, the 17 per cent figure would be doubled or tripled.<sup>9</sup>

Thus, it is the supermarket which clearly dominates the retail grocery industry. In 1969 the market share held by small, full-service grocery stores was down to only 10 per cent; supermarkets held almost 90 per cent of total grocery store sales.<sup>10</sup>

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<sup>8</sup>Delbert J. Duncan, Charles F. Phillips and Stanley C. Hollander, Modern Retailing Management, 8th ed. (Homewood, Illinois, 1972), p. 6.

<sup>9</sup>Appel, op. cit., p. 39.

<sup>10</sup>Stanton, op. cit., p. 302.

The overwhelming majority of all supermarkets are chain stores with eleven or more units.<sup>11</sup> Currently the battle for industry leadership is being waged between the Great Atlantic & Pacific Tea Company and Safeway Stores, Incorporated. Sales for 1972 were \$6.37 billion for A & P and \$6.1 billion for Safeway.<sup>12</sup> However, during the same time period A & P suffered a net loss of \$51.3 million while Safeway reported net income of \$91.1 million.<sup>13</sup>

Profit margins in the supermarket industry have always been narrow with net income averaging less than 1 per cent of sales.<sup>14</sup> The supermarket must have a rapid turnover of its merchandise in order to make a profit. Spoilage of perishable foods cannot be tolerated. Nor can a store afford dissatisfied customers in this highly competitive industry. Thus supermarkets depend on satisfying customers with fresh merchandise. Such a policy requires constant stock rotation and the

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<sup>11</sup>Charvat, op. cit., p. 4.

<sup>12</sup>The Wall Street Journal, April 30, 1973, p. 23.

<sup>13</sup>Ibid.

<sup>14</sup>Duncan, op. cit., p. 10.

establishment of a system of dating perishable food products in order to facilitate stock rotation. A system of dating perishable and semiperishable food products had to be established.

### Code Dating

Most packaged food products found in supermarkets are code dated by the manufacturer or processor. The five principal closed coding systems used by the food industry are the following: numeric; alphabetical; combination alphabetical-numeric; geometric, consisting of a series of straight lines, marking, notches, or perforations on labels; and color schemes or tags.<sup>15</sup>

Food distributors and manufacturers have utilized closed code dating systems for many years. These closed codes can only be read with the aid of a key. In describing the usage of code dating, William S. Hoofangle of the United States Department of Agriculture states:

Coding of food products has been practiced by food industry for years. However, the codes used were not usually understandable to the consumer

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<sup>15</sup>Department of Food Science, Rutgers University, Food Stability Survey, Vol. I (Washington, 1971), 22.

and, in some instances, to the employees of wholesalers and retailers. The codes used were often based on a color system, letters, numbers, or other mystifying combinations.<sup>16</sup>

The purpose of code dating was generally to give manufacturer and distributor some means of shelf monitoring for quality maintenance. The purpose of code dating systems has been described in the following manner:

These cryptic systems grew out of initial desires of each company to protect competitive advantages in the marketplace and to provide a means of identification to company personnel for shelf product monitoring or product withdrawal on the basis of age without informing the consumer of this feature. Coding and monitoring are also used for withdrawal of products from warehouses, distribution centers, or retail outlets in the event of difficulties arising after processing and before use.<sup>17</sup>

#### Open Code Dating

Currently food manufacturers and distributors are under great pressure from consumer groups and government to end the practice of code dating. Many have already done so. These manufacturers and distributors have converted to open code

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<sup>16</sup>Department of Food Science, Rutgers University, Food Stability and Open Dating, Conference Proceedings (Brunswick, N. J., 1971), p. 11.

<sup>17</sup>Food Stability Survey, op. cit., pp. 4-5.

dating systems so that consumers can easily read the freshness dates on packaged food items.

The trend toward open code dating finds the large supermarket chains in the lead with their private label brands. "More and more private label brands, and recently a few national brands, can be found on supermarket shelves with freshness dates any shopper can read and understand."<sup>18</sup>

However, the issue of open code dating has raised many questions. One such question relates to the cost involved in providing consumers with this additional information. Some industry spokesmen have claimed that open code dating would cost consumers more, especially if it were made mandatory by different state legislatures. They fear that different states would pass laws requiring different dates. Gerald Wollert, Director of Consumer Affairs for General Foods, has been one industry spokesman opposed to mandatory open code dating at the state level.

If more than three states pass different open-dating regulations, Mr. Wollert predicts the consumer would have to pay as much as 5% to 10% more

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<sup>18</sup>"Large Chains Convert to Open Dating--Voluntarily," Supermarketing (January, 1973), p. 5.

for General Foods products. Differing regulations from state to state would force food processors to carry a higher retail inventory, redesign some labels for each state and reduce product-manufacturing efficiencies.<sup>19</sup>

The industry is deeply concerned over the possibility of conflicting state regulations. If it appears likely that any of the twenty-four states currently considering mandatory open dating are about to enact this legislation "General Foods and others stand ready to override the states and support preemptive Federal consumer legislation."<sup>20</sup> Thus, the food industry is prepared to support proposed Federal mandatory open code dating legislation in order to assure uniformity of regulation and to avoid a multitude of conflicting state regulatory laws. Federal law takes precedent over state law.

In any attempt to standardize industry usage of open dating, the National Association of Food Chains favors using a "pull date." A pull date is the last day a supermarket may still sell the food, but not the last day it can be eaten without loss of quality; it provides for a reasonable time period

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<sup>19</sup>Wall Street Journal, February 20, 1973, p. 8.

<sup>20</sup>Ibid.



of home storage. The proposed Federal mandatory open code dating bill would also require a pull date.

Another question raised by critics is whether or not consumers would actually use open dating. An industry publication, Progressive Grocer, reports: "It seemed to be fairly well recognized that unlike unit pricing, open coding would be a service that customers might actually use, and one that could help retailers improve their own operations, particularly stock rotation."<sup>21</sup>

A related area of concern is over just how many consumers desire open dating and how important it is in comparison to other issues such as phosphate content disclosure, unit pricing, returnable beverage bottles, and nutrition labeling. The trade magazine, Chain Store Age, reported the results of a survey conducted in Atlanta, Georgia, among 400 shoppers at four leading supermarket chains (Winn-Dixie, A-Mart, Colonial, and Big Apple). Shoppers were asked which of these programs would be helpful in making a product choice. Table II gives the results of the survey.

As Table II reveals, open code dating scored highest with 95 per cent indicating it would be helpful in making a product

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<sup>21</sup>"Consumerism," Progressive Grocer (April, 1972), p. 112.

TABLE II  
PER CENT OF SHOPPERS INDICATING  
PROGRAM WOULD BE USEFUL\*

Issue	Per Cent
Open Code Dating . . . . .	95
Phosphate Content Disclosure . . . . .	88
Unit Pricing . . . . .	78
Returnable Bottles . . . . .	73
Full-disclosure Nutrition Labels . . . . .	72

\*"All Quiet on the Chattahoochee," Chain Store Age (February, 1971), p. 30.

choice. However, it still remains unclear exactly how many consumers on the survey thought open dating to be the most important of the five issues.

In an effort to determine the relative importance of each of the programs, consumers were then asked which issue was the most important in shopping. Table III gives shoppers' responses.

From Table III it may be seen that almost half of the Atlanta shoppers stated open code dating was the most important of the five issues. Only 23 per cent indicated unit pricing, the issue in second place, to be the most important issue.

TABLE III

PERCENTAGE OF ATLANTA SHOPPERS INDICATING WHICH  
PROGRAM WOULD BE MOST IMPORTANT\*

Issue	Per Cent
Open Code Dating . . . . .	49
Unit Pricing . . . . .	23
Nutrition Labels . . . . .	16
Phosphate Content Disclosure . . . . .	11
Returnable Bottles . . . . .	<u>1</u>
Total . . . . .	100

\*Ibid., p. 31.

Thus, the issue of converting from code dating to open code dating has raised many questions, not the least of which involves whether or not consumers really understand open dating where it has been implemented. It was found in a study conducted by the Department of Agriculture that consumers did not really understand open code dating, despite the fact that they were aware of it and used this service.<sup>22</sup> It was found that many consumers were confused as to what the dates meant. Only 20 per cent of consumers correctly identified the date on the package as being the pull date.

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<sup>22</sup>Ibid.

The limited amount of research already conducted on the subject of open code dating indicates it is not a simple issue. Consumers desire more product information, but not all use this information properly when it is made available. Additionally, industry spokesmen have expressed fears that providing such information would add to costs and prices, especially if non-uniform state legislation were passed. In order to gain additional insight into the complex matter of how strongly consumers desire open code dating information, the next chapter of the study deals with the investigation of consumer attitudes in Dallas County.

#### Summary

The supermarket industry, under pressure from consumer groups and government legislative bodies, is moving to meet demands for open code dating. However, the industry only has direct control over its private label brands. The shift from code dating is being opposed by some food industry spokesmen who claim consumers would not benefit from the additional information. The supermarket industry has come a long way in the past forty years. Intense competition for leadership by the top chains provides a desire for agreeing to consumer

demands. Whether or not manufacturers are prepared to act so quickly may emerge as an issue affecting manufacturer and distributor relationships.

## CHAPTER IV

### CONSUMER POSITION: PRESENTATION AND ANALYSIS

The limited amount of secondary data available fails to give a clear picture of consumer position in regard to open code dating. Existing information does not contain adequate analysis of which food products consumers desire most be open dated. General and social characteristics of shoppers favoring open dating are unknown and should be examined. The purpose of this chapter will be to present and analyze data gathered by personal interviews with Dallas County consumers in order to gain additional insight into their position on the issue of open code dating.

#### Sample Determination

For practical reasons it was necessary to limit the universe of consumers to those names listed in the 1973 Dallas County telephone directory. It was decided Dallas County would be the geographical boundary of the universe because the time and expense of conducting personal interviews in a larger territory would have been prohibitive. Thus, one limitation

of the study is that findings from consumer questionnaires are not necessarily statistically valid for the nation as a whole, because Dallas County does not constitute a valid sample of the nation's population.

Names listed in the 1973 Dallas County telephone directory were used for the study for two main reasons: first, the directory provided the most complete and up to date listing of ultimate consumers available in the county; and second, in addition to providing names and addresses of consumers, the directory listed their telephone numbers, something which was vital to have in order to verify that interviews were actually being conducted and that cheating was not practiced by the interviewers.

From the universe, a systematic random sample of 350 names was drawn. The first name was selected at random using a table of random numbers. Thereafter, the second name on the fourth column of every fourth page was selected. In the event that this was impractical (for example, the listing of a place of business), the next name was selected.

#### Data Collection Process

During the month of March, 1973, each of the 350 consumers in the sample was sent a letter (see Appendix) which briefly

stated the nature and purpose of the study. The purpose of the letter was to help elicit consumer cooperation in the study, so that a higher response rate than otherwise might be expected would be secured.

Data were collected by personal interviews. These interviews were conducted by North Texas State University students from the College of Business Administration. As part of a voluntary extra-credit project, the students conducted personal interviews during March and April of 1973. Students were instructed how to conduct interviews and use the consumer questionnaires properly (see Appendix). The purpose of the instruction was to avoid errors and to secure uniformity in the data gathering process. When completed consumer questionnaires were returned, respondents were spot checked by telephone in order to make sure the interviews had actually taken place.

At the end of the data gathering process, a total of 232 usable questionnaires had been completed, a response rate of 66.3 per cent. Reasons for non-response included not at home (even after three calls), refusals to cooperate, and change of address. A confidence interval of 87.23 per cent, with an allowable error of plus or minus 5 per cent, was determined by applying the following formula:<sup>1</sup>

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<sup>1</sup>J. B. Spalding, "Statistical Determination of Sample Size," The Business Symposium (August, 1970), p. 6.



$$N_s = \frac{pq}{\left(\frac{AE}{z}\right)^2}$$

In this formula  $N_s$  is the necessary sample size; AE, the allowable error or desired accuracy between sample percentage and universe percentage, is set at 5 per cent;  $z$  is the desired confidence interval for the study. Since  $p$  and  $q$ , percentages for affirmative and negative responses, were initially unknown, they were arbitrarily set at .50 each.

The previously stated formula may be computed in the following manner:

$$232 = \frac{(.50) (.50)}{\left(\frac{.05}{z}\right)^2}$$

$$z = 1.5233 \text{ standard errors}$$

$$= 87.23 \text{ level of confidence}$$

#### Data Presentation

The first question on the questionnaire was designed to determine the extent of consumers buying spoiled or damaged food at the grocery store. Table IV presents the results of this question. From Table IV it may be seen that only 27.3 per cent of the respondents had never bought food which was

TABLE IV

PERCENTAGE OF CONSUMERS STATING THEY HAD BOUGHT SPOILED  
FOOD AT STORE WITHIN A CERTAIN TIME PERIOD

Occurances	Per Cent
Within the last month . . . . .	21.2
Within the last two to six months . . . . .	28.6
Within the last seven to twelve months . . . . .	22.9
Never . . . . .	<u>27.3</u>
Total . . . . .	100.0

found to be spoiled. From the data it may be inferred that apparently there is, or has been, a real problem with consumers buying spoiled food. This finding would appear to be in sharp contrast with industry claims that spoiled food in supermarkets is a rare occurrence and not a problem.

Those respondents that had indicated having bought spoiled food within the last year were then asked what kinds of food they had found to be in this condition. The purpose of this question was to determine what types of foods have given consumers the greatest problem with freshness. Table V illustrates the percentages of respondents that had found different foods to be spoiled or otherwise to have deteriorated in quality.

TABLE V  
 PERCENTAGE OF RESPONDENTS STATING CERTAIN  
 FOOD ITEMS FOUND SPOILED OR OTHERWISE  
 TO HAVE DETERIORATED IN QUALITY

Food Items	Per Cent*
Dairy products . . . . .	47.0
Fresh meat . . . . .	25.0
Processed meat . . . . .	13.7
Frozen foods . . . . .	13.1
Fresh vegetables . . . . .	11.9
Canned goods . . . . .	10.8
Fresh fruit . . . . .	8.9
Baked goods . . . . .	7.1
Other . . . . .	6.6

\*Percentages do not total 100 because respondents could check more than one item.

The results in Table V clearly indicate consumers have a much greater problem with certain types of food. Nearly one-half of all respondents stated such a problem had occurred within the last year with dairy products (butter, milk, cheese, cream, cottage cheese, and others). Twenty-five per cent of respondents indicated that spoilage had occurred with fresh meat. A much smaller per cent of respondents indicated that a spoilage problem existed in regard to the remaining foods

listed in Table V. Only dairy products and fresh meat clearly stand out as problem areas, a fact that should not be too surprising in view of their high susceptibility to rapid spoilage.

Consumers were asked if they were aware of the proposed Federal law which would, if passed, make open code dating mandatory. The results of this question, presented in Table VI, indicate that a surprisingly high percentage expressed an awareness of the bill.

TABLE VI

PERCENTAGE OF RESPONDENTS AWARE OF PROPOSED  
FEDERAL OPEN CODE DATING BILL

Aware of Proposed Law	Per Cent
Yes . . . . .	60.3
No . . . . .	<u>39.7</u>
Total . . . . .	100.0

The high awareness level expressed in Table VI would suggest that consumers are much more knowledgeable than many people think. If awareness were translated into desire for action on open code dating, adoption of this issue would appear to be assured. However, awareness is not necessarily tantamount to desire for enactment. Cross-classification of the data will supply more answers.

Many people in the food industry have expressed the opinion that consumers are not even aware of the presence or absence of freshness dates on food packages. If this is true, as these people contend it is, the open code dating is not an issue at all, because consumers are not interested. In an effort to determine the validity of such an assertion, consumers in the study were asked if they ever noticed the presence or absence of freshness dates on food packages. Results of this question are presented in Table VII.

TABLE VII  
PERCENTAGE OF CONSUMERS AWARE OF FRESHNESS  
DATES ON FOOD PACKAGES

Awareness	Per Cent
Yes . . . . .	76.7
No . . . . .	<u>23.3</u>
Total . . . . .	100.0

As Table VII indicates, respondents in the study exhibited a very high degree of awareness of freshness dates. Over three-fourths replied affirmatively to this question. However, just because consumers are aware of the presence of freshness dates does not prove that freshness dates are helpful to consumers in their grocery buying.

Respondents were then asked if they found freshness dates helpful in buying groceries. A surprisingly high percentage did, as Table VIII reveals.

TABLE VIII  
PERCENTAGE OF RESPONDENTS STATING FRESHNESS  
DATES HELPFUL IN GROCERY BUYING

Helpful	Per Cent
Yes . . . . .	78.6
No . . . . .	<u>21.4</u>
Total . . . . .	100.0

The table makes it clear that the overwhelming majority of consumers in the study stated that they found freshness dates to be helpful in their grocery buying. Presumably, if a consumer does not find the freshness dates helpful, he probably does not notice their presence or absence. This relationship is later verified through chi-square analysis of data in Table XXVII.

In order to determine how desirable consumers consider the issue of open code dating, respondents were asked if they would like to see all perishable food products clearly marked with open code dates. The results of this question, presented in

Table IX, attest that fewer than one in twenty consumers respond negatively to this question.

TABLE IX  
PERCENTAGE OF CONSUMERS RESPONDING THAT THEY  
WOULD LIKE ALL PERISHABLE FOODS TO  
BE CLEARLY OPEN DATED

Respondent Answer	Per Cent
Yes . . . . .	95.3
No . . . . .	<u>4.7</u>
Total . . . . .	100.0

The extremely high percentage of consumers favoring wide usage of open dating would appear to suggest that many people want this information even though they may not always use it. Consumers apparently desire open dating whether they use it or not. The statistically dependent relationship between these two variables is verified in a test of significance later in this chapter. The data would support the contention made that consumers desire this service even though many do not take advantage of it.<sup>2</sup>

That consumers in the survey desire the implementation of open dating is significant in itself. However, it is equally

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<sup>2</sup>Boris W. Becker, "Consumerism: A Challenge or a Threat?" Journal of Retailing, XLVIII (Summer, 1972), 26.

important to know which food products are considered most important by consumers to be open code dated. Consumers were asked which one food item they would most prefer to be open dated. Results of the question are revealed in Table X.

TABLE X  
PERCENTAGE OF RESPONDENTS INDICATING THE ONE  
FOOD PRODUCT CONSIDERED MOST IMPORTANT  
TO BE OPEN DATED

Food Product	Per Cent
Dairy products . . . . .	41.0
Fresh meat . . . . .	40.1
Canned goods . . . . .	4.7
Processed meat . . . . .	4.3
Baked goods . . . . .	3.9
Frozen foods . . . . .	2.2
Fresh fruit . . . . .	1.3
Fresh vegetables . . . . .	1.3
Others . . . . .	<u>1.3</u>
Total . . . . .	100.0

Though dairy products are usually open dated, fresh meat is not. Because grocery stores cut and package fresh meat, control and responsibility for freshness lies at the retail level. This procedure is in contrast to the usual policy of dating food products further up the channel of distribution. Many supermarket chains are considering, or are already in the process of implementing the policy of open code dating fresh



meat. Kroger is an example of a chain preparing to implement this policy decision.

One major problem inherent in implementing open code dating concerns which date to use. At the present time, there are at least six possible dates that can be put on a package. These dates range from a pack date (the day the food was packaged) to a shelf-display date (the day the store puts the food on display). In an attempt to minimize confusion and to achieve some degree of standardization, the food industry has recommended using a pull date; it is the last day a grocer can still sell the food, but not the last day it may be eaten.

To find out which date Dallas County consumers preferred on their food packages, respondents were asked to state a preference. Table XI presents the results of this inquiry.

TABLE XI

RESPONDENT PREFERENCES AS TO WHICH DATE  
DESIRED ON FOOD PACKAGES

Type of Date	Per Cent
Freshness date . . . . .	27.8
Pack date . . . . .	22.0
Pull date . . . . .	19.8
Expiration date . . . . .	18.9
Shelf life date . . . . .	9.3
Shelf-display date . . . . .	<u>2.2</u>
Total . . . . .	100.0

As the meanings of the dates were carefully explained to consumers, it would appear that a clear preference is lacking. From Table XI it may be seen that a plurality of respondents indicated a preference for a freshness date, this percentage being 27.8. That fewer than one in five of the respondents stated a preference for a pull date should be of significance to the industry. Perhaps this would suggest that steps, such as advertising and other forms of promotion, be taken to enhance shopper preferences for a pull date.

In order to determine whether or not apparently clear preference was lacking among respondents (regarding type of open code dates), the data were tested against a uniform distribution; a chi-square value of 57.46512 was computed, showing that the probability of a Type II error to be less than .00005. The result is that the null hypothesis, that there is no significant difference between the data in Table XI and a uniform distribution, is rejected. A clear preference among consumers, as to any one type of open code date, does not exist.

If consumers exhibit differing preferences in types of open code dates, then can this be taken to reveal a lack of understanding of the entire issue? To help answer such a question, consumers were asked what they thought a date on a

food package meant. The results of the question, displayed in Table XII, make it apparent that mass confusion and ignorance exist on the subject of what open code dates mean.

TABLE XII

PERCENT DISTRIBUTION OF CONSUMER RESPONSES REGARDING  
MEANING OF FOOD PACKAGE DATES

Respondent Answer	Per Cent
Pack date . . . . .	21.1
Shelf life . . . . .	2.7
Pull date . . . . .	13.9
Freshness date . . . . .	21.5
Expiration date . . . . .	26.0
Shelf-display date . . . . .	2.2
Don't know . . . . .	11.7
Other . . . . .	<u>.9</u>
Total . . . . .	100.0

Again, as illustrated in both Table XI and Table XII, consumers are apparently completely confused on the subject of the meaning of open code dates. This fact was further illustrated when asked what they thought dates on food packages meant (Question Nine). Fewer than 14 per cent of respondents named a pull date, the date nearly always used in open code dating. It is likely in view of the responses given that the "don't know" category of only 11.7 per cent is indeed much larger than that percentage would actually indicate.

The data gathered from the previous two questions give emphasis to the need for standardization and development of open code dates that consumers will readily understand. The problem was reported in Business Week when that magazine stated: "A tougher problem than simplifying codes may be standardizing them."<sup>3</sup> Thus, the number of possible dates, coupled with different consumer preferences and lack of understanding of the dates, require that steps be taken to clarify the problem. There is a strong need for greater efforts on the part of the food industry to educate consumers on the subject of open code dating.

The supermarket industry is faced with numerous demands for action by consumer groups and governmental agencies. Also, in addition to open dating, there have been demands for unit pricing (cost per unit of measure in ounces), nutrition labels, and phosphate content disclosure in detergents. In order to get a clearer understanding of the relative importance of these issues in the minds of consumers, the respondents were asked to rank the four issues in order of importance. Table XIII presents the results of the question, showing that open code

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<sup>3</sup>"Chains Woo Consumers With Open Dating," Business Week (January 16, 1971), p. 48.

dating clearly ranks first in order of importance in the eyes of Dallas County grocery shoppers.

TABLE XIII  
RESPONDENT RANKING OF PROGRAMS  
IN ORDER OF IMPORTANCE

Program Ranking	Per Cent of Respondents Giving First Rank
Freshness dating . . . . .	61.5
Unit pricing . . . . .	32.6
Nutrition labeling . . . . .	5.9
Phosphate content disclosure . . . . .	<u>0.0</u>
Total . . . . .	100.0

It may be inferred from the preceeding table that the issue of open dating ranks first in order of importance among consumers when compared with the other three issues of unit pricing, nutrition labeling, and phosphate content disclosure. Certainly there may well be other issues which would rank higher than open dating; however, the importance of the issue cannot be ignored.

One issue which is currently attracting a tremendous amount of attention in the supermarket industry is price. Prices of many food items have risen sharply within the past

year, bringing numerous protests and demands for investigation of the food industry's pricing structure. To say that consumers have become price conscious in their grocery shopping would be somewhat of an understatement.

It has been claimed by some industry spokesmen that additional food labeling information, such as open dating and nutrition labeling, would cause food prices to rise.<sup>4</sup> These industry spokesmen claim that open code dating would cause supermarket retailers' "throw-away" costs to increase, because shoppers would select only the freshest dated packages, leaving older merchandise on the store shelves. It is against this background that consumers in the survey were asked if they were willing to pay higher prices for any of the above information. The results of this question are revealed in Table XIV.

TABLE XIV

PERCENTAGE OF CONSUMERS WILLING TO PAY HIGHER PRICES  
FOR MORE INFORMATION ON FOOD PACKAGES

Response	Per Cent
Willing . . . . .	37.4
Unwilling . . . . .	<u>62.6</u>
Total . . . . .	100.0

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<sup>4</sup>The Wall Street Journal, February 20, 1973, p. 8.

It may be observed from the table that a sizeable majority of respondents in the survey expressed an unwillingness to pay higher prices for additional labeling information of food packages. However, a substantial minority, 37.4 per cent, did state a willingness to pay higher prices, a sizeable percentage considering the public's sensitivity to price increases on food products. At any rate this may become a moot point if the additional information is required by law. Additional costs may be translated into higher prices anyway, as when the automobile industry raised prices to cover costs of required safety devices on automobiles.

The importance and significance of open code dating to the retail food industry cannot be understated. This factor was emphasized by the findings of one particular question asked consumers in the study. Dallas County grocery shoppers were asked if they thought open dating was important enough that they would refuse to patronize stores which would not provide this information. Results of the question appear in Table XV.

From Table XV it can be seen that over two-thirds of the respondents said they would not shop at stores which refused to utilize open code dating. One problem would lie in making consumers sufficiently aware of differences in food dating

TABLE XV

PERCENTAGE OF RESPONDENTS STATING IF THEY  
WOULD SHOP AT STORES REFUSING TO  
ADOPT OPEN CODE DATING

Consumer Response	Per Cent
Yes, would shop . . . . .	32.5
No, would not shop . . . . .	<u>67.5</u>
Total . . . . .	100.0

practices in order for this potential threat to ever materialize. However, results in the table indicate that open dating has tremendous potential as a competitive weapon. Also, it suggests that when some food manufacturers and retailers adopt open code dating, others may be forced to adopt it or lose sales and customers.

Though the purpose and design of the consumer survey was primarily directed specifically toward the issue of open code dating, one question was asked which was not directly related to the immediate subject of open dating. Consumers were asked what caused them the greatest problem in buying groceries. The purpose of this open-ended question was to gain some insight into the frustrations and gripes that grocery buyers may possibly have. Though some shoppers expressed no complaints whatsoever, the question elicited ready responses from most



of those surveyed. Table XVI presents the responses derived from the question.

TABLE XVI  
RESPONSES BY DALLAS COUNTY CONSUMERS WHEN  
ASKED WHAT CAUSES THE GREATEST PROBLEM  
IN BUYING GROCERIES

Problem Areas	Per Cent
High prices . . . . .	43.8
Freshness of food . . . . .	10.5
Too much time to check out . . . . .	10.0
Poor quality of merchandise . . . . .	7.1
Employees and services . . . . .	7.1
Limited assortment . . . . .	4.3
Miscellaneous . . . . .	<u>17.2</u>
Total . . . . .	100.0

As Table XVI shows, the overriding concern expressed by respondents was over the high prices of groceries. The second largest single problem area concerned the freshness of food, or open code dating. Ten per cent of the consumers stated their biggest complaint was over slowness at the check-out register. Complaints concerning store personnel and quality of merchandise were of equal importance in the survey. Miscellaneous complaints, totaling 17.2 per cent, included store failure to mark prices, lack of unit pricing, unable to find advertised products, unhappy with package sizes, and that store aisles were too narrow. Obviously many of these problem areas,

especially high prices, are largely beyond the control of the industry. However, other complaints concerning stale food, poor quality of merchandise, discourteous employees, and poor service can be acted on by stores.

The final portion of the questionnaire was designed to gain information about the demographic characteristics of the sample respondents. The purpose of this section was to gain information for cross-classification of data in order to ascertain if certain segments of the population would be more, or less, receptive to utilizing open code dating.

Consumers were first asked the number of people currently living in the household. The purpose of this question was to determine if household size was a factor in grocery buying habits. The results of this question are presented in Table XVII. From this table it may be seen that size of households in the sample ranged from one to nine persons. The most common, or mode, was two, the median was three, and the mean number of persons living in the household was 3.06.

Consumers in the survey were also asked their age in order to determine if age plays a significant role in consumer awareness and usage of open code dating. Table XVIII presents the data gathered by this question. In that the interviews were

TABLE XVII

PERCENTAGE OF RESPONDENTS STATING THE TOTAL NUMBER OF  
PERSONS CURRENTLY LIVING IN HOUSEHOLD

Number	Per Cent
1 . . . . .	14.4
2 . . . . .	28.7
3 . . . . .	21.8
4 . . . . .	17.0
5 . . . . .	12.6
6 . . . . .	3.0
7 . . . . .	1.7
8 . . . . .	.4
9 . . . . .	<u>.4</u>
Total . . . . .	100.0

conducted with the person that does the grocery shopping, very few consumers interviewed were younger than twenty years of age.

TABLE XVIII

AGE OF SAMPLE RESPONDENTS

Age Category	Per Cent
Under 20 . . . . .	2.6
20 - 29 . . . . .	25.1
30 - 39 . . . . .	26.9
40 - 49 . . . . .	18.5
50 - 59 . . . . .	13.7
60 - 69 . . . . .	9.7
70 + . . . . .	<u>3.5</u>
Total . . . . .	100.0

As the table indicates, the largest single category of respondents in the sample were found to be in the thirty-to-thirty-nine-year-old age bracket. The data suggest a relatively young sample of adults with over half, 54.6 per cent of respondents under age forty.

Respondents were asked how many years of school they had completed. As Table XIX illustrates, the sample was not only

TABLE XIX

## EDUCATIONAL CHARACTERISTICS OF THE SAMPLE

Number of Years of School Completed	Per Cent of Respondents
Less than 6 . . . . .	2.6
7 - 9 . . . . .	7.4
10 - 12, but did not graduate . . . . .	10.0
High school graduate, but no college . . . . .	20.4
Attended college, but did not graduate . . . . .	31.3
College graduate . . . . .	19.6
Post graduate work . . . . .	<u>8.7</u>
Total . . . . .	100.0

a relatively young selection of adults, but a highly educated segment of the population. According to 1970 Census of Population in Dallas County, the medium educational level was 12.2 years of school completed for adults twenty-five years of age or older.<sup>5</sup>

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<sup>5</sup>United States Department of Commerce, United States Census of Population: Texas (Washington, 1970), p. 1020.

Findings presented in the table show that the largest single segment of respondents, 31.3 per cent, attended college but did not graduate. Eighty per cent were high school graduates, and 28.3 per cent had been graduated from college. Census data for Dallas County in 1970 indicated that among adults twenty-five years or older, 55.7 per cent of females and 57.3 per cent of males had completed high school, a much smaller percentage of high school graduates than were found in the sample.<sup>6</sup>

Consumers in the sample were asked within what range their approximate total annual family income fell. Due to the sensitive nature of the question, respondents were not asked the exact amount of their income. Table XX displays the findings.

TABLE XX

## TOTAL ANNUAL FAMILY INCOME OF RESPONDENTS

Income Range	Per Cent
Less than \$6,000 . . . . .	12.4
\$6,000 - \$8,999 . . . . .	18.1
\$9,000 - \$11,999 . . . . .	21.9
\$12,000 - \$14,999 . . . . .	15.2
\$15,000 - \$19,999 . . . . .	14.3
\$20,000 + . . . . .	<u>18.1</u>
Total . . . . .	100.0

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<sup>6</sup>Ibid.

As shown in Table XX, respondents in the survey exhibited a wide range in total annual family income differences. The largest single group, 21.9 per cent, had incomes of from \$9,000 to \$11,999 yearly. This compares with census data which show a medium family income of \$10,680 and a mean family income of \$12,688 in 1970 for Dallas County families.<sup>7</sup> Over 12 per cent earned less than \$6,000 yearly, but over 32 per cent had annual family incomes of greater than \$15,000, the area where discretionary purchasing power is concentrated.

Following each interview, interviewers categorized respondents by sex and ethnic group. The purpose of the classification was to determine if attitudes toward grocery shopping and open dating varied on the basis of sex or ethnic group. Table XXI presents a breakdown of respondents by sex.

TABLE XXI  
SEX OF RESPONDENTS

Sex	Per Cent
Male . . . . .	22.5
Female . . . . .	<u>77.5</u>
Total . . . . .	100.0

<sup>7</sup>Ibid.

That over three-fourths of respondents were female is not surprising. Interviewers were instructed to speak to the person who usually does the household grocery buying, and most grocery shopping is done by women. Also, as many interviews were conducted during the day, the husband may have been at work. This factor could have induced some bias into the sample, because characteristics of respondents found at home during the day may differ from those people not at home at this time.

Respondents were also categorized by ethnic group. Table XXII illustrates the ethnic group composition of respondents in the survey.

TABLE XXII  
ETHNIC GROUP OF RESPONDENTS

Ethnic Group	Per Cent
White . . . . .	84.4
Black . . . . .	12.1
Mexican-American . . . . .	3.1
Oriental-American . . . . .	<u>.4</u>
Total . . . . .	100.0

From the table it may be seen that the vast majority of respondents were white. Whereas minority groups comprised 15.6 per cent of the sample. The percentage of minority group composition is somewhat smaller than what was found in the

population of Dallas County, according to census data. For example, blacks comprised 12.1 per cent of sample respondents. However, according to census data, blacks constitute 16.8 per cent of the Dallas County population. The findings are utilized in the next part of the chapter, as an aid in helping analyze the data.

### Chi-Square Analysis of Data

Data were analyzed by statistical methods. Chi-square analysis of sample data was used to determine if the principles or criteria for cross-classification were meaningful. Contingency tables were established to cross analyze data from one question with data from another question. Chi-square analysis was then utilized to help determine if the relationship was significant and whether the data variables were dependent or independent.

Full and complete chi-square analysis of all data gathered by the questionnaire would in itself constitute a lengthy and extremely tedious thesis. As a result, chi-square analysis presentation will be primarily limited to selected data that are considered to be the most significant. In chi-square analysis computation, Yates' correction for continuity will be used where applicable. Analysis will involve data



concerning the characteristics of the sample and certain responses given by this sample. Data findings will be considered significantly dependent and analyzed when the probability of the two factors being independent is .01 or smaller.

Due to the fact that the study involved original research in a new field, it was felt that the highest degree of accuracy possible should be obtained before drawing any conclusions relative to significant findings in tests of significance. It was realized that a probability of .05 could have been utilized instead of .01. However, in the interest of securing a greater degree of accuracy the .01 level was chosen.

#### Awareness and Importance

Data findings were analyzed in order to determine if a relationship exists between awareness of the proposed mandatory Federal open dating bill (question three) and consumer beliefs that the issue is important enough to refuse to shop at a store which refused to implement open dating (question twelve). The observed frequencies and percentages of respondent answers to these two questions are presented in Table XXIII. A majority of respondents expressed the belief that it was an important issue and that they were aware of the proposed bill.

TABLE XXIII

RELATIONSHIP OF CONSUMER AWARENESS OF FEDERAL OPEN  
DATING BILL AND IMPORTANCE OF THE ISSUE

Awareness of Bill	Importance - Observed Frequencies		Total
	Important	Unimportant	
Aware	107	30	137
Unaware	47	44	91
Total	154	74	228
Awareness of Bill	Importance - Observed Percentages		Total
	Important	Unimportant	
Aware	46.9298	13.1579	60.0877
Unaware	20.6140	19.2982	39.9123
Total	67.5439	32.4561	100.0000

As Table XXIII illustrates, awareness and importance of open dating appear to be directly related. Those respondents who expressed an awareness of the proposed bill were far more likely to consider open dating an important issue than were those respondents that were unaware of the proposed legislation. The observed percentages of respondent answers further illustrate how awareness and importance are related.

From observation, it would indeed appear that there is a significant dependent relationship between the two questions. Chi-square analysis was utilized to conduct a test of independence between the two factors (awareness and importance). The formula<sup>8</sup> for computing chi-square values is:

$$X^2 = \sum \frac{(f_o - f_e)^2}{f_e}$$

where,

$f_o$  is the observed frequency, and

$f_e$  is the expected or theoretical frequency.

However, contingency Table XXIII of observed frequencies allows for only one degree of freedom (the number of rows minus one times the number of columns minus one). Therefore, in computing chi-square values from a two by two contingency table, the previous formula must be modified slightly, using Yates' correction for continuity.<sup>9</sup> The following formula reduces the computed value of chi-square:

<sup>8</sup>Charles T. Clark and Lawrence L. Schkade, Statistical Methods for Business Decisions (Cincinnati, 1969), p. 424.

<sup>9</sup>Ibid., p. 433.

$$\chi^2 = \sum \frac{(|f_o - f_e| - \frac{1}{2})^2}{f_e}$$

where,

$f_o - f_e$  is the absolute difference between  $f_o$  and  $f_e$ .

Table XXIV employs the Yates' correction for continuity formula in order to compute the chi-square value for questions three and twelve in a test of independence.

TABLE XXIV

COMPUTATION OF CHI-SQUARE FOR A TEST OF INDEPENDENCE OF CLASSIFICATION FOR A 2 X 2 CONTINGENCY TABLE USING YATES' CORRECTION FOR CONTINUITY

Cell	$f_o$	$f_e$	$ f_o - f_e  - \frac{1}{2}$	$( f_o - f_e  - \frac{1}{2})^2$	$\frac{( f_o - f_e  - \frac{1}{2})^2}{f_e}$
Aware of bill important	107	92.5351	13.9649	195.01843	2.1075
Aware of bill unimportant	30	44.4649	-13.9649	195.01843	4.3836
Unaware of bill important	47	61.4649	-13.9649	195.01843	3.1728
Unaware of bill unimportant	44	29.5351	13.9649	195.01843	6.6030
Totals	228	228.0000	0.0	$\chi^2 = 16.2669$	

As computed in the table, the chi-square value is 16.2669. When tested at the .0001 level it may be inferred that awareness and importance of open dating are probably highly dependent on one another, as their chances for being independent are only about 1 in 10,000. Thus, it can be stated that those respondents who expressed an awareness of the proposed Federal mandatory open code dating bill are also the ones who feel the issue is important enough that they would refuse to shop at a store which refused to implement open code dating.

#### Awareness and Helpfulness

When asked if they were aware of a bill before Congress which would require open code dating (question three), over 60 per cent of respondents answered affirmatively. Over three-fourths stated that they found the freshness dates helpful in their grocery shopping (question five). Table XXV presents the observed frequencies of respondent answers to these two questions.

As the table illustrates, those consumers that expressed an awareness of the bill were far more likely to have found open code dating helpful than those who were not aware of the bill. Upon being subjected to a test for independence, chi-square value was found to be 8.8377 and the probability of the

TABLE XXV

RELATIONSHIP OF CONSUMER AWARENESS OF FEDERAL OPEN DATING  
BILL AND PERCEIVED HELPFULNESS OF OPEN DATING

Awareness of Bill	Helpfulness - Observed Frequencies		Total
	Helpful	Not Helpful	
Aware	118	20	138
Unaware	62	29	91
Total	180	49	229

two being independent of one another was .0030, or only 3 chances in 1,000. Therefore, it can be stated that questions three and five are significantly dependent. Consumers that are aware of the proposed bill do find the freshness dates helpful in their grocery shopping.

Awareness and Willingness to Pay

Question three (awareness of the proposed bill) was cross-classified with question eleven (willingness to pay more for additional labeling information, including open code dating). Though most consumers had expressed an unwillingness to pay more for additional information, the proportion of those that were willing to pay more was significantly greater (though

still less than half) among those consumers that were aware of the proposed bill. The observed frequencies of respondent answers to these two questions are presented in Table XXVI.

TABLE XXVI

RELATIONSHIP OF AWARENESS OF FEDERAL OPEN DATING BILL  
AND WILLINGNESS TO PAY MORE FOR INFORMATION

Awareness of Bill	Willingness to Pay - Observed Frequencies		Total
	Willing	Unwilling	
Aware	62	77	139
Unaware	24	67	91
Total	86	144	230

As Table XXVI indicates, 45 per cent of respondents that were aware of the bill expressed a willingness to pay more for additional labeling information; whereas, of those consumers that were unaware of the bill, only about 26 per cent were willing to pay more. The computed chi-square value for a test of independence between the two is 7.0485. When tested at the .0081 level, it can be stated that awareness and willingness to pay more are probably highly dependent, as their chances for being independent are only 81 in 10,000.

The implications of the findings from these data are significant for the food industry. Perhaps it would be in the best self interest of the industry to try and make as many shoppers aware of open dating and the proposed Federal legislation is an effort to gain greater consumer acceptance of price increases on food products containing such information as open code dating, unit pricing, nutrition labels, and phosphate content disclosure.

#### Awareness and Helpfulness of Freshness Dates

In an effort to determine whether a significant relationship existed between question four (respondents answering that they noticed the presence of freshness dates on food packages) and question five (those who found freshness dates helpful in buying), the two questions have been cross classified in Table XXVII. The table shows that over three-fourths of respondents replied in the affirmative to both questions, and presents the observed frequencies of consumer answers.

A test of independence was conducted using the data in the table. A chi-square value of 57.5437 was computed. At this level, the probability of the two being independent was less than .00005, making it almost certain that the two questions are highly dependent on each other. Apparently, if



TABLE XXVII

RELATIONSHIP BETWEEN RESPONDENTS THAT NOTICED FRESHNESS  
DATES AND THOSE WHO FOUND THEM HELPFUL

Noticed the Freshness Dates	Helpfulness of Freshness Dates Observed Frequencies		Total
	Helpful	Not Helpful	
Did notice	160	18	178
Did not notice	20	31	51
Total	180	49	229

shoppers are aware of freshness dates, then they are likely to use them; obviously, if they are not aware, then they do not utilize open dating.

Awareness and Desire for Open Dating

When question four (whether consumers ever noticed freshness dates) and question six (consumer desire for open code dating) were analyzed to determine if a significant relationship could be found between the two, the findings indicated a strong possibility of a dependent relationship. The observed frequencies, or respondent replies to the two questions, are presented in Table XXVIII and show that consumers in the sample were very likely to answer positively in both cases.

TABLE XXVIII

A 2 X 2 CONTINGENCY TABLE DEMONSTRATING THE RELATIONSHIP  
OF RESPONDENTS NOTICING FRESHNESS DATES AND  
DESIRE FOR OPEN DATING

Noticed the Freshness Dates	Desire for Open Dating--Frequencies		Total
	Desired	Did Not Desire	
Did notice	174	3	177
Did not notice	47	6	53
Total	221	9	230

As the table indicates, desire for open dating is found to be stronger (less than 2 per cent opposed to it) among respondents that had noticed the presence or absence of freshness dates on food packages than among those consumers that had not ever noticed the freshness dates (over 11 per cent did not desire open dating). Computed chi-square value was 7.6541 and, when tested at the .0058 level, there was found to be a significantly dependent relationship between the two questions, as their chances for independence were only 58 in 10,000. Thus, the people that noticed the presence, or absence, of freshness dates are the same ones that would like to see all foods marked with open code dates.

When question four (respondents that noticed the freshness dates) was cross-classified with question twelve (whether open dating was important enough to refuse to shop at a store which refused to adopt it), the relationship of positive answers to these two questions was found to be significantly dependent.

Those consumers that noticed freshness dates on food packages expressed a much greater willingness to refuse to shop at stores which refused to adopt open code dating than the ones that said they did not ever notice the freshness dates. Overall, 67.54 per cent of respondents stated a willingness to boycott; however, of those shoppers that said they noticed the freshness dates, over three-quarters replied affirmatively, compared to less than 40 per cent of those respondents that said they did not ever notice the freshness dates. The observed frequencies of consumer responses to these two questions are presented in Table XXIX.

Stated in statistical terms, this relationship produces a computed chi-square value of 22.9247, which means the two are almost certainly dependent, as their chances of being independent are less than .00005. Thus, it may be stated that consumers that notice freshness dates feel strongly enough

TABLE XXIX

CONSUMERS NOTICING FRESHNESS DATES AND WILLINGNESS TO  
REFUSE TO SHOP AT STORES THAT DO NOT  
ADOPT OPEN CODE DATING

Consumers Noticing Freshness Dates	Willingness to Boycott--Frequencies		Total
	Would Boycott	Would Not Boycott	
Did notice	133	42	175
Did not notice	21	32	53
Total	154	74	228

about their value that they would refuse to shop at a store which refused to implement open code dating, a finding that should be of interest to supermarket chains in particular.

Helpfulness and Desire for Open Dating

When asked if they found freshness dates on food helpful (question five), over three-fourths of the respondents answered affirmatively, while 95 per cent stated they would like to see all perishable food products clearly marked with open code dates (question six). Table XXX presents the observed frequencies of these data findings.

As can be observed from inspecting the table, those respondents that found freshness dates helpful were much more

TABLE XXX  
 CONSUMER ATTITUDES TOWARD HELPFULNESS  
 AND DESIRE FOR OPEN CODE DATING

Helpfulness of Freshness Dates	Desire for Open Dating--Frequencies		Total
	Desired	Not Desired	
Helpful	176	3	179
Not helpful	42	6	48
Total	218	9	227

likely to express a desire for universal open code dating than were those consumers who had not found them helpful. In conducting a test of independence between the two, the chi-square value was determined to be 8.9773. Tested at the .0028 level, it was found that the two were significantly dependent on one another, as their chances for independence were only 28 in 10,000. Thus, those consumers that have found open code dating to be helpful are, not surprisingly, the ones that also favor its universal adoption on all perishable food products. Also, people that did not find freshness dates helpful still expressed a desire for open dating by a margin of eight to one, though less than a similar percentage of those who thought it helpful. Consumers desire universal open code dating whether or not

they find the freshness dates helpful. Other studies have reported that even though consumers may not always utilize open dating, they still desire this information.<sup>10</sup>

Helpfulness and Willingness to Pay

Thile over three out of four consumers surveyed had indicated that they found freshness dates helpful in grocery buying (question five), only a little over 37 per cent stated they would be willing to pay higher prices for additional labeling information (question eleven). The observed frequencies of consumer responses have been cross-classified in Table XXXI.

TABLE XXXI

RELATIONSHIP OF SHOPPERS ATTITUDES TOWARD HELPFULNESS OF  
OPEN DATING AND WILLINGNESS TO PAY MORE

Helpfulness Freshness Dates	Willingness to Pay More		Total
	Willing	Unwilling	
Helpful	79	100	179
Not helpful	7	41	48
Total	86	141	227

<sup>10</sup>Becker, op. cit.

From the table it can be observed that apparently consumers that find freshness dates helpful are more likely to be willing to pay more for this kind of information than those who do not find them helpful. A test of independence was conducted between questions five and eleven, the results of which yielded a chi-square value of 12.8179. When tested at the .0004 level it was found that a significantly dependent relationship existed between the two questions, as their chances of being independent were only 4 in 10,000. Therefore, it can be stated that consumers who have found open dating helpful are significantly more likely to be willing to pay more for this type of information than are consumers that have not found open dating to be helpful. As a result, it would appear to be to the advantage of the food industry to find out what can be done in order to get more consumers to perceive open code dating as being an aid in their grocery shopping; this in turn should lessen consumer resistance to paying higher prices for the additional labeling information placed on food packages.

#### Helpfulness and Willingness to Boycott

Consumer responses to question five (helpfulness of freshness dates) and question twelve (willingness to refuse to shop at stores refusing to adopt open dating) were cross-classified

in order to conduct a test of independence between the two. Chi-square value was computed to be 23.4348 in a test of independence. There was found to exist a significantly dependent relationship between questions five and twelve; the probability of independence was less than .00005, or approaching zero. Table XXXII presents the observed frequencies of respondent answers to these questions.

TABLE XXXII  
HELPFULNESS OF FRESHNESS DATES AND  
WILLINGNESS TO BOYCOTT

Helpfulness of Freshness Dates	Willingness to Boycott--Frequencies		Total
	Willing	Unwilling	
Helpful	134	43	177
Not helpful	18	30	48
Total	152	73	225

Based on these data, it may be claimed that a dependent relationship exists between the responses to these two questions. Those respondents who found freshness dates helpful in their grocery shopping are also the same people that said they would be willing to refuse to shop at a store which refused to adopt open code dating. The observed percentage of



respondents in this category was almost 60 per cent. This finding should serve as a major reason for supermarkets to adopt open code dating on all food products.

#### Helpfulness of Freshness Dates and Education

One purpose of the study was to determine whether or not a dependent relationship exists between educational level and consumer usage of open code dating. In a limited study conducted by Michigan State University's Marketing Information for Consumers Program it was found "that both educational level and income level of the homemaker were related to their acquaintance with open dating. Those with more education and a higher income level were more likely to have heard about it."<sup>11</sup>

Consumers interviewed in Dallas County were asked if they found open code dating helpful in their grocery buying (question five) and the number of years of school they had completed (question sixteen). In order to ascertain if the two questions were significantly dependent they were cross-classified and subjected to chi-square analysis. Table XXXIII reveals the relationship between questions five and sixteen.

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<sup>11</sup>Department of Food Science, Rutgers University, Food Stability and Open Dating, Conference Proceedings (Brunswick, N. J., 1971), p. 11.

TABLE XXXIII

CONTINGENCY TABLE SHOWING RELATIONSHIP OF CONSUMER  
PERCEPTION OF HELPFULNESS OF FRESHNESS DATES  
AND EDUCATIONAL LEVEL

Helpfulness of Freshness Dates	Years of School Completed--Frequencies					Total
	9 or Less	10-12	High School Graduate	Attended College, Did Not Graduate	College Graduate	
Helpful	11	17	33	64	54	179
Not helpful	12	6	14	7	10	49
Total	23	23	47	71	64	288

As may be seen from the contingency table, educational level and helpfulness of open dating would appear to be significantly dependent. Respondents with a college education were far more likely to perceive open code dating as helpful than were those consumers with only a very limited education.

When a test of independence of classification was conducted for the two questions cross-classified in the contingency table, the chi-square value was found to be 22.0372 and the probability of the two being independent of one another was .0002, or only 2 chances in 10,000. As a result, it can be claimed that a dependent relationship between the two questions exists. Helpfulness of open code dating is significantly dependent on the level of education possessed by

the consumer. As educational level rises, then so does the probability that the consumer will find such labeling information helpful. In view of the rising educational level of the population of the United States, it may be presumed that the utility of additional product labeling information will increase.

#### Helpfulness of Open Dating and Ethnic Group

To ascertain whether a significantly dependent relationship existed between question five (helpfulness of freshness dates) and question nineteen (ethnic group), the original questionnaire for question nineteen contained four categories: White, Black, Mexican-American, and Oriental-American. In order to achieve greater statistical accuracy for chi-square analysis of these two questions, respondents in question nineteen were grouped into two main categories: White (including Oriental-American) and Non-white (Black and Mexican-American). The purpose for collapsing these data cells is to make possible valid and significant chi-square analysis of the data gathered.

When asked whether freshness dates were helpful in their grocery buying, over three-fourths of all consumers surveyed responded affirmatively. However, when questions five and nineteen were cross-classified it became apparent that white

respondents were much more likely to find open dating helpful than were non-whites. The extent of these differences may be seen by studying the data presented in Table XXXIV. Observed frequencies of respondent answers suggest a highly dependent relationship between ethnic group and helpfulness of open code dating.

TABLE XXXIV  
RELATIONSHIP OF HELPFULNESS OF OPEN CODE DATING  
AND ETHNIC GROUP OF RESPONDENT

Helpfulness of Open Dating	Ethnic Group--Observed Frequencies		Total
	White	Non-white	
Helpful	158	21	179
Not helpful	35	14	49
Total	193	35	228

As the table illustrates, white respondents indicated that they found open dating helpful far more frequently than did non-white consumers in the survey. However, even among non-white respondents, 60 per cent found open dating helpful in grocery buying.

In order to help determine whether the cross-classification of the two questions produced a significantly dependent relationship, a test of independence of classification was conducted. The chi-square value was determined to 9.269. Tested at the .0031 level, it was found that questions five and nineteen were significantly dependent, as their chances for being independent were only 31 in 10,000. Accordingly, it may be stated that in the study conducted a significant difference was found regarding the helpfulness of open code dating by ethnic group. Whites were significantly more likely to answer affirmatively regarding the helpfulness of open dating than were non-whites. Reasons for this disparity are unclear. However, it is considered likely that lower educational levels of non-whites were a contributing factor. For example, though the median educational level for all Dallas County residents 25 or older was 12.2 years of completed school, the figures were lower for blacks and Mexican-Americans. According to 1970 census data, the medium number years of completed education for blacks was 10.3 years<sup>12</sup> and for Spanish surnamed

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<sup>12</sup>United States Department of Commerce, op. cit., p. 1040.

adults it was 9.3 years.<sup>13</sup> Additionally, language difficulties among Mexican-Americans may have reduced label reading comprehension.

Desire for Open Dating and Willingness to Boycott

Over 95 per cent of respondents in the study expressed a desire for clear open code dating on all perishable food products (question six), and over two-thirds of the sample respondents indicated open dating was important enough that they would refuse to shop at a store which refused to implement open code dating (question twelve). Consumer responses to the two questions were cross-classified and the data are presented in Table XXXV.

TABLE XXXV

RELATIONSHIP OF CONSUMER DESIRE FOR OPEN DATING AND  
WILLINGNESS TO BOYCOTT STORES REFUSING  
TO ADOPT OPEN DATING

Desire for Open Dating	Willingness to Boycott--Frequencies		Total
	Willing	Unwilling	
Desirable	152	65	217
Undesirable	1	8	9
Total	153	73	226

<sup>13</sup>Ibid., p. 693.

From the table it may be observed that respondents desiring open code dating were considerably more likely to express a willingness to boycott stores refusing to implement open code dating than were those consumers that had not expressed a desire for open dating. Even consumers that were unwilling to boycott were heavily in favor of open dating by a margin of sixty-five to eight.

A test of independence was conducted between questions six and twelve, and the chi-square value was found to be 11.1632. With only one degree of freedom, the two are almost certainly dependent, as their chances of being independent are .0009, or only 9 in 10,000. Consequently, it is claimed on this basis that desire for open code dating and consumer willingness to boycott are significantly dependent factors.

These data represent a significant finding in the study, especially for retail supermarkets. It is apparent from the findings that consumers not only just desire open dating, but they desire it strongly enough that they would actually refuse to shop at supermarkets refusing to adopt open code dating. It would appear that it would be in the best interests of the retail supermarkets to adopt open dating where possible. Manufacturers should also be encouraged to convert from code dates by the findings of this study.

Open Dating Preferences and Comprehension

An important aspect in the issue of conversion to open code dating concerns the problem of what date shall be placed on the food package. Possible options include the adoption of a pack date, shelf life date, pull date, freshness date, expiration date, or a shelf-display date. The food industry has favored using a pull date on all food packages in order to avoid confusion, but attempts to standardize food code dates have not been completely successful.<sup>14</sup> When asked their preferences as to which date they would prefer (question eight), consumers in the survey expressed a wide range of preferences; the largest group, less than 28 per cent, favored a freshness date.

Though consumers expressed varying preferences as to what date they would like to see on food packages, this variation would be less significant had they indicated an understanding of open code dating. Unfortunately, they did not. When asked what they thought dates on food packages meant (question nine), fewer than 14 per cent of respondents named a pull date, the date nearly always employed by manufacturer or middleman.

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<sup>14</sup>"Chains Woo Consumers With Open Dating," Business Week (January 16, 1971), p. 48.



In order to ascertain whether a dependent relationship existed between questions eight and nine, they were cross-classified and subjected to chi-square analysis. The purpose of such analysis was to determine if respondent preferences and understanding of open dating systems were related. Results of this cross-classification, presented in Table XXXVI, illustrate the nature of this problem, as there appears to be a strong relationship between preferences and comprehension of open code dating.

TABLE XXXVI

RELATIONSHIP OF RESPONDENT PREFERENCES AND UNDERSTANDING  
OF VARIOUS OPEN CODE DATING SYSTEMS

Respondent Preference	Respondent Understanding--Frequencies				Total
	Pack Date	Pull Date	Freshness Date	Expiration Date	
Pack date	19	3	3	15	40
Pull date	6	9	8	6	29
Freshness date	9	9	28	9	55
Expiration date	9	4	4	21	38
Total	43	25	43	51	162

In the interest of statistical validity in data analysis, only those categories to which a meaningful number of respondents replied were incorporated in Table XXXVI. To have utilized all cells from questions eight and nine would have invalidated chi-square analysis from the contingency table, due to the extremely small percentage of consumers responses to other categories in the questions. Therefore, only consumer responses to the pack date, pull date, freshness date, and expiration date categories were utilized.

Chi-square analysis of the data in Table XXXVI revealed an extremely high probability of a significantly dependent relationship between questions eight and nine, as their chances for being independent were calculated at less than .00005, or 5 in 10,000. The chi-square value for the four by four contingency table was 49.8901.

The extremely highly dependent relationship found to exist between questions eight and nine is a significant finding. What it means, essentially, is that people perceive what they expect to perceive, a phenomenon known to researchers in human behavior.<sup>15</sup> Thus, it is likely that this relationship between

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<sup>15</sup>John Douglas, George A. Field and Lawrence X. Tarpey, Human Behavior in Marketing (Columbus, Ohio, 1967), p. 31.

respondent preference and comprehension of open code dating systems can be explained in terms of perception, the way in which people experience their universe. Since some consumers prefer to see a pack date, for example, on a food package, it is for this reason that these same consumers state that they think open code dates on food packages are pack dates. The result is a tremendous lack of understanding on the part of consumers concerning open dating systems.

The obvious answer to this lack of consumer understanding would appear to lie in changing consumer preferences. If the food industry is going to adopt a pull date, then every effort must be made to educate consumers as to what a pull date is and why it is the best open date to utilize. Failure to follow this course of action will continue to be mass confusion on the part of consumers as to the actual meaning of open dating systems, and the effectiveness of open code dating will be impaired.

#### Willingness to Pay and Importance of Open Dating

One aspect of the issue of open code dating concerns the possibility of conversion from code dating resulting in higher prices for consumers in the supermarket. When consumers were asked if they would be willing to pay higher prices for

additional product labeling information (question eleven), such as open code dating, almost 37 per cent of respondents replied affirmatively. This figure of 37 per cent becomes much more significant when the observed frequencies of respondent answers in question eleven are cross-classified with the data results from question twelve. Respondents were asked if they thought open dating was important enough that they would refuse to shop at a store which refused to adopt this policy. Over 63 per cent of respondents indicated a willingness to boycott stores refusing to adopt open code dating. In order to determine if consumer willingness to pay more was related to consumer willingness to boycott, questions eleven and twelve were cross-classified and the data are presented in Table XXXVII.

As Table XXXVII illustrates, there appears to be a strong relationship between consumer willingness to pay more for additional product labeling information and willingness to boycott stores refusing to adopt open code dating policies. In order to test the statistical validity of the apparent dependent relationship, a test of significance was conducted. A chi-square value of 7.8955 was computed from the observed frequencies of respondent answers to questions eleven and twelve

TABLE XXXVII

RELATIONSHIP OF RESPONDENT WILLINGNESS TO PAY  
MORE FOR ADDITIONAL LABELING INFORMATION  
AND WILLINGNESS TO BOYCOTT

Number Willing to Pay More	Number Willing to Boycott		Total
	Willing	Unwilling	
Willing	66	17	83
Unwilling	87	57	144
Total	153	74	227

in the contingency table. When tested at the .0051 level, it was determined that a dependent relationship was very probable, as the chances of these data being independent were only 51 in 10,000.

Based on these statistical data, it is evident that a dependent relationship exists between questions eleven and twelve. In other words, those consumers that indicated a willingness to pay more for additional labeling information also would refuse to shop at stores refusing to implement open dating. The importance of this finding is that it gives another clear example of just how strongly some consumers desire the implementation of open code dating. There are consumers that

desire the adoption of this policy so strongly that they have expressed a willingness to go to extreme lengths to promote its adoption. The implication for the food industry should be apparent: open code dating should be adopted as rapidly as possible.

#### Importance of Open Dating and Respondent Age

One important aspect of the study concerns the relationship between age of consumers and their perceived importance of open code dating. Specifically, do younger consumers attach greater importance to open dating than do older consumers? Results of a study conducted by the Marketing Information for Consumers Program of the Cooperative Extension Service at Michigan State University indicate the existence of such a relationship. In the Michigan study, it was found that generally the younger homemakers were more interested in having readable freshness dates.<sup>16</sup> However, the Michigan study did not attempt to determine how strongly respondents desired open dating.

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<sup>16</sup>Department of Food Science, Rutgers University, Food Stability and Open Dating, Conference Proceedings (Brunswick, N. J., 1971), p. 36.

The study conducted in Dallas County did seek to elicit information from respondents which would give a meaningful indication of just how strongly consumers desired the implementation of open code dating. Consumers were asked if they thought open dating was important enough that they would refuse to shop at stores which refused to use open dating (question twelve). Better than two out of every three respondents replied affirmatively.

It was not known whether this willingness to boycott was related to respondent age. To determine whether or not a dependent relationship existed between respondent age and willingness to boycott, questions twelve and fifteen were cross-classified. Observed frequencies are presented in Table XXXVIII.

As can be seen from the table, there appears to be a dependent relationship between the two factors. A test of significance was conducted to test the null hypothesis that there was no significant difference in the willingness to boycott on the basis of respondent age. Computed chi-square value from the observed frequencies in the contingency table was 13.64 with four degrees of freedom. Tested at the .0088 level, it may be stated that questions twelve and fifteen are

TABLE XXXVIII  
RELATIONSHIP BETWEEN RESPONDENT WILLINGNESS  
TO BOYCOTT AND RESPONDENT AGE

Willingness to Boycott	Age of Respondents--Frequencies					Total
	Under 30	30-39	40-49	50-59	60+	
Willing	50	43	20	21	17	151
Unwilling	12	17	21	9	13	72
Total	62	60	41	30	30	223

dependent, as their chances of being independent are only 88 in 10,000. Therefore, the null hypothesis is rejected.

This demonstrated relationship between age and willingness to boycott is readily observable in the table, as younger consumers were much more willing to boycott than were older respondents. Particularly, the under-thirty age group was the most favorably inclined to boycott; the margin was greater than four to one. This willingness to boycott became less and less pronounced in older groups. The one exception to this statement was found in the forty-to-forty-nine age category, where a slight majority of respondents indicated an unwillingness to refuse to shop at a store which refused to adopt open code dating.



The relationship between age and willingness to refuse to shop may be explained by the fact that younger people are generally better educated and are more receptive to consumer group proposals. Additionally, as the level of education among adults is steadily rising, this factor should become increasingly important. Thus, conditions favorable to the establishment of open code dating should continue to grow and benefit adoptors of this consumer policy.

#### Age and Educational Level

To ascertain whether a relationship between age and educational level existed among the Dallas County sample, the data gathered from questions fifteen (age) and sixteen were cross-classified in a contingency table. Normally it would be assumed that younger adults would be better educated than older adults. Therefore, as one measure to check the reliability of the data gathered in the survey, the analysis of age and educational level was conducted. Observed frequencies of respondent answers to these two questions are presented in Table XXXIX. In order to achieve greater statistical reliability in data analysis, some of the data cells were collapsed and combined together; however, this action in no way detracts from the significance of the data.

TABLE XXXIX  
RELATIONSHIP BETWEEN RESPONDENT AGE  
AND LEVEL OF EDUCATION

Respondent Age	Number Years of School Completed				Total
	Less Than 12	High School Graduate	Some College	College Graduate	
Under 30	5	10	24	24	63
30-39	11	21	17	12	61
40-49	9	9	13	11	42
50-59	9	4	9	8	30
60 +	11	3	7	9	30
Total	45	47	70	64	226

It is apparent from observing Table XXXIX that there is a strong relationship between age and level of education among respondents surveyed. Of the under-thirty age group, fewer than 8 per cent had not finished high school, whereas almost 37 per cent of the over-sixty age group had failed to complete high school. Additionally, the percentage of college graduates was found to be highest among the under-thirty age group with twenty-four out of sixty-three stating they had been graduated from college.

A test of significance was conducted in order to validate this apparent relationship between age and education. From the observed frequencies of respondent answers in Table XXXIX, a chi-square value of 74.9809 was computed. With twelve degrees of freedom, it was found that the probability of age and education being independent was less than .00005, which would almost certainly mean that age and educational level are significantly dependent factors.

#### Education and Income

Analysis of data revealed that respondents surveyed in the study exhibited a wide range in both education and income levels. The largest single group of respondents (31.3 per cent) had attended college, but had not been graduated. An approximate total annual family income of from \$9,000 to \$12,000 was the response given most frequently, a category in which 21.9 per cent of the sample fell.

In order to ascertain if a significantly dependent relationship existed between the variables of education and income level, data from these two questions were classified in a five by four contingency table. Some data cells were collapsed in order to make chi-square analysis more statistically accurate.

In Table XL the observed frequencies of consumer responses to questions sixteen and seventeen are presented.

TABLE XL  
RELATIONSHIP OF RESPONDENT LEVEL OF  
EDUCATION AND INCOME

Year of School Completed	Annual Family Income--Frequencies				Total
	Less Than \$8,999	\$9,000- 11,999	\$12,000- 14,999	\$15,000+	
Less than 9	20	2	0	0	23
Attended high school	15	6	1	1	23
High school graduate	11	10	7	13	41
Attended college	12	19	11	20	62
College graduate	7	9	13	32	61
Total	65	46	32	67	210

From Table XL it may be observed that there is an apparent relationship between education and income. This relationship was tested in order to determine if sample conformed with the widely held concept of high correlation between education and income. The null hypothesis (that there is no relationship

between education and income) was formulated and tested through chi-square analysis. A chi-square value of 72.29 was computed. With twelve degrees of freedom, it was found that there was less than a .00005 probability of education and income being independent factors, thus making it almost certain that the two are dependent. Thus, it is possible to state that there is a direct relationship between respondent level of education and family income. As level of education rises, then so does income. This finding should be of significance to those who have questioned the existence of the relationship between income and education. Also, and more significantly, since a strong relationship between educational level and support for open code dating has been demonstrated, the findings suggest that perhaps it is the supermarkets' most affluent shoppers that are interested in seeing open code dating adopted.

#### Education and Ethnic Group

Consumer level of education data (question sixteen) were classified with ethnic group data (question nineteen) in order to determine to what degree sample educational characteristics conformed with the population. Respondents were classified as white (including Oriental-American) and non-white (black and Mexican-American) in order to give a two-way classification

suitable for valid chi-square analysis of data. Observed frequencies of consumer responses to these two questions are presented in Table XLI.

TABLE XLI  
RELATIONSHIP BETWEEN CONSUMER LEVEL OF  
EDUCATION AND ETHNIC GROUP

Level of Education	Ethnic Group--Observed Frequencies		Total
	White	Non-White	
Less than 9	10	13	23
Attended high school	17	6	23
High school graduate	41	5	46
Attended college	67	5	72
College graduate	59	6	65
Total	194	35	229

Analysis of data in Table XLI reveals a strong relationship between ethnic group and level of education. Non-white respondents were far more likely to have a lower level of education than were white respondents in the survey. Thirteen out of thirty-five non-white respondents had less than nine

years of school completed, compared with 10 out of 194 white respondents at this level.

A test of significance was conducted in order to determine the strength of the observed relationship between ethnic group and education. Chi-square value was computed at 36.6134. The probability of ethnic group and education being independent was found to be less than .00005, making them almost certainly dependent. Therefore, the null hypothesis was rejected.

This relationship between ethnic group and level of education in the sample is intended to help verify the statistical validity of the sample. Though sample data are not directly comparable with census data for Dallas County, whites generally were found to have a higher level of education in the county. The 1970 Census of Population revealed that Negroes in Dallas County had completed a medium of 10.5 years of school, compared to 12.2 for the entire adult county population.<sup>17</sup>

#### Statistically Nonsignificant Findings

Through the usage of chi-square analysis of data gathered and cross-classified, numerous statistically valid dependent relationships between data variables were found to exist.

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<sup>17</sup>Bureau of the Census, 1970 Census of Population, General Social and Economic Characteristics, No. 45 (Washington, 1970).

These findings were not all unexpected or surprising. For example, a strong dependent relationship found to exist between level of education and income was not considered unusual or unexpected.

In other cases a dependent relationship had been expected, but was not found to exist and the null hypothesis was accepted. Such findings were then not considered for one of two reasons. If more than 20 per cent of the cells in a contingency table contained fewer than five observed frequencies, and it was not feasible to collapse some cells, the findings were not analyzed further. A second condition under which the null hypothesis would be accepted occurred when the probability of the two data variables being independent was .01 or greater. For these two reasons a large amount of data findings were not considered to be significantly dependent, even though a strong dependent relationship was ascertained. The fact that these findings were not analyzed further may not mean that the analysis would not be statistically significant. It is possible that the sample size was so small that the chi-square distribution could not be adequately used.

One such case involved the relationship between helpfulness of freshness dates (question five) and family income



(question seventeen). A significant finding was expected, but did not materialize, and the null hypothesis was accepted. Probability of attaining a chi-square value of 7.9715 or larger is 15.9 per cent. Therefore, it is assumed the variables are independent, contrary to what was expected.

Another area in which a statistically valid dependent relationship had been expected, but was not found to exist, involved importance of open code dating (question twelve) and educational level (question sixteen). It had been assumed that more highly educated respondents would be significantly more willing to refuse to shop at stores refusing to adopt open code dating. While some correlation between these two factors was determined, it was not high enough, as the probability for chi-square happening by chance when variables are independent was .0267.

Due to variations in educational levels of whites and blacks it had been anticipated that these differences might be translated into significant contrasts in their perceived importance of open dating. However, data gathered in the study fail to bear out this expectation. When importance of open dating (question twelve) was classified with ethnic group (question nineteen), no statistically dependent relationship was determined.

It had been anticipated that awareness of freshness dates (question four) and level of education (question sixteen) would be significantly dependent. However, when the data was cross-classified and chi-square analysis conducted, the null hypothesis was accepted due to a .0279 probability of chance occurrence.

Consumer willingness to pay higher prices for additional product labeling information (including open code dating) was found to be, as expected, very limited, with 37.4 per cent of respondents indicating such a willingness. However, it had been expected that this willingness would be significantly related to respondent income. When these data were cross-classified and a test of independence of classification conducted, no significant dependent relationship was found to exist. Respondents in all income categories were found to oppose this concept. Furthermore, the percentages did not differ in a significant manner from one income group to the next. An apparent conclusion drawn from acceptance of the null hypothesis in this case is that evidence of a higher income is not necessarily accompanied by a greater willingness to part with this income by consumers.

The previous examples constitute the most significant cases in the study in which an expected dependent relationship was not found to exist. A much higher number of dependent relationships could have been claimed by accepting a greater probability than .01 that the results occurred by chance. However, by lowering the criteria or standards utilized, the quality of the data analysis would have been compromised.

#### Summary

Analysis of data gathered from consumers through the questionnaire method requires that great caution be exercised in interpreting results of the data. The problems encountered in data analysis of questionnaires by researchers are numerous and the path is hazardous. These problems can perhaps be best summarized by a quote from the Greek philosopher, Epictetus, who wrote in the first century B.C.

Appearances are to us in four ways; for either things appear as they are; or they are not, and do not even appear to be; or they are, and do not appear to be; or they are not, and yet appear to be. Further, in all these cases, to form a right judgement is the office of an educated man.<sup>18</sup>

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<sup>18</sup>Epictetus, Discourses, Book I, Chapter 27, cited in Kenneth P. Uhl and Bertram Schoner, Marketing Research (New York, 1969), p. 154.

Presentation and analysis of consumer position in regard to open code dating has been the focal point of this chapter. A systematic random sample of Dallas County consumers was taken and data gathered by personal interviews. A total of 232 usable questionnaires were completed in this manner, giving a confidence level of 87.23 per cent with an allowable plus or minus 5 per cent.

From the data gathered it was found that most Dallas County consumers have bought spoiled food, particularly dairy products and fresh meat, at a grocery store within a one-year time period.

A significant majority of respondents indicated an awareness of the proposed mandatory Federal open code dating bill. However, it is difficult to gauge the reliability of these statements due to human reluctance to admit ignorance.

By a margin of more than three to one, consumers stated that they found freshness dates helpful in their grocery buying in that they would like to see all perishable foods clearly marked with open code dates. Consumers were particularly interested in seeing dairy products and fresh meat open dated.

However, it was discovered that consumers exhibited a wide range of preferences concerning types of open code dates

they would like to see on food packages. No one single type of open dating system was desired, raising questions concerning consumer understanding of what different types of open code dates mean. Upon further investigation it was determined that the average consumer is not aware of the meaning of freshness dates and that extensive confusion exists on this issue.

Despite the presence of a vast amount of respondent ignorance and confusion regarding open code dating systems, it was found that consumers consider this issue to be much more important than other related consumer issues such as unit pricing, nutrition labeling, and phosphate content disclosure. However, this finding is tempered by the discovery that most consumers are unwilling to pay more for this additional labeling information.

Though respondents expressed an unwillingness to pay more for open code dating information, this reluctance should not be taken as an indication of a lack of interest in this issue. Over two-thirds of respondents expressed a willingness to refuse to shop at a supermarket which refused to implement open code dating, a clear indication of the significance of open dating.

High prices, not surprisingly, were found to be what causes Dallas County shoppers the greatest problem in buying

groceries. This problem area was followed in importance by freshness of food and check out time in stores.

Demographic data were gathered on consumers in the sample. Family size ranged from one to nine, with two being the most commonly mentioned family size. The largest single group of respondents was found to be in the thirty-to-thirty-nine age bracket. An extremely high percentage, forming the largest group, had attended college, but had not been graduated. A total annual family income of from \$9,000 to \$12,000 was most frequently mentioned.

Over three-fourths of respondents surveyed were women. This was not surprising in view of the fact that women are home more often than men and do most of the grocery shopping. Ethnic group composition of the sample was overwhelmingly white, as characterizes the universe from which the sample was drawn.

Analysis of data was conducted utilizing statistical methods, such as chi-square analysis. Analysis was utilized to determine if statistically valid dependent relationships existed. The purpose of this analysis was to gain additional insights into consumer opinion and to establish a valid statistical basis for projections to be made from the data.

In analyzing selected significant data it was found that awareness of open code dating legislation was significantly related to consumer perceived importance of the issue. Consumers that were aware of proposed mandatory open dating legislation were significantly more likely to consider freshness dating to be helpful in their grocery shopping. Those consumers that expressed an awareness, also were significantly more willing to pay more for additional labeling information than were respondents that were unaware of such legislation.

Consumers that had noticed the presence or absence of freshness dates on food packages were significantly more likely to desire open dating, to find this information helpful, and to be willing to refuse to shop at stores not adopting this policy.

Those respondents that had stated freshness dates were helpful in their grocery shopping significantly more willing to pay more for this information, to boycott stores refusing to adopt open code dating, and to have a higher level of education than were consumers that had indicated freshness dates not helpful in grocery shopping. Helpfulness of freshness dates was also related to ethnic groups in that whites were

significantly more likely to consider open dating an asset than were non-whites.

Importance of open code dating was an issue which was found to be significantly related to consumer willingness to pay more for such labeling information, to consumer willingness to boycott, and to respondent age. Also, younger consumers were much more likely to express a willingness to refuse to shop at stores not adopting open code dating systems.

A significantly dependent relationship between respondent age and level of income was determined in that younger respondents were significantly better educated. Higher income levels were dependently related to higher levels of education among respondents. Also, whites were significantly better educated than were non-whites.

Some findings had been anticipated and materialized, while others had been expected but did not materialize. For example, it had been anticipated that there would be a significantly dependent relationship between consumer willingness to pay more for additional product labeling information and consumer income. However, there proved to be no relationship at all.



Essentially, most findings from the survey had been anticipated. The findings were similar to other results in like cases conducted by researchers. Implications of these findings are substantial and are included in the recommendations in the final chapter of the study.

## CHAPTER V

### RETAILER POSITION: PRESENTATION AND ANALYSIS

Viewpoints held by consumer groups have been presented in the thesis. Additionally, position of ultimate consumer has been presented and analyzed in some detail. Both have strongly favored establishment of mandatory open code dating.

However, a balanced study would be lacking if only this one-sided approach were utilized. The study should, and did, incorporate the viewpoints of businessmen as an integral part of the study. Even a partial comprehension of the many complexities of the retail supermarket industry and open code dating would not be possible were this portion of the study omitted.

#### Methodology

The methodology adopted in this segment of the thesis was to interview a selected number of Dallas County retail supermarket store managers and chain store executives. In incorporating this case-study approach, a total of twelve interviews were conducted during the spring and summer of 1973.

Attitudes and policies toward open code dating were examined. Six supermarket chains were studied. These six case studies were conducted by interviewing a store manager and a chain executive from each of the six firms. The purpose of such an approach was to gain an additional and more balanced insight into retailer position regarding the issue of open code dating.

No attempt was made to achieve a statistically valid sample in this segment of the study. Therefore, conclusions drawn from these case studies do not purport to contain information gathered through a statistically reliable process.

Interviews were conducted on an individual basis in the office or store of the interviewee. Individuals being interviewed were asked a series of questions, most of which were open-ended in order to elicit the greatest amount of response from the interviewee. A complete listing of the questions asked may be found in Appendix. Even though there was a list of questions, the list served primarily as a guideline. The questioning was essentially of the nonstructured-nondisguised variety, due to the nature of the subject involved and the degree of diversity among businessmen being interviewed. Names and addresses of all businessmen and their firms that made up this segment of the study are listed in the Appendix.

Information was sought concerning attitudes and opinions toward open code dating by the grocery retailer. It was considered important to ascertain retailers' perceived advantages, as well as disadvantages, associated with the issue of adopting open code dating. Awareness and attitudes toward proposed Federal mandatory open dating legislation were examined. Retailers were asked which of several possible types of open code dates they would prefer and why. Opinions regarding responsibility for open dating were solicited. Lastly, an attempt was made to determine whether or not attitudes toward open dating were significantly different between supermarket store managers and supermarket chain executives.

#### Extent of Open Code Dating

Because of a multitude of reasons, including pressure from consumers and government, the extent of usage and adoption of open code dating is far more widespread than it was just a short time ago. As recently as 1971 a study by the Food Science Department of Rutgers University found that "only a few companies use open dating."<sup>1</sup> However, under pressure from consumers,

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<sup>1</sup>Department of Food Science, Rutgers University, Food Stability Survey, Vol. I (Washington, 1971), p. 20.

government, and competitors, an increasing number of firms are now dating their food packages in such a manner that grocery shoppers can easily read the freshness dates on them.

By virtue of his position in the channel of distribution, the supermarket retailer is especially vulnerable to pressure from consumers. When consumers express a desire for adoption of open code dating, as shown by the Dallas County study, then it is the retailer, not manufacturer, that comes under the greatest amount of pressure. By viewing this fact in the light of the intensely competitive nature of the retail grocery business, it becomes apparent why the retail supermarket chains have taken the lead in converting to open code dating systems.

The result of these circumstances is that it is more common to see retailer's private brands open dated than manufacturer's national brands. This fact was expressed in the supermarket industry magazine, Supermarketing, by the following quotation: "More and more private label brands, and recently a few national brands, can be found on supermarket shelves with freshness dates any shopper can read and understand."<sup>2</sup>

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<sup>2</sup>"Large Chains Convert to Open Dating--Voluntarily," Supermarketing (January, 1973), p. 5.

Usage of open code dating varies according to such factors as type of food product, size and type of retailer, and geographic location. A 1972 study by Super Market Institute reported that open code dating was most likely to have been adopted by a large supermarket chain with annual sales over \$250 million that was headquartered in the Mountain or Middle Atlantic regions. The same study found that dairy products had the greatest probability of being open dated.<sup>3</sup>

These findings by the Super Market Institute should not be considered too surprising. Large chains have the financial resources and capacity to implement desired changes, whereas smaller concerns may find it difficult to do likewise. Additionally, there is the leadership factor. Smaller firms may be reluctant to initiate changes and may wait for large firms to take the lead in these matters. Because of their tendency to spoil, dairy products are likely to be the first items to be open dated by a firm.

Large chains are in a much better position to bring pressure on food processors to convert to open dating. By virtue of their market power, giant supermarket chains are often

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<sup>3</sup>Ibid.

able to exert a much greater degree of influence on their suppliers than are small concerns.

#### Conversion to Open Code Dating

In that the Dallas County case studies covered only six grocery chains, findings from the study are necessarily limited to conditions present in the six chains studied. Therefore, findings from these case studies may not be representative for all grocery retailers in Dallas County. The six chains involved in the study were The Great Atlantic and Pacific Tea Company (A & P), Minyard Food Stores, The Kroger Company, Cullum Corporation (Tom Thumb), Safeway Corporation, and Southland Corporation (Seven-Eleven Stores).

Information was sought from the chains concerning their usage of open code dating. Retailers were asked if they had converted to open dating their private branded merchandise. From Table XLI it may be seen that adoption of open code dating has become very widespread on the part of grocery chain stores.

Five out of the six grocery chains surveyed had at least partially converted to open code dating. Only one of the six, Minyard's, had not yet implemented this change on its private label food items. Kroger's management was still in the process

TABLE XLI

## NUMBER OF GROCERY CHAINS HAVING ADOPTED OPEN DATING

Action Taken	Number
Adopters . . . . .	5
Nonadopters . . . . .	<u>1</u>
Total . . . . .	6

of converting completely to open dating on private brand merchandise. However, it was stated by Jerry Lindley, that conversion to open code dating would be completed by July 15, 1973.<sup>4</sup> According to Lindley, Kroger had already begun open dating dairy and bakery products, two highly perishable food items.

Respondents gave various reasons for their firm's implementation of open code dating. Store managers were generally not aware of reasons for a policy change to open dating, but a much greater awareness was found among chain store executives.

One store manager who expressed a viewpoint as to why his firm had begun conversion to open dating in November of 1972 was Lloyd Crumpton, Acting Manager of a Kroger supermarket.

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<sup>4</sup>Statement by Jerry Lindley, Manager of Operations, Southwestern Division, Kroger Company, Dallas, Texas, May 31, 1973.



Crumpton viewed Kroger's move toward open dating as a pragmatic approach when he stated that "sooner or later the government would require it."<sup>5</sup> Agreeing with Crumpton was Butch Clopp, Store Director for a Dallas Tom Thumb supermarket. Conversion to open dating, initiated in 1971 by Cullum Corporation, was prompted by government pressure, not by pressure from consumers.<sup>6</sup> It was the threat of passage of the Federal mandatory open code dating legislation, Clopp emphasized, that persuaded Cullum Corporation to begin open dating its private brand merchandise. None of the businessmen interviewed thought a significant number of their customers desired adoption of open code dating. Though several of the businessmen interviewed in the study expressed reservations about how strongly open dating was desired by shoppers, none strongly opposed its adoption, and most supported such a policy change. Perhaps retailer sentiment was best expressed by Jack Garritson, Merchandising Director of Cullum Corporation. Regarding

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<sup>5</sup>Statement by Lloyd Crumpton, Acting Manager, Kroger Supermarket, Dallas, Texas, June 19, 1973.

<sup>6</sup>Statement by Butch Clopp, Store Director, Tom Thumb Supermarket, Dallas, Texas, May 31, 1973.

conversion to open dating, Garritson stated that it was "fine if that's what our customers want."<sup>7</sup>

#### Mandatory Open Code Dating

Proposals to make open code dating mandatory have flourished at all levels of government. Fear of government-required open dating has been a major concern to the food industry and has been instrumental in convincing many firms of the wisdom of conversion. In interviews with supermarket executives and store managers the reason most often given for converting to open dating was the belief that it would eventually be required by the government.

This belief expressed by businessmen being interviewed was not without foundation. Many state and local governments are giving open dating careful attention. A proposed Federal bill is before Congress which, if passed, would make open code dating mandatory (see Appendix).

Retailers in the food industry generally support open code dating, though this support may not always be completely

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<sup>7</sup>Statement by Jack Garritson, Merchandising Director, Cullum Corporation, Dallas, Texas, April 17, 1973.

voluntary. Pragmatism would appear to be the basis for retailer support of open code dating. The industry has adopted a position of support for open dating in an attempt to eliminate the drive for mandatory open code dating. Indeed, it would appear that retailers are trying, through voluntary adoption of open code dating, to make proposed mandatory legislation unnecessary. This attitude toward voluntary self regulation was expressed concisely in an industry publication by the following paragraph:

The hope is that legislative bodies will recognize the spirit, volume, and effort retailers have put into voluntarily open dating products, and thus find mandatory open dating unnecessary. "We can prove we don't need it by doing it," says Clarence Adamy, president of the National Association of Food Chains. The NAFC has encouraged voluntary open dating by all of its members.<sup>8</sup>

Retail store managers and chain store executives interviewed in the Dallas survey generally expressed awareness of proposed Federal mandatory open code dating legislation. In Table XLII responses from chain store executives and store managers are presented, showing differences between the two

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<sup>8</sup>Supermarketing, op. cit., p. 6.

groups in levels of awareness about proposed mandatory Federal open code dating legislation.

TABLE XLII

## RESPONDENT AWARENESS OF PROPOSED FEDERAL OPEN DATING BILL

Response	Number of Respondents		Total
	Store Managers	Chain Executives	
Aware	3	6	9
Unaware	3	0	3
Total	6	6	12

Awareness of proposed Federal mandatory open dating legislation was much higher among chain store executives than among retail store managers. All the executives interviewed were aware of the proposed legislation, while only half of the store managers were aware of this bill. One executive, not only expressing knowledge about the bill, stated "We helped write the law in Washington, D. C." No doubt this high degree of awareness, particularly among chain store executives, is indicative of the importance attached to the issue.

Attitudes toward proposed Federal legislation were not uniform among businessmen surveyed. Nor were opinions

regarding mandatory open dating legislation the same between store managers and chain executives. Supermarket store manager opinion was evenly divided as to whether or not this legislation was desired. On the other hand, supermarket executives were unanimously in favor of passage of the bill. Such differences, though difficult to explain, are important because of possible implications involved. It may be that executives expressed official company policy, while store managers expressed their own personal attitudes--attitudes developed through experience. It is possible that these differences may not be significant at all, and may result from chance. Due to the small number of cases studied, it was impossible to ascertain the importance of these differences. Perhaps a better view of the desirability of open code dating from a businessman's viewpoint can be determined by a look at perceived advantages and disadvantages of open dating.

#### Attitudes Toward Open Dating

In the case studies conducted, businessmen were asked to express their attitudes toward the subject of open code dating. This largely unstructured approach was incorporated in the investigation so that respondents would have adequate opportunity in which to express their viewpoints fully.

Interviewees were encouraged to give their viewpoints regarding advantages and disadvantages associated with open code dating.

While some businessmen interviewed had voiced serious reservations concerning desirability of mandatory open code dating, none were opposed to voluntary adoption of open dating. Nor did any of these men feel that the disadvantages of open dating were greater than the advantages associated with conversion.

Store managers were particularly favorably disposed to open code dating, even in cases where it had not yet been adopted. Statements were made that open code dating is "good for us" and "a damn good thing." One very enthusiastic supporter of open dating was Dave Helmsing, Director of Advertising and Public Relations for Kroger's Southwestern Division. Concerning desirability of open dating, Helmsing stated "This makes a hell of a lot more sense than unit pricing."<sup>9</sup>

Chain store executives viewed advantages of open dating in terms of broad policy areas. That is, they saw voluntary open dating as a policy which would make proposed mandatory

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<sup>9</sup>Statement by Dave Helmsing, Director of Advertising and Public Relations, Kroger Corporation, Southwestern Division, Dallas, Texas, June 5, 1973.

Federal legislation unnecessary. Open dating was viewed in terms of appeasing consumer groups. Expressing this viewpoint was Bob Gallanna of Southland Corporation. Gallanna stated "We think the public is consumer oriented."<sup>10</sup>

Store managers were more likely to perceive possible advantages of open dating in terms of practical daily operations. A major positive aspect of open dating was considered to be an aid in stock rotation. Under closed code dating systems, grocery clerks engaged in stock rotation would have to use a code book in order to read dates on food packages. Stock rotation is conducted in order to remove old merchandise from store shelves and to insure that older stock is placed on the front row of display. Through open dating, code books can be eliminated, thus saving grocers both time and money.

Another advantage in open dating was seen as a move toward appeasing customers. Though retailers apparently were not certain as to how many of their customers desired open dating, all believed that it was wanted by some shoppers. Estimates varied widely. One store manager estimated that 90 per cent

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<sup>10</sup>Statement by Bob Gallanna, Acting Merchandise Manager, Southland Corporation, Dallas, Texas, April 17, 1973.

of his customers desired complete adoption of open code dating on all food products.<sup>11</sup> Other store managers were somewhat less optimistic in terms of estimated percentages of shoppers desiring open dating. One grocer stated that virtually none of his customers utilized open dating.<sup>12</sup> However, no evidence was offered to support this claim.

One insight regarding consumer awareness and attitudes toward freshness dates was offered by Kroger Supermarket manager, Lloyd Crumpton. Crumpton stated that fresh meat is open dated at each individual Kroger supermarket where it is packaged. In support of his belief that customers are very much aware of freshness dating, Crumpton declared "Customers line up outside the door at 8:15 in the morning and when we open up they head for the meat counter to get marked down meat that is past the pull date."<sup>13</sup>

Though open code dating has been viewed by some as a "hot, new marketing tool"<sup>14</sup> which would help win new customers and

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<sup>11</sup>Statement by John Cotler, Manager, Minyard's Food Store, Dallas, Texas, July 20, 1973.

<sup>12</sup>Statement by William Hicks, Assistant Manager, A & P Supermarket, Dallas, Texas, May 10, 1973.

<sup>13</sup>Crumpton, op. cit.

<sup>14</sup>"Chains Woo Consumers With Open Dating," Business Week (January 16, 1971), p. 48.



boost sales, grocers interviewed were uncertain of its marketing impact. Most stated that open dating was still too new for them to yet know what its overall impact would be.

Conversion to open code dating has not been implemented without some problems and some perceived disadvantages. One area of concern has been over costs involved. Costs can arise from two areas: conversion costs and throwaway costs. Conversion costs arise from efforts involved in converting from code dating to open code dating systems. These expenses involve both equipment and labor costs. Unfortunately, none of the businessmen interviewed could give even an estimate of their conversion costs. One insight into this cost problem was provided in Business Week magazine.

The cost of open dating, of course, varies from chain to chain. California-based Lucky Stores, which went to open dating last October, spent \$15,000 on new code-printing equipment. The chain also invested in explanatory signs and had to print new egg and milk cartons to accommodate its open-dating message . . . .

Supermarkets General claims that assembling a code book for shoppers is one of the biggest costs. Its own book, which covers all perishable and semi-perishable items, runs to 100 pages . . . .<sup>15</sup>

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<sup>15</sup>Ibid., p. 49.

Cost data may vary from chain to chain, but expenses cannot be avoided. Regardless of whether a closed code or an open dating system is used, there will be costs involved. The only direct costs in open dating are one-time conversion costs. This point was made by one supermarket executive quoted in Supermarketing magazine.

"Basically, there is [sic] no significantly greater costs inherent in open dating as compared to any other kind of dating system," according to N. V. Lawson, Vice-President, Accounting and Data Processing, Safeway Stores. "All producers of perishable foods must date their foods in one way or another anyway."<sup>16</sup>

Throwaway costs were expected by some to soar if open dating was adopted. "Some food men also fear that customers may pass over perfectly good food in order to buy the most recently dated items."<sup>17</sup> However, when asked about throwaway costs, none of the grocers in the study felt that conversion to open dating had caused an increase in these costs. On the other hand, it should be remembered that one of the six chains studied had not yet implemented open dating and two others

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<sup>16</sup>Supermarketing, op. cit., p. 7.

<sup>17</sup>Business Week, op. cit.

(Southland and Kroger) were not yet deeply enough into open dating to know about this aspect.

On balance then, it would appear that advantages of open dating are appreciably greater than disadvantages, according to grocer opinions in the six Dallas County cases. Most significantly perhaps, was the comment by one chain store executive. In referring to open code dating as a good control item, he stated that it "tends to cut down on consumer complaints."<sup>18</sup>

#### Standardization of Dating Systems

One important problem area involved in implementation of open dating concerns the date itself. What date shall be placed on a food package? Options available include a shelf life date, pack date, pull date, freshness date, expiration date, and a shelf-display date. The many available types of open dates have been a source of great confusion on the part of grocery shoppers. Unfortunately, all too often the grocery shopper sees a freshness date, but does not know what the date means. The survey of consumers in Dallas County revealed this to be a significant problem area.

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<sup>18</sup>Statement by Jack Word, Division Purchasing Director, A & P, Dallas, Texas, May 31, 1973.

Shopper confusion over interpretation of open dating was found to be widespread. In a study conducted by the United States Department of Agriculture of Jewel Food Stores customers, it was reported that shoppers "did not really understand open coding despite their awareness and use of it."<sup>19</sup> As a further measure of the magnitude of the problem of consumer lack of understanding concerning open dating, it was discovered in the Jewel study that "only 20 per cent of those interviewed could relate dates to the last day the product could be sold--the pull date used by Jewel and many other retailers in their dating system."<sup>20</sup>

To help eliminate shopper confusion over what open code dates mean, the supermarket industry has recognized the need for a uniform system of open dating. An attempt has been made to standardize dating systems by uniformly adopting a pull date, the last date a product could be sold. This effort has been reported in Progressive Grocer.

The National Association of Food Chains favors open dating using a pull date. It sees this as a workable middle ground between a manufacturer's pack

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<sup>19</sup>"Consumerism," Progressive Grocer (April, 1972), p. 112.

<sup>20</sup>Ibid.

date, which would be a poor guide to consumers, and an absolute expiration date, which would leave too much to chance once products were in consumers' hands.<sup>21</sup>

Businessmen surveyed in the Dallas County study were asked to indicate a preference as to which kind of open date they would prefer to see on perishable and semi-perishable food packages. Their responses, presented in Table XLIII, indicate that nearly all grocers favor the industry-recommended pull date.

TABLE XLIII  
GROCER PREFERENCES REGARDING TYPES OF  
OPEN CODE DATING SYSTEMS

Respondent Preference	Number of Responses		Total
	Store Managers	Chain Executives	
Pull date	5	6	11
Pack date	1	0	1
Total	6	6	12

No doubt industry adoption of a pull date as the standard type of open date to be utilized played some part in the nearly

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<sup>21</sup>Ibid.

unanimously expressed preference by grocers for this type of date. However, the pull date has the real advantage of being the one date which benefits grocer most. Since the pull date is the day on which unsold merchandise must be taken off store shelves, it is therefore a significant asset to grocer in the task of stock rotation. Adoption of a pull date aids grocer in doing his job of keeping stale or spoiled food off store shelves, while acting as an aid in customer relations at the same time. Left unanswered is the question of whether or not the pull date is the best one from consumers' point of view.

#### Responsibility for Open Coding

A central point of focus in an analysis and study of the issue of open code dating concerns the issue of responsibility for open dating. Though this issue is of little or no concern to the average grocery shopper, it is of great importance in the food industry.

The basic question revolves around the issue of just which member of a channel of distribution (for packaged food products) shall have the responsibility for placing a freshness date on a food package. Shall open dating be the responsibility of manufacturer or processor, wholesaler, or retailer? Which of these three traditional members of a channel of distribution

shall undertake this responsibility? It is always possible for only one of the three to conduct open code dating?

Investigation into the issue of responsibility revealed that there were many aspects to this problem.

It is the retailer that is in direct contact with grocery shoppers. Hence, it is retailer that is most vulnerable to consumer pressure for adoption of open dating. Therefore, it is the retailer, the end link in a channel of distribution, that is most likely to desire open dating. However, retailers, especially small independent retailers, may lack the resources to conduct open dating. It may not be merely impractical for retailer to open date his merchandise, it may be largely impossible. Retailer normally has no knowledge about such things as shelf life for food products. In addition to this lack of technical knowledge, retailer may be unaware of how long food has been in manufacturer's warehouse or wholesaler's warehouse.

Though the large retailer may be able to control open dating on his private brand merchandise, he is in a unique position in a distribution channel. Since large retail chains control their own distribution channels, open dating becomes simplified. The retail chain executive knows how long merchandise has been in storage since processing and packaging.

Manufacturers of nationally branded products are in a less advantageous position, because they cannot control the complete channel of distribution. This problem is illustrated in the following paragraph:

The national brand manufacturer has more trouble figuring the shelf life of a product than the retailer manufacturing a private label brand, because he controls fewer factors in the distribution process. Don Stowbridge, Stop & Shop, describes the situation: "We stores cannot control their packaging integrity, their bacterial load at the time of packaging, and their initial shipping stages. But the manufacturers cannot control distribution factors like temperature control in the warehouse, coolers and display cases, total time in storage, and time on the shelf."<sup>22</sup>

It should become increasingly apparent that open code dating is a complex issue and that determining responsibility for open code dating is not always an easy matter. It is difficult to affix any degree of responsibility for open coding on the small independent retailer or independent wholesaler. These members of a channel of distribution, for reasons already expressed, are not logical recipients for responsibility of conducting open code dating.

This analysis involving the determination of responsibility for open code dating leaves two possible candidates which might

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<sup>22</sup>Supermarketing, op. cit.



be expected to assume responsibility. They are manufacturer and large retailer. As the study did not include primary data from food manufacturers or processors, their position on this issue is not expressed. It may be assumed, though, that they would likely be somewhat less enthusiastic about accepting this responsibility than retailers would be about suggesting they accept it.

Not all food manufacturers and processors have refused to implement open code dating on their nationally branded merchandise. Some manufacturers have implemented this policy change without waiting for it to be forced upon them by government or consumers. One large firm recently voluntarily adopting open code dating (along with nutritional labeling) was Del Monte Corporation. With 1972 sales of \$820.6 million, Del Monte ranks as the world's largest canner of fruits and vegetables.<sup>23</sup>

Richard G. Landis, President and Chief Operations Officer, has explained the Del Monte move in terms of a growing realization of the importance of the marketing function. Landis states

The increasing concentration of power in the hands of major grocery chains, the growth of discounting and private label brands, greater demand

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<sup>23</sup>"Del Monte: Living With New Labeling Rules," Business Week, (February 3, 1973), p. 42.

for new products to satisfy the consumer's appetite for convenience and novelty, more spending for snacks and less for foods associated with the traditional three square meals, more interest in nutrition and product information, and the enormous growth of fast foods, the latter representing indirect competition to grocers and grocery manufacturers.<sup>24</sup>

Del Monte views nutritional labeling and open coding as marketing opportunities to be adopted and exploited. These moves have appeared especially attractive in terms of competing with large grocery chains' private brand merchandise and marketing techniques. Other food manufacturers are gradually moving toward open dating, though not as rapidly as the large chain supermarkets are with private brand merchandise.

When Dallas County grocers were asked about responsibility for open dating, the unanimous response was that open dating should be the responsibility of manufacturer, not retailer. In the case of private brand merchandise, this attitude is logical and presents no problem in that retailer has direct control. However, manufacturers of nationally branded products cannot be forced by retailers to implement open dating, though pressure can be brought to bear upon them by supermarket chains.

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<sup>24</sup>Ibid.

As a practical matter, manufacturers must be willing to accept responsibility for open code dating, if it is to be successfully implemented on all perishable and semi-perishable packaged food products. It is impractical to open date merchandise at the retail grocery store, though a limited amount of open dating is done at this level. For example, bread baked in a Tom Thumb supermarket is dated at the store.<sup>25</sup> Often stores which cut and package fresh meat will place open dates on packages of fresh meat. However, fresh meat and store-baked bread constitute the only examples where open dating was conducted at the retail store level.

Retail store managers and chain executives in the study felt that the only practical way to implement open dating was at the manufacturer's level. The consensus of these businessmen was that manufacturer was in the best position to determine freshness conditions leading to open dating of products. In cases of retailer's private brand merchandise, the grocers stated that their chains required the manufacturers of private label products to conduct the open dating.

That manufacturer should assume responsibility for open dating is a requirement of the proposed Federal Open Dating

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<sup>25</sup>Clopp, op. cit.

Perishable Food Act. In section 202 of H. R. 8417, it is written

No person who manufactures or packages a perishable or semiperishable food in the form in which it is sold by retail distributors to consumers may distribute (or cause to be distributed) for purposes of sale a perishable or semiperishable food packaged by him in such form unless he has, in accordance with the requirements of subsection (f), labeled such packages to show (1) the pull date for such food, and (2) the optimum temperature and humidity conditions for its storage by the ultimate consumer.<sup>26</sup>

#### Promoting Open Code Dating

Businessmen were asked what their firms were doing to promote open dating to their customers. Responses to this question give indication of a major weakness with open code dating: grocers fail to sufficiently promote this new development.

When asked what methods their firms had used to promote open dating to the public, few of the grocers could respond in any detail. Some businessmen in the study stated their firm was doing little or nothing to promote open dating. The two main methods mentioned for publicizing open dating to

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<sup>26</sup>H. R. 8417, 92nd Congress, 1st Session, p. 3, cited in Rutgers University Food Science Department, Food Stability and Open Dating, Conference Proceedings (New Brunswick, N. J., October 21-22), p. 123.

shoppers were newspaper advertising and display signs in stores. One firm, Southland Corporation, was using television to announce that chain's adoption of open dating.

Another firm, Safeway Corporation, has incorporated a dual approach; Safeway utilizes both newspaper advertising and store display signs to advertise open dating.<sup>27</sup> Some might well question whether or not even the Safeway approach is sufficient to make consumers sufficiently aware of that firm's usage of open dating.

In view of the vast amount of ignorance and confusion found to exist among Dallas County consumers relative to the subject of open dating, it may be that supermarkets and others are going to have to devote a great deal more effort to informing shoppers of this move. Since findings revealed that most consumers expressed preference for other open dates than a pull date, it would appear that grocers are going to have to take steps to counter consumer opinion. Countering consumer opinion on the desirability of using a pull date should be a primary objective of the industry. Secondly, greater efforts should

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<sup>27</sup>Statement by Roy Brooking, Store Manager, Safeway Supermarket, Dallas, Texas, June 4, 1973.

be taken to inform shoppers of the scope and meaning of open code dating.

The food industry should devote a greater portion of its promotion budget to consumer education on the subject of open code dating. This program could be accomplished in three main ways: greater newspaper advertising by retailers, more in-store display signs and posters, and additional labeling information on food packages which will help shoppers to better understand open code dating. Most food packages which are open dated have only the freshness date stamped on them and no explanation as to the significance of the freshness dates.

It is believed that adoption of this approach would have the effect of substantially reducing consumer ignorance concerning open dating. Also, the desirability of such an approach can be viewed in terms of creating greater consumer confidence in both manufacturer and retailer. Consumer confidence can be translated into brand loyalty and store loyalty. These loyalties can in turn result in increased sales and greater profits. As profit motive is the basic fundamental justification for existence of a private business firm in a capitalistic system, the adoption of this approach is recommended.

### Summary

A series of six case studies were conducted in order to obtain viewpoints of Dallas County grocers toward open dating. In each of the six cases a chain store manager and chain store executive were interviewed. Interviews were not highly structured, nor was a statistically significant sample drawn from the universe; therefore, no statistical significance was attached to the findings.

The interviews produced a number of very interesting findings. It was determined that consumer attitudes toward open code dating were not always identical with grocer attitudes; nor were store managers and chain executives always in agreement.

Five out of the six chains had adopted open code dating to some extent on their private brand merchandise. Generally, the grocers expressed satisfaction with open dating, believing it to be an asset in rotating stock and satisfying customers. Possible disadvantages, such as increased throwaway costs and large conversion costs, were not seen as being significant. Perceived advantages of open dating were much greater than the disadvantages, and it was strongly favored by all the businessmen, even in the one chain where open dating had not been adopted.

A very high degree of awareness was found to exist among grocers concerning proposed mandatory open code dating legislation. Awareness was significantly greater among chain store executives than among store managers. Perhaps surprisingly, opinion was in favor of this proposed legislation, especially among chain executives.

None of the businessmen interviewed indicated that pressure from organized consumer groups was a factor in their firm's conversion to open dating, nor were they aware of any pressure from consumer groups to implement open dating. One interesting revelation was that the grocers were less apt to believe consumers desired open dating than statements from consumers themselves would indicate. Perhaps consumers do not widely utilize open dating, but desire for it is far more widespread than some grocers apparently realize.

In accordance with the recommendation of the National Association of Food Chains (NAFC), businessmen interviewed were (with only one exception) unanimously in favor of using a pull date in open dating. The pull date, the last day a product could be sold in the store, was perceived as the best date for stock rotation and control.



Responsibility for open code dating was seen by these businessmen as belonging to manufacturer, except in cases of where food is packaged or processed in the retail food store. The expressed conviction was that only manufacturer had the capability to properly place freshness dates on food packages.

It was determined that a major weakness in open dating lay in the failure by both manufacturer and retailer to make consumers sufficiently aware of the meaning and scope of open coding. This weakness could be corrected were retailers and manufacturers to take steps to promote open dating to their customers, a move which should prove mutually beneficial to both parties.

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATIONS

#### Summary

In an effort to provide continuous analysis of dynamic marketing, a doctoral research study was conducted on the issue of open code dating. This issue of open code dating involves the movement toward dating perishable food packages in such a manner that shoppers can easily determine how fresh they are or how long they have been on grocery store shelves.

Under pressure from government and consumer groups many manufacturers and retailers have begun converting to open code dating. However, despite proposed Federal legislation which would make open dating mandatory, many firms have refused to implement this change. They have retained the old practice of code dating food packages in such a manner that only a store employee equipped with a code book can decipher the codes.

Open code dating may be viewed as a natural outgrowth of the present consumer movement. Desire for more product information, especially labeling information on food packages, is

widespread among consumers and government agencies. The Fair Packaging and Labeling Act of 1966, which would be amended by proposed mandatory open dating legislation, is one example of the result of this desire for more product information.

At the same time, a proper balance must be preserved between what is desirable or undesirable in terms of benefits versus costs of open code dating. The issue of open code dating raises many questions. Is it needed? Do consumers really want this implemented? Will they use open dating? Who should be responsible for open dating? Which possible open date would be used? Is proposed mandatory Federal open code dating legislation desirable? The purpose of this study has been to seek answers to these questions.

During the Twentieth Century there have been three separate and distinct consumer movements in the United States; the third is still in progress. Business and the free enterprise system has been deeply affected by these consumer movements and resulting restrictive legislation, especially at the Federal level. Currently there are more than 350 consumer protection bills before congress. How many of these will eventually be enacted into law is an unknown factor.

Businessmen must develop realistic responses to consumer demands. Often it is advantageous to businessmen to meet consumer demands, thus reducing pressures for additional restrictive government legislation. Additionally, adoption of consumer demands can build goodwill and give adopting firms a competitive edge to promote.

A key target of consumer groups' demands has been the retail supermarket. The supermarket industry, because of its size, accessibility, and intensely competitive position, has been extremely vulnerable to consumer protests. Under pressure from consumer groups and governmental legislative bodies, the supermarket industry is moving to meet demands for more product labeling information.

Since its development during the early years of the 1930's, the supermarket industry has had to remain ready to adjust to constantly changing marketplace conditions. Intense competition for leadership among top chains provides a strong incentive for meeting consumer demands for open code dating on private brand merchandise. However, manufacturers of national brand merchandise have been slower to convert to open dating than with private brand merchandise, a fact causing some possible strain between manufacturers and retailers.

To answer some basic questions raised concerning consumer attitudes toward open code dating, a primary research study was conducted among Dallas County consumers. A systematic random sample was drawn from the universe of Dallas County residents listed in the 1973 telephone directory. A total of 232 valid questionnaires were completed with data gathered through personal interviews. From this sample size a confidence level of 87.23 per cent with an allowable error of plus or minus 5 per cent was determined.

Analysis of data gathered revealed the issue of open code dating to be an important one to grocery shoppers. Consumers were very much aware of open dating and most had purchased spoiled food within the previous year, a factor which was found to enhance favorable consumer attitudes toward mandatory open dating.

Consumers were found to be overwhelmingly in favor of having food packages open dated for freshness. Respondents stated that freshness dates were helpful in their grocery shopping. Most shoppers expressed awareness of proposed mandatory Federal open code dating legislation.

Though consumers strongly desired open code dating, it was ascertained that few truly understood the meaning of

open dating. It was discovered that few respondents had any clear conception of the meaning of dates on food packages. Not only were the vast majority of shoppers unable to correctly identify a pull date as the freshness date nearly always used in open dating, but many consumers failed to indicate a clear preference as to type of open dating system desired.

Despite existence of extensive respondent lack of knowledge and confusion regarding open dating systems, it was found that consumers consider this issue to be much more important than other related consumer issues such as unit pricing, nutritional labeling, and phosphate content disclosure. However, this finding was tempered by the discovery that most consumers were unwilling to pay more for this additional product labeling information.

Though respondents expressed an unwillingness to pay more for open code dating information, this reluctance should not be taken as an indication of a lack of concern in this issue. Over two-thirds of respondents stated they would be willing to refuse to shop at a supermarket which refused to implement open code dating, a clear indication of the significance of open dating in the minds of grocery shoppers.

Demographic data were gathered on consumers in the sample for purposes of more detailed analysis. Family size ranged from one to nine, with two being the size most often mentioned. The largest single group of respondents was found to be in the thirty-to-thirty-nine age bracket and had attended college, but had never graduated. Over three-fourths of respondents surveyed were women. Ethnic group composition of the sample was overwhelmingly white, as characterizes the universe from which the sample was drawn.

In order to present a balanced evaluation and to gather additional information, retail grocers in Dallas County were surveyed on a nonrandom basis. Six chain stores were examined in these case studies to determine extent of adoption and grocer attitude toward open code dating.

Five out of the six chains had adopted open dating on their private brand merchandise, while representatives of the sixth expressed regret that this action had not yet been taken by their firm. The businessmen expressed satisfaction with open dating, believing it advantageous in terms of stock rotation and customer satisfaction. Possible disadvantages, such as increased throwaway costs and large conversion costs, were not seen as being significant. Businessmen felt that

advantages of open dating were significantly greater than any disadvantages.

Awareness of proposed Federal mandatory open code dating legislation was very high among those grocers, especially among chain store executives. Perhaps surprisingly, opinion was favorable toward passage of this proposed legislation.

Pressure from organized consumer groups was not considered to have been a factor in any of the firms' adoption of open dating. However, the businessmen expressed the belief that most customers had little interest in open dating, an expression sharply in contrast from data gathered from consumers which revealed strong interest and desire for open coding. Perhaps consumers do not always widely utilize open dating, but interest and desire for this action appears to be far more widespread than businessmen apparently realize.

The businessmen favored adoption of a pull date, the last day a product could be sold, as the best possible type of open date. Stock rotation and inventory control were perceived advantages of a pull date, the date recommended by the National Association of Food Chains. Except in cases where food was packaged or processed in a supermarket, it was felt that manufacturer had the sole responsibility of labeling food packages



with the pull date. Only manufacturer had knowledge of packaging conditions and distribution conditions to properly conduct open coding.

From interviews with both grocers and shoppers, it was ascertained that a major weakness of open dating where it had been adopted lay in the failure to educate consumers to the actual meaning of freshness dates on food packages. This weakness could be corrected were retailers and manufacturers to take steps to promote open dating to shoppers, a move which should prove to be mutually beneficial.

### Conclusions

As a method by which the magnitude and importance of open code dating to both consumer and businessmen could be measured, four hypotheses were tested in order to ascertain the importance and usefulness of open code dating.

The first hypothesis, that consumers desire the widespread adoption of open code dating, was accepted on the basis of results of personal interviews with grocery shoppers.

The second hypothesis, that consumers would utilize open code dating were it adopted, was accepted, though it was realized that consumers might not always use this service at all times in their grocery shopping.

The third hypothesis was accepted. It was determined that adoption of open code dating constituted an economically sound policy. Grocers throwaway costs do not soar once products are open dated, nor are any other costs, other than one-time conversion costs, associated with conversion to open dating.

The fourth hypothesis was validated in the course of the study. It was concluded that adoption of open code dating was a desirable marketing strategy. Open dating was found to aid businessmen by building consumer confidence and aiding store managers in stock rotation. Additionally, voluntary adoption of open dating should help eliminate demands for mandatory Federal open code dating legislation.

#### Recommendations

Pursuant to the issue of open code dating, adoption of the following points is recommended.

First, it is strongly recommended that all packaged perishable and semi-perishable foods be clearly and conspicuously open code dated.

Second, it is recommended that manufacturers and processors uniformly adopt the pull date as the type of freshness date to place on food packages.

Third, it is recommended that the Federal Open Dating Food Perishable Act (H. R. 1655) not be passed by Congress at the present time, unless it is determined that the industry cannot or will not voluntarily adopt this recommended course of action.

Fourth, it is strongly recommended that both manufacturers and retailers take steps to promote consumer awareness and understanding of the meaning and scope of open code dating. Since consumers who have found open dating helpful have been found significantly more likely to be willing to pay more for open dating information, it would appear to be to the advantage of the food industry to get consumers to perceive open dating as an aid in their grocery shopping. This should lessen consumer resistance to paying higher prices for this additional labeling information. This recommendation may be implemented by adopting three steps: greater newspaper advertising of open dating by retailers, more in-store display signs and posters explaining open coding, and additional labeling information on food packages to better explain freshness dates.

It is believed that adoption of all of these recommendations would be advantageous to both businessmen and consumers. Businessmen would benefit from greater consumer confidence

and consumers would benefit from the assurance that packaged food would be fresh at the supermarket.

#### Suggestions for Further Research

This study of open code dating was restricted to a universe of consumers and businessmen in Dallas County, Texas. It might prove advantageous to test these same hypotheses in other areas of the country in order to see whether or not similar findings might be obtained. As Dallas County residents do not necessarily constitute a valid sample of the nation's population, further research is necessary in order to determine if these findings can be applied to the nation as a whole.

A major limitation in the study, which calls for further research, concerns the validity of consumer responses. It might prove a worthwhile research study to observe consumers in their grocery buying in order to ascertain the extent of consumer usage of open code dating. Through observation, it is often possible to gather more exact data concerning shopping habits than can be obtained through personal interviews. This approach might prove more effective than asking consumers at home whether they use open dating.

Additional research could be done in order to gather data relative to the merits of open code dating from food manufacturers and processors. Also, more data are needed concerning exact costs to manufacturer of converting to open dating.

Due to the recency of open code dating as an issue, further research may be conducted in the form of a follow-up study which would determine the results obtained from open dating. Numerous data were not available because many firms had not yet adopted this policy; their results of open coding could not yet be measured.

These suggestions for further research are designed to provide more complete answers to the many questions and issues raised by the subject of open code dating. Only through exhaustive research can all these questions be answered and arguments associated with this issue be resolved beyond any further doubt. The end result of such activity will be to better clarify relationships between businessmen and consumers, resulting in a better environment in which the nation's marketing system can function.

APPENDIX

OPEN DATING FOOD PERISHABLE ACT  
INTRODUCED IN THE HOUSE  
OF REPRESENTATIVES

93D CONGRESS  
1st Session

**H. R. 1655**

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IN THE HOUSE OF REPRESENTATIVES

January 9, 1973

Mr. Rosenthal (for himself, Mr. Podell, Mr. Price of Illinois, Mr. Rangel, Mr. Rodino, Mr. Roybal, Mr. Ryan, Mr. Studds, Mr. Seiberling, Mr. Thompson of New Jersey, Mr. Tiernan, Mr. Wolff, Mr. Addabbo, Mr. Reid, and Mr. Sarbanes) Introduced the following bill; which was referred to the Committee on Interstate and Foreign Commerce

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**A BILL**

To amend the Fair Packaging and Labeling Act to require certain labeling to assist the consumer in purchases of packaged perishable or semiperishable foods.

1 Be it enacted by the Senate and House of Representa-  
2 tives of the United States of America in Congress assembled,  
3 That this Act may be cited as the "Open Dating Perishable  
4 Food Act".

5 LABELING REQUIREMENTS FOR PERISHABLE AND  
6 SEMIPERISHABLE FOODS

7 SECTION 1. The Fair Packaging and Labeling Act (15  
8 U.S.C. 1451-1461) is amended by adding at the end there-  
9 of the following new title:

## 2

1 "TITLE II

2 "DEFINITIONS

3 "SEC. 201. For purposes of this title:

4 "(1) The term 'Secretary' means the Secretary of  
5 Health, Education, and Welfare.

6 "(2) The term 'food' has the meaning prescribed for  
7 that term by section 201 of the Federal Food, Drug, and  
8 Cosmetic Act, except that such term does not include any  
9 fresh fruit or vegetable.

10 "(3) The term 'perishable or semiperishable food'  
11 means any food which the Secretary determines has a high  
12 risk of any of the following as it ages:

13 "(A) Spoilage;

14 "(B) Significant loss of nutritional value; or

15 "(C) Significant loss of palatability.

16 "(4) The term 'pull date' means the last date on which  
17 a perishable or semiperishable food can be sold for consump-  
18 tion without a high risk of spoilage or significant loss of  
19 nutritional value or palatability, if stored by the consumer  
20 after that date for the period which a consumer can reason-  
21 ably be expected to store that food.

22 "(5) The term 'label' means any written, printed, or  
23 graphic matter affixed to or appearing upon any container  
24 or wrapping in which a perishable or semiperishable food is  
25 enclosed.

1       "(6) The terms 'package' and 'principal display  
2 panel' have the meanings prescribed for those terms by  
3 section 110(b) and 110(f), respectively, of title I of this  
4 Act.

5           "LABELING REQUIREMENTS FOR PERISHABLE AND  
6                               SEMIPERISHABLE FOODS

7       "SEC. 202. (a) No person who manufactures or pack-  
8 ages a perishable or semiperishable food in the form in  
9 which it is sold by retail distributors to consumers may  
10 distribute (or cause to be distributed) for purposed of sale  
11 a perishable or semiperishable food packaged by him in  
12 such form unless he has, in accordance with the require-  
13 ments of subsection (f), labeled such packages to show  
14 (1) the pull date for such food, and (2) the optimum  
15 temperature and humidity conditions for its storage by the  
16 ultimate consumer.

17       "(b) No person engaged in business as a retail dis-  
18 tributor of any packaged perishable or semiperishable food  
19 may sell, offer to sell, or display for sale such food unless  
20 the food's package if labeled in accordance with subsections  
21 (a) and (f).

22       "(c) No person engaged in business as a retail dis-  
23 tributor of any packaged perishable or semiperishable food  
24 may sell, offer to sell, or display for sale any such food



1 whose pull date, as specified on its package's label, has  
2 expired unless--

3       "(1) the food is fit for human consumption, as  
4       determined under applicable Federal, State, or local  
5       laws,

6       "(2) such person separates the food from other  
7       packaged perishable or semiperishable foods whose pull  
8       dates, as specified on their packages' labels, have not  
9       expired, and

10       "(3) such person clearly identifies by sign or other-  
11       wise the food as a food whose pull date has expired.

12       "(d) No person engaged in the business of manufac-  
13       turing, processing, packing, or distributing perishable or  
14       semiperishable foods may place packages on such foods,  
15       labeled in accordance with subsection (a), in shipping con-  
16       tainers or wrappings unless such containers or wrappings are  
17       labeled by him, in accordance with regulations of the Secre-  
18       tary, to show the pull date (or dates) on the labels of  
19       such packages.

20       "(e) No person may change, alter, deface, or remove  
21       before the sale of a packaged perishable or semiperishable  
22       food to the ultimate consumer any pull date required by this  
23       section to be placed on the label of such food's package or  
24       shipping container or wrapping.

25       "(f)(1) The pull date and the storage instructions

1 required to be on the label of a packaged perishable or semi-  
2 perishable food under subsection (a) shall be determined  
3 in the manner prescribed by regulations of the Secretary.

4       "(2) A pull date shall, in accordance with regulations  
5 of the Secretary--

6               "(A) be (i) in the case of the month contained  
7 in the pull date, expressed in the commonly used letter  
8 abbreviations for such month, and (ii) otherwise ex-  
9 pressed in such combinations of letters and numbers as  
10 will enable the consumer to readily identify (without  
11 reference to special decoding information) the day,  
12 month, or year, as the case may be, comprising the  
13 pull date; and

14               "(B) be separately and conspicuously stated in  
15 a uniform location upon the principal display panel of  
16 the label required under subsection (a).

17       "(3) (A) Any regulation under paragraph (1) pre-  
18 scribing the manner in which pull dates for a packaged  
19 perishable or semiperishable food shall be determined may  
20 include provisions--

21               "(i) prescribing the time periods to be used in de-  
22 termining the pull dates for such food,

23               "(ii) prescribing the data concerning such food  
24 (and the conditions affecting it before and after its sale

1 to the consumer) to be used in determining its pull  
2 dates, or

3 "(iii) permitting a person engaged in the business  
4 of manufacturing, processing, packaging, or distributing  
5 such food to determine its pull dates using such time  
6 periods and data as such person considers appropriate.

7 "(B) If such regulation includes provisions described  
8 in subparagraph (A)(iii) of this paragraph, such regula-  
9 tion shall also contain--

10 "(i) such provisions as may be necessary to pro-  
11 vide uniformity, where appropriate, in the time periods  
12 used in pull date determinations; and

13 "(ii) provisions for regular review by the Secretary  
14 of the pull date determinations and the time periods  
15 and data upon which they are based.

16 "PENALTIES AND INJUNCTIONS

17 "SEC. 203. (a) Any person who violates any provision  
18 of section 202, or any regulation made thereunder, shall be  
19 imprisoned for not more than one year or fined not more  
20 than \$5,000, or both; except that if any person commits  
21 such a violation after a conviction of him under this sub-  
22 section has become final, or commits such a violation with  
23 the intent to defraud or mislead, such person shall be im-  
24 prisoned for not more than three years or fined not more  
25 than \$25,000, or both.

1       "(b) Any packaged perishable or semiperishable food  
2 that is distributed in violation of section 202 or any regula-  
3 tion made thereunder shall be liable to be proceeded against  
4 at any time on libel of information and condemned in any  
5 district court of the United States within the jurisdiction of  
6 which such packaged food is found. Section 304 of the Fed-  
7 eral Food, Drug, and Cosmetic Act (21 U.S.C. 334) (relat-  
8 ing to seizures) shall apply with respect to proceedings  
9 brought under this subsection and to the disposition or pack-  
10 aged foods subject to such proceedings.

11       "(c)(1) The United States district courts shall have  
12 jurisdiction, for cause shown, to restrain violations of section  
13 202 and regulations made thereunder.

14       "(2) In any proceeding for criminal contempt for viola-  
15 tion of an injunction or restraining order issued under this  
16 subsection, which violation also constitutes a violation of  
17 section 202 or a regulation made thereunder, trial shall be  
18 by the court or, upon demand of the accused, by a jury. Such  
19 trial shall be conducted in accordance with the practice and  
20 procedure applicable in the case of proceedings subject to  
21 the provisions of rule 42(b) of the Federal Rules of Criminal  
22 Procedure.

23       "(d) In the case of any imports into the United States  
24 of any packaged perishable or semiperishable food covered  
25 by this title, the provisions of section 202 and regulations

1 made thereunder shall be enforced by the Secretary of the  
2 Treasury pursuant to section 801 (a) and (b) of the Fed-  
3 eral Food, Drug, and Cosmetic Act (21 U.S.C. 381).

4       "(e) Before any violation of section 202 or a regula-  
5 tion made thereunder is reported by the Secretary to any  
6 United States attorney for institution of a criminal proceed-  
7 ing, the person against whom such proceeding is contem-  
8 plated shall be given appropriate notice and an opportunity  
9 to present his views, either orally or in writing, with regard  
10 to such contemplated proceeding.

11       "(f) Nothing in this title shall be construed as requir-  
12 ing the Secretary to report for prosecution, or for the  
13 institution of libel or injunction proceedings, minor violations  
14 or section 202 or a regulation made thereunder whenever  
15 he believes that the public interest will be adequately served  
16 by a suitable written notice or warning.

17       "(g) (1) Actions under subsection (a) or (c) of this  
18 section may be brought in the district wherein any act or  
19 transaction constituting the violation occurred, or in the dis-  
20 trict wherein the defendant is found or is an inhabitant or  
21 transacts business, and process in such cases may be served  
22 in any other district of which the defendant is an inhabitant  
23 or wherever the defendant may be found.

24       "(2) In any actions brought under subsection (a) or  
25 (c) of this section, subpoenas for witnesses who are required

1 to attend a United States district court may run into any  
2 other district.

3 "REGULATIONS

4 "SEC. 204. The Secretary shall make regulations pur-  
5 suant to this title in accordance with the procedures pre-  
6 scribed by section 553 of title 5 of the United States Code  
7 (other than clause (B) of the last sentence of subsection  
8 (b) of such section).

9 "REPORTS TO CONGRESS

10 "SEC. 205. The Secretary shall transmit to the Congress  
11 in January of each year a report containing a full and com-  
12 plete description of his activities for the administration and  
13 enforcement of this title in the preceding fiscal year.

14 "COOPERATION WITH STATE AUTHORITIES

15 "SEC. 206. (a) The Secretary shall (1) transmit copies  
16 of each regulation made under this title to all appropriate  
17 State officers and agencies, and (2) furnish to such State  
18 officers and agencies information and assistance to promote  
19 to the greatest practicable extent uniformity in State and Fed-  
20 eral regulation of the labeling of packaged perishable or  
21 semiperishable foods.

22 "(b) Nothing contained in this section shall be con-  
23 strued to impair or otherwise interfere with any program  
24 carried into effect by the Secretary under other provisions of

1 law in cooperation with State governments or agencies, in-  
2 strumentalities, or political subdivisions thereof.

3 "EFFECT UPON STATE OR LOCAL LAW

4 "SEC. 207. If any labeling requirement for pull dates  
5 or storage conditions is in effect under this title with respect  
6 to any packaged perishable or semiperishable food, no State  
7 or political subdivision of a State may establish or continue  
8 in effect, with respect to such packaged food, any law pre-  
9 scribing any such labeling requirement which is not identical  
10 to the labeling requirement in effect under this title; except  
11 that this section shall not be construed to (1) abate any  
12 prosecution or other action for the enforcement of such a  
13 law of a State or political subdivision of a State begun be-  
14 fore the date this title takes effect, or (2) release or ex-  
15 tinguish any penalty, forfeiture, or liability incurred under  
16 such law."

17 TECHNICAL AMENDMENTS

18 SEC. 2. (a) Whenever in this section an amendment is  
19 expressed in terms of an amendment to a section or other  
20 provision, the reference shall be considered to be made to a  
21 section or other provision of the Fair Packaging and Label-  
22 ing Act.

23 (b) The second sentence of section 2 is amended by  
24 inserting "and quality" after "quantity".

25 (c) Sections 3, 4, 5, 6, 7, 8, 9, 10, and 12 are each

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1 amended by striking out "this Act" each place it occurs and  
2 inserting in lieu thereof "this title"; and section 13 is  
3 amended by striking out "This Act" and inserting in lieu  
4 thereof "This title".

5 (d) The following is inserted between section 2 and  
6 section 3:

7 "TITLE I"

8 (e)(1) Sections 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, and 13  
9 are redesignated as sections 101, 102, 103, 104, 105, 106,  
10 107, 108, 109, 110, and 111, respectively.

11 (2)(A) Sections 102(a), 102(b), and 105(a) (as so  
12 redesignated) are each amended by striking out "section 3"  
13 and inserting in lieu thereof "section 101".

14 (B) Sections 103(b), 103(c), 104(a), 104(b), and  
15 110 (as so redesignated) are amended by striking out  
16 "section 4" and inserting in lieu thereof "section 102"; and  
17 section 105(c) (as so redesignated) is amended by strik-  
18 ing out "sections 4" and inserting in lieu thereof "sections  
19 102".

20 (C) Sections 104(a), 104(b), and 106 (as so re-  
21 designated) are each amended by striking out "section 5"  
22 and inserting in lieu thereof "section 103"; and section  
23 105(c) (as so redesignated) is amended by striking out  
24 "and 5" and inserting in lieu thereof "and 103".

25 (D) Section 102(a) (as so redesignated) is amended

1 by striking out "section 6" and inserting in lieu thereof  
2 "section 104".

3 EFFECTIVE DATE

4 Sec. 3. The amendments made by sections 1 and 2  
5 of this Act shall take effect on the first day of the seventh  
6 calendar month beginning after the date of its enactment.

March 1, 1973

Dear Consumer:

Your opinion is needed. A random survey is being taken of Dallas County residents. The purpose of this survey will be to gether information about consumer attitudes toward certain grocery store practices. Specifically, your opinions about the usage of freshness dates on perishable grocery products will be asked.

In the next few days a North Texas student will call at your home. His (or her) only purpose will be to ask you a few questions as part of a class project. No one will try to sell you anything and your name will be kept confidential. The student will need only a few minutes of your time and will have an identification card.

Your cooperation will be sincerely appreciated.

Sincerely,

Kirby Lee McGown  
Instructor in Marketing

KLM/ncm

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 Name of Interviewer

## CONSUMER QUESTIONNAIRE

Name of consumer \_\_\_\_\_

Address \_\_\_\_\_

Telephone number \_\_\_\_\_

1. How often have you bought packaged food at a grocery store and then found it to be spoiled when you got home with it?

Within the last month	1	Within the last 6 months	
Within the last 2 to 6	2	to a year	3
months		Never	4

(1)

2. If so, what kinds of foods have you found to be spoiled or otherwise to have deteriorated in quality?

1 Fresh meat	1 Dairy products	
1 Processed meat	1 Canned goods	(2-10)
1 Frozen foods	1 Fresh vegetables	
1 Fresh fruit	1 Baked goods	
1 Other (please identify)	_____	

3. Are you aware of a bill before Congress which, if passed, would require all food products to be clearly marked with a freshness date?

Yes	1	No	2	(11)
-----	---	----	---	------

4. Do you ever notice the presence (or absence) of freshness dates on food packages?

Yes	1	No	2	(12)
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5. Do you find the freshness dates (if your store uses them) helpful in buying?

Yes	1	No	2	(13)
-----	---	----	---	------

6. Would you like to see all perishable food products clearly marked with open code dates?

Yes	1	No	2	(14)
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7. Which one food product would you consider the most important to be open dated?

1 Fresh meat	6 Dairy products	
2 Processed meat	7 Canned goods	(15)
3 Frozen foods	8 Fresh vegetables	
4 Fresh fruit	9 Baked goods	
5 Other (please identify)	_____	

8. Which date would you prefer to see on the package: (16)

- 1 Pack date. The day the food was packaged.
- 2 Shelf life. The length of time after the pack date during which a food will retain its best quality.
- 3 Pull date. The last day a grocer could sell the food, but not the last day it could be eaten.
- 4 Freshness date. The last day you can definitely expect the food to be at its best.
- 5 Expiration date. The last day the food may be acceptable for use.
- 6 Shelf-display date. The day the store puts food on display.

9. When you see a date on a food package, what do you think the date means? (17)

- |   |            |   |                    |   |                   |
|---|------------|---|--------------------|---|-------------------|
| 1 | Pack date  | 4 | Freshness date     | 7 | Don't know        |
| 2 | Shelf life | 5 | Expiration date    | 8 | Other             |
| 3 | Pull date  | 6 | Shelf-display date |   | (Please identify) |

10. Please indicate by numbering to show in order of preference, which of the following programs you consider to be most important.

- |                 |                              |         |
|-----------------|------------------------------|---------|
| <u>        </u> | Freshness codes              |         |
| <u>        </u> | Unit pricing                 | (18-21) |
| <u>        </u> | Nutrition labels             |         |
| <u>        </u> | Phosphate content disclosure |         |

11. Would you be willing to pay higher prices for the availability of any of the above information?

- Yes 1      No 2 (22)

12. Do you think open dating is important enough that you would refuse to shop at a store which refused to use readable freshness dates on its food packages?

- Yes 1      No 2 (23)

13. What do you think causes you the greatest problem in buying groceries?

Please check the following categories as they apply to you.  
This information is utilized only for cross-examination  
purposes and will in no way identify you.

14. Number of people currently living in household \_\_\_\_\_ . (24-25)

15. Age of person being interviewed.

1 Under 20	4 40-49	7 70+	(26)
2 20-29	5 50-59		
3 30-39	6 60-60		

16. Number of years of school completed:

1 Less than 6	5 Attended college, but did not graduate	(27)
2 7-9	6 College graduate	
3 10-12, but did not graduate	7 Post graduate work	
4 High school graduate but did not attend college.		

17. Approximate total annual family income:

1 Less than \$6,000		
2 6,000 - 8,999		
3 9,000 - 11,999		(28)
4 12,000 - 14,999		
5 15,000 - 19,999		
6 20,000 +		

To be completed by Interviewer following interview:

18. Sex of person being interviewed:

1 Male	2 Female	(29)
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19. Ethnic group

1 White		
2 Black		(30)
3 Mexican-American		
4 Oriental-American		

## QUESTIONNAIRE USED IN INTERVIEWING

## DALLAS COUNTY GROCERY RETAILERS

1. What do you think about open code dating? What are some of the advantages, disadvantages, or problems associated with this issue?
2. To what extent has your firm converted to open code dating?
3. Are you aware of a bill before Congress which would require open code dating of all perishable and semi-perishable food products? What do you think about the desirability of mandatory open code dating?
4. Which date would you favor placing on a food package? Why?
5. Who should pay for spoiled or damaged merchandise? Where does spoilage or damage usually take place?
6. How do you think your employees will react (or have reacted) to open code dating?
7. How do consumers react to open dating? Do you think shoppers really want open code dating to be adopted? Will they (or do they) use open dating in their grocery shopping?
8. If your firm has adopted open dating, what has prompted this adoption? Pressure from consumer groups or government agencies?
9. Would (or did) competitors usage of open code dating cause your firm to adopt it?
10. What costs are associated with open code dating? Are there greater throwaway costs than with code dating systems?
11. How might customers best be informed about open code dating?

GROCERY RETAILERS INTERVIEWED  
IN DALLAS COUNTY STUDY

Gordon Bostwick  
Grocery Merchandising Manager  
Safeway Corporation  
Southwestern Division  
9111 Garland Road

Roy Brookins  
Store Manager  
Safeway Store #193  
6060 E. Mockingbird Lane

Butch Clopp  
Store Director  
Tom Thumb Store #7  
3046 Mockingbird Lane

John Cotter  
Assistant Store Manager  
Minyard Store #4  
4325 Lover's Lane

Loyd Crumpton  
Acting Store Manager  
Kroger Store #25  
6330 E. Mockingbird

Allan Douglas  
Store Manager  
7-11 Store #19  
4100 Skillman



Bob Gallanna  
Acting Merchandising Manager  
Southland Corporation  
2828 N. Haskell

Jack Garritson  
Merchandising Manager  
Cullum Corporation  
Tom Thumb Division  
3300 W. Mockingbird

Dave Helmsing  
Director of Advertising and Public Relations  
Kroger Store  
Southwestern Division  
Highway 183 - Irving

Bill Hicks  
Assistant Store Manager  
A & P Store  
6901 Snider Plaza

Jerry Lindley  
Manager of Operations  
Kroger Stores  
Southwestern Division  
Highway 183 - Irving

Ron McDermont  
Director of Retail Operations  
Minyard Food Stores  
6100 Cedar Springs

Jack Word  
Division Purchasing Director  
Great Atlantic & Pacific Tea Corporation  
Southwestern Division  
1401 Cedar Springs

## BIBLIOGRAPHY

### Books

- Arnold, Pauline and Perceval White, Food: America's Biggest Business, New York, Holiday House, 1959.
- Beckman, Theodore N., William R. Davidson, and W. Wayne Talarzyk, Marketing, 9th ed., New York, The Ronald Press Company, 1973.
- Charvat, Frank J., Supermarketing, New York, McMillan Company, 1961.
- Childress, Russell L., Trends and Prospects for Affiliated Food Retailers, Newark, Delaware, The University of Delaware, 1962.
- Clark, Charles T. and Lawrence L. Schkade, Statistical Methods for Business Decisions, Dallas, South-Western Publishing Co., 1969.
- Cox, Keith K., The Relationship Between Shelf Space and Product Sales in Supermarkets, Austin, Bureau of Business Research, University of Texas, 1964.
- Cross, Jennifer, The Supermarket Trap, Bloomington, Indiana University Press, 1970.
- Duncan, Delbert J., Charles F. Phillips, and Stanley C. Hollander, Modern Retailing Management, 8th ed., Homewood, Illinois, Richard D. Irwin, Inc., 1972.
- Howard, Marshall C., Legal Aspects of Marketing, New York, McGraw-Hill, 1964.
- Kangun, Norman, editor, Society and Marketing: An Unconventional View, New York, Harper & Row, Publishers, Inc., 1972.

- McGuire, Joseph W., Business and Society, New York, McGraw-Hill, 1963.
- Phelps, D. Maynard and J. Howard Westing, Marketing Management, 3rd ed., Homewood, Illinois, Richard D. Irwin, Inc., 1968.
- Preston, Lee E., Profits, Competition and Rules of Thumb in Retail Food Pricing, Berkley, Institute of Business and Economic Research, University of California, 1963.
- Sayres, Paul, Food Marketing, 1st ed., New York, McGraw-Hill, 1950.
- Sheehan, John J., Marketing Practices and Preferences in the Food Industry, New York, Family Circle, 1963.
- Sorenson, Helen, The Consumer Movement, New York, Harper & Brothers Publishers, 1941.
- Stanton, William J., Fundamentals of Marketing, 3rd ed., New York, McGraw-Hill, 1971.
- Uhl, Kenneth P. and Bertram Schoner, Marketing Research, New York, John Wiley and Sons, Inc., 1969.
- Zimmerman, Max M., The Super Market, 1st ed., New York, McGraw-Hill, 1955.

#### Articles

- Aaker, David A. and George S. Day, "Corporate Responses to Consumerism Pressures," Harvard Business Review, L (November-December, 1972), 114-124.
- "A & P Counts the Cost of Its Pyrrhic Victory," Business Week, (April 28, 1973), p. 117-119.
- "A & P's Price War Bites Broadly and Deeply," Business Week, (September 30, 1972), p. 56-57.
- "Advertising Nutrition," New Republic, CLXIV (March 6, 1971), 7-8.

- "All Quiet on the Chattahoochee," Chain Store Age, (February, 1971), p. 27-31.
- Appel, David, "The Supermarket: Early Development of An Institutional Innovation," Journal of Retailing, XLVIII (Spring, 1972), 39-53.
- Becker, Boris W., "Consumerism: A Challenge or a Threat?" Journal of Retailing, XLVIII (Summer, 1972), 16-28.
- "Chains Woo Consumers With Open Dating," Business Week, (January 16, 1971), p. 48+.
- "Code of Business Conduct Urged in Response to Consumerist Demands," Management Advisor, IX (November, 1972), 10.
- Cohen, S. E., "Voluntary Labeling Plans Will Be Difficult to Escape," Advertising Age, XLIII (April 17, 1972), 11.
- "Coming--Food Labels With Nutrition Facts," Changing Times, XXV (August, 1971), 15-17.
- "Consumer Movement is Slipping," Business Week, (December 5, 1936, p. 24+.
- "Consumerism: A New Force to Deal With," Business Week, (September 6, 1969), p. 132.
- "Consumerism's Phase Two: Entering the Merchandising Mainstream," Progressive Grocer, LII (April, 1972), 106-112.
- "Consumers Gang Up," Business Week, (May 15, 1937), p. 16.
- Cross, Jennifer, "Blind Dates in the Supermarket," The Nation, CCXII (November 2, 1970), 434-436.
- \_\_\_\_\_, "Truth in Labeling," The Nation, CCXIV (June 12, 1972), 754-757.
- "Del Monte: Living With the New Labeling Rules," Business Week, (February 3, 1973), pp. 42-45.

- "FDA Issues Proposals for Voluntary Nutritional Labeling," Advertising Age, XLIII (April 10, 1972), 53.
- "FDA Seems About to Abandon Its Opposition to Truthful Labeling of Factory-Made Foods," Consumer Bulletin, LIV (August, 1971), 24-26.
- "Food Dating: Now You See It, Now You Don't," Consumer Reports, XXXVII (June, 1972), 391-394.
- "Food Men Must Fight Consumeritis, Burnett Exec Says," Advertising Age, XXXVIII (October 30, 1967), 91.
- "Food Men Pooh-Pooh Nader's Talk," Advertising Age, XL (August 4, 1969), 3+.
- "4-Sided Coder Saves 65% in Carton Inventory Costs," Food Processing, XXX (September, 1969), 14-15.
- Fruhan, W. E., "Pyrrhic Victories in Fights for Market Share," Harvard Business Review, L (September 7, 1972), 100-107.
- "Giant Foods Adds Two Elements to It's Test Program for Food Labeling," Advertising Age, XLIII (January 31, 1972), 2.
- "Hartke-Moss Truth in Food Labeling Act," Food Processing, XXXIII (April, 1972), 12.
- "How Fresh Are Our Milk and Eggs and What Goes into Cola Drinks?" Consumer Bulletin, LIV (August, 1971), 30-32.
- "How Multiple-Unit Pricing Helps and Hurts," Progressive Grocer, L (June, 1971), 52-61.
- "How Pathmark Disarms the Crusaders," Business Week, (May 8, 1971), p. 62.
- "How to Read Processed-Meat Labels," Good Housekeeping, CLXXV (August, 1972), 138.
- "Information Panel--Nutritional Labeling," Food Processing, XXXIII (June, 1972), 35.

- "Jewel Finds Helping Shaper Hiked Profits," Advertising Age, XLI (August 3, 1970), 27.
- "Jewel Food Stores: Open Dating Game," Sales Management, (August 15, 1970), p. 25.
- Kotter, Philip, "What Consumerism Means for Marketers," Harvard Business Review, L (May-June, 1972), 48-57.
- "Large Chains Convert to Open Dating--Voluntarily," Supermarketing, (January, 1973), pp. 5-8.
- Leibson, Bob, "Grocery Store Sales \$87.65 B in Record '72," Supermarketing, (April, 1973), p. 1.
- "Mission Code Break," McCall's, IC (October, 1971), 46.
- Monroe, Kent B. and Peter J. LaPlaca, "What Are the Benefits of Unit Pricing?" Journal of Marketing, XXXVI (July, 1972), 16-22.
- "More Talk Than Action on Consumer Complaints," Business Week, (May 19, 1973), pp. 66-68.
- "Nader Hits Food Marketers Silent Violence to Consumers," Advertising Age, XL (July 1, 1969), 1.
- "New Congress Considers Consumers," Changing Times, XXV (April, 1971), 6.
- "New Labels for Food," Time, CI (January 29, 1973), 42-45.
- "Nutrition By Numbers: Nutritional Value of Contents on Del Monte's Cans," Time, C (October 30, 1972), 95.
- "Open Code Guidelines Move Closer," Progressive Grocer, L (January, 1971), 87.
- "Progressive Grocer--Cornell Report Shows New Low for Chain Profits," Progressive Grocer, LI (October, 1972), 48-50.
- "Smell It, Then Sell It," The New Republic, (April 25, 1970), 8-9.

- "Tables of Contents: FDA's Proposed Regulations," Newsweek, LXXXI (January 29, 1973), 57-59.
- Tracey, E. J., "How A & P Got Creamed," Fortune, LXXXVII (January, 1973), 102-106.
- "Uniform System of Nutritional Labeling Proposed," Food Processing, XXX (May, 1972), 10.
- "Universal Product Code Nears Reality," Progressive Grocer, LI (January, 1972), 90-92.
- "Use Nutritional Information in TV Ads, Chote Urges Food Men," Advertising Age, XLIII (March 27, 1972), 3.
- "Washington's Diet for Food Companies: Nutritional Labeling," Business Week, (March 20, 1971), p. 28.
- "Which Do You Want, Good Eating or Good Nutrition?" Consumer Bulletin, LIV (March, 1971), 19-20.
- "Why Net Weight Spells Nonsense on Canned Food Labels," Consumer Reports, XXXVII (October, 1972), 665-669.

#### Reports

Food Science Department, Rutgers University, Food Stability and Open Dating, Conference Proceedings, New Brunswick, N. J., Rutgers University, 1971.

#### Public Documents

Economic Research Service, U. S. Department of Agriculture, A Case Study of Food Dating in Selected Chicago Supermarkets, Washington, U. S. Department of Agriculture, 1971.

Food Science Department, Rutgers University, Food Stability Survey, Volume 1, Washington, U. S. Department of Agriculture, 1970.

Office of Consumer Affairs, Consumer Legislative Monthly Report, Washington, U. S. Government Printing Office, April 1, 1973.

Sub-Council on Packaging and Labeling of the National Business Council for Consumer Affairs, Guiding Principles for Responsible Packaging & Labeling, Washington, U. S. Government Printing Office, 1972.

#### Newspapers

Dallas Morning News, November 20, 1972.

Wall Street Journal, February 20, 1973.

Wall Street Journal, April 30, 1973.

Wall Street Journal, October 3, 1973.

Washington Post, December 6, 1970.