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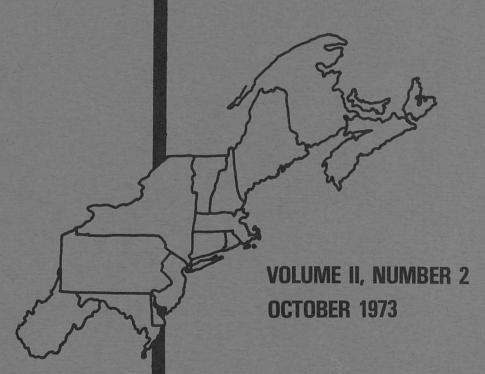
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Testing for Differences in Consumer Attitudes Toward Milk in New York State

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Market researchers are frequently interested in determining the differences in attitudes of various groups of consumers. For example, they may want to know if significant shifts in attitudes have occurred over time or if attitudes vary by sex, income, race or market.

In this paper a specific procedure will be outlined which can be used to test for significant differences in attitudes of groups of consumers. The procedure will be discussed in the context of comparing attitudes toward milk in selected New York Markets.

The Study

Attitude comparisons were desired for the major markets of New York State. Table 1 gives the markets selected. Eighty-two percent of the population of New York State live in the sampled markets.

The data used in this analysis were collected as part of a broader study of adult (eighteen and over) beverage consumption and attitudes in November of 1972.

Professional enumerators collected the data through personal interviews in the respondents' homes. The sample of adults in each market was selected by a directed route sampling procedure with quota constraints on sex and income.

I/ The New York State Dairy Advisory Board, a producer board which manages the expenditure of market order funds for advertising and promotion, is faced with many decisions requiring an understanding of New York State consumers. One area of interest is whether customers in the various markets of New York State have similar attitudes towards milk.

Sixteen different semantic differential scales were used to measure the respondents' attitudes toward milk. The scales (see Table 2) used in this study were developed from an extensive literature review and pretest. These are quite similar to the semantic differential scales used in a study of attitudes toward milk in eight western cities reported by Thomas and Waananen.

Table 1
Selected New York State Markets, 1970 Population and Sample Size

Markets	1970 Population	Sample Size	
New York City SMSA ^a / White Black Spanish Other	8,099,284 1,885,303 1,390,087 197, 145	246 198 221 0	
Buffalo SMSA	1,349,210	204	
Rochester SMSA	882,667	221	
Albany SMSA	721,910	189	
Syracuse SMSA	636,507	200	

a/ SMSA - Standard Metropolitan Statistical Area

Source: U.S. Bureau of the Census

^{2/} This scaling procedure was developed and reported by Charles E. Osgood et. al., in The Measurement of Meaning, University of Illinois Free Press, Urbana, Illinois, 1957. It is a wideley used scaling technique for measuring consumer attitudes.

^{3/} For a fuller discussion of the literature and pretest see Joseph J. Mueller, "Development of a Questionnaire and Methods of Analysis for the Measurement of Consumer Attitudes and Belief Toward Other Beverages", unpublished M.S. thesis, Cornell University, January 1973.

^{4/} Monica Thomas and Martin Waananen, "Consumption, Use and Attitudes Toward Selected Fluid Milk Products in Eight Western Cities", Washington Agricultural Experiment Station Bulletin 763, October 1972, p. 4.

Problems of Summarization and Analysis

Frequently in summarizing and analyzing data from a semantic differential scale numerical values are assigned to each point on the scale. Then an arithmetic mean is calculated for the scale and the means are used for descriptive and comparison purposes. Usefulness of the mean for these purposes is dependent upon some knowledge of the underlying distribution from which it is calculated.

Table 2
Semantic Differential Scales Used in Milk Attitude Survey
November 1972

High cost item Very high in fats Good for weightwatchers Necessary for good health in adults I like the taste Very high in protein Good for people concerned with heart disease Very high in calcium Excellent value for the money Man normally consumes Woman normally consumes Very high in cholesterol Excellent energy source Very high in calories Would always order in a restaurant	Very low in fats Bad for weightwatchers Not necessary for good health in adults I dislike the taste Very low in protein Bad for people concerned with heart disease Very low in calcium Poor value for the money Man does not normally consume Woman does not normally consume Very low in cholesterol Poor energy source Very low in calories Would never order in a restaurant
Very high in vitamins	

a/ The respondents indicated their attitude on each scale by checking one of seven boxes ranged between, and including, the extreme positions.

The semantic differential data have a discrete distribution with only seven possible data points. The mean can lie between 1 and 7 and the standard deviation can range between 0 and 3. One of the difficulties of using the mean as a summary statistic is that it gives little indication

^{5/} Paper by Thomas and Waananen is an example of this. See especially pp. 15, 18-25.

of the distribution of attitudes. For example, a mean value of 4 could be obtained from many different distributions of the data (e.g., all of the observations at the mid-point or half of the observations on the other).

Using the mean value of a scale to compare the attitudes of two different groups of consumers has a related difficulty. The common statistical tests used to determine whether two means are significantly different are based on the assumption that the data are normally distributed.

Chi-Square Test

In this analysis, a statistical procedure, the chi-square test, is used to make intermarket comparisons of the distribution of responses on the attitude scales. Since this procedure examines the entire distribution of responses, a more meaningful and accurate comparison is possible than can be made through the use of means.

The chi-square test can be used to examine a two-way classification of discrete data for statistical independence. Each of the 16 attitude scales listed in Table 2 can be examined separately, and comparisons made across the seven markets. Thus each dimension of consumer attitude toward milk can be analyzed.

To demonstrate the use of the chi-square procedure, one attitude scale, the cost of milk, is analyzed on the following page. First, a two-way contingency table is constructed for this scale (see Table 3). The absolute frequencies of various rating positions are recorded by rows and the market frequencies by columns. From this data table a corresponding table of chi-square values is calculated. (See Table 4).

^{6/} Other less approximate procedures exist for testing contingency tables. However, the chi-square test was chosen for the ease with which dependent relationships can be identified through disaggregation of the calculated chi-square value.

^{7/} The calculating procedures can be found in R. G. D. Steel and J. H. Torrie, Principles and Procedures of Statistics, McGraw-Hill, New York, 1960, pp. 366-369.

Table 3
Attitude Rating of Milk on Cost Scale
by Adults in Seven New York Markets, Fall 1972
Absolute Frequency

41111			C) IC	3/				All		
Attitude		SMSA Market								
Rating ^a /	New York City			Buff-	Roch-	Albany	Syra-	Mar-		
	White	Black	Spanish	alo	ester		cuse	kets		
			-	number -						
High Cost										
Item -	68	82	111	38	65	39	46	449		
	30	36	39	38	34	46	34	257		
	50	24	15	36	36	40	38	239		
	49	22	20	40	48	32	43	254		
	15	12	6	21	16	13	15			
Low Cost	7	9	4	15	13	7	9	98 64		
Item -	27	11	25	16	2	10	15	113		
Total	246	196	220	204	221	187	200	1474		

a/ The rows in the table are arranged from top to bottom in order of increasing agreement with the bottom statement and decreasing agreement with the top statement.

Table 4
Table of Chi-Square Values for Attitude Rating of Milk on Cost Scale by Adults in Seven New York Markets, Fall 1972

Attitude			SMSA	Market				All
Ratingb/	Ne	w York C	ity	Buff-	Roch-	Albany	Syra-	Mar-
	White	Black	Spanish	alo	ester		cuse	kets
			- Chi-Squ	are Valu	es -			
High Cost								
Item -	0.6	8.3	28.9	9.4	0.1	5.7	3.7	56.7
	3.9	0.1	0.0	0.2	0.5	5.5	0.0	10.2
	2.6	1.9	12.0	0.3	0.0	3.1	1.0	20.9
	1.0	4.1	8.5	0.7	2.6	0.0	2.1	19.0
	0.1	0.1	5.1	4.1	. 0.1	0.0	0.2	9.7
Low Cost	1.3	. 0.0	3.2	4.3	1.2	0.1	0.0	10.1
Item -	3.5	1.1	3.9	0.0	3.7	1.3	0.0	13.5
Total	13.0	15.6	61.6	19.0	8.2	15.7	7.0	140.1

a/ Calculated using data in Table 3.

b/ The rows in the table are arranged from top to bottom in order of increasing agreement with the bottom statement and decreasing agreement with the top statement.

The null hypothesis of the chi-square test is that the distribution of responses on the attitude scale is independent of the markets in which they occur. If the null hypothesis is correct, consumers in the various markets have the same attitudes about the cost of milk. The alternative hypothesis is that the distribution of responses is related to the markets in which they occur. If the alternative hypothesis is correct, consumers in some of the markets have different attitudes than consumers in some of the other markets. In order to reject the null hypothesis and accept the alternative hypothesis, the calculated chisquare value for the entire table must be greater than the tabular value of chi-square for the appropriate degrees of freedom at the desired level of confidence. With 36 degrees of freedom at the 99 percent level of confidence, the tabular chi-square value is 58.6. From Table 4, the calculated value is 140.1. Thus, the null hypothesis is rejected, and it can be inferred that there are significant differences in attitude toward the cost of milk in the various New York State markets.

Once it has been concluded that a significant difference exists in the attitudes toward the cost of milk among the various markets, a further step can be taken to analyze the source of the differences. First, the market chi-square values can be compared to determine which markets are different from that expected. Using a 95 percent confidence level, the critical value of the chi-square at 6 degrees of freedom is 12.6. A market (column) which has a calculated chi-square greater than the critical value has a significantly different distribution of attitudes toward the cost of milk than the average distribution for all markets.

The data show that five of the markets are significantly different from the overall sample of markets. They are New York City Spanish-speaking market, Buffalo, Albany, New York City Black, and New York City White markets.

The percentage distribution of attitudes (Table 5) and individual chi-square elements (Table 4) can be compared to determine the differences in distribution that occur. For example, the calculated chi-square of 28.9 in the first row (milk is a high cost item) and third column (New York City Spanish-speaking) indicates that the New York City Spanish-speaking market checked this box on this scale a significantly (95 percent confidence level) different number of times than we would expect based on the average.

The higher numbers throughout that column indicate a different distribution than the average for all markets. The higher the number the greater the divergence between the actual and the expected number of individuals that checked that box on the scale.

Table 5: Attitude Rating of Milk on Cost Scale by Adults in Seven New York Markets, Fall 1972, Relative Frequency.

			SMSA					
Attitude,	- bereitsenbereitsenbereitsenbereit	v York Ci	Charles and Company of the Company	Buff-	Roch-		Syra-	Aver-
Rating a/	White	Black	Spanish	alo	ester	Albany	cuse	age
				- percent				
High cost								
item	27.6	41.9	50.5	18.7	29.4	20.9	23.0	30.5
	12.2	18.4	17.7	18.6	15.4	24.6	17.0	17.4
	20.3	12.2	6.8	17.6	16.3	21.4	19.0	16.2
	19.9	11.2	9.1	19.6	21.7	17.1	21.5	17.2
	6.1	6.1	2.7	10.3	7.2	6.9	7.5	6.7
Low cost	2.9	4.6	1.8	7.4	5.9	3.7	4.5	4.3
item	11.0	5.6	11.4	7.8	4.1	5.4	7.5	7.7
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a/ The rows in the table are arranged from top to bottom in order of increasing agreement with the bottom statement and decreasing agreement with the top statement.

The percentage frequency distribution table for the cost attitude scale provides an indication of the exact way in which the distributions vary among markets (Table 5). Those data show that the majority of consumers sampled felt milk was a high cost item. But the blacks and the Spanish-speaking samples in New York City felt milk was even higher in cost than did respondents in the other markets, and the New York City Spanish-speaking group viewed milk as being more expensive than did the blacks. While none of the markets viewed milk as a low cost item, respondents in Albany, Buffalo, and the New York City whites viewed milk as more moderate in cost than did the average of all respondents in all markets.

Table 6
Markets with Significantly Different Attitudes Toward Milk
Seven New York Markets, Fall 1972

	SMSA Markets										
Attitude	Ner	W York C	ity	Buff-	Roch-		Syra-				
Scales a/	White	Black	Spanish	alo	ester	Albany	cuse				
Cost	xb/	x	x	x		x					
Fat			x								
Weight			x			x					
Health	x		x	x		x					
Taste											
Protein						x					
Heart	x	x	x	x							
Calcium		x	x	x							
Value		x	x		x						
Man			x								
Woman	х		x			x					
Cholesterol	x	x	x			x					
Energy		x	x			x	x				
Calories			x			x					
Restaurant	x		x			x					
Vitamins		х	x			x					

a/ For a complete statement see Table 2

b/ The x indicates that the distribution of responses for this attitude scale (row) in this market (column) were significantly different from the distribution for all markets. The level of confidence used was .95.

Intermarket Comparisons - Attitude Scales

A summary of significant chi-square test results for all attitude scales is given in Table 6. Further investigation of the individual frequency distribution tables (Table 7 to 21) indicates that the New York City Spanish-speaking sample views milk more favorably than do any of the other groups. They view it as more nutritious and better for one's health and appearance. They also would be much more willing to order milk in a restaurant and felt it was an excellent value for the money. On the negative side, they viewed milk as being more costly.

The New York City Black respondents appear to have a somewhat more favorable attitude toward milk than the average but not quite as favorable as the New York City Spanish. Like the Spanish-speaking sample, they view it as a relatively high cost but nutritious beverage. They seem even less concerned than the Spanish about the cholesterol content or the effect on the heart.

The group that appears to have the most unfavorable set of attitudes toward milk is the New York City White sample: they would not order it in a restaurant, they consider it bad for the heart, not necessary for good health, and less of a woman's drink. They are also concerned about the cholesterol content.

The Buffalo respondents' attitudes were also different from the average, but not as markedly different as those in New York City. They view milk as less necessary for good health and bad for the heart. Fewer Buffalo respondents, however, viewed milk as being low in calcium.

Of the Upstate group, the Albany respondents showed the greatest difference from the average distributions. They viewed milk as being poorer for weightwatchers, not as necessary for good health, and somewhat higher in cholesterol. However, on the positive side, they viewed milk as higher in vitamins and in protein content.

To summarize, the only attitude scale on which there was no difference among the markets was the one for taste. Attitudes in Rochester and Syracuse markets were similar to each other and to the average, except for some deviation by Syracuse on the energy scale. In the other markets there were substantial differences in the attitude of consumers toward milk.

Conclusions

The chi-square test appears to be a useful test to identify differences in attitude among different groups. A comparison of the attitudes toward milk of seven New York markets indicated signficant differences in all attitude scales except taste.

Table 7
Attitude Rating of Milk on Fat Scale
by Adults in Seven New York Markets, Fall 1972

Attitude			SMS	A Markets	S		100 100 000 0000 000	New York
Rating	New	York Cit	ty	Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
Very High				-pe	rcent-		in in the	
in Fats -	47.1	42.1	39.8	38.7	41.8	41.3	32.0	40.6
	22.9	20.0	12.7	23.1	25.5	27.5	28.5	22.7
	13.5	14.9	9.5	19.1	16.8	17.5	21.5	16.0
	10.3	11.8	18.5	5.9	9.1	9.5	10.0	10.8
	2.1	4.6	5.0	5.4	3.6	2.1	2.5	3.6
Very low	1.2	2.0	4.1	3.4	1.8	1.0	1.0	2.1
in Fats -	2.9	4.6	10.4	4.4	1.4	1.1	4.5	4.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 8
Attitude Rating of Milk on Weightwatchers Scale by Adults in Seven New York Markets, Fall 1972

Attitude			SMS	A Market	S	Property (Versial E. L. e.	Marie III Marie II	
Rating	Ner	w York C	ity	Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
Good for				-percei	nt-			
Weight-	7.0	10.9	26.8	7.9	6.4	4.2	7.0	10.2
watchers	1.2	3.1	4.1	3.0	4.1	2.7	6.0	3.4
	5.3	6.2	6.8	8.3	4.6	6.3	5.5	6.1
	11.4	14.5	17.7	8.8	14.6	11.6	13.5	13.2
	10.2	11.9	4.6	10.3	10.0	12.2	8.5	9.6
Bad for	15.1	17.1	10.5	18.6	15.1	22.8	18.0	16.5
Weight-	49.8	36.3	29.5	43.1	45.2	40.2	41.5	41.0
watchers	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 9
Attitude Rating of Milk on Health Scale
by Adults in Seven New York Markets, Fall 1972

			SM	SA Marke	ts			
Attitude	Nev	W York C	ity	Buff-	Roch-	Albany	Syra-	Aver-
Rating	White	Black	Spanish	alo	ester		cuse	age
Necessary				- percer	nt-			
for good								
health in								
adults -	34.7	56.7	68.2	38.2	41.6	36.2	41.0	45.2
	15.5	11.7	8.6	20.6	13.1	20.7	21.0	15.7
	15.1	11.2	7.3	11.8	14.5	17.0	13.0	12.8
Not necess.	- 13.9	6.6	9.1	6.9	14.5	9.0	10.5	10.2
ary for	2.9	2.1	0.9	2.9	2.3	4.3	5.0	2.9
good health	1 6.9	5.1	1.4	7.4	4.1	2.1	3.5	4.4
in adults ·	- 11.0	6.6	4.5	12.2	9.9	10.6	6.0	8.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 10
Attitude Rating of Milk on Taste Scale
by Adults in Seven New York Markets, Fall 1972

Attitude			Si	MSA Mark	ets			
Rating	New York City			Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
				-percen	t-			State of the state of
Like								
Taste -	53.9	58.7	65.5	62.8	60.7	55.9	66.0	60.4
	12.6	9.7	9.5	11.2	14.0	12.2	12.0	11.7
	7.8	9.2	6.8	8.3	4.5	11.1	7.0	7.7
	11.4	6.6	6.4	3.9	6.8	6.4	6.0	6.9
	3.7	2.0	5.0	3.9	2.7	3.2	3.0	3.4
Dislike	3.7	3.1	1.8	0.5	1.8	1.6	2.5	2.2
Taste	6.9	10.7	5.0	9.3	9.5	9.6	3.5	7.7
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 11
Attitude Rating of Milk on Protein Scale
by Adults in Seven New York Markets, Fall 1972

Attitude				SMSA Man	rkets			
Rating	New York City		Buff-	Roch-	Albany	Syra-	Aver-	
	White	Black	Spanish	alo	ester		cuse	age
				- perce	ent -			
Very High								
in Protein	48.4	53.3	56.4	48.5	49.8	42.3	48.0	49.6
	17.1	21.0	15.4	17.2	22.6	32.8	19.5	20.6
	13.0	7.7	6.8	16.2	11.7	13.8	16.0	12.1
	12.6	13.9	16.4	11.3	12.7	10.1	11.5	12.7
	4.9	1.5	1.8	1.9	0.9	0.5	2.0	2.0
Very low in	1.2	0.5	0.9	1.5	0.9	0.5	0.5	0.9
Protein -	2.8	2.1	2.3	3.4	1.4	0.0	2.5	2.1
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 12 Attitude Rating of Milk on Heart Disease Scale by Adults in Seven New York Markets, Fall 1972

Attitude			SMS.	A Market				
Rating	Nev	v York Ci	Lty	Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
Good for people con-	-			- perce	nt -			
cerned with	n							
disease -	7.3 2.0 4.5	21.1 7.2 13.9	29.7 6.8 10.0	8.3 3.4 7.4	14.9	9.0 5.8 8.0	13.0 5.0 7.5	14.7 5.2 8.3
Bad for people con-	27.4 10.2 - 15.1	32.5 6.7 5.7	31.5 4.6 2.3	24.0 12.3 17.2	25.8 5.9 14.0	28.6 14.3 11.1	31.0 11.0 14.5	28.6 9.2 11.5
cerned with	n 33.5	12.9	15.1	27.4	24.9	23.2	18.0	22.5
disease	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 13
Attitude Rating of Milk on Calcium Scale
by Adults in Seven New York Markets, Fall 1972

Attitude	SMSA Markets								
Rating	New York City			Buff-	Roch-	Albany	Syra-	Aver-	
	White	Black	Spanish	alo	ester		cuse	age	
				- percer	nt -				
Very high									
in Calcium	63.4	56.4	55.0	62.2	64.1	60.3	65.5	61.1	
	18.1	13.9	14.1	20.6	18.6	22.7	16.0	17.7	
	7.0	8.2	6.4	5.9	6.4	7.4	6.0	6.7	
	8.2	13.9	17.3	5.9	8.2	6.4	9.0	9.9	
	0.4	1.0	3.2	1.4	0.9	1.6	1.5	1.4	
Very low in	1 0.4	1.5	0.9	3.9	1.4	1.1	1.5	1.5	
Calcium -	2.5	5.1	3.2	0.0	0.4	0.5	0.5	1.8	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Table 14
Attitude Rating of Milk on Value Scale
by Adults in Seven New York Markets, Fall 1973

Attitude				SMSA Mark	cets			
Rating	New York City			Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
				- percen	it -			
Excellent								
value for								
money -	26.5	31.6	39.7	39.7	32.1	30.9	39.5	34.2
	16.3	12.2	11.9	15.7	15.8	18.6	19.0	15.6
	19.6	14.3	10.5	20.6	20.4	19.7	16.5	17.4
	22.5	14.8	15.1	15.7	19.9	13.3	13.5	16.6
	5.7	10.7	5.0	2.4	3.6	7.4	6.0	5.8
Poor value	2.5	3.1	2.3	2.0	2.3	6.9	3.5	3.1
for money -	6.9	13.3	15.5	3.9	5.9	3.2	2.0	7.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 15
Attitude Rating of Milk on Man Scale
by Adults in Seven New York Markets, Fall 1972

Attitude				SMSA	Markets	New York Control of the		
Rating	New York City			Buff-	Roch-	Albany	Syra-	Aver-
2.0	White	Black	Spanish	alo	ester		cuse	age
				- perce	ent -			
Man Norm-								
ally con-				The second				
sumes -	28.2	36.9	49.7	34.5	37.1	29.6	30.5	35.3
	15.5	14.9	12.7	12.3	12.2	18.0	14.5	14.2
	12.3	12.8	4.5	13.8	16.7	14.8	17.5	13.1
Man does	16.7	14.4	14.9	19.7	19.5	20.6	18.0	17.6
not norm-	10.2	3.6	5.0	5.9	4.1	8.0	8.5	6.5
ally con-	5.7	5.1	5.4	6.4	3.6	3.7	3.0	4.8
sume	11.4	12.3	7.7	7.4	6.8	5.3	8.0	8.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	700.0	T00.0	700.0	100.0	100.0	100.0	700.0	700.0

Table 16
Attitude Rating of Milk on Woman Consumption Scale by Adults in Seven New York Markets, Fall 1972

Attitude		SMSA Markets							
Rating	Ner	w York C:	ity	Buff-	Roch-	Albany	Syra-	Aver-	
	White	Black	Spanish	alo	ester		cuse	age	
				- perce	nt -				
Woman									
Normally									
Consumes	32.1	44.4	60.0	33.8	33.0	28.7	31.5	37.8	
	14.6	16.8	7.7	14.7	17.7	20.2	17.5	15.5	
	10.6	11.7	7.7	17.2	11.8	19.2	18.0	13.5	
Woman	17.1	14.3	13.7	18.2	22.6	16.5	17.5	17.1	
does not	8.1	3.6	3.7	4.9	6.3	7.4	6.0	5.8	
Normally	7.3	4.1	3.6	3.4	1.4	2.1	4.5	3.8	
Consume		5.1	3.6	7.8	7.2	5.9	5.0	6.5	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Table 17
Attitude Rating of Milk on Cholesterol Scale
by Adults in Seven New York Markets, Fall 1972

Attitude	SMSA Markets								
Rating	New York City			Buff-	Roch	Albany	Syra-	Aver-	
	White	Black	Spanish	alo	ester		cuse	age	
				- perce	nt -				
Very high	in								
Cholestero	1 38.8	19.2	26.7	33.3	31.7	25.5	28.5	29.5	
	20.0	14.0	6.5	21.6	18.4	23.9	20.0	17.7	
	13.9	10.9	8.8	16.7	15.1	22.3	17.5	14.8	
	16.3	43.0	40.1	17.2	25.7	19.2	22.5	26.1	
	3.3	3.6	5.5	2.4	2.7	3.2	3.5	3.5	
Very low i	THE RESERVE THE PROPERTY OF THE PARTY OF THE	2.6	4.6	2.9	2.3	2.7	5.0	3.2	
Cholestero		6.7	7.8	5.9	4.1	3.2	3.0	5.2	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

Table 18
Attitude Rating of Milk on Energy Scale
By Adults in Seven New York Markets, Fall 1972

Attitude	SMSA Markets							
Rating	Net	New York City			Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
				- percei	nt -			
Excellent								
Energy								
Source -	48.0	62.0	58.8	45.1	48.0	37.7	40.5	48.7
	15.9	15.4	13.6	24.0	20.4	24.1	18.5	18.7
	16.3	10.8	7.7	15.2	11.3	22.5	19.5	14.6
	13.0	6.2	13.1	11.3	12.2	12.6	12.5	11.7
Poor	4.0	1.5	2.3	1.9	5.0	1.1	2.0	2.6
Energy	1.6	1.0	3.6	1.5	1.3	1.0	3.0	1.9
Source	1.2	3.1	0.9	1.0	1.8	1.0	4.0	1.8
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 19
Attitude Rating of Milk on Calories Scale
by Adults in Seven New York Markets, Fall 1972

Attitude				SMSA Ma	rkets			
Rating	New York City			Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
				- percei	nt -			
Very high	in							
Calories -	39.0 19.9 19.9 13.4 2.9	40.2 25.3 14.5 11.7	40.9 13.2 10.4 23.2 4.5	32.3 26.5 16.2 14.7	37.1 19.5 23.1 14.9 2.3	32.3 27.5 24.3 10.1 3.7	35.0 22.0 20.5 17.0 4.0	36.8 21.7 18.4 15.1
Very low i Calories -	n 1.2	3.6 3.1 100.0	1.4 6.4 100.0	2.0 100.0	1.8 1.3 100.0	2.1 0.0 100.0	0.5 1.0 100.0	2.1 2.6 100.0

Table 20
Attitude Rating of Milk on Restaurant Scale
by Adults in Seven New York Markets, Fall 1972

Attitude				SMSA Mai	rkets			
Rating	New York City			Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
				- percer	nt -			
Would alwa	ys							
Order in a								
Restaurant	13.4	26.6	40.0	24.0	20.4	14.9	15.5	22.1
	7.3	12.3	8.6	9.3	8.1	7.4	11.5	9.1
	6.9	10.7	5.4	9.8	12.7	19.7	14.5	11.1
	17.1	11.7	14.1	15.7	12.7	12.2	12.0	13.8
Would neve	r 6.9	6.1	6.4	8.8	9.0	6.4	10.0	7.7
order in a	11.8	6.1	6.4	6.9	8.6	11.7	10.5	8.9
Restaurant	36.6	26.5	19.1	25.5	28.5	27.7	26.0	27.3
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 21
Attitude Rating of Milk on Vitamins Scale
by Adults in Seven New York Markets, Fall 1972

Attitude	SMSA Markets							
Rating	Nev	V York C	Lty	Buff-	Roch-	Albany	Syra-	Aver-
	White	Black	Spanish	alo	ester		cuse	age
		74 W 25 18		- percei	nt -			
Very high	in							
Vitamins -	44.9	65.2	61.9	44.1	49.3	35.5	41.5	49.0
	20.8	13.3	13.9	24.0	20.8	30.7	22.5	20.7
	15.5	8.2	7.2	14.7	14.0	18.5	16.5	13.5
	11.4	7.2	11.2	10.8	13.1	10.0	11.5	10.8
	3.3	1.0	3.1	3.4	2.3	2.6	4.0	2.8
Very low in	A STATE OF THE PARTY OF THE PAR	1.0	2.7	1.5	0.5	1.1	0.5	1.2
Vitamins	3.3	4.1	0.0	1.5	0.0	1.6	3.5	2.0
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0