

Chart 6. Stereo Receivers by Price and Quality, Syracuse, New York, 1976.

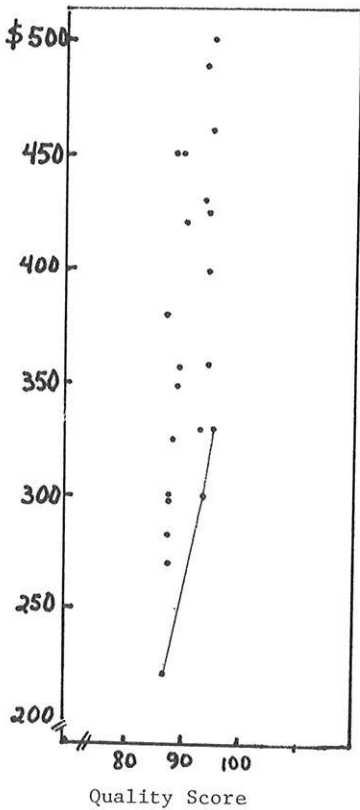


Chart 7. Washing Machines by Price and Quality, Syracuse, New York, 1978.

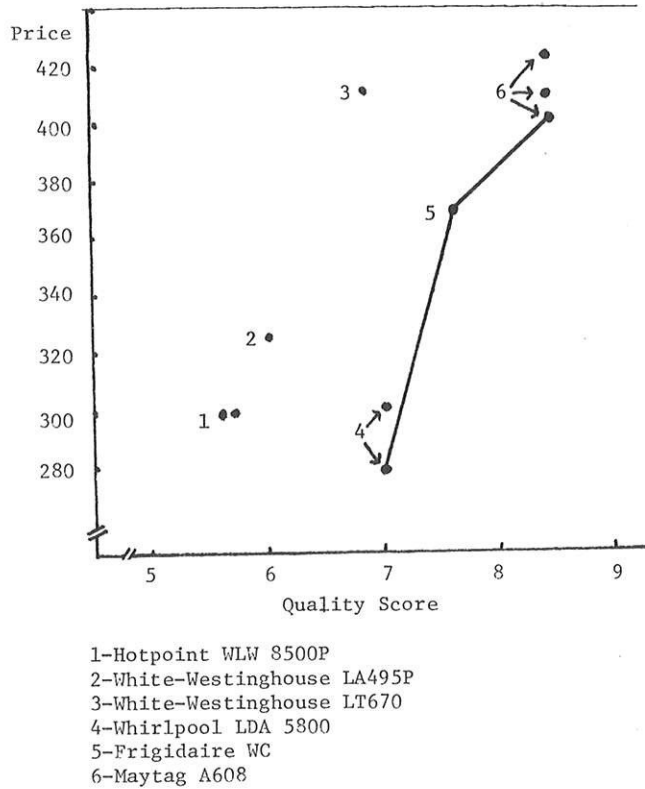


TABLE 5. Stereo Receivers: Price Offers and Maximum Price Differences--
 (1) Overall and (2) By Variety^a

Ithaca			Syracuse		
Variety	Prices Quoted	Maximum Difference	Variety	Prices Quoted	Maximum Difference
<u>All Varieties^a</u>		<u>\$211</u>	<u>All Varieties</u>		<u>\$259</u>
Harmon Kardon 730	\$399	0		\$300, 425	125
Marantz 2252	---	--		358, 399, 460, 500	142
Sherwood S89100	325	0		429	0
Sherwood 7310	400	0		329	0
Sony STR4800SD	250, 300	50		285, 298, 299	14
Onkyo TX 4500	400	0		489	0
Lafayette LR 3030	250, 300	50		219	0
Nikko 7075	249	0		---	---
JV JRS 300	---	--		420	0
Pioneer SX 750	280, 350	70		348, 356, 450	102
Kenwood 6600	329	0		450	0
Pioneer SX 650	220, 240, 275, 300	136		270, 325	55
Realistic STA 90	379	0		380	0
Sansui 5050	189	0		---	0

^aQuality differences are ignored due to their narrow range, 85 to 92.

small ticket price of aspirin makes a search for a better buy not worth the time. Hence consumers may just pick the brand that they recognize and pay more.

Chart 1 reveals considerable price dispersion for gin. Table 4 shows that between-brand differences account for most of this price dispersion. The between-store differences are miniscule as compared with the between-brand differences. The very large between-brand differences are undoubtedly due to consumers' misperceptions of quality. Few people would pay more than four dollars for a prettier bottle if they knew what Consumers Union tells us--that the gin in the fancy, expensive bottle is not better than the cheapest gin [20]. Consumer ignorance of quality enables sellers to charge higher prices than necessary.

Table 4. Prices of Gin: By Brand and Store--Ithaca

	Most expensive brand	Cheapest brand	Difference in price
Most expensive store	\$8.56	\$3.99	\$4.57
Cheapest store	8.15	3.89	4.26
Difference in price	0.41	0.10	

As Chart 6 indicates, the price range for stereo receivers is large while quality differences are trivial. As can be seen from Table 5, both the between-brand and the between-store dispersion is considerable, even when quality is constant. For this product consumers may suffer from lack of knowledge with respect to both price and quality. Stereo receivers are relatively expensive. Hence, most people would be likely to buy the lowest priced receiver if only they knew where to purchase it, even if the low-priced retailer was located inconveniently.

From the examples analyzed here, it seems that the anatomy of price dispersion differs among products. Both between-store and between-brand differences are important, suggesting that consumers are ignorant of both price and quality. This seems a reasonable surmise since quality is complex, both with respect to conceptualization and actual assessment.

Summary. The data of this section graphically support Morris-Bronson's characterization of local markets as "chaotic" [11]. The next section contributes to our understanding of the "reasons why."

Perceived Price Dispersion

The Data

Our objective here was to ascertain consumers' perceptions of price dispersion (quality constant) of the sample products. The instrument used to obtain this information was a telephone survey conducted in Syracuse in early 1978 with a sample of 200 telephone subscribers. As compared with an ideal instrument this survey was deficient in three ways: (1) it excluded unlisted telephones and non-subscribers; (2) the nonresponse rate was substantial--about 35 percent; (3) the sample consisted of all consumers and not the ideal subgroup--recent or prospective purchasers of the sample products. This last limitation is

partially offset because some respondents who were not recent or prospective purchasers declined to answer our questions on grounds that they "did not know."

Despite these defects it is our judgment that the data convey an impression that would be confirmed by replication. Nonetheless, the reader is put on notice that these results should be viewed as tentative. The data on frequently purchased products are likely to be of better quality than those pertaining to less frequently purchased products.

For products of uniform quality, the critical question regarding price dispersion took the following form:

"Let's start with questions about particular products. The first one is DISHWASHING DETERGENT³--the kind you use for washing dishes by hand. For a 22-ounce bottle of dishwashing detergent, the LOWEST PRICE charged in Syracuse in December was 69 cents. Can you tell me what you think was the HIGHEST PRICE charged--for the SAME SIZE BOTTLE, but ANY BRAND, from ANY STORE in Syracuse? Again, the LOWEST PRICE was 69 cents.

"Let us make sure I got that right. You think that _____ cents was the HIGHEST PRICE charged for the same size bottle, but any brand from any store. Is that right?"

The analogous question for products of variable quality was introduced by the phrase: "For a WASHING MACHINE of AVERAGE QUALITY (according to Consumer Reports)."

Why couch the critical question in terms of highest price rather than lowest price? Our answer is that we sought information regarding the perceived dispersion of prices and not the correct value of either the highest price or the lowest price. Had we fed the respondents the highest price and asked them to quote the lowest price, we would have remained unsure whether we were tapping their knowledge of the lowest price per se or the extent of price dispersion.

Our impression is that the questionnaire "worked" and that the data are credible.

Respondents were queried regarding the entire sample of products actually priced in Syracuse several months before. In addition, they were asked about price dispersions for life insurance and single-lens reflex cameras, products whose price dispersion had been investigated in earlier research in Ann Arbor.

Results

Our data on perceived price dispersion are summarized in Table 6. For the reader's convenience, Columns 1 and 2 recapitulate our findings on actual price dispersion. In this table respondent's perceived highest prices are expressed as ratios to the actual highest price. To clarify through an example, Table 6 shows that 73 percent of respondents, in estimating the highest price of aspirin, gave answers that amounted to 65 percent or less

TABLE 6. Perceived Price Dispersion in Syracuse: Ratio of Perceived Highest to Actual Highest Price

Product	(1) Actual Highest/ Lowest Price	(2) Ratio of Highest to Lowest	(3) Percent Distribution of Respondents				
			65% or less	66% to 85%	On Target: 86% to 115%	116% to 135%	136% or more
A. Products of Uniform Quality							
1. Aspirin	\$1.59 - 0.39	4.08	73%	13%	<u>8%</u>	4%	2%
2. White Bread (Ithaca)	0.73 - 0.39	2.21	29	34	<u>31</u>	4	2
3. Eggs	0.93 - 0.74	1.26	1	20	<u>76</u>	2	1
4. Milk	0.83 - 0.69	1.20	--	2	<u>92</u>	6	--
5. Auto grease/ lubrication ^a	4.50 - 2.00	2.25	25	22	<u>16</u>	6	31
6. Gin	8.56 - 3.89	2.20	33	17	<u>44</u>	5	1
7. Heating oil	0.495- 0.483	1.02	--	--	<u>64</u>	36	--
8. Term life insur- ance ^b Participating	3850 - 2900	1.35	--	28	<u>30</u>	23	19
B. Products of Variable Quality							
9. Dishwashing liq- uid (best qlty.)	1.05 - 0.69	1.52	--	49	<u>35</u>	12	4
0. Tape recorders	144 - 50	2.88	66	14	<u>11</u>	2	7
1. Stereo speakers	120 - 70	1.71	1	38	<u>14</u>	14	34
2. Single-lens reflex cameras	650 - 170	2.28	46	27	<u>14</u>	3	10
3. Stereo receivers	500 - 219	3.74	86	5	<u>7</u>	1	1
4. Washing machine	410 - 278	1.47	1	46	<u>48</u>	4	1

^aAs presented, data overstate extent of underestimation. Reason: highest price taken as \$6.50, an outlier. To be corrected.

^bData pertain to Ann Arbor, Michigan, 1974. The lowest price is offered by a company that is "accessible with difficulty."

^cRespondents were erroneously fed "low price" of \$200. These data pertain also to Ann Arbor, Michigan in 1974.

of the actual highest price. Similarly, 13 percent gave answers that amounted to anywhere from 66 to 85 percent of the correct highest price.

Two impressions are overwhelming. First, consumers are rather ignorant of the extent of price dispersion. For only 4 of 14 products were most consumers on-target (15 percent of the actual highest price). The products for which their perceptions were realistic: milk, eggs, heating oil, and washing machines. Even with white bread, they proved ignorant, though we may have encountered problems of definitions with respect to what "white bread" includes.

The second overwhelming impression is that of underestimation of price dispersion. Underestimators (their perceived highest price was less than 86 percent of the actual highest price) exceeded overestimators in 11 out of 14 product categories. What is more, the exceptions have special explanations. Heating oil exhibits near-zero price variation (a fixed price?). Stereo speakers, as used in this investigation, were Consumers Union's "low-priced"

speakers and thus pose the possibility of different interpretations of what is "low-priced." Finally, though the lowest price for participating term life insurance in Ann Arbor, Michigan was \$2,900 and the highest price was \$3,500, giving a ratio of 1.35, the difference on the national market gives rise to a 2 to 1 ratio!

We conclude that if consumers of other products and other markets are similar to those in our sample, then consumers are contributing to excessive price dispersion and imperfect markets, are victims of such markets, and are likely to be paying higher prices than necessary.

Policy Implications

Two messages emerge from this research:

1. Food apart, the actual price dispersion (quality constant) for many, or perhaps most products, will be substantial, to the detriment of most consumers;

2. Again, except for food, consumers are relatively ignorant of the extent of price dispersion (quality constant) and tend to underestimate the extent of dispersion substantially.

We turn now to the policy and other implications of these findings.

The Need for Further Research

Some will find this research unconvincing. Before they find these "messages" compelling, they would demand further documentation and replication--more and different products, more and different markets, and different times. Further, they would point to weaknesses in this research that could be corrected. Before accepting the observed price dispersions of this investigation as "harmful" rather than "innocent," they would want several crucial assumptions examined more thoroughly. Specifically, they would welcome convincing research on the extent to which different fully informed consumers make uniform assessments of quality. Going further, they would want convincing research on to whether "high-priced" retailers really practice price discrimination among brands or whether they are consistently pricing their products higher to cover the superior ancillary services they provide, e.g., atmosphere, better guarantees, more numerous and better trained sales people, convenience, etc.

Others will ask for a replication of our data on perceptions of actual price dispersion. A sample of actual and prospective purchasers would be preferable to our sample of all consumers. There may be other means of conceptualizing price dispersion that are more convincing than the ascertainment of the highest price given the lowest price.

Ethics, This Study, and Consumer Education

It is perceived injustices that have always provided the "steam" for both the consumer movement and for many consumer educators. The table of contents of the Journal of Consumer Affairs and the Journal of Consumer Policy provide a comprehensive list of injustices that are salient for our time. The data of this study, if generalizable, provide a new source of injustice or inequity on which both the consumer movement and consumer educators should focus. We would contend that a competitive market is fair since it provides favorable and identical terms to all. Contrariwise, the markets that our research describes are unfair and "unethical" (to cite the theme of this Conference) since the actual price dispersion and the misperceptions and underestimates of consumers assure that many will pay higher prices than necessary for a given quality.

One might ask whether the oldest and most influential consumer organization, Consumers Union, has successfully communicated the extent of price dispersion to its readers. Would subscribers to Consumer Reports misestimate and underestimate the actual price dispersion to the same extent as our sample in Syracuse? This is our researchable question. In our judgment, Consumer Reports contains the message of informationally imperfect markets, but successfully underplays it. As examples, consider three articles on products discussed here --life insurance, washing machines, stereo speakers. In the case of life insurance (Consumer Reports,

January, 1974), three pages of scrupulously edited text do not mention the fact that the tables that follow include ratios of highest-to-lowest prices of as much as 2-1/2 to 1! From the October, 1978 article on washing machines, the alert reader could extract realistic information on price dispersion, but the text of the article discusses price cursorily and price dispersion (quality constant) not at all. "High-priced loudspeakers" are accorded similar treatment in the same issue.

The Consumer vs. Seller Interest in Price Dispersion

Let there be no mistake on this point: sellers, as a group, have a vested interest in the continuance of price dispersion. Consumers: the contrary. The reasons? As the supporting data show, only a minority of retailers and varieties lie on the perfect information frontier. Others derive excessive profits or continued existence (if they are inefficient) from the continuance of prices about the frontier. As noted earlier, the consumer interest is exactly opposite. Every above-frontier price paid (to the extent that it represents "harmful" price dispersion) reduces the purchasing power and welfare of some consumer.

Given the majority seller interest in the continuance of price dispersion, it should come as no surprise that the information-persuasion resources controlled by sellers are focused on competitive actions that will not eliminate price dispersion. Given the 5,000 to 1 excess of seller-controlled information-persuasion resources over similar consumer-controlled resources, it would be fatuous to expect any reduction in price dispersion under current institutional arrangements. What the consumer interest strongly requires is the dedication of "large" resources to information-persuasion purposes under consumer control. For a detailed discussion of this proposal, see [9].

Steps to Facilitate Consumer Choice

This study has taught us a lesson regarding the complexity of modern consumer markets. Consider soap as an example. The number of brands, colors, fragrances, combination offers (two bars for a special price), discounts, and cents-off offers make the assessment and comparison of price (quality constant) a formidable and perhaps an impossible task. Changing examples, we note that our investigation disclosed more than 70 varieties of 1 lb. loaves of bread in either the Ithaca or Syracuse markets.

Can this degree of complexity be reduced by regulatory intervention? For example, is it feasible to simplify choice by establishing uniform sizes, prohibiting special discounts, cents off options, or adopting a list variant of unit pricing that is effective from an information processing viewpoint? (See Russo [13] for evidence supporting the last proposal.) These are suggestions of the types of corrective steps that should be investigated.

A more drastic move would be the development of a new economic institution--the local consumer information system. This institution discussed

at the 1976 ACCI Conference and spelled out in a JCA article [10], consists of a data bank to which the individual consumer could address questions and receive answers regarding the local market. The purpose of the system would be to deliver relevant consumer information more efficiently. For the individual consumer the system would help identify his best buy variety of a product, quickly and at low cost. It would tell him, again quickly and at low cost, from what local retailers and at what local prices this best buy variety might be purchased. While it is likely to directly serve better educated, higher income consumers, it would serve all consumers in a community by lowering many prices.

So far no operating local consumer information systems are extant. However, elements of such a system can be found in part in some developing institutions. Last fall the British Post Office initiated a system called "Prestel" on a test basis that enables television owners to use their telephones to gain access to a computer information bank that will project desired information on their television screens. The system works as follows:

Using an ordinary telephone, a Prestel user dials a central computer packed with information on a wide range of topics from financial data to consumer reports and mail-order catalogs. When the connection is made an index page appears on his TV screen, and by pressing buttons on a hand-held keyboard, the user can find his way into the data bank, which can hold up to 250,000 "pages" of information. (Each page holds about 150 words.) It costs him just over five cents for the basic call, plus another two or three cents for every page he consults. The charges appear automatically on his quarterly telephone bill [15].

The system is currently being tested in London, Manchester, and Norwich.

Another example is the Washington Consumers' Checkbook, a local analogue to Consumer Reports that is published quarterly by the Washington Center for the Study of Services [18].

FOOTNOTES

¹The product set included hair shampoo, color television, coffee makers, sewing machines, record changers, TV antennas, and AM-FM radios. Source: Benson and Benson, Table T21 [2].

²One small-scale study of students' assessments of the quality of 19 10-speed bicycles showed a high degree of congruity [7].

³As Chart 2 shows, this product varies modestly in quality. The low price quoted was for the highest quality on Chart 2.

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CONSUMERS' REACTIONS TO SUPERMARKETS WITH OPTICAL
PRICE SCANNERS AND CONSUMER PRICE MARKING

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This paper deals with shopper reactions to and behavior resulting from using universal product code scanning checkouts. Since the studied supermarket chain that used the scanners did not item price, consumer reactions to self-price marking are also presented. The basic findings are that consumers did find the scanning systems to their advantage, but found self-price marking to their disadvantage.

Since 1974 a number of retailers have been investigating the use of universal product code (UPC) scanner checkout devices (6, 14). In fact, one grocery chain appears to be moving beyond the experimental stage and is installing scanning devices in one-half of its stores (7).

The UPC scanning devices eliminate manual recording of prices by a retail clerk. The UPC represented by the bar code is "read" by passing the code over a window installed in the checkout counter. A laser beam reads this code, which is then transmitted to a computer. Finally, the price recorded in the computer is relayed back to the electronic cash register and is recorded on the receipt and displayed on two visual read-outs, one for the customer and one for the clerk's use.

Retailers maintain that a consumer directly benefits when stores have scanner-equipped checkouts. The consumer benefits include faster checkout, more accurate bills, and more informative and useful computer generated sales receipts (2, 4, 6, 15). However, there has been little published research to indicate whether consumers share these beliefs (15).

Another visible change for the shopper would be the possible removal of item prices (5). A number of grocery retailers believe that one of the significant cost savings for the merchant and perhaps the shopper is the elimination of marking each item in a store (1, 13). In those stores where prices have been removed, retailers report that some consumers do not notice the price removal. Of those consumers who do notice, few raise serious objections (12). However, there are some consumers and consumer groups who are very concerned with this trend toward item price removal. This concern is partially based on the findings of a study conducted by Harrell, et. al. This study found that shoppers at a store that removed item prices had a lower short-term price awareness than shoppers at a store with marked item prices (8). At the end of 1977, seven states and a number of cities required varying types of item pricing (9).

Shoppers self-marking their own item prices may be one way to maintain consumer price awareness and still allow retailers to stop marking individual items. However, there has been no published research on patrons' reactions to their self-marking of item prices. This research was designed to determine the attitudes and behavior of customers of a supermarket. The supermarket is

equipped with UPC scanner checkouts and removes most item prices and encourages shoppers to self-mark prices. Specifically, the study had two purposes: (1) to determine shoppers' perceived advantages of scanner checkouts and self-marking of item prices, and (2) to investigate changes in shopping behavior associated with checking out at scanner-equipped stores and self-marking of item prices.

Methodology

This study focused on patrons of a retail grocery chain in a Midwestern Standard Metropolitan Statistical Area (SMSA) that has been using scanner checkouts in three of their six stores over two years. The chain also encourages shoppers to self-mark most of the grocery items in the store. This shopper marking of individual items is an outgrowth of the chain's fundamental appeal -- lower prices. To implement this low price image, the chain has a modified warehouse grocery approach. Emphasis is placed on shoppers buying in quantity although single item purchases are common. The stores carry no fresh meat although some produce and frozen and refrigerated items are stocked. The chain de-emphasizes aesthetics and service. Shoppers not only price mark their own groceries, but also bag their purchases.¹

Data for this study were collected by telephone interviews conducted in December, 1977. To reduce interviewee conditioning, the questionnaire contained a combination of open-end and forced-choice response questions. The sample was drawn from people with telephones living within five minutes driving time of each of the chain's three scanner-equipped stores. Since specific reactions to scanner-equipped checkouts and self-pricing items were desired, emphasis was placed on interviewing patrons of this chain.² Non-patrons, when encountered in the interviewing, were asked only demographic qualifying questions.

Findings

Almost 70 percent of the respondents indicated there was a consumer-oriented advantage to the scanner checkout. When given a free choice to state what the primary advantage of scanning was, the majority of shoppers indicated faster checkout time. The other main advantages were almost equally divided between improved accuracy of the receipt and a more informative receipt (Table 1).

These initial responses were supported by a set of forced-choice questions. Over two-thirds of the respondents believed the scanner checkouts were much or somewhat faster than conventional checkouts, while an additional 17 percent saw no difference. When asked about the accuracy

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TABLE 1. PATRONS' PERCEIVED ADVANTAGES OF SCANNER CHECKOUTS

A. Patrons' Stated Advantage

<u>Advantage</u>	<u>Number</u>	<u>Percent</u>
Takes less time to checkout	32	53
The bill is more accurate	14	23
The receipt is more informative	13	22
Other	2	2
Total	61	100

B. Speed and Accuracy of Scanner vs. Conventional Checkout

<u>Speed</u>	<u>Number</u>	<u>Percent</u>	<u>Accuracy</u>	<u>Number</u>	<u>Percent</u>
Much faster	34	36	Much more accurate	25	26
Somewhat faster	34	36	Somewhat more accurate	32	34
No difference	17	18	No difference	23	24
Somewhat slower	3	3	Somewhat less accurate	7	7
Much slower	1	1	Much less accurate	0	0
No opinion	6	6	No opinion	8	8
Total	95	100	Total	95	99*

*Due to rounding, total does not equal 100 percent

TABLE 2. PATRONS' PERCEIVED DISADVANTAGES OF SCANNER CHECKOUTS

A. Patrons' Stated Disadvantages

<u>Disadvantages</u>	<u>Number</u>	<u>Percent</u>
The bill is inaccurate	19	63
Takes more time to checkout	5	17
Do not like the idea of system	3	10
Other	3	10
Total	30	100

B. Patrons' Observation of the Scanner Recording Prices vs. Conventional Checkouts'

<u>Level of Observation</u>	<u>Number</u>	<u>Percent</u>
Always more closely observe than conventional checkouts	23	24
Sometimes observe more closely	7	7
Do not observe because of self bagging	8	8
Do not observe more closely	57	60
Total	95	99*

*Due to rounding, total does not equal 100 percent.

TABLE 3. PATRONS' STATED ADVANTAGES AND DISADVANTAGES OF SELF-PRICE MARKING ITEMS AND PRICE MARKING BEHAVIOR

A. Patron Advantages and Disadvantages of Self-Pricing

<u>Advantages</u>	<u>Number</u>	<u>Percent</u>	<u>Disadvantages</u>	<u>Number</u>	<u>Percent</u>
Remember or notice prices	25	26	Takes more time to shop	33	35
Lower prices	18	19	Hard to mark items	11	12
Other	5	5	Messy-defacing	7	7
No advantage	47	50	Forget to mark items	7	7
Total	95	100	Other	2	2
			No disadvantage	35	37
			Total	95	100

B. Patron Behavior Related to Present and Future Self-Pricing

<u>Present</u>	<u>Number</u>	<u>Percent</u>	<u>Future</u>	<u>Number</u>	<u>Percent</u>
Do price mark	66	70	Continue to price mark	40	42
Sometimes price mark	12	12	Stop price marking	46	48
Do not price mark	14	15	Do not know	9	10
Do not know	3	3	Total	95	100
Total	95	100			

of the scanner checkout versus the conventional system, over one-half of the shoppers believed the scanner to be more accurate and about 25 percent of the shoppers believed the system to be no more accurate; 8 percent stated that the scanning system was somewhat less accurate than conventional checkouts. The opinion of the shoppers who found the scanner no more accurate or less accurate than conventional methods is amplified when considering customers' views on the disadvantages of the scanner.

Disadvantages of the Scanner Checkout

Approximately one-third of the sample thought that scanner-equipped checkouts presented disadvantages to the consumer. As shown in Table 2, when asked to give the main disadvantages of the system, almost two-thirds of the shoppers reported inconsistencies between computer-generated receipt prices and self or shelf marked item prices.

In order to determine changes in shopper behavior, respondents were asked if they more closely watched prices being recorded at the scanner checkout than at a conventional checkout. About one-fourth of the shoppers indicated they watched more closely (Table 2). However, a few of the shoppers stated they could not watch because they had to bag their own groceries. While one-half of the shoppers did not observe price recording more closely at the checkout, they may have checked their receipt at a later time.

As a further check on this possibility, the respondents were asked if they used their scanner-generated receipts differently from conventional receipts. About 25 percent indicated they did. Within this group, two-thirds of the shoppers saved the receipts to compare receipt prices to self-marked prices or the prices of previous purchases. Also, when asked if the self-marking of prices was not encouraged by the store, over 40 percent of the shoppers said they would continue to price mark. The main reason given for this was to compare item prices to computer prices.

Shopper-Marked Item Prices

One-half of the shoppers said there were no advantages to self-marking item prices. However, as further indicated in Table 3, one-fourth of the total sample thought they remembered prices better when they marked them. It is also interesting to note that nearly 20 percent of all shoppers believed that self-marking reduces prices charged by the supermarket.

Nearly two-thirds of the total sample mentioned specific disadvantages to self-marking item prices (Table 3). Taking more time to shop was the major complaint of one-third of these shoppers. Perhaps this problem of additional time is reflected in the number of shoppers who do not self-mark prices. Also, when asked if they would continue to price mark if they were not encouraged by the store to do so, nearly one-half of the shoppers said they would stop price marking.

Scanner-Generated Grocery Receipt

A number of retailers have anticipated that consumers would find the scanner-generated receipt more informative and useful (4, 15). The scanner receipt gives an entry such as "Cheerios - 15 oz. - .97." To an extent, respondents in this study agreed that the main advantage of scanner-equipped stores was a more informative receipt (Table 4).

When specifically asked about the informative value of the scanner receipt versus the conventional receipt, almost two-thirds of the sample found the receipt more informative. However, one-half of the respondents said they found it no more useful than conventional receipts. Also, when asked if they used the new receipts any differently, three-fourths of the sample said they used them no differently than old style receipts.

Summary

A majority of the shoppers at supermarkets offering scanner-equipped checkouts found advantages to the scanning system. The main advantage was speed of checkout. Also, a majority of the shoppers believed the system was more accurate than conventional checkouts. However, a sizable minority found the scanner-equipped checkouts to be no more, or less accurate than conventional checkouts. In fact, for the sizable minority who found disadvantages to the scanner, the main disadvantage was inconsistency between shelf- or self-marked item prices and prices recorded on the checkout receipt.

This concern on the part of shoppers was supported by the fact that, of the minority of shoppers who used their receipts in new ways, the way they used the receipt was to compare receipt prices to item prices or previous purchases. Also, of those who would continue to voluntarily record prices, the chief reason given to compare item prices to the receipt.

Although a majority of the shoppers found the scanner-generated receipt more informative, a majority of the sample did not have new uses for the receipt.

Finally, more customers found shopper item pricing to their disadvantage than to their advantage. The biggest complaint was the additional shopping required when item pricing. On the other hand, there was a minority that believed shopper item pricing helped them to remember prices.

Discussion

Based on this study, the greatest advantage of the scanner-equipped checkout to consumers is the speed of moving through the checkout. This may be a very important advantage for some consumers since some people believe that over the next ten years consumers will increasingly want to buy "time" when they go shopping (2). Further support for the value of time comes from a nation-wide survey in which the leading complaint from super-

TABLE 4. PATRONS' PERCEIVED INFORMATIVE VALUE AND USEFULNESS OF SCANNER vs. CONVENTIONAL RECEIPTS

<u>Informative Value</u>	<u>Number</u>	<u>Percent</u>	<u>Usefulness</u>	<u>Number</u>	<u>Percent</u>
Much more informative	37	39	Much more useful	16	17
Somewhat more informative	20	21	Somewhat more useful	21	22
No difference	31	33	No difference	46	48
Somewhat less informative	2	2	Somewhat less useful	1	1
Much less informative	0	0	Much less useful	0	0
No opinion	5	5	No opinion	11	12
Total	95	100	Total	95	100

market shoppers was slow checkout service. This complaint was mentioned by almost twice as many shoppers as the next highest complaint of prices being too high (3).

Counterbalancing this speed of checkout is the expressed need of some shoppers in this study to police the prices recorded at the checkout. It is not known whether the group of customers in this study who checked prices at the scanner store also compared item prices to receipt prices at conventional checkout stores. Also, it may be that more shoppers check item prices to receipt prices because the more informative scanner-generated receipt facilitates this activity. Finally, it is not known whether the shoppers who checked prices found more, the same, or less errors at the scanner checkout compared to the conventional checkout.

To alleviate the inconsistency between computer prices and store displayed prices, supermarket consumer affairs executives must stress the importance of simultaneous updating of computer and store displayed prices. This computer updating should occur when prices can be changed in the store, such as in the early morning hours before the store is open. Also, more frequent store and computer updating may be necessary.

This study also supports Esther Peterson's statement that the role of consumer affairs professionals is to help educate consumers in new uses of retail technology (11). The need for these educational programs is demonstrated in this study since a vast majority of respondents have no new uses for the detailed scanner receipt. It is possible that consumers could use this receipt to aid in longitudinal price comparisons. Also, the receipt would facilitate keeping detailed food budgets. Finally, the receipts could serve as a gauge of household usage levels of various food items.

Because of UPC scanner checkouts, retail stores no longer need to mark prices on most individual items. However, consumers may need and want the price on each item. One alternative may be consumers price-marking their own purchases. Based on this research, a majority of consumers may find this to their disadvantage. To an extent, the need to price mark could be reduced if (1) retailers eliminated inconsistencies between store displayed prices and computer prices and (2) consumers learned to use the scanner-generated grocery receipt in lieu of item prices. Also, although consumers believe that the main disadvantage to self-pricing is additional shopping time,

there has been no reported research investigating this assumption.

While the advent of UPC scanner technology is being assessed primarily in terms of the change it brings to retail management, this study has focused on the largely neglected topic of consumer reaction to the system. Just as questions about the benefits and implementation problems of the scanning system for retailers must be asked, the same questions must be asked of the consumer. For it is only through a better understanding of the advantages and disadvantages experienced by consumers that retailers can take the steps necessary to insure that scanner systems meet consumer needs.

Footnotes

¹Because of this strong price appeal, the findings of this study should not be generalized to all supermarket patrons since this type of store operation probably draws on a unique subset of all supermarket shoppers. However, when patrons and non-patrons of this chain were compared on selected variables there were only two significant differences. The studied chain patrons were more likely to shop at more than one store for their groceries. This is not surprising since the studied chain did not sell fresh meat. The other significant difference was that the studied chain patrons tended to be younger.

There was no significant difference between the two groups of shoppers based on dollars spent on weekly food purchases, size of family, educational level, and occupation and social class membership of the main wage earner.

²This, in fact was the case. When asked an unprompted response question seeking to know at which store they purchased their dry and canned groceries, 22 percent (n = 29) of the respondents mentioned the studied chain. The studied chain's actual market share was 8 percent (10). When asked specifically if they had ever shopped at the studied chain, 71 percent (n = 133) indicated they had shopped there.

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AN INVESTIGATION OF THE ROLE OF CONSUMER ALIENATION
ON CONSUMER DISSATISFACTION AND COMPLAINT BEHAVIOR

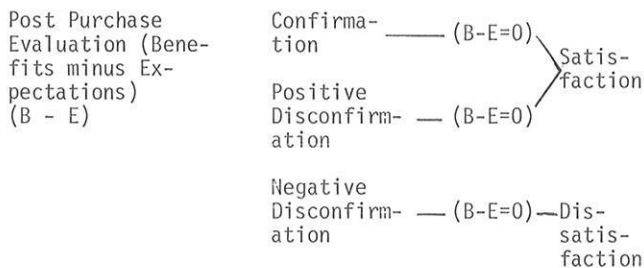
Maurice G. Clabaugh, Jr.*

Published research has been largely unsuccessful in explaining behavioral differences when consumers are confronted with dissatisfaction with a product or service. This study examined additional variables previously suggested as possible explanatory constructs for the complaining behavior of consumers. Specifically, the ability of consumer alienation, consumer satisfaction/dissatisfaction, and problem attribution to differentiate between various consumer complaint actions were examined. A pattern of complaining behavior was found, as well as the impact of problem attribution in the moderation of complaint behavior. However, consumer alienation was ineffective as an indicator of complaint behavior.

The current low level of trust by consumers of businesses reflects a generalized belief that American corporations have not sufficiently been responsive to consumer discontent (23). Under these conditions, consumerism is not only an inevitable occurrence but also enduring (12). With minor exceptions, the study of consumerism (consumer satisfaction/dissatisfaction) has been theoretical and unscientific (26).

Definitions of consumerism consistently include overt actions of consumers who are dissatisfied with outcomes of their experiences in the marketplace. Figure 1 shows that satisfaction/dissatisfaction is based on two facts of consumer's

FIGURE 1. Postpurchase Evaluation and Cognitive Behavior¹



thought processes: (1) expectational levels and (2) perception or evaluation of outcomes. If benefits received from a purchase are equal to expectations, confirmation occurs and satisfaction results. If benefits received are greater than those expected, positive disconfirmation occurs. Negative disconfirmation occurs when benefits received are less than expected. Thus, dissatisfied consumers are assumed to be those persons who receive negative

disconfirmation in their purchase and consumption of products and services.

Dissatisfied consumers have the option of seeking redress for their dissatisfaction by actively complaining. These complaints traditionally have been the primary measure of consumer dissatisfaction used by manufacturers, retailers, consumer groups, and regulatory agencies (9,3). However, dissatisfaction and complaining behavior are not necessarily highly correlated and, as shown in Figure 2, all dissatisfied consumers do not complain. Further, complaining behavior may be either formal (i.e., to manufacturers, retailers, government and/or third-parties) or informal (i.e., to family and/or friends). Consequently, dissatisfaction is a necessary but insufficient condition for complaining behavior. However, frequently only formal complaints become input into policy decisions in the private and public sector since information regarding the nature of informal communications and feedback from dissatisfied/noncomplaining consumers is not typically available to policy makers.

In recent years, a variety of empirical studies have sought to expand the understanding of consumer complaint behavior. These studies vary both by type of problem and type of good. Findings indicate that the person who is dissatisfied and complains is generally younger and more mobile, has younger children in the household, earns a higher than average income, is more educated, and has a higher than average social status (16,26,27).

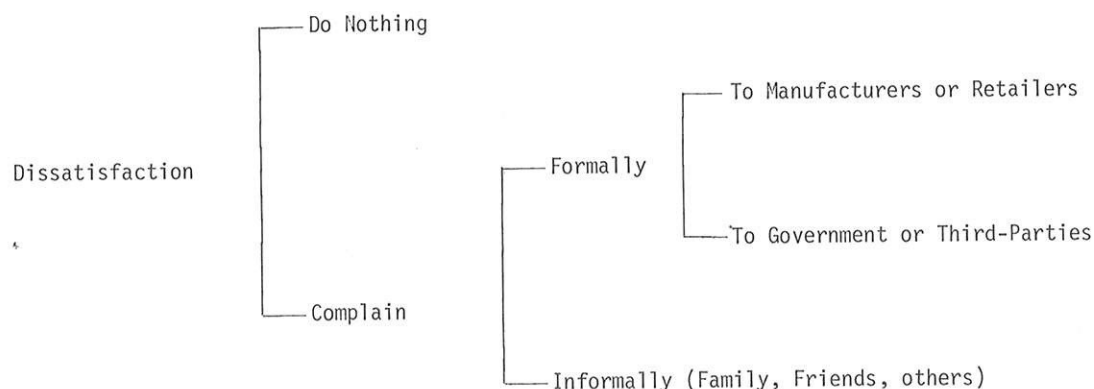
The demographic profile of the dissatisfied/non-complainer is somewhat different. Noncomplainers tend to be conservative, older, poorer, and more politically alienated (13,27). These "downscaled consumers" are generally home-oriented socializers on the lower end of the socio-economic scale (6, 27).

Since input from dissatisfied/noncomplainers may not be adequately reflected in policy decisions of businesses and government, it is the upscaled complainant who often speaks for "all" dissatisfied consumers.²

In spite of some consistency of findings, demographic variables have not been particularly successful in explaining the type of complaint behavior which emanates from dissatisfied consumers. Therefore, increasing interest is being shown in developing psychological profiles as predictors of the type of complaint action which is likely to occur when a consumer has become dissatisfied with a product or service. Specifically, such constructs as dogmatism, alienation, internal-external locus of control, and other individual characteristics have been suggested as predictors of complaint behavior (2,13,14,18,20,4).

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FIGURE 2. Dissatisfaction and Complaining Behavior



Alienation and Attribution

Lundstrom and Kerin have conducted one of the most comprehensive studies to date involving psychological and demographic correlates of consumer discontent (15). Their results indicate that consumer discontent is positively correlated with the alienation dimensions of powerlessness, normlessness, and social isolation and that discontented consumers generally feel apart from the mainstream of society. However, the relationship between dissatisfaction and complaint behavior was not examined.

Alienation typically has been viewed as a generalized socialization phenomenon which results from a person's efforts to cope with perceived environmental inequalities and imbalances (21). Little agreement exists on the exact dimensions of the concept (5). One author has observed, however, that:

...social alienation is a situation where individuals find the social system in which they live to be oppressive and incompatible with some of their own desires, and thus, have feelings of being estranged (24).

This definition parallels various definitions of consumerism (7,12). In each era of consumerism, the consumer has felt increasing structural strain (e.g., growing depersonalization in the marketplace and frustration over complexities in the marketing structure). This strain may offer a partial explanation for feelings of consumer frustration as a result of marketplace activities (12). Alienation to date, however, has been used primarily to study political apathy, negative voting patterns, maladjustments toward work, and various forms of antisocial behavior (25).

Consumer feelings of alienation and discontent are evidence of the relative ineffectiveness of the public and private sectors in responding to consumer problems with the marketplace. If consumers feel, through their experiences or from a company's reputation for handling complaints, that they will not gain satisfaction from complaining, they are not likely to complain. Consumer alienation, thus, represents intuitively a variable which may affect individual tendencies to complain.

Consumer assignment of the responsibility for a

problem with a good or service may also affect the tendency to complain. Attribution theory, as developed by Heider, contains five levels of attribution of responsibility: (1) association, (2) commission, (3) foreseeability, (4) intentionality, and (5) intentionality with justification (22). Levels one through three involve attribution to the environment, while four and five involve personal attribution.

Consumer dissatisfaction is a perception of the individual about imbalances within the marketing system (17). Thus, Kelley's attribution theory is more applicable to consumer dissatisfaction and complaint behavior than the Jones and Davis theory of personal attribution. Kelley's criteria for external attribution validity are:

1. Distinctiveness: An effect occurs when an entity is present and does not occur when an entity is absent.
2. Consistency over time: Disposition can be attributed to an entity if the effect is the same or nearly the same each time the entity is present.
3. Consistency over modality: Disposition can be attributed to an entity if it is experienced by all observers (11).

If consumers feel they have a valid picture of the outside world and are confident of the validity of an external problem attribution, complaining may occur. However, if consumers make internal attributions of the problems incurred with a good or service (i.e., feel personally responsible for the problems incurred) complaint action is less likely to occur. Consumers who believe that the problem which occurred in the purchase or consumption of a good or service is their fault and feel they would be ineffective in achieving resolution of the problem may also be less likely to voice a complaint. Thus, attribution theory may be a significant tool for the investigation of psychological constructs of complaint behavior. This conceptualization is shown in Figure 3.

The purpose of the present effort was to investigate the relationships between problem attribution, alienation, and consumer complaint behavior. Speci-

fically, the following hypotheses were tested:

- H₁. Satisfied consumers have lower levels of consumer alienation make more internal attributions, and have fewer complaints than do dissatisfied consumers.
- H₂. Dissatisfied consumers who do not complain make more internal attributions and have higher levels of consumer alienation than do dissatisfied consumers who do complain.
- H₃. Dissatisfied consumers who complain formally to businesses, government agencies, and/or third-parties make more external attributions and have lower levels of consumer alienation than do dissatisfied consumers who complain informally.

As such, this research may be labeled as an exploratory study of micro-marketing system dissatisfaction (19). Specifically, it considered buying-system dissatisfaction and consuming-system dissatisfaction, since both dissatisfaction involved in selecting and purchasing products from retail outlets and problems occurring after use were considered.

Methodology

A self-administered questionnaire was distributed to a convenience sample of 400 female household heads in a Southeastern Standard Metropolitan Statistical Area. A total of 338 usable questionnaires were obtained. The typical respondent was married, age 33 to 44, with some college training, and a total household income of \$15,000 to \$20,000. This demographic profile shows a slight skewness toward people in the higher socio-economic groups in the area. Data obtained for five products (new cars, eyeglasses, auto tires, toys, and women's clothing) and three services (medical care, dental care, and car repairs) categories were analyzed. Dissatisfaction was most frequently expressed for these items selected out of the twenty-nine goods and

eight service categories to which consumers initially responded.³

Respondents indicated their level of satisfaction/dissatisfaction with each of the goods and services purchased during the past two years on a five point Likert-type scale. They also indicated the type of problem(s) that had been experienced based on a list of product/service related problems developed by Landon and Emery (14). This information allowed identification of the type of problem attribution (14). Additionally, respondents indicated the actions if any that had been taken to alleviate the problem(s). Finally, consumer alienation was operationalized as a summated score of the Allison Consumer Alienation Scale (1).

The research method utilized allowed for some control of both type of good and type of problem, as called for in previous research (6,13). Two-group discriminant analysis was performed to determine if profiles of satisfied/dissatisfied and complaining/noncomplaining consumers differed.

Findings

Hypothesis I

The resulting discriminant functions developed from consumer scores on the satisfaction/dissatisfaction scale function significantly discriminated between the satisfied and dissatisfied consumers for each item category ($p < .001$).

The resulting mean scores for the satisfied/dissatisfied groups on the basis of consumer alienation, problem attribution, and type of action taken are depicted in Table 1. Consumer alienation scores were generally insignificant between groups across product and service categories. However, for each item category, consumer alienation scores were somewhat higher for the satisfied group than for the dissatisfied group.

FIGURE 3. Flow Diagram of the Post-Purchase Decision Process

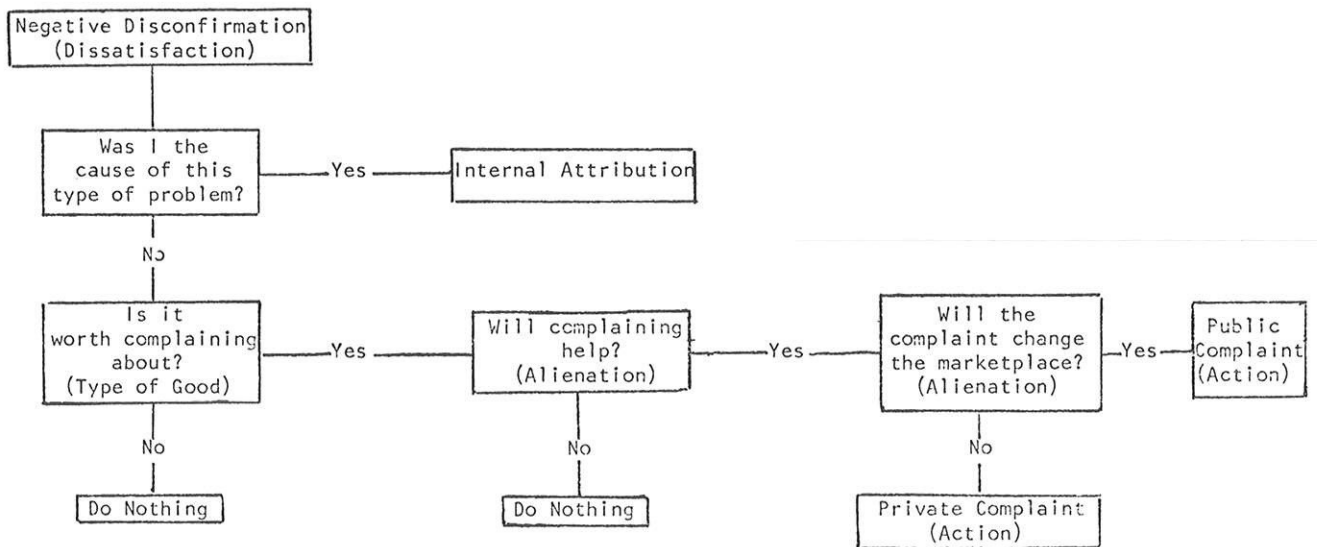


Table 1. Mean Group Scores for Satisfied/Dissatisfied Groups For Selected Goods and Services.

Item	Satisfied Consumers				Dissatisfied Consumers				Total sample size
	Number	Consumer alienation	Attri- bution	Action taken	Number	Consumer alienation	Attri- bution	Action taken	
New cars	113	65.73	.40	.38	66	65.11	1.97**	1.83**	179
Eyeglasses	91	65.78	.06	.06	46	61.67	1.89**	1.24**	137
Auto tires	135	64.78	.04	.02	61	63.07	2.00**	1.44**	196
Toys	89	64.64	.18	.11	49	64.12	1.98**	1.17**	138
Women's clothing	189	65.67	.25	.14	75	63.43	1.97**	1.24**	264
Quality of medical care	184	66.07	.10	.09	67	62.88	1.97**	1.24**	251
Quality of dental care	189	65.39	.08	.05	40	64.40	1.95**	1.40**	229
Car repairs	124	67.19*	.25	.20	123	63.22	1.94**	1.56**	247

*Significant at $p < .05$

**Significant at $p < .01$

Mean attribution scores were significantly different ($p < .01$) between satisfied and dissatisfied consumers for all item categories. Responses by type of problem attribution were scored (0) no response, (1) internal attribution, and (2) external attribution. The mean attribution scores for satisfied consumers ranged from .04 to .40. Thus, most satisfied consumers either made no attribution or an internal attribution for most problems encountered. In contrast, dissatisfied consumers almost exclusively made external attributions for each product or service related problem (1.89 to 2.0).

The behavioral actions of satisfied consumers who have experienced a problem with a good or service have been assumed in previous research to be different from the actions of dissatisfied consumers. As expected, the mean action score for the satisfied consumer group in this research ranged from .02 to .38 (a score of (0) indicated no complaint action, (1) informal complaint action, and (2) formal action). These low mean scores indicate that satisfied consumers rarely took complaint action about their frustration with products and services. In contrast, dissatisfied consumers had mean action scores ranging from 1.17 to 1.83.

Since differences between the two groups were significant ($p < .01$) for both action taken and the attribution measure, some support for the hypothesis was found. However, the lack of significant differences in the scores on the consumer alienation variable as well as the reverse in the predicted direction of these scores are contrary to that expected. This discrepancy may be due, however, to the nature of the sample. Club members may likely be socially responsible consumers who are more inclined to vocalize their dissatisfaction

and be less alienated than other consumers. A comparison of the consumer alienation scores in this research with those in the Allison study also indicated an upward bias as did the demographic characteristics (1). Only 12 percent of the consumer alienation scores in this study were above 80, which was the lower end of Allison's 95 percent confidence interval.

Hypothesis II

For purposes of testing the second hypothesis, the dissatisfied portion of the sample was further partitioned into complainers and noncomplainers. The resulting discriminant functions discriminated between complainers and noncomplainers ($p < .01$) for all item categories except auto tires, women's clothing, and medical care. To augment the discriminant analysis, differences in consumer alienation, satisfaction/dissatisfaction, and attribution were tested between complainers and noncomplainers.

Consumer alienation scores were not significantly different between the two groups as shown in Table 2. However, the scores were somewhat higher among non-complainers than complainers for eyeglasses, toys, women's clothing, medical care, and car repairs. Thus, consumer alienation did not differentiate between dissatisfied consumers who complained and those who did not complain.

Attribution response distributions were significantly different ($p < .01$) for all categories except auto tires. Persons who made external attributions were more likely to complain across product and service categories. As noted earlier, Landon and Emery also observed a majority of external attributions in their research (14).

Table 2. Mean Group Scores for Complainant/Noncomplainant Groups For Selected Goods and Services.

Item	Complainant Group			Noncomplainant Group			Total sample size		
	Number	Consumer alienation	Dissatis- faction	Attri- bution	Number	Consumer alienation		Dissatis- faction	Attri- bution
New cars	61	65.21	4.28	2.00	5	63.80	4.20	1.60**	66
Eyeglasses	39	61.15	4.10	2.00	7	64.57	4.00	1.29**	46
Auto tires	49	63.67	4.24	2.00	12	62.25	4.17	2.00	61
Toys	42	62.86	4.10	2.00	7	71.71	4.57**	1.86*	49
Women's clothing	54	63.15	4.07	2.00	21	64.14	4.00	1.89*	75
Quality of medical care	56	62.61	4.14	2.00	11	64.27	4.00	1.82*	67
Quality of dental care	36	65.17	4.11	2.00	4	56.50	4.25	1.50**	40
Car repairs	102	63.13	4.35	1.99	21	63.67	4.33	1.71**	123

*Significant at $p < .05$

**Significant at $p < .01$

Table 3. Mean Group Scores of Formal/Informal Groups for Selected Goods and Services.

Item	Formal Group			Informal Group		
	Consumer Alienation	Dissatis- faction	Attri- bution	Consumer Alienation	Dissatis- faction	Attri- bution
New cars	70.20	4.20	2.00	62.78	4.32	2.00
Eyeglasses	60.67	4.00	2.00	61.72	4.11	2.00
Auto tires	63.05	4.30	2.00	63.41	4.21	2.00
Toys	60.50	4.10	2.00	65.00	4.09	2.00
Women's clothing	63.50	4.09	2.00	62.91	4.06	2.00
Quality of medical care	62.17	4.03	2.00	63.07	4.26*	2.00
Quality of dental care	66.40	4.05	2.00	63.63	4.19	2.00
Car repairs	65.48	4.11	2.00	62.28	4.44**	1.99

*Significant at $p < .05$

**Significant at $p < .01$

Hypothesis III

In testing the third hypothesis, the dissatisfied complainer portion of the sample was further partitioned into formal and informal complaints. The discriminant function was unable to discriminate between formal and informal complainers ($p < .01$) except for one item category (e.g., car repairs). Likewise, differences in consumer alienation, satisfaction/dissatisfaction, and attribution scores were tested for formal and informal complainants.

Consumer alienation scores were not significantly different between the two groups, as shown in Table 3. Scores for only four of the eight item categories were in the predicted direction. Thus, consumer alienation was unsuccessful in differentiating between formal and informal complainers.

Like consumer alienation, attribution was unable to differentiate between formal and informal complainers. All complainers made external attribution of their problems whether they used a formal or informal complaint mechanism in expressing their dissatisfaction.

Dissatisfaction scores for medical care and car repairs were the only item categories which were significantly different ($p < .05 + p < .01$, respectively). For all other items categories the level of dissatisfaction was nondiscriminant. Therefore, dissatisfaction is a necessary but insignificant condition for predicting use of a particular complaint mechanism.

Discussion

Consumer complaints are an expression of negative post-purchase disconfirmed expectations concerning the purchase of products and services. Complaints also represent a source of consumer input into policy formulation at the public and private sector levels and are frequently interpreted as a reflection of consumer satisfaction. Since consumer groups and policy makers tend to react to complaints rather than initiate action to determine their existence, sole reliance on complaint data may be misleading. Such an approach has been criticized by researchers who contend that complainers come primarily from upscaled consumers (2). However, it is particularly for the benefit of the dissatisfied/noncomplainer that many consumer oriented regulations are designed. Yet, this group typically has little or no input into the policy making process.

Consequently, efforts by both business and government should be undertaken periodically to assess levels of satisfaction through means other than simply relying on formally registered complaints. From a business perspective, dissatisfaction is often registered by simply changing brands or patronizing a different outlet. When complaints are registered, they rarely are transmitted above the level of retailer. Surveys such as this research represent a viable and complementary means of assessing levels of consumer satisfaction that might otherwise go unnoticed. As observed by Andreasen:

There is a growing interest on the part of business and government in gathering data on consumer complaints directly from consumers through field surveys since such surveys can gather data on both voiced and unvoiced complaints. In specifically defined purchase categories, they have the poten-

tial for serving as an important tool in the formulation of public policy (2).

Further efforts are also needed to investigate differences in consumer satisfaction/dissatisfaction and complaining/noncomplaining profiles within and across product/service categories. Conceivably, expressions of dissatisfaction may be more frequently expressed by the upscaled consumer simply because of more frequent purchase of higher priced items. Dissatisfaction for some, thus, may be a constant percentage of purchases and simply show up more frequently among upscaled consumers as a result (8).

Finally, the results of this study must be interpreted with caution. The research is exploratory and was based on a convenience sample of female upscale consumers. Additionally, the information was self-reported and sample sizes are small. Further research is clearly in order to validate the findings presented in this paper.

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FOOTNOTES

¹Adapted from Ralph L. Day, "Extending the Concept of Consumer Satisfaction," Advances in Consumer Research (Atlanta, GA: Association for Consumer Research, 7th Annual Conference, 1976), p. 152.

²Recent research by Andreasen (1977) does suggest that demographic differences between complainers and non-complainers may not be as distinct as previously thought when type of product or service is held constant.

³The categories initially examined corresponded to those examined by Andreasen and Best (1977).

A CALIFORNIA STUDY OF CONSUMER SATISFACTION,
PROBLEM PERCEPTION AND COMPLAINT ACTION**

Dr. Howard G. Schutz*

This study was conducted to determine consumer satisfaction with goods and services, the frequency and type of problems consumers experience, and what complaint action, if any, was taken by the consumer. A statewide mail survey was conducted to collect the data. The 868 responding households reported that 28 percent of their purchases had one or more problems. However, complaint action was taken with less than 40 percent of the perceived problem purchases and only 6.5 percent of complaint actions involved third party actions. Demographic and socioeconomic information was cross-tabulated with the complaint data to explore how compliant parameters are related to characteristics of the consumer.

The complaint data relied on by government agencies is gathered from consumer protection agencies and individual consumers who have taken the time and trouble to contact a consumer affairs organization. This information provides part of the basis for policy decisions with regard to establishing priorities for legislation, research and consumer education. Yet research has revealed that this complaint data is not a reliable information source because people who complain and take action are not representative of the general population. Studies report that consumers who complain are better educated, younger, and have a higher income than is true of the population (8), while another study finds that people who have spare time are more likely to voice complaints (5). Also, the order and magnitude of the kinds of problems consumers experience may not be reflective of the complaints which reach third party complaint handling agencies. It seems apparent that the incidence of complaints, methods of recourse, and product and service problems are not accurately represented by the voluntary complaints.

Research relating to consumer dissatisfaction and problems includes three major survey studies: one personal interview study addressed a national sample and focused on consumer problems, not products and services, experienced within the past year (7); another national telephone study surveyed only urban households and was limited to twenty-six products and eight services (1); one study, though comprehensive, surveyed only a particular small midwestern city (3).

Therefore, results from this study can supplement the limited research in this field by addressing a cross-section of the California population concerning their consumer problems. By reaching a large sample of California consumers for information about their purchasing experiences concerning a wide range of products and services,

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the results will reflect a better representation of the complaint process than the data traditionally relied upon.

Methodology

A statewide, multi-stage probability sample of 1800 households was selected, using California counties as primary sampling units. A sample (with probabilities proportionate to size) from each county was determined, and telephone directories were then used as sampling frames to select households (6, p. 131). The survey was conducted during May and June 1978. The anonymous mail survey procedure consisted of five waves: (1) a pre-questionnaire postcard, (2) a questionnaire, (3) a reminder postcard, (4) a second questionnaire, and (5) a final reminder postcard. Included in the four page questionnaire were questions concerning purchase satisfaction (4 point rating scale); problems (12 choices), and actions (10 choices) toward 32 products and 22 services which are listed in Table 1. In general, items were selected because they are bought most often, complained about most often, and come under the jurisdiction of California state agencies. The problem and action response choices were developed from complaint agencies and previous studies in this area and are multi-response so the respondent could check as many problems or actions as are applicable. A male or female head of household was eligible to answer the questionnaire.

TABLE 1. PURCHASE CATEGORIES SURVEYED

Products	Services
Air conditioner	Appliance repairs
Automobile, new	Auto repair/service
Automobile, used	Beauty/Barber shops
Auto, parts/accessories	Business opportunities
Auto, tires	Credit cards
Bicycle	Dentist
Books/Magazines	Employment agencies
Calculator	Film developing
Carpet/Floor covering	Home improvement/ repair
Clothing/Footwear	Home/Apartment rental
Cosmetics/Toiletries	Hotel/Motel/Resort
Drapes/Wall covering	Insurance, auto
Drugs (non Rx)	Insurance, health
Eyeglasses/Contact lenses	Lawyer
Furniture/Furnishings	Loans
Groceries	Mail order services
Hardware/Tools	Pest Control
Hearing Aid	Physician
Housing/Real Estate	Tax preparers
Insulation	Trade/Vocational school
Kitchen appliances - major	Travel
Kitchen appliances - small	Utilities
Mobile home	
Photographic equipment	
Records/Tapes	
Sporting goods	
Stereo Equipment/Tape Recorders	
Television set	
Toys	
Vacuum cleaner	
Washer/Dryer	
Watch/Jewelry	

Valid questionnaires were received from 868 respondents, which accounts for 53 percent of the deliverable questionnaires. Analysis of selected responses by week of return, geographical location, and statewide demographic statistics supports the contention of a low non-response bias.

The data were analyzed using the Statistical Package for Social Sciences programs which gave basic frequencies, central tendency data and cross tabulations (4).

Results and Discussion

Households reported a total of 17,188 purchases with the average household having 20.3 purchases, of which 10.8 were products and 9.3 were services. Table 2 provides an overall summary of the major groupings used in the study: total purchases, purchases with perceived problems, purchases with actions, and purchases with third party actions. It shows that consumers experienced one or more problems with 27.5 percent of the questioned items purchased in the last year, that is, a problem is perceived in more than one out of every four purchases. More than half of those problems had no complaint action taken. Consumers took any kind of action concerning 36.9 percent of the perceived problems but only 6.5 percent of those actions involved contacting a third party. Thus, the data in this study show that only 2.4 percent of the problems consumers experience are received by consumer agencies, Better Business Bureaus, small claim courts, or city, state or federal agencies. Yet, those voiced actions are the basis of information used by businesses and government as reliable indicators of consumer complaints.

TABLE 2. PURCHASES WITH PROBLEMS, ACTIONS, AND THIRD PARTY ACTIONS

	Number	Transitional Probabilities**	Percent of Total Purchases
Total Purchases	17,188		
Purchases with Perceived Problems*	4,734	27.5	27.5
Purchases with Actions ¹	1,746	36.9	10.2
Purchases with Third Party Actions	114	6.5	0.7

*All purchases with one or more problems or actions.

**Transitional probability is a percentage. It is calculated by dividing the Number in that column by the Number in the column directly above it.

Satisfaction

A satisfaction rating was obtained for each of the 54 products and services. The scale consisted of four ratings: satisfactory, somewhat satisfactory, somewhat dissatisfactory, and dissatisfactory.

Table 3 presents a summary of the satisfaction ratings for the grouped products, services, and total purchases. The data show that, overall, services have a lower satisfaction rating than products, with 15.0 percent of all services receiving a dissatisfactory or somewhat dissatisfactory rating compared to 10.6 percent for all products. There is, however, within the categories particular products and services which generate more dissatisfaction than others. For example, among services, employment agencies had the highest combined dissatisfactory and somewhat dissatisfactory rate of 54.2 percent, followed by home/apartment rental (28.5 percent) and auto repair service (25.1 percent). This dissatisfactory rate goes down to a low 6.2 percent for credit cards. Among products, mobile homes had the highest combined dissatisfactory rating of 37 percent, followed by groceries (20.4 percent) and housing/real estate (21.6 percent). The lowest dissatisfactory rates were 3.2 percent for sporting goods, followed by cosmetic/toiletries (3.4 percent) and hardware tools (4.5 percent).

TABLE 3. SATISFACTION OF PRODUCTS AND SERVICES

	Products	Services	Total
Number	8,661	7,601	16,262
Satisfactory	74.3%	68.3%	71.5%
Somewhat Satisfactory	15.0%	16.6%	15.8%
Somewhat Dissatisfactory	6.3%	8.5%	7.4%
Dissatisfactory	4.3%	6.5%	5.4%

Many purchases with low combined satisfactory, somewhat satisfactory rates were found to be products and services which households depend on, consider necessary, or cause great inconveniences if defective or delayed, such as auto repair, groceries, and utilities. On the other hand, many low cost, frequently purchased items had high satisfactory rates such as books/magazines (93.7 percent) and cosmetic/toiletries (96.6 percent). Any dissatisfaction experienced with these product categories may tend to be overlooked because of the low cost involved or the ease with which a switch to a different brand is possible. However, a purchase like toys presents a contradictory consideration. Toys can be purchased frequently and inexpensively but the consumer may encounter severe problems as an obvious quality defect or a safety problem. This could account for a high dissatisfactory rate for toys (17.0 percent).

Problems

The satisfactory, dissatisfactory rating does not state that the purchase had a specific problem, how many problems, nor how severe any problems were. Households reported 4,734 purchases with one or more problems, which is an average of five purchases with one or more problems per household with a range of 0 to 40. As mentioned earlier, the questionnaire listed twelve specific problems and instructed the respondent to check as many problems as apply for each purchase. There were 7,215 total problems mentioned, which is 1.5 mentions per purchase with problems. Presenting this list may encourage

problem reporting by aiding the recall of a problem or the recognition of a problem otherwise not considered important enough to mention. Table 4 lists the problems and the frequency with which they were reported. Price accounts for over 3,000 mentions which is 42 percent of all problems. Items with the greatest percent of reported problems as "price problems" were groceries (46.7 percent), utilities (41.7 percent), auto insurance (41.3 percent), and home/apartment rental (37.6 percent). Percent breakdowns were also made for all other problems excluding price because of the dominance of "price problem" mentions. "Quality of product" (with 1,271 mentions) accounts for 30.4 percent of all non-price problems and "unsatisfactory service" accounts for 21.4 percent of all non-price problems. Table 5 presents the percent of total purchases by problem categories, with the 32 grouped products and 22 grouped services. The most obvious distinction between products and services is that "quality problem" is highest for products and, expectedly, "service problem" is highest for services. Within the purchase categories, business opportunities had the highest percentage of "advertising" problems and "misrepresentation by seller", toys were highest in "quality" problems, new autos in "service" problems, mobile homes in "damage or loss", air conditioning in "delay in service", mail order service in "failure to receive", home/apartment rental in "safety" problems, new autos in "warranty" problems, credit cards in "credit error", and groceries in "price" problems.

presents the actions which were listed on the questionnaire and the frequency with which each action type was taken. The questionnaire and the frequency with which each action type was taken. The action taken question has multi-response possibilities; one problem purchase may have needed more than one action to obtain satisfactory results. The data show that "complained to seller" accounts for 43.3 percent of all actions taken. "Complained to friends", though not a "real" or "market" action, accounts for 27.3 percent of all actions taken. "Complained to friends" may be used for less severe problems or may be an addition to another "real" action. "Switched brand or service" accounted for 24 percent of all "market-involved" actions. Certain purchases with problems generated more voiced complaints in particular action categories than others, for example, home/apartment rental was highest for "complained to friends", auto tire for "switched brand", mobile homes for "complained to seller" and all third party complaint handling agencies. Overall, new autos, auto repair, and mobile homes, all costly items, have high action rates. Table 7 presents the action rates by the various action categories based on the percent of total purchases with problems.

When only one action was taken in response to a problem, 36.2 percent voiced a complaint to the seller or manufacturer and 9.4 percent switched a brand or service. There were 114 cases presented to one or more third party complaint handlers; 73 cases were services

TABLE 4. PERCEIVED PROBLEMS (MULTI-RESPONSE)

Type of Problem	Number	Percent of total problems*	Percent of non-price problems
Price	3,032	42.0	-
Quality of Product	1,271	17.6	30.4
Unsatisfactory service	895	12.4	21.4
Delay in service	496	6.9	11.9
Misrepresented by seller	437	6.1	10.4
Advertising	240	3.3	5.7
Damaged/Lost item	191	2.6	4.6
Warranty/Guarantee	162	2.2	3.9
Credit/Billing error	143	2.0	3.4
Refund/Adjustment	142	2.0	3.4
Failure to receive	122	1.7	2.9
Safety/Health	84	1.2	2.0

*Total Problems Reported 7,215

TABLE 5. PERCENT OF ALL PURCHASES BY PROBLEM CATEGORY

	Number	Adver- tising	Misrepre- sented	Quality	Service	Damaged/ Lost	Delay in service	Failure to receive	Safety	Warranty	Credit Error	Price
Products	9,094	1.9	2.7	9.8	3.3	1.4	1.8	.6	.5	1.3	.4	14.7
Services	8,000	.9	2.4	4.7	7.5	.8	4.1	.9	.5	.6	1.3	21.2
Total	17,094	1.4	2.6	7.4	5.2	1.1	2.9	.7	.5	.9	.8	17.7

Actions

The surveyed consumers reported one out of every four purchases had one or more problems, that is, 4,734 purchases with perceived problems. Concerning these problems, consumers took some type of complaint action with 36.9 percent of all problem purchases. The average household took 1.3 actions for both products and services for a total of 2.6 actions, with a range of 0 to 38. Table 6

and 41 were products even though there were more product choices and more product purchases. This may be because of unsuccessful attempts for redress from the seller, or the importance and cost of the service problem. Perhaps dealing with a service provider is more intimidating than requesting a refund for a damaged product from the seller. The consumer may prefer a third

TABLE 6. ACTIONS TAKEN (MULTI-RESPONSE)

Type of Action	Number	Percent of all actions*	Percent of "market" actions
Complained to friends	821	27.3	-
Complained to seller	1,303	43.3	59.9
Switched brand/service	528	17.5	24.1
Complained to manufacturer	200	6.6	9.1
Complained to state/federal agency	40	1.3	1.8
Complained to city/county agency	39	1.3	1.8
Complained to BBB	34	1.1	1.6
Complained to media	22	.7	1.0
Complained to law enforcement office	12	.4	.5
Went to small claims court	10	.3	.5

*Total actions taken: 3,009

TABLE 7. PERCENT OF ALL PURCHASES WITH PROBLEMS WITH ACTION TAKEN

	Number	Switched Brand/Service	Complained to:								
			Friends	Seller	Manuf.	Media	BBB	City/County Agency	State/Federal Agency	Law Enforcement Agency	Small Claims Court
Products	2,048	13.2	18.8	31.4	5.6	0.6	0.7	0.5	0.5	0.4	0.1
Services	2,300	11.2	19.0	28.7	3.7	0.4	0.9	1.3	1.3	0.1	0.3
Total	4,348	12.1	18.9	30.0	4.6	0.5	0.8	0.9	0.9	0.3	0.2

party to mediate the problems. Utilities (14), mail order services (10) and appliance repair (8) had the highest number of cases presented to third party.

to have a problem perceived in at least one instance. In addition, the problem purchases from this study are not based on frequency of complaint action but do indicate consumer concerns.

Incidence of Complaints Comparison

This study approaches problems with products and services as a percent of the purchases in each category. For example, respondents purchased only 16 mobile homes and 17 hearing aids in the past year. Of these, consumers reported six mobile homes as dissatisfactory, but, as a percent of purchases, it has a 37.5 percent dissatisfaction rate. Third party agency data are based on the absolute frequency with which a complaint is received, which in some cases may mislead identification of problem products and services. Table 8 presents the top twenty consumer complaints received by the Office of Consumer Affairs (OCA) in 1977 and the California Department of Consumer Affairs (DCA) between July 1977 and June 1978. These complaints represent items most frequently voiced to a national agency and a state agency. Also listed are the twenty purchases from this study which households most frequently reported as having any problems, including perceived price problems. This may account for the high ranking of groceries, physician/dentist, auto insurance, and utilities as compared to the OCA and DCA list. Finally, the last column lists the twenty categories with the highest percentage of problems based on number of purchases in that category.

The appearance on the list of purchases, which have a relatively high satisfaction rate, occurs because of the frequency of the purchase. Beauty/barber, drugs (non-prescription) and cosmetic/toiletries were purchased by over 500 respondents and most likely were purchased many times during the last year. It follows that these multi-time purchases would be more probable

Demographics Related to Consumer Purchase Experiences

The purchase satisfaction, problem perception, and action data, in both frequency and ratio form, was cross-tabulated with the demographic and socio-economic data (income, education, age, ethnic background, and marital status) to explore any statistically significant relationships. The study found predictably that as income increases, the number of purchases increases, and as the number in the household increases, the number of purchases also increases. As follows, when the number of purchases increases, the number of problems also increases. It has been alternately discussed that lower income consumers have more problems and more often get "ripped-off" by business, but on the other side, the upper income consumer has been profiled as a more discriminating consumer, yet perceiving problems at a high rate. The data from this study show that there was no significant relationship between income and problems per purchase, though higher income groups had more total problems.

The \$15,000-29,999 income group does perceive more problems per purchase than any of the other income groups including \$30,000 and over. They also have the lowest amount of average total purchase satisfaction. When looking at actions, however, no relationship was found between actions per problem or third party actions per problem. Higher education was a better predictor of the number of problems per purchase, especially problems per service purchases. The elderly have also been portrayed as victims of business (2). This study found a strong relationship between age and purchases, age and problems, and age and problems per purchase. As age increases, fewer total purchases are made,

TABLE 8. COMPARISON OF TWENTY MOST PREVALENT CONSUMER COMPLAINT CATEGORIES RECEIVED BY THE NATIONAL OFFICE OF CONSUMER AFFAIRS, CALIFORNIA DEPARTMENT OF CONSUMER AFFAIRS, AND REPORTED IN THIS CALIFORNIA SURVEY

Rank	National Office of Consumer Affairs		California Department of Consumer Affairs		California Survey			
	Complaint Category	% of Total Complaints	Complaint Category	% of Total Complaints	Problem Category	% of Total Problems		
1.	Automobiles	21.7	Catalogue sales	9.9	Auto: new, used, repair	9.3	Home/apartment rental	52.3
2.	Mail order	9.6	Clothing/accessories	9.6	Groceries	8.5	Auto, new	51.9
3.	Business practices	5.0	Books, Mags, Newspaper	6.5	Physician/dentist	7.1	Groceries	49.8
4.	Credit	3.7	Landlord/tenant	4.5	Auto Insurance	6.3	Employment agency	48.0
5.	Appliances	3.4	Auto: new, used, repair	4.1	Utilities	6.3	Utilities	44.7
6.	Housing/real estate	2.5	Auto: parts, tires	3.8	Clothing/footwear	5.0	Auto, repair	44.4
7.	Insurance	2.2	TV/Radio/Stereo	3.5	Auto: parts, tires	4.3	Auto, insurance	44.3
8.	Food	2.0	Carpet/drapery/floor	3.4	Film developing	2.9	Appliance repair	43.7
9.	Travel	2.0	Insurance	3.3	Appliance repair	2.5	Auto, used	38.7
10.	Auto tires	1.7	Furniture/furnishings	3.2	Health insurance	2.5	Housing/real estate	35.3
11.	Magazines	1.7	Photo service/products	3.1	Beauty/barber	2.5	Home improvement	34.5
12.	Advertising	1.6	Mobile homes	2.6	Home/apartment rental	2.4	Mail order services	33.6
13.	Television/radio	1.6	Appliances	2.8	Mail order services	2.4	Toys	32.9
14.	Watches/clocks	1.3	Sporting goods	2.2	Hotel/motel/resort	2.3	Air conditioner	32.0
15.	Mobile homes/R.V.	1.0	Housewares	2.1	Records/tapes	2.1	Mobile home	31.3
16.	Utilities	1.0	Credit/collection	1.7	Books/magazines	2.1	Clothing/footwear	31.3
17.	Home repairs	.1	Hardware/tools	1.6	Eyeglasses/lenses	2.0	Pest control	30.0
18.	Household	.1	Records/tapes	1.3	Drugs (non prescription)	2.0	Hearing aid	29.5
19.	Movers	.1	Hotel/motel/resort	1.3	Cosmetic/toiletries	2.0	Hotel/motel/resort	29.2
20.	Medical/dental	.1	Trailers/campers	1.3	Toys	2.0	Lawyer	28.3

and fewer total problems are perceived. But also, there were fewer problems per purchase as age increases. Generally, older consumers were more satisfied with their purchases. Although they took fewer total actions, age was not related to action per problem. Sex was not found to predict satisfaction, problems or actions, except with regard to third party actions per problem, which females are more likely to take. Widowed respondents reported fewer purchases, problems and actions than married or never married respondents.

Ethnic background was related to average total purchase satisfaction in which the study found blacks had the highest rate of satisfaction followed by whites, Mexican-Americans and then Asian-Americans. Blacks perceived the fewest problems per purchase and Asian-Americans perceived the highest problems per purchase though they have the lowest action rate.

In summary, the study found that, in fact, younger people with higher incomes are more likely to be better represented among the voiced complainers. They complain more frequently because they experience problems more frequently as a result of the greater amount of purchases made. The study did not find sufficient data to profile the older or poor consumer as dissatisfied yet powerless, but indicates that lower income and minority consumers may be unaware or unconcerned about consumer problems.

Conclusion

This study reveals that there is a significant gap between complaint information from consumer agencies and complaint information collected by a survey method. Voluntary voiced complaints made to third party complaint handlers are neither representative of consumer dissatisfaction with products and services nor of the complaint actions consumers take when they have problems with purchases. The study found that most complaint actions involved "complained to seller" and "switched brand or service" in which case, neither manufacturers nor government agencies can become knowledgeable about or respond to consumer concerns. The study points to particular problem areas with products and services compared to voluntary voiced consumer complaint incidence. It also indicates the prevalence of perceived "price" problems by households.

Results from the survey indicate areas for consumer education, such as informing consumers about procedures for voicing complaints, increasing their familiarity with consumer organization, and promoting better use of third party complaint agencies. It would be useful to conduct this survey on a yearly basis to identify trends in consumer problems with products and services and trends in consumer complaint action behavior. Additionally, the effects of economic and legislative actions could be monitored.

Hopefully, this research will result in improved information channels to government promoting appropriate investigation and legislation. Only if consumer problems are reliably represented to those who influence and direct policy making, can consumers be effectively protected, educated, and represented.

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FORUM FOR THE FORUM: TECHNIQUES FOR TEACHING
CONSUMER ECONOMICS

Nancy Z. Spillman*

The purpose of this presentation is to tell about how I use successful teaching techniques in the classroom. Certainly each of you who are in the classroom have something very successful that you would like to contribute to Consumer Education Forum. At present, articles are being submitted to the Forum in great quantity. That is all right; we will just expand the Forum because the articles are improving by leaps and bounds. This is a forum on the Forum.

Using Overhead Transparencies¹

Some of you do not use the overhead projector, and this is what I am trying to encourage. I find it an extremely successful and helpful teaching tool, especially in consumer economics. When I use the overhead projector, whether I am talking with students or with faculty, I remind them of my learning model: I hear and I forget, I see and I remember, I do and I understand. We learn in many respects; we learn through many vehicles. And this is how I lead the students, sometimes unwillingly at first, but as the years go by they become conditioned. Every time I put a new transparency on and want to talk, they say, "No, no, wait, we have to get it down into our notes."

There are many vehicles by which you can offer consumer economics and economics (I teach economics as well as consumer economics). There are chalkboards, films, filmstrips, cassettes, and so forth. However, the most important are the transparencies, and more importantly, the homemade ones. There is something about the homemade ones, including the errors, that tend to endear them to the students. They learn that you are human. I tell my students that fifteen years ago I made an error and conceivably I could make another one. But they like to see even the little errors.

If you have the appropriate audio-visual support, you can have things blown up to be made into larger and more readable transparencies. Take any type of article...here's one on conference conversation, which is another thing I do...we had a conference conversation with Milton Friedman, another one with Alfred Kahn, and we are going to do it with some other people. To get the students in the right mood I will cut out a newspaper picture of Alfred Kahn or Milton Friedman and take it to photography or audio-visual and have them blow it up to poster size. It turns out a bit faded gray or black, but it is not bad. If you really want to make an image... here we would be talking on the phone but you do not see the person...use these big pictures of Milton Friedman and of Alfred Kahn. It is like having them right there.

Not too many people write directly on the overhead. This is another thing you can do. You can use color on overhead transparencies. The audio-visual support

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department has the ink to add color to make your outline in colors, which makes the outline even more graphic. This assumes that you have a very supportive audio-visual department.

First of all, the reason why I use overheads is because students are encouraged to write down a complete outline which will be followed in subsequent classes. I try to keep it very brief, just key words. You do not want them writing laborious notes on this. At a glance the students know exactly what is to be covered in future sessions; they have the whole outline of what you are going to cover. This assumes, of course, you are organized in knowing what you are going to cover, which in turn forces you to be organized. Students can organize their studies around the outline. If they are away a couple of days, they know exactly where they are going to be at a certain time. The outline constrains the professor from going too far afield.

Sometimes it is nice to go off on a tangent. Every four or five weeks I let the students, if they want to, go off on a tangent. I go right along with them. They feel they are getting something for nothing; they are getting you away from the subject and they feel so good about that. It is a matter of understanding the psychology of students.

We are all in a budget constraint. A few transparencies are considerably less costly each semester than several hundred copies of the outline. This saves tremendously on the paper budget. The cost of the outline is shifted to the benefitor of the education. As an economist very much concerned with cost-benefit analysis, I say to the students; "Why should I take tax dollars to give this out to you?" I do give out a lot of problems, reproduced problems, but not the outlines. I do another thing in my class. Being an economist, I announce at the outset that the basic economic problem is scarcity. If there is scarcity, I say to my students, you are going to receive one and only one copy of everything I hand out. If you want a second copy, you are going to have to borrow it from someone else and photocopy it. I have shifted the cost of that second copy to the person who was wreckless with the first copy. Of course, if their house burns down or a car is stolen, then I give it to them under the table. But no one should know about this. So they do not ask for second copies. It is amazing how we cure all these problems of handouts getting lost. It never happens anymore. If you set the rules at the outset, you do not have to give out multiple copies.

Using Humor in the Classroom

I go on two basic principles in the classroom. Like mama, in this cartoon:

"Mother, you are a domineering, guilt-inducing, food stuffing, interfering old