Out-of-Pocket Home Care Expenditures for Noninstitutionalized Disabled Elderly

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Levels and predictors of out-of-pocket home care expenditures for the disabled elderly were examined using a sample of paid home care users with out-of-pocket expenditures from the 1984 National Long Term Care Survey (N=859). Results of hierarchical multiple regression indicate need, specifically functional ability, is the most important predictor of out-of-pocket home care expenditures. Education, marital status, and population density while significant predictors, added relatively little to the total variance. Implications for prevention education, long term care policy, and research are discussed.

Dramatic changes in the age structure of the American population are challenging how we plan, provide, and pay for health care services for individuals over 65 years of age. Longer life expectancies and aging of the population in general suggest that the number of elderly with long term care needs are likely to increase dramatically. It is well documented that most elderly prefer to remain independent in their own home for as long as possible (Rowland & Lyons, 1991). Community-based noninstitutional long term care is increasingly viewed as the most appropriate alternative to enable an aging population to maintain their independence. The overall goal of long term care is to restore or maintain an individual's functioning (physical, psychological or social), at a maximum level rather than curing medical conditions (Katz, 1983). Paid home care is one approach to help individuals with routine and often repetitive tasks of daily living. Paid home care services can range from social services (homemaker/chore services, assistance with bathing and toileting) to more health related services (nursing and nurses aides, monitoring of medication).

There has been a great deal of research on health care expenditures for acute care (physician or hospital) and institutionalized long term care (nursing homes) but much less is know about the costs of maintaining elderly in the community through noninstitutionalized care (Feder, 1991; Rivlin & Wiener, 1988). Given the many gaps in current public and private health care programs, the functionally disabled elderly appear to be most at risk of incurring substantial out-of-pocket long term care expenses. Medicare, Medicaid and long term care insurance coverage of home health services is limited to situations in which skilled care is needed, primarily for postacute illnesses, rather than for the chronically ill. Such short-term, intermittent care for the homebound does not include the majority of long term care needs of the disabled elderly (Feder, 1991; Rivlin & Wiener, 1988).

Relatively few sources of data, beyond Medicare and Medicaid records, have been available to help understand the range of home care use, sources of financing, or out-of-pocket expenditures. A majority of expenditure data therefore has been for skilled care, such as nursing services, versus expenditures for assistance with the more routine tasks of daily living. As long term

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care policies on the provision and financing of services are debated and developed it seems essential to understand consumer home care expenditures. This study utilizes a nationally representative sample to gain further understanding of out-of-pocket expenditures for home care help with daily living activities of the disabled elderly. Questions regarding the level of out-of-pocket expenditures being incurred for a range of home care services, relationships between expenditures and characteristics of a diverse disabled elderly population, and major predictors of differences in out-of-pocket expenditures are addressed.

Literature Review

Levels of Home Care Expenditures

In the only nationally representative study found of out-of-pocket home care expenditures Liu, Manton, and Liu's (1985) results suggest about half of the noninstitutionalized disabled elderly using some type of paid help experienced out-of-pocket payments. As has been found in other studies of health care expenditures (U.S. Health and Human Services, 1982), Liu et al. (1985) found a small percentage of individuals tend to account for the greatest proportion of expenditures.

Influences on Out-of-Pocket Expenditures

Household expenditures, including health care, depend on family income, prices of goods and services, and the needs or preferences in a household (Freidman, 1957). Income was found related to home care expenditures in several studies (Liu et al., 1985; U.S. Health and Human Services, 1982). Although money income is considered to be a major determinant of consumption, it is generally acknowledged that current annual income is an unsatisfactory measure of consumption among elderly (Moon, 1977). In addition to income, elderly may choose to draw upon accumulated wealth, including liquid and non-liquid assets, to cope with contingencies such as changes in health status.

A U.S. Department of Health and Human Services (1982) study of out-of-pocket expenditures for personal health services (physician, hospital, nursing home) found expenditures to vary by demographic and socioeconomic factors. Out-of-pocket expenditures were greater for individuals who were older, female, living in Standard Metropolitan Statistical Areas (SMSA), living in the Western U.S. Census Region, had higher educational levels, and higher incomes. Williams, Hagler, Martin, Pritchard & Bailey (1991) in a multivariate study of predictors of out-of-pocket medical expenditures for low-income households found income, type of insurance, number of ill family members, priority of medical expenses, and ethnicity to explain 13% of the variance in expenditures.

While Liu et al. (1985) did not conduct multivariate analyses, single relationships between individual characteristics and out-of-pocket expenditures for home care were examined. Significant predictors of out-of-pocket home care expenditures, in addition to income, included prior medical service use, age, marital status, and gender. Individuals who were older, without a spouse, and female were likely to have higher out-of-pocket expenditures. It was also found individuals with the highest number of functional health limitations had out-of-pocket expenses three times higher than the average out-of-pocket for all disabled persons which paid for care (Liu et al., 1985). Winter, Morris, Bivens, and Jakubczak (1989) found that becoming disabled increases both total medical outlays and out-of-pocket expenditures. Just as in younger populations, the type and level of health limitations impacting expenditures among individuals over 65 vary widely (Rowland & Lyons, 1991).

Two measures of the extent of functional limitations or physical disability, and, therefore, an indication of the need for long term care, include the Activities of Daily Living (ADL) scale (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963) and Instrumental Activities of Daily Living (IADL) scale (Duke University Center for the Study of Aging and Human Development, 1978). ADL's refer to the performance of basic daily living personal care tasks such as ability to dress, eat, and toilet. IADL's assess a person's ability to maintain a household independently, such as preparing meals, managing money, doing housework and laundry, and using the telephone.

Conceptual Framework

Existing research on out-of-pocket home care expenditures as well as research on health care expenditures overall, does not offer a specific conceptual framework to guide the selection of independent variables nor suggest how the variables may interact to influence out-of-pocket expenditures. This study attempts to contribute to the literature by using Andersen's (1968) original and Andersen and Newman's (1973) expanded behavioral model of health services utilization as a tool to conceptually organize many of the individual, or micro, factors which may influence out-of-pocket expenditures. Given the overall lack of third party coverage for help with daily living activities, it is assumed that factors which may influence use, will also influence out-of-pocket expenditures.

In Andersen and Newman's (1973) behavioral model, health service use is characterized as a function of characteristics of the population at risk, the resources of the health care system, and social determinants. In this study, and in most utilization research, only characteristics of the population at risk are focused upon to understand home care expenditures. In the Andersen model, population characteristics considered to influence use are comprised of predisposing, enabling, and need characteristics of the individual.

Predisposing characteristics are personal characteristics which exist prior to health needs and influence health services use including: a) demographic (age, gender, marital status), and b) social structural (education, race) aspects of an individual's life. Andersen's behavioral model assumes that even when one is predisposed to use health services, there must be some felt need as the basic stimulus for the use of health care services. Need has been measured by self-reports of health status, functional limitations, or perceived health levels. The enabling characteristics in the behavioral model reflect that while an individual may be predisposed or have a need to use health services, he or she will not be able to use health services without some "means," or resources, to do so. An individual's ability to use health services depends upon: a) family resources (income, health insurance, family member availability), and b) community resources (urban/rural character; geographic location; availability of care).

When Andersen and Newman's (1973) theoretical framework is utilized, out-of-pocket expenditures are conceptualized as the outcome of need for care interacting with a combination of enabling factors and predisposing characteristics of elderly individuals. This framework guides an examination of the following questions: 1) How diverse are levels of out-of-pocket home care expenditures for help with daily living activities? and 2) What combination of specific predisposing, need, and enabling resource variables best explain differences in out-of-pocket home care expenditures for help with daily living activities?

Methodology

Sample

Data used in this analysis is from the 1984 National Long Term Care Survey (NLTCS) conducted by the Bureau of the Census and sponsored by the Department of Health and Human Services. The 1984 NLTCS is the second-wave in a longitudinal survey of the personal characteristics and use of health-related services by non-institutionalized disabled elderly in the United States. The 1982 NLTCS sample was obtained by screening a random sample of approximately 36,000 Medicare enrollees to determine the presence of one or more limitations in activities of daily living (ADL's) or instrumental activities of daily living (IADL's) lasting 3 months or longer. The 1984 NLTCS community-dwelling sample (N=5934) consists of respondents from 1982 who were re-interviewed; individuals who had turned 65 by 1984, and individuals screened-out in 1982 but who now met the chronically disabled criteria. A sub-sample of 859 individuals who reported out-of-pocket expenditures as a result of using paid home care for help with ADL's or IADL's provided the sample for this study. Further methodological details concerning the 1982-1984 survey and sampling procedures have been described elsewhere (Macken, 1985; Manton, 1988).

Table 1
Coding, Means and Standard Deviations for Independent and Dependent Variables

Variable	Mean	Standard Deviation	Coding Algorithm
DEPENDENT			
Out-of-pocket home care expenditures	173.42	389.98	Actual out-of-pocket expenditure in last month for help with IADL's/ADL's[1]
PREDISPOSING			
Age	79.06	7.57	Actual number of years
Gender	1.74	.44	1=Male, 2=Female
Marital Status	1.84	.64	1=Married, 2=Widow, 3=Divorced, separated, never married
Race	1.08	.28	1=White, 2=Other
Education	10.38	3.79	Actual number of years
NEED			
Functional Ability	.72	.27	Index based on weighted ADL's & IADL's 0-1 range with 1=highest functional ability
Perceived Health	2.72	.98	1=Excellent, 2=Good, 3=Fair, 4=Poor
Prior Nursing Home Use Ever	.16	.37	1=Yes, 0=No
Prior Hospital Use in past year	.39	.49	1=Yes, 0=No
Senior Center or Day Care Use	.07	.25	1=Yes, 0=No
Meals Program Use	.07	.25	1=Yes, 0=No
ENABLING			
Self			
Income	6.97	1.16	Natural log of monthly household income
Report Assets	.73	.44	1=Yes, 0=No
Home Equity[2]	3.99	4.74	Actual value
Family			
Size	1.65	.95	Actual number of household members
Helpers	.34	.71	Actual # of unpaid helpers
Unpaid Helper Days	.56	1.74	Actual # of unpaid helper days
Children	.82	1.14	Actual # of children within 60 minutes of traveling time
Community			1=Rural, 2=Urban
Population Density	1.45	.50	66=Northeast, 67=Northcentral, 68=South,
Census Region	67.46	1.02	69=West

[1]ADL's is for activities of daily living and IADL's for instrumental activities of daily living.
[2]Home value and mortgage were coded into identical categories. Home equity is the result of home value less mortgage value; renters were coded 0.

Operational Definitions

Table 1 displays definitions, coding, means and standard deviations for the independent and dependent variables used as operational indicators of the theoretical concepts in the Andersen and Newman (1973) behavioral model. An improved measure of functional limitation is utilized as one indicator of need. Instead of simply counting ADL's and IADL's, each specific activity is weighted according to difficulty and severity (IADL's low=1 to high=3; ADL's low=6 to high=8). A functional ability score ranging from 0 to 1 is computed for each individual. Alpha reliability coefficients for the functional ability index were well within acceptable ranges (alpha=.8397 ($F=590.65$, $p < .001$).

Analysis

Levels of expenditures and bi-variate relationships with predisposing, enabling and need variables were examined using Pearson correlations and comparisons of expenditures at selected percentiles. Hierarchical multiple regression was used to examine the combined predictive effects of the independent variables on out-of-pocket expenditures as well as the overall effect of each block of independent variables (predisposing, need, enabling). In this analysis, predisposing variables were entered on the first step to control for differences; all need variables on the second step as need should serve as the stimulus for health care use, and enabling variables which help meet needs were entered on the third and final step.

To assess for multicollinearity, each independent variable was regressed on all of the other independent variables. Variables with categorical measures were coded as dummy variables and one category was not entered into regression analysis for comparison groups. All variables contributing significantly ($p < .05$) to preliminary regression equations were combined in the final analysis.

Findings

Out-of-Pocket Home Care Expenditures

Disabled elderly reporting out-of-pocket expenditures for home care averaged monthly expenditures of $173. The highly skewed distribution of out-of-pocket expenditures is indicated by the fact that one-half made out-of-pocket payments of $32 per month or less, and 10% reported paying more than $496 per month. As expected, the average out-of-pocket monthly expenditures for home care increased as functional ability decreased. The average monthly out-of-pocket expenditures for individuals with the highest functional ability was $54 compared to $395 for individuals with the lowest functional ability. The skewness of out-of-pocket expenditures is further highlighted when a comparison of the distribution of out-of-pocket payers with the distribution of total out-of-pocket expenditures in a month by payment and limitation level. The subgroup of individuals who had the lowest functional ability and paid over $134 composed only 12.3% of the out-of-pocket payer population, but accounted for 54.3% of the total out-of-pocket payments.

Specific relationships between predisposing, need, enabling variables and out-of-pocket home care expenditures were examined using Pearson's correlations. Individuals with higher levels of out-of-pocket expenditures were significantly more likely to be older, other single, White, and more highly educated than their counterparts ($p < .05$). Two of the six need variables were also significantly related to expenditures. Individuals with higher functional ability levels and prior nursing home use were more likely to report higher levels of out-of-pocket expenditures ($p < .05$).

Levels of out-of-pocket home care expenditures were significantly related to the enabling variables of family income, assets, and home equity ($p < .05$). Individuals reporting payments of $15 or less per month had median monthly incomes of $564, 63% had assets, and the median home equity reported was $20,000. In comparison, individuals reporting payments of $135 or more had median monthly incomes of $1069, 80% had assets, and a reported median home equity of $50,000. Individuals reporting higher expenditure levels were more likely to have a larger household size, but a lower number of unpaid helpers. Out-of-pocket expenditures were also significantly related to population density, with individuals in urban areas more likely to have higher expenditures.

Multivariate Analysis of Out-of-Pocket Predictors

Table 2 contains the standardized regression coefficients for the significant variables in the final step of the hierarchical regression. The R^2 coefficients indicate the cumulative proportion of the variance explained by each block of the independent variables (Predisposing (P), Need (N), Enabling (E)). Overall, 19% of the variance in out-of-pocket home care expenditures was explained using predisposing, need, and enabling individual determinants of Andersen and Newman's (1973) behavioral model. The results suggest predisposing variables add relatively little explanation to the total variance (R^2 (P)=.02). Of the predisposing variables, education and marital status were the strongest predictors of expenditures. Disabled elderly with higher education levels and individuals who were divorced, separated or never married (other single) were more likely to have higher out-of-pocket expenditures,

Table 2
Final Standardized Regression and Hierarchical R^2 Coefficients for Predisposing, Need, and Enabling Variables

Independent Variables by Block	Standardized Beta
PREDISPOSING	
Education	.13***
Marital Status	
Widow	.06
Other Single	.09**
NEED	
Functional Ability	-.41***
ENABLING	
Population Density	.08**
Adjusted R^2	
(P) = .02***	
(P + N) = .18***	
(P + N + E) = .19***	

F(5,826)=39.696, N=832
**p<.01; ***p<.001

Need, specifically functional ability, is the most powerful predictor of out-of-pocket home care expenditures, increasing the Adjusted R^2 by .16 (R^2 (P+N)=.18). As previously illustrated, individuals with lower levels of functional ability are more likely to have higher out-of-pocket home care expenditures. Enabling variables also added relatively little (.01) to the total variance (R^2 (P+N+E)=.19). Of the resource variables, population density was the only significant predictor in relation to the other independent variables. Individuals living in urban areas were more likely to have higher out-of-pocket expenditures.

Conclusions

The results suggest that out-of-pocket home care expenditure patterns appear to be similar to other types of health care service expenditures with a small percent of individuals accounting for the greatest proportion of the total expenditures (Liu et al., 1985; U.S. Health and Human Services, 1982). Elderly individuals preparing for the possibility of functional limitations and the need for paid home care can expect to spend an average of $173 per month out-of-pocket in 1984 dollars. Given the skewness found in out-of-pocket expenditures, some individuals will pay much less and others are at risk for much higher expenditures.

Of the predisposing, need, and enabling variables the most powerful predictor of out-of-pocket home care expenditures appears to be need, specifically level of functional ability. The relative importance of need found in this study is consistent with other health care expenditure and home care use studies. Functional limitations appear to be the best predictors of home care need in comparison to perceived health or prior health use measures.

The results in this study add further support to the consistent absence of significant explanations by predisposing and enabling variables in relation to need. Other studies of home care use have found similar results with education, marital status, and population density as significant predictors, although such variables add little to the overall variance (Hanley & Wiener, 1990; Kemper, 1989; McAuley & Arling, 1984). It is suggested that education may affect an individual's ability to combine any knowledge of his or her resources with potential use of home care services to maximize his or her health status and independence. Population density is frequently included as a proxy measure of the availability of health care and to reflect differences in costs of care in urban and rural areas. Individuals in urban areas are more likely to have access to home health care and to pay higher costs for such care.

Andersen and Newman's model of health care utilization appears to have merit in predicting out-of-pocket home care expenditures. Total variance in home care use explained with the model in other studies have ranged from 10-23 percent, with 19% of the variance in out-of-pocket home care expenditures explained in this study. While the R^2 may not lead to predicting any one individual's expenditures, the model does help to understand the aggregate picture of out-of-pocket home care expenditures.

Implications

Improving our understanding of the levels and predictors of out-of-pocket home care expenditures for the chronically disabled elderly is important to assist in: a) appropriate prevention education of an aging population; b) long term care policy and planning; and c) developing appropriate theoretical models to understanding noninstitutionalized long term care service use and expenditures. Given the demographic trends in this country and the move to noninstitutional long term care, it seems critical that consumers begin to understand issues of long term care, including home care and sources of financing. While there has been considerable prevention education for consumers regarding acute health care risks, the costs of formal and institutional care, and sources of financing; consumers are much less familiar with chronic health care risks, non-institutional care options, and sources of financing. Consumers need to be aware of both acute and chronic health care risks and the potential financial implications for their family systems.

The results in this study of expenditures were consistent with others regarding home care use in finding that need, specifically functional limitations as a measure of health status, is the primary predictor. Therefore, it seems especially important to understand who is most likely to experience functional limitations, especially the more severe ADL problems. Consumers should be aware that the risk of functional limitations clearly increases with age (Doty, Liu, & Wiener, 1985). Functional limitation levels and severity for any person changes over time, and the direction of change can be toward improvement or toward decline (Liu & Cornelius, 1991).

In addition to understanding who is most at risk of functional limitations, it is also essential that consumers understand the possible costs of paid home care and potential sources of financing. Health care consumers must learn to make informed decisions regarding self-insuring against home care costs, with some combination of accumulated economic resources and social support. This study added insight into possible levels of out-of-pocket home care costs at one point in time. Given likely transitions in functional limitations, longitudinal studies are also needed to examine expenditures over time if consumers can adequately prepare.

Long term care policy issues continue to emerge as important social priorities at the federal, state, and local levels of government. Issues of access, equity, and sources of public and private insurance financing for home care must be addressed. Continual assessment of out-of-pocket home care expenditures should add insight into access and equity issues. Given the assumption that in an equitable health care system need drives use, the home care system would appear to be quite equitable. Policy and program development should be based on the understanding that need, not predisposing or enabling resources, appears to be the primary contributor to the explanation of use and expenditures. Such findings lend support to public and private policies and programs that use ADL disabilities for determining eligibility for home care services. As public and private home care financing options evolve, issues regarding eligibility criteria will continue to grow. Decisions on how "need" or functional limitations are assessed as well as the role of enabling resources are yet to be determined.

The results of this study also reinforce the need to continue to develop and expand the theoretical frameworks used in the examination of health care expenditures. In this study as in most others on home care use, only a subset of variables in Andersen's model were used as predictors. To date no research has included all dimensions of Andersen and Newman's model at the micro or macro level leaving the explanatory value of the full model unknown.

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The Implicit Prices of Long-Term Health Care Policy Characteristics

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As long-term health care policies become a more important part of the health insurance market, state insurance regulators and others have become increasingly concerned about the provisions of such policies. Some states have taken the step of mandating provisions in long-term health care policies. This study shows there is a cost to such action. The study calculates the implicit prices of provisions of a sample of long-term health care policies.

Long-term health care policies have grown to become a significant part of the health insurance industry and a significant option for consumers. Long-term care policies are designed to pay for long-term care in a nursing home or at the policyholder's home. The growth of long-term health care policies has paralleled the relative growth of the elderly population and the professional long-term care industry. The market for long-term care policies is expected to grow in the future as the relative sizes of the over age 65 and over age 85 populations grow.

Long term health care policies vary in their characteristics and coverage. This variability has motivated some states to mandate types of coverage or to eliminate some restrictions in long-term care policies. For example, in 1989 North Carolina required that long-term care policies marketed in the state drop any requirements that the policyholder must first be hospitalized before long-term care benefits could begin.

But, of course, mandated coverage or limitations on restrictions aren't without cost. Mandated coverage and limitations on restrictions which in turn increase coverage will increase the price of the policy unless consumers place no value on the additional benefits and the additional benefits are costless to provide by the insurer.

It is important, therefore, for policymakers to consider the impact of mandated coverage and restriction limitations on the price of long-term health care coverage. Only then can policymakers weigh the relative benefits and costs of interference in the long term health care market. The objective of this study is to provide estimates of the implicit prices of long-term care policy characteristics for policies marketed in North Carolina.

The outline of the paper is as follows. The second section develops the background and theoretical model for the analysis of long-term care policy characteristics. The third section discusses the variables used in the analysis. The fourth section discusses the data, presents the empirical results, and provides interpretations. Conclusions and policy implications are offered in the last section.

Theoretical Model

The notion that a financial contract, such as an insurance policy, can be decomposed into its characteristics, and that implicit prices can be derived for the characteristics is in the tradition of hedonic price analysis developed by Lancaster [1966], Muth [1966], and Rosen [1974]. Hedonic price analysis recognizes that many products are

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composed of multiple attributes or characteristics. Consumers demand goods because of the characteristics they include. Goods that contain more of the characteristics preferred by consumers will be in greater demand and, consequently, will have higher prices. Conversely, goods that contain fewer characteristics preferred by consumers will be demanded less and will have lower prices. Characteristics that don't provide benefits to consumers will have no impact on the good's price.

The equilibrium price of the composite good is therefore a function of the equilibrium prices of the characteristics. The first level of hedonic price analysis decomposes the composite good into its characteristics and estimates the equilibrium prices of the characteristics.[1] The relationship to be estimated is:

$$P_i = \alpha_1 X_{i1} + \alpha_2 X_{i2} + \alpha_3 X_{i3} + \ldots \alpha_n X_{in}, \qquad (1)$$

where P_i is the total price of composite good i, X_{i1}, X_{i2}, $X_{i3}, \ldots X_{in}$ are the levels of characteristics X_1, X_2, $X_3, \ldots X_n$ for composite good i, and α_1, α_2, α_3, $\ldots \alpha_n$ are the implicit prices per unit of characteristics X_1, X_2, $X_3, \ldots X_n$. A linear hedonic relationship is shown in equation (1) for illustrative purposed only; hedonic price equations need not be linear.

The hedonic price approach to analyzing good characteristics has most frequently been used in analyzing durable goods such as houses [Walden, 1990]. However, the approach has also been successfully applied to financial products. Most recently, Schiano calculated implicit prices of investment product characteristics [Schiano, 1987], and Walden calculated the implicit prices of whole life insurance policy characteristics [Walden, 1985].

This study uses the model specified in equation (1) to calculate the implicit prices (α's) of long-term care policy characteristics (X's).

Empirical Model

The dependent variable in the empirical analysis is the annual premium (P). The annual premium can be adjusted each year by the company for inflation. Determinants of P are discussed below.

Policyholders Age

Although the policyholder's age is not a policy characteristic, it does have a significant impact on the annual premium. The probabilities of the policyholder needing long-term care or of needing long-term care for a longer period of time are expected to increase with age.

The effects of three ages, 60, 70 and 80, on the annual premium are measured by two categorical variables, AGE70 and AGE80. AGE70 equals 1 if age of the policyholder is 70 years and AGE70 equals zero otherwise. AGE80 equals 1 if age of the policyholder is 80 years and AGE80 equals zero otherwise. The coefficients on AGE70 and AGE80 measure the change in the annual premium from the premium when the policyholder's age is 60. The coefficients on both AGE70 and AGE80 should be positive, with the coefficient on AGE80 greater than the coefficient on AGE70.

Benefit

Benefit (BENEFIT) is the monthly payment paid by the insurer to the policyholder for intensive or intermediate care, for home care, or for hospice care BENEFIT is adjusted ech year for inflation. Since this benefit is a potential return to policyholders, policyholders are expected to prefer policies with a higher amount of benefits and to bid more for such policies. Higher benefits are also, of course, more costly to the insurance company.

Policies used in the study gave separate monthly benefit payments for intensive and intermediate care and for home and hospice care. However, the benefit for home and hospice care was found to be proportional to the benefit for intensive and intermediate care. Therefore, only the benefit for intensive and intermediate care is measured by BENEFIT. The coefficient on BENEFIT is expected to be positive.

Prior Hospitalization

A controversial provision in some long-term care policies is the requirement that the policyholder be hospitalized prior to long-term care for long-term care benefits to be received. The presence or absence of the prior hospitalization provision is measured by the categorical variable NOPRIOR, where NOPRIOR equals 1 if the prior hospitalization provision is absent and 0 if the prior hospitalization provision is present. Since the absence of the prior hospitalization provision is likely to increase the use of long-term care policies by policyholders and to increase the cost to the insurer, the coefficient of NOPRIOR should be positive.

Elimination Period

The elimination period refers to the number of days a policyholder must be in residence at a nursing home before policy benefits begin. For example, a 30-day elimination period means a policy will begin paying benefits on the 31st day. Shorter elimination periods are obviously more beneficial to policyholders and more costly to insurers.

Although elimination periods can be any number of days, elimination periods in this study's sample of policies were either 0, 30, or 60 days. The elimination period provision was therefore represented by two categorical variables, ELIMPD30 and ELIMPD60. ELIMPD30 is 1 if the elimination period is 30 days and 0 otherwise. ELIMPD60 is 1 if the elimination period is 60 days and 0 otherwise. The coefficients on ELIMPD30 and ELIMPD60 measure the change in the annual premium from the premium when the elimination period is 0 days. The coefficients on ELIMPD30 and ELIMPD60 are expected to be negative, and the coefficient on ELIMPD60 is expected to be greater, in absolute value, than the coefficient on ELIMPD30.

Benefit Period

The benefit period is the maximum length of time (in months) that benefits will be paid to the policyholder for each period of stay in a long-term care facility. Policyholders prefer longer benefit periods, and longer benefit periods are more expensive to insurers; therefore premiums should be higher for policies with longer benefit periods.

In the study's sample of policies three benefit periods were present, 24 months, 48 months, and 96 months. These benefit periods are represented by two categorical variables. BENPD48 is 1 if the benefit period is 48 months and is 0 otherwise. BENPD96 is 1 if the benefit period is 96 months and is 0 otherwise. The coefficients on BENPD48 and BENPD96, therefore, measure the change in the annual premium from the premium when the benefit period is 24 months. The coefficients on BENPD48 and BENPD96 should both be positive, and the coefficient on BENPD96 should exceed the coefficient of BENPD48.

Gap Between Two Periods of Stay

The gap between two periods of stay (GAP) is the minimum amount of time, in days, that must elapse between consecutive stays in a long-term care facility for benefits to be paid. Consumers prefer smaller gaps, but smaller gaps increase the expected payout by the insurer. Therefore, the coefficient on GAP should be negative.

Examination Period

The examination period (EXAMPD) is the number of days that the insurer allows the consumer to examine the policy before making a decision about purchasing it. During this period the consumer has the right to refuse the policy without any cost. A longer period of examination allows more flexibility to the consumer; therefore the consumer is expected to bid more for policies with longer examination periods. Similarly, if it takes an insurance agent a longer period of time, on average, to sell a policy with a longer examination period, then selling such policies will be more costly to the insurance company. Therefore, the coefficient on EXAMPD should be positive.

The empirical model can therefore be summarized as follows:

$$\mathbf{P=f(\overset{+}{AGE70},\overset{+}{AGE80},\overset{+}{BENEFIT},\overset{+}{NOPRIOR},\overset{-}{ELIMPD30},\overset{-}{ELIMPD60},\overset{+}{BENPD48},\overset{+}{BENPD96},\ \overset{-}{GAP},\ \overset{+}{EXAMPD})}. \qquad (2)$$

The hypothesized sign of the coefficient for each variable is given above the variable.

The study does not consider the impact of company characteristics on price. If company characteristics do influence policy price, then the true model is:

$$P=f(X_1,X_2,), \qquad (3)$$

where X_1 represents policy provisions and X_2 represents company characteristics. The omission of X_2 from the model may bias the parameter estimate for X_1. To gauge the size of this bias, let b_1 and b_2 be the true parameters of X_1 and X_2, and let $\hat{b}_1$ be the parameter estimate of the mispecified model. The bias in estimating b_1 is:

$$\text{Bias} = E(\hat{b}_1)-b_1 =$$

$$(X_1'X_1)X_1'X_2\ b_2. \qquad (4)$$

Equation (4) shows that the bias is proportional to the magnitude of b_2. The smaller the coefficients of the omitted company characteristics, the smaller the implied bias. The bias is also smaller the smaller the correlation between included and excluded variables, as measured by $X_1'\ X_2$. The specification error vanishes in the limit as $X_1'X_2$ approaches zero. Walden's study of whole life insurance policy characteristics [1985] found low correlations between policy characteristics and company characteristics. We expect the same to be true of long-term care policies. Therefore, the bias in the parameter estimates of the policy characteristics due to omitting company characteristics should be small.

Data and Results

Data for this study were taken from 15 insurers marketing long-term care policies in North Carolina between 1985 and 1990. Each insurer offered several combinations of provisions (including age of the insured) and a premium associated with each set of provisions. We call each provision set and associated premium a policy. There are 130 policies used in the study.

Table 1 gives descriptive statistics for the policies. The mean annual premium is \$177.73, but there's a considerable range about this mean, with the minimum annual premium being \$13.20 and the maximum annual premium being \$1129.00. There's a similar range about the mean monthly benefit of \$235.86. Means for the categorical variables are the percentage of policies in the study with that characteristic. For example, the mean value of 0.615 for NOPRIOR indicates that 61.5 percent of the policies had no prior hospitalization requirement. Table 2 gives correlation coefficients for the independent variables. The correlation coefficients are all relatively low.

Equation (2) is estimated with ordinary least squares regression analysis. The equation is estimated with the variables in linear functional form. Other functional forms were estimated, but the results were not significantly different or improved. The results for the OLS estimation are given in Table 3.[2]

In general, the results conform very well to the hypotheses presented in the previous section. The model explains a substantial amount (70 percent) of the variation in long-term care premiums. All of the explanatory variables have the correct sign, and eight of the 10 explanatory variables (excluding the intercept) are statistically significant at the 0.10 level or better.

Table 1
DESCRIPTIVE STATISTICS

Variables	Mean Value	Standard Deviation	Minimum Value	Maximum Value
Premium (P) in (\$)	177.73	183.91	13.20	1129.0
AGE70 (1=AGE70; 0=otherwise)	0.33	0.47	0.0	1.0
AGE80 (1=AGE80; 0=otherwise)	0.32	0.469	0.0	1.0
BENEFIT (\$)	235.86	168.65	100.0	1500.0
NOPRIOR (1 if no prior hospitalization required; 0 otherwise)	0.615	0.488	0.0	1.0
ELIMPD30 (1 if elimination period is 60 days; 0 otherwise)	0.276	0.449	0.0	1.0
ELIMPD60 (1 if elimination period is 60 days; 0 otherwise)	0.185	0.389	0.0	1.0
BENDP48 (1 if benefit period is 48 months; 0 otherwise)	0.315	0.466	0.0	1.0
BENDP96 (1 if benefit period is 96 months, 0 otherwise)	0.177	0.383	0.0	1.0
GAP (days)	93.69	61.72	90.0	180.0
EXAMPD (days)	28.0	6.33	10.0	30.0

Table 2
SIMPLE COORELATION COEFFICIENTS BETWEEN THE INDEPENDENT VARIABLES IN THE ANALYSIS

	AGE70	AGE80	BENEFIT	NOPRIOR	ELIMPD30	ELIMPD60	BENPD48	BENPD96	GAP	EXAMPD
AGE70	1.00	0.50	0.10	0.01	0.06	0.04	-0.05	-0.02	-0.01	0.06
AGE80		1.00	0.09	0.01	0.06	0.04	-0.02	-0.01	-0.01	0.05
BENEFIT			1.00	0.01	0.04	0.23	-0.06	0.16	-0.19	0.03
NOPRIOR				1.00	0.00	0.09	0.02	0.07	0.20	-0.40
ELIMPD30					1.00	0.36	-0.01	-0.06	0.24	-0.23
ELIMPD60						1.00	0.03	-0.02	0.16	-0.22
BENPD48							1.00	0.34	0.12	-0.20
BENPD96								1.00	0.10	-0.19
GAP									1.00	-0.35
EXAMPD										1.00

The estimated coefficients of the policyholder age variables (AGE70 and AGE80) are positive and statistically significant, as expected, and the coefficient for AGE80 is greater than the coefficient for AGE70, as was hypothesized. This means that older policyholders, all other things equal, pay a higher premium. The parameter estimates indicate that a policyholder who is age 70 pays $84 more annually than a policyholder who is age 60, and a policyholder who is age 80 pays almost $256 more annually than a policyholder who is age 60.

The coefficient on the BENEFIT variable indicates that the annual premium increases by 70 cents for every increase of $1 in the monthly benefit. The absence of a provision restricting payment of benefits only to cases where the policyholder has been hospitalized prior to long-term care (NOPRIOR) increases the annual premium by almost $38. This is 21 percent of the mean annual premium (from Table 1)

As discussed earlier, elimination periods are like deductibles because the policyholder must directly pay the costs of long-term care during the elimination period. Longer elimination periods should therefore be associated with lower premiums. The results support this hypothesis. The parameter estimates for both ELIMPD30 and ELIMPD60 are negative, although only the coefficient for ELIMPD60 is statistically significant. Also, the parameter estimate for ELIMPD60 is greater in absolute value than the parameter estimate for ELIMPD30, as hypothesized. The parameter estimate for ELIMP60 indicates that policies with a 60-day elimination period have an annual premium which is $46 lower than policies with a 0 day elimination period.

Table 3
OLS REGRESSION RESULTS FOR LONG-TERM CARE POLICY ANALYSIS

Dependent variable = P (annual premium in dollars).

Explanatory Variable	Parameter Estimate	t Statistic	Variable Label
Intercept	-197.914	-4.069***	
AGE70	84.079	3.847***	1 if age is 70, 0 otherwise.
AGE80	255.823	11.622***	1 if age is 80, 0 otherwise.
BENEFIT	0.704	12.087***	Monthly benefit in dollars.
NOPRIOR	38.116	1.953**	1 if no prior hospitalization required, 0 if prior hospitalization required.
ELIMPD30	-26.390	-1.194	1 if elimination period is 30 days, 0 otherwise.
ELIMPD60	-46.837	-1.858*	1 if elimination period is 60 days, 0 otherwise.
BENPD48	44.507	2.136**	1 if maximum benefit period is 48 months, 0 otherwise.
BENPD96	44.143	1.703*	1 if maximum benefit period is 96 months, 0 otherwise.
GAP	-0.147	-0.083	Minimum gap between two periods of stay.
EXAMPD	2.986	1.787*	Examination period in days.

R^2=0.72
$\bar{R}^2$=0.70
Number of observations = 130
*** significant at the .01 level
** significant at the .05 level
* significant at the .10 level

The parameter estimates for both benefit period variables, BENPD48 and BENPD96, are positive as expected and statistically significant. However, the parameter estimate for BENPD96 is essentially the same as the parameter estimate for BENPD48. The results suggest that policies with 48 or 96-month benefit periods have annual premiums which are $44 more expensive than policies with a 24-month benefit period.

The parameter estimate for GAP, the maximum gap in days between two periods of stay, is negative as expected but not statistically significant. However, the fact that the mean value of GAP is very close to its minimum value (Table 1) indicates little variation in GAP among the study's sample of policies. The parameter estimate for EXAMPD, the number of days the consumer is allowed to examine the policy before making a decision, is positive as expected and statistically significant. Annual premiums are almost $3 higher for every additional day in the examina tion period.

Summary and Conclusion

This study has demonstrated that provisions of long-term care policies have a significant impact on the price (premium) of those policies. Using a sample of long-term care policies marketed in North Carolina between 1985 and 1990, this study was able to statistically "explain" 70 percent of the variation in price of the policies by policy provisions. In particular, policies marketed to older consumers, policies with larger benefits, policies with no prior hospitalization requirement, policies with shorter elimination periods, policies with longer benefit periods, and policies with longer examination periods, were found to be more costly.

These results have important implications for state insurance regulators. The results indicate that state regulations mandating certain provisions or levels of benefits of long-term care policies will not be without cost to the consumer. For example, if state regulators require that all policies have a "no prior hospitalization" provision, then prices of policies required to add that provision will rise. Such price increases would reduce the affordability of long-term care policies.

State regulators should, therefore, take these price effects into account when considering mandating provisions. This raises the question of why mandating provisions is considered by state regulators if consumers can freely consider policies with alternative characteristics in the marketplace. Rather than mandating provisions, an alternative role for state insurance regulators would be to concentrate on two efforts. First, state regulators could ensure that policies with alternative combinations of policy provisions (or characteristics) are available in the marketplace. Second, state regulators could ensure that policies and policy provisions are written in a clear and understandable way that enables the consumer to easily compare policies and prices.

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Endnotes

1. The second level of hedonic price analysis estimtes the bid prices by purchases and the offer prices by suppliers for good characteristics. This analysis requires information on features of both purchasers and suppliers in different markets. This second stage of hedonic analysis is not pursued in this paper.

2. Since the policies were offered in various years between 1985 and 1990, we also tested if the annual premium was sensitive to the year the policy was offered by including year categorical variables in equation (2). The coefficients for the year categorical variables were not statistically significant and the coefficients for the other variables did not change. These results probably reflect the fact that the annual premiums could be adjusted for inflation.

Drugs, Money and Elder Abuse

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Financial exploitation is one form of elder abuse. Using data from 1,108 cases of elder abuse, a logit model was developed to address the following. What factors are associated with the probability that financial exploitation will be alleged in an elder abuse complaint? Given that an allegation of financial exploitation is made, what factors are associated with the probability that an investigation will confirm the allegation? Substance abuse was a significant factor in both cases.

Introduction

Financial exploitation, the unauthorized and/or improper use of funds, property, or any resources of an elderly person, is one type of elder abuse. Most states have legal authority, usually resting within an Adult Protective Services (APS) agency, to investigate complaints of elder abuse. These agencies operate voluntary or mandatory reporting systems that respond to allegations, and administer treatment and prevention programs. When a report of alleged financial exploitation is received, for example, the agency opens a case file and proceeds with an investigation. The results of the investigation may indicate that there is no basis for the allegation, that the allegation has been substantiated, or that the specific allegation cannot be confirmed, but the alleged victim is found to be at-risk for maltreatment in the immediate future. In the latter two cases, the agency can choose among interventions, with the cooperation and permission of the victim. These interventions can include legal proceedings against the perpetrator, removing the victim from the exploitative situation, providing in-home services and/or financial aid to reduce the dependence of the victim upon the perpetrator, and conducting stress reduction programs for the perpetrator.

The National Aging Resource Center on Elder Abuse estimates that of approximately 2 million reported incidents of elder maltreatment in 1988, there were 400,000 substantiated cases of financial exploitation of the elderly. In almost all cases, the perpetrators were either family, friends, caregivers or acquaintances of the victim (Tatara, 1990).

In times of decreasing resources for state social welfare services, more accurate modeling of victim and perpetrator profiles can assist APS in effectively identifying the at-risk population, and improve the efficiency of both their investigation and intervention programs. Victim and perpetrator profiles have been extensively explored in the elder abuse literature. Early studies (Block and Sinnott, 1979; Lau and Kosberg, 1979; Giordano and Giordano, 1984; Hwalek, Sengstock and Lawrence, 1984) identified the typical victim as an older woman--usually in her 70s--dependent upon the perpetrator for care, and socially isolated. Stress was the most mentioned cause of abusive behavior. Perpetrators were seen as caregivers with good intentions, but whose feelings of burden and aloneness erupted in dysfunctional behaviors.

More recent studies (Kosberg, 1988; Godkin, Wolf, and Pillemer, 1989; Wolf, Godkin and Pillemer, 1986; Anetzberger, 1989; Pillemer and Finkelhor, 1989) expanded the list of victim characteristics to also include poor physical health, poor emotional health, mental impairments, low-income, and alcohol abuse. Emotional distress, mental illness and substance abuse were found to have a stronger association with perpetrator characteristics than caregiver stress. Only two studies (Wolf, et al., 1986; Pillemer and Finkelhor, 1989) determined factors that would differentiate among various types of elder maltreatment. Victims of financial exploitation tended to be

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single, had few support networks, and had problems with financial management. Perpetrators of this type of abuse did not live with the victim, had problems with alcohol, and had long-term financial problems.

Unfortunately, most of these previous studies suffer from methodological and conceptual limitations, many of which are acknowledged in the studies. The hypotheses in these studies centered on the causal influence of various risk factors for abuse and neglect. However, the statistical techniques were bivariate, using chi-square or correlation analysis to investigate the hypotheses. These techniques did not separate associations with different risk factors. Few of the samples had more than 50 observations.

It would seem that more accurate associations between type of abuse, or outcomes of investigations, and victim/perpetrator characteristics could be drawn using a logit model. The logit model applies when a process has qualitative outcomes — that is types of outcomes like physical abuse versus financial exploitation, or results of investigations, like allegation substantiated versus allegation not substantiated — rather than amounts of outcomes.

Objectives

This study addresses the following questions:

(1) Given there is at least one allegation of abuse and/or neglect made to adult protective services, what factors are associated with the probability that the allegation will be one of financial exploitation?

(2) Given that an allegation of financial exploitation is made, what factors are associated with the probability that an adult protective services investigation will have an adverse finding?

There are no comparable studies in the literature that address these questions. Nor are there comparable studies that use logit analysis or samples as large as in this study. The characteristics that make this study unique also make it very exploratory. This should be the first of many studies. As such, the analysis is deliberately biased toward leaving possible influences open to further study.

Methodology

Source of the Data and Sample

Adult Protective Services (APS) of the State of Delaware Division of Aging has a database consisting of environmental, psychosocial, physiological and health behaviors assessments of their clients. This, in combination with its monthly report forms and summary sheets, are the sources of data. Since 1984, Delaware APS has collected information from over 3,000 cases, categorizing allegations as complaints of physical abuse, neglect, sexual abuse, financial exploitation, psychological abuse, inadequate self care, and/or disruptive behavior. There are many cases of multiple allegations.

The sample comprises Delaware APS case records from 1986 to 1990. A case record has an allegation of at least one type of problem involving an adult protective services investigation. The sample was restricted to those cases in which the client's age and living arrangements were identified in the case file, and the database was reasonably complete. There were 1,108 cases included in the sample.

This study includes only clients 60 years old or older at the time the case record was opened, living outside an institutional or quasi-institutional setting. There were a total of 774 cases that met these requirements. Of these cases, 76 included allegations of financial exploitation.

The ages of all alleged victims ranged from 60 to 103. Alleged victims of financial exploitation ranged in age from 62 to 96. The mean age for both groups was 77.2 years. Compared to all alleged victims, fewer of the alleged victims of financial exploitation were married, more lived with non-relatives, and more were Black. On the whole, however, both groups shared similar demographic characteristics. See Table 1 for descriptive information.

Table 1

Characteristics of Alleged Victims of Elder Maltreatment, in Percent

	ALL ALLEGED VITCIMS	ALLEGED VICTIMS OF FINANCIAL EX-PLOITATION
Sex		
Male	28.6	31.6
Female	71.0	68.4
Race		
White	69.4	58.2
Black	28.1	36.7
Living Arrangement		
Lives Alone	40.0	38.0
Lives w/Relative	50.6	44.3
Lives w/Non-Rel.	9.4	17.7
Marital Status		
Married	18.2	11.4
Widowed	58.1	60.8
Other (specified)	29.1	22.8
Age		
60-69	22.0	19.0
70-79	35.2	41.8
80-89	34.6	35.9
90-99	7.9	3.8
100+	.3	0.0

Levels of Analysis

The study examined factors associated with financial exploitation at two levels. These levels correspond to information in the APS case files.

The first level. The first level of analysis used the entire sample of APS cases (N=774). The question analyzed was:

Given there is at least one allegation, what factors are associated with the probability an allegation of financial exploitation is made?

Whether or not the allegation is financial exploitation has a "Yes" or "No" answer, so the dependent variable in the analysis is binary.

The second level. The second level addresses the question:

Given that an allegation of financial exploitation is made, what factors are associated with the probability the APS investigation will have an adverse finding?

Adverse findings include substantiating financial exploitation (confirming that the alleged events actually occurred), or not substantiating the allegation but finding the client to be at risk for exploitation. The alternative to an adverse finding is no evidence of exploitation or risk of exploitation. The sample for level two is 76 observations.

The meaning of adverse findings. On one hand, the analyst can take the question of whether the APS investigation had an adverse finding as a "Yes" or "No" question. "Yes" would include substantiation or at risk. Either of these is adverse compared to the alternative — not substantiated and not found at risk. The analysis was done with this binary interpretation of the dependent variable, using binary logit.

On the other hand, the analyst can treat the investigation outcomes as being ordered. No substantiation and not at risk is not adverse. At risk is adverse. Substantiation is most adverse. The situation has gone beyond risky to actual abuse or neglect. In this interpretation, there are three possible outcomes, each more adverse than the last. The analysis also was done with this ordered format for the dependent variable, using ordered logit.

The choice between binary or ordered logit depends on what the analyst is willing to assume about the quality of the outcome data and the interpretation of "at risk" versus "substantiated." The ordered analysis relies on clear, consistent differentiation between the adverse categories by the APS investigator. Situations judged at risk must be less severe than those substantiated. The distinction has to be consistent among APS investigators and among cases for any investigator. These conditions are untested, and probably hard to test. The ordered analysis is necessarily tentative, since it assumes the dependent variable distinguishes degrees of severity. It is possible the difference between a situation at risk and one with substantiated abuse or neglect is random timing of the investigation's start. Investigations started before a situation substantially deteriorates may lead to an assessment of risk. Those started later may lead to substantiation. When the investigation starts may be mostly random. In this case, it would be more appropriate to treat the outcome as binary, ie. adverse or not adverse. The difference between adverse categories would be random.

There is no information in the literature or in the

APS files on when investigations start relative to some threshold of behavior. Such information is impossible, since it presumes knowledge of behavior prior to a complaint or investigation. Likewise, there is no information on consistency of procedure or assessment of client situations for a single investigator or across investigators. A priori there is no basis for preferring the binary or ordered logit.

Explanatory Variables

Over 100 variables were coded from each case file. With this many, selection of variables to be used in the logit equations had to be careful. Because the questions investigated in this study have not previously been addressed, there is no exact body of literature. For guidance, we turned to a body of related literature, previously cited in this paper, that does examine victim profiles and risk factors for maltreatment, based upon case worker files. This is the available literature that comes closest to this research. Generally, there is strong agreement of results among these studies. As a beginning point, we included those variables that most often identify, through APS files, elderly victims of maltreatment (age, female gender, strength of family system, client's mental health, client's physical health, substance abuse, and low-income).

There are several instances where the data are most naturally categorical. For instance, the APS client's family system can be categorized as problematic, neutral or supportive. Ideally, this information would be captured using dummy variables for categories. Working against this format, however, is the large number of variables created with an accompanying loss of degrees of freedom, increasing model complexity, increasing sparseness of cells, and lower power of a test of a null hypothesis of no association. For several types of data in this study, a single variable was used with equal increments between categories. For instance, family system was scored zero for problematic, one for neutral and two for supportive. The single variable with equal increments implies that differences between categories are equally salient for the outcome. This implication probably does not hold exactly. The analysis used the single variable for brevity and ease of interpretation and for fewer variables in the smaller sample at the second level of analysis. If sample size permitted, a full dummy variable specification would be preferred for its flexibility.

Some combination of the following variables are used in each logit equation. A rationale for inclusion is given for the two variables (Southern and Nonwhite) not previously identified from the literature.

Southern- a dummy variable that equals zero if the case file is from the northern county of Delaware. The northern county has a relatively dense population and includes the primary administrative APS office. The variable equals one for the other two, southern counties of the state, which are less densely populated, more rural, has fewer available social services, and includes an APS office that is much smaller and less closely supervised. This variable may represent effects of population density, transportation access and APS behavior on reporting and outcomes.

Age- age of the APS client.

Female- a dummy variable that equals one if the client is female and zero if the client is male.

Nonwhite- a dummy variable that equals one if the APS investigator listed the client as any classification other than Caucasian. A finer classification would have given few observations in the specific nonwhite categories. Previous studies (Bell, Schmidt, and Miller, 1981) have found that non-white elderly, compared to white elderly, are more likely to be judged incapable of handling their own financial affairs in conservatorship legal proceedings. This variable may represent effects of susceptibility to financial exploitation and APS behavior on reporting and outcomes.

Family System- This variable gives a three-level assessment of functioning in the client's family. A value of zero means the APS file showed a problem in the family system. A value of one was neutral, and the value two represents a positive statement by the APS investigator. This variable relates directly with the assessed strength of family support for the client.

Client Mental Health- This variable relates inversely to an assessment of the client's mental health. The values are zero if there is no indication of a mental health problem and one if there is mention of a problem.

Client Physical Health- This variable relates directly with the client's physical health as documented in the APS file. The values are 0=file shows major physical impairment of the client, 1=file shows a minor impairment and 2=file shows no physical impairment of the client.

Number of Substance Abuses- The total number of drug or alcohol abuses mentioned in the APS file for the client, the alleged perpetrator and any other significant people. The minimum value is zero, for no abuses. The maximum value is six for abuse of both types of substances by the client, the alleged perpetrator and another significant individual.

Client Substance Abuse- This variable and the following one separate substance abuse by the client from substance abuse by someone in the client's environment. This variable has value zero if the APS file makes no mention of substance abuse by the client. If the file mentions substance abuse (drugs or alcohol) by the client, this variable takes a value of one.

Substance Abuse by Others- This variable relates directly to substance abuse by people in the client's environment. The values are: 0=no mention of substance abuse by the alleged perpetrator or any other significant individual and 1=abuse of at least one substance by at least one individual, not the client.

Low Income- This variable takes the value one to identify client households where income is below the official poverty line or where the APS investigator indicates a problem with finances or both. For client households where neither indicator of low income pertains, the variable has a value of zero.

Results

In an exploratory study like this one, concluding that an association is statistically significant will lead only to further study. There is little problem from erroneously concluding an association is significant. Such an error will only lead to some effort being spent to find the association is not what it seemed. However, overlooking an association that is significant could lead future research, policy and program development also to overlook that association. This is a more serious error.

Deciding what level of statistical significance to use means balancing the consequences of the two possible errors (Wonnacott and Wonnacott, 1972; Blake, 1979). It is important at this stage not to rule out associations that show potential. A liberal significance level of 20 percent (two-tailed test) is used to identify statistically significant results. The tables also indicate significance at a more conventional 5% and 10% (two-tailed test). Readers who adhere to more conventional significance levels can disregard the coefficients that are not significant at 10%. Other readers may wish to consider, as we did, the consequences of dismissing a true association on the basis of one exploratory study versus the consequences of including a hypothesis in other studies that turns out to be false[1].

Allegations of Financial Exploitation: First Level of Analysis

Table 2 gives the results for the first level of analysis concerning financial exploitation. The question addressed in Table 2 is, "Given there are one or more allegations, what factors are associated with the probability there will be an allegation of financial exploitation?"

The variables listed down the first column are selected as candidates for explaining the probability of alleged financial exploitation. The variables included in the two equations described in columns two and three are the same with the following exception. The equation represented in the second column contains only one substance abuse variable (the number of substance abuses in the client's environment). The equation in the third column omits that variable, and includes two other substance abuse variables that identify the substance abuser (substance abuse by the client and substance abuse by others in the client's environment).

The first statistical question is whether there is evidence that an association exists between the probability of an allegation and the collection of explanatory variables, taken as a whole.

The significance level of both equations at the bottom of Table 2 is essentially zero. There is virtually no probability the coefficient estimates would arise from a population in which all the "true" coefficients were zero. Overall, the relationships are statistically significant.

For coefficients of individual variables, tests of significance are made with a two-sided t-statistic. The significance level gives the probability that a coefficient estimate as far from zero as the one reported would happen when the true coefficient is zero. The results of both equations are similar. Considering the variables included in both equations, complaints of financial exploitation are more likely if the potential clients are non-white, have mental health problems, are in better physical health, and live in low-income households. Geographic location, age of the client, sex of the client and strength of the family system demonstrate no statistical significance in either equation.

All three substance abuse variables are significant. Substance abuse in the client's environment, included in the equation in column two, increases the likelihood of an allegation of financial exploitation. When the substance abusers are identified, in the third column, substance abuse by others shows a much stronger level of significance than does substance abuse by the client.

Investigation Outcomes: Second Level of Analysis

Significant factors for whether a type of complaint is brought are not necessarily significant in whether the APS investigation has an adverse outcome; ie. the complaint is substantiated ,or the complaint is not bully substantiated but the client is found to be at risk. Table 3 is at ther second level of analysis and the second level of sample. There are 76 observations in the sample for Table 3, corresponding to the number of APS cases in which there was an allegation of financial exploitation. The questions addressed in these estimates is, "Given an allegation of financial exploitation is made, what factors are associated with the probability the APS investigation will have an adverse finding?" It is likely to be more difficult to find significant results at this level of analysis, inasmuch as investigation results are subject to many influences that may not be measurable or systematic to the analyst.

Columns 2 and 3 use binary analysis, treating the findings of the investigation as adverse or not. For an adverse finding, the complaint is substantiated or the client is found to be "at-risk." Column 2 uses the single variable for substance abuse. Column 3 differentiates between the clinet's near environment.

Columns 4 and 5 use ordered logit, discriminating among 0=no adverse finding, 1=at risk but allegation unsubstantiated and 2= allegation substantiated. Column 4 uses a single variable for the total of all substance abuses. The equation in column 5 has separate variables for substance abuse by the client and substance abuse by another individual close to the client.

Table 2

Multivariate Logit Analysis of Factors Associated with Probability of Alleged Financial Exploitation: Binary Analysis (N=774)

Independent Variable	Equation with Single Substance Abuse Variable Coefficient (t-ratio)	Equation with Separate Substance Abuse Variables Coefficient (t-ratio)
Constant	-4.192***	-4.372***
	(-3.589)	(-3.640)
Southern	0.094	0.094
	(.919)	(.903)
Age	0.010	0.012
	(.757)	(.865)
Female	-0.018	-0.007
	(-.124)	(-.044)
Nonwhite	0.583***	0.563***
	(2.327)	(2.239)
Family System	0.066	0.070
	(.279)	(.295)
Client Mental Health	0.598***	0.584***
	(2.467)	(2.395)
Client Physical Health	0.361***	0.364***
	(2.298)	(2.314)
# Substance Abuses	0.249***	
	(1.976)	
Client Substance Abuse		0.423*
		(1.302)
Substance Abuse-Others		0.547**
		(1.737)
Low Income	0.426**	0.410**
	(1.713)	(1.646)
Significance level-model	0.002***	0.002***

*** Significant at .05 level or less
** Significant at .10 level
* Significant at .20 level

TABLE NUMBER 3

Multivariate Logit Analysis of Factors Associated with Probability of Adverse Outcome in Case of Alleged Financial Exploitation (N=76)

	Binary Analysis		Ordered Analysis	
	Equation with:		Equation with:	
	Single Substance Abuse Variable	Separate Substance Abuse Variables	Single Substance Abuse Variable	Separate Substance Abuse Variables
Independent Variables	Coefficient (t-ratio)	Coefficient (t-ratio)	Coefficient (t-ratio)	Coefficient (t-ratio)
Constant	0.202 (.071)	-0.019 (-.007)	0.345 (.136)	0.482 (.193)
Southern	-0.490 (-.813)	-.527 (-.883)	-0.283 (-.519)	-0.342 (-.613)
Age	0.021 (.586)	0.022 (.601)	0.009 (.249)	0.004 (.134)
Female	0.360 (.610)	0.498 (.838)	0.667 (1.142)	0.745 (1.266)
Nonwhite	-1.383 *** (-2.506)	-1.345 *** (-2.473)	-1.058 *** (-2.044)	-0.981 *** (-1.938)
Family System	-0.861 * (-1.552)	-0.670 (-1.215)	-0.927 ** (-1.876)	-0.800 * (-1.582)
Client Mental Health	-0.473 (.836)	-0.514 (-.920)	-0.166 (-.302)	-0.183 (-.337)
Client Physical Health	-0.465 (-1.120)	-0.421 (-.995)	-0.383 (-.976)	-0.313 (-.798)
# Substance Abuses	0.642 ** (1.766)		0.795 ** (1.786)	
Client Substance Abuse		0.888 (1.165)		0.648 (.815)
Substance Abuse-Others		0.377 (.549)		0.893 * (1.343)
Low Income	-0.664 (-1.164)	-0.601 (-1.068)	-0.441 (-.845)	-0.319 (-.597)
Significance level-model	0.067 **	0.189 *	0.056 **	0.242

*** Significant at .05 level or less
** Significant at .10 level
* Significant at .20 level

With the exception of the estimated logit equation in column 5, three of the four logit models on Table 3 are significant. In these models, the estimates have found a statistically significant association between an adverse outcome and the collection of variables.

The results for variables are very similar in all models. All equations indicate that investigations are less likely to result in adverse findings when the client is non-white. In three of the four equations, the coefficients for family system indicate that adverse findings are more likely for those with weak family systems. Those equations that include the variable for number of substance abuses show a statistically significant association between adverse findings and a greater number of substance abuses in the client's environment. The equations with separate substance abuse variables suggest that the allegation of financial exploitation is more likely to be confirmed when either the perpetrator or another important person close to the client is the substance abuser. The coefficients for substance abuse by the client are statistically insignificant.

Conclusions

The following indicates those factors that are significantly associated with a higher probability that an allegation of financial exploitation will be reported to Adult Protective Services: there are others in the client's environment who are substance abusers; there are a greater number of substance abuses in the client's environment; client is a substance abuser; client is non-white; client is in poorer mental health; client is in better physical health; and client is low income. There are no variables significantly associated with a lower probability that an allegation will be made.

Those factors found to be significant for predicting a type of allegation were not necessarily predictive of whether the complaint was justified, ie. the client found to be at risk or actually victimized. Of the variables listed in the preceding paragraph, only substance abuse, in three of the four estimates in Table 3, also shows a statistically significant association with a higher probability of an investigation yielding an adverse outcome. All estimates in Table 3 show a statistically significant association between the client being non-white and a lower probability that the complaint will have an adverse finding. None of the other variables statistically associated with an allegation of financial abuse are statistically associated with the investigation's outcome. On the other hand, while strength of the family system was not significant in whether there would be a financial exploitation complaint, three of the four estimates in Table 3 find that clients with weak family systems who do allege financial exploitation are more likely to have those complaints substantiated.

This study alone is not sufficient for definitive findings that direct policy or program actions. The results from further research to confirm or dispute these preliminary findings, however, may have important implications for professional practice. Currently, adult protective services in every state spends scarce resources on programs that seek to identify potentially abusive families and vulnerable elders for early intervention efforts. Each state also has a federal mandate, effective 1991, to establish multi-agency prevention programs for targeting "high-risk" populations. Effective intervention and treatment strategies on state-wide levels have been a high priority of U.S. Administration on Aging grants programs.

The great majority of these program efforts are based on the victim profiles cited in earlier elder abuse studies. These characteristics differ from our findings to a large extent. Unlike the majority of the current literature, we found advanced age, gender, and geographic location not statistically significantly associated with either initial allegations or substantiation of complaints. We also found that the majority of other characteristics cited in the literature (poor physical health, poor emotional health, low-income) were associated with reporting behavior but not with outcome. Our findings concur with the literature concerning substance abuse and family supports. None of the current literature considers the importance of the client's race in determining not only vulnerability (ie. possibility of an allegation) but victimization (ie. outcome of the investigation).

Accurate modeling, based not only on allegations but on investigation outcomes, is vital if adult protective services, and ancillary agencies such as state departments of consumer affairs that also receive complaints of financial exploitation, are to effectively identify the at-risk population and improve the efficiency of their investigation and intervention programs. We have some initial indication that the accuracy of the profile models currently used in social welfare practice can be improved. Further refinement of our logit equations, keeping those variables exhibiting some potential association, omitting those variables drawn from the literature that were not statistically significant and substituting others from the literature that were not initially included (ex. mental illness, marital status, client living arrangement) will be a second step towards better early identification of elders at-risk for or victimized by financial exploitation.

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Endnotes

1. In making this decision, we are guided by thoughts like those of Maddala (1977): "At what level do we consider that an improbable event has occurred? When the probability is 5, 10 or 20 percent? This is quite arbitrary, and...it cannot be decided without an explicit consideration of the losses involved in each decision (p. 45)." Bradley (1976), in discussing appropriate levels of significance notes: "The decision-maker, of course, need not be a slave to convent and he may select the value that affords the degree of protection against a Type I Error that he feels is appropriate his needs (p. 262)."

Developing Curricula in Consumer Affairs

Richard Widdows, Purdue University[1]

Many institutions of higher education which offer degrees in consumer economics or consumer studies are introducing changes into their programs to reflect the growth of the consumer affairs profession. The changes must take into account the special needs of the profession as regards skill requirements, while giving students an insight into how to deal simultaneously with end consumers and "internal" business customers.

Demand for Consumer Affairs Degrees

The 1992 edition of the Membership Directory of the Society of Consumer Affairs Professionals lists 2,656 members representing 1,228 Companies (SOCAP, 1992). Twenty years ago, SOCAP did not exist, and neither did the jobs held by the 2,656.

The growth of consumer affairs in the private sector came at a time when the emphasis on consumer protection in the public sector was diminishing. Since, initially at least, the skill requirements for the two kinds of careers were similar, it was natural that faculty and students in consumer economics or consumer studies degree programs would expect the new profession to be an outlet for their graduates. Supply would create its own demand.

In reality, the new profession did not take up the slack in the consumer studies graduate market. In the early days, this may have been due to an attitude prevalent at the time that special skills were not essential for the profession. This attitude was summarized in the satirical statement, "Anyone who can push a shopping cart can be a consumer affairs manager." I would also contend that involved faculty were not anxious to reach out to the new profession. Attendance of ACCI members at SOCAP meetings was rare, and few initiatives were taken on either side to bridge the gap between the two organizations. A major exception to this was the internship program offered jointly by ACCI and SOCAP, which until recently was administered through Oklahoma State University.

There have been signs of late of a recognition of mutual interest between ACCI and SOCAP. The consumer affairs profession has developed to a point where specific skills are required which higher education institutions are in a unique position to offer. Individual consumer studies programs have reached out to the SOCAP members in their market area, and there are now six Student Chapters of SOCAP. The time for serious discussion of curriculum needs of the profession is upon us.

Supply Responses

The purpose of this session is to discuss some of the supply responses that have been made in higher education curricula to meet the emerging needs of the profession. We will look at three aspects of curriculum development.

A major function of the consumer affairs professional is communication with customers. Communication is an art, which requires hands-on experience for full development of skills. As such, internships have been a feature of most programs which reach out to the profession. Karen Holden will describe the successful program at the University of Wisconsin-Madison.

Behind the take-off of the profession has been technological development in computers and communications which allow data from consumer communications to be trapped and analyzed (Anton, Bennett and Widdows, 1991). Indeed, the prime function of the profession is now being characterized as transforming consumer data into actionable information for management. Karla Hay will report on a new course at Purdue University

[1] Professor, Consumer Economics

which simulates the answer center environment and involves students directly in consumer information management.

A tenet of consumer affairs is that if you want to find out what your customer want, ask them. John Brady will report on a survey of SOCAP members which concerned the kind of skills they look for when they hire college graduates. The information supplements studies by ACCI members of the characteristics deemed desirable in consumer affairs professionals (Maynes 1988, Garman 1990).

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Developing an Internship Program

Robin A. Douthitt, University of Wisconsin, Madison[1]

This discussion pertains to consumer affairs internships in the private sector and specific University of Wisconsin, Madison experience.

Successful internship programs are ones where universities build a long term relationship of trust and cooperation with a sponsor. Although our focus today is on private sector internships, initially establishing unpaid placements with government agencies can serve as an excellent foundation on which to build an internship program. At the University of Wisconsin, Madison, the consumer affairs internship program began in 1981. It was (and is) an elective experience and most initial opportunities were unpaid with government agencies. Over time, the most successful unpaid relationships were ones where sponsors included student interns in their every day operations. This level of commitment helps ensure a positive student internship experience and a steady flow of highly qualified applicants.

Some of the least successful relationships, either paid or unpaid, were special initiatives where project completion was not central to the sponsor's operation. However, our experience is that paid interns seldom suffer from lack of sponsor attention. Thus, we now only accept new sponsors who will make long term commitments for paid internships. This policy has also opened the self-supporting student applicant pool, a group who previously could not afford to spend up to 15 hours per week at an unpaid position.

Internships provide students a unique opportunity to apply theories and learn skills prior to graduation. Feedback from alumni surveyed 6 months after graduation indicates that the internship experience gave them an edge in early and field specific job placement. The internship experience can also provide career exploration, teaching students before graduation whether or not they are suited to a field.

From the university's perspective, although consumer affairs programs are not established to teach specific skills, it is essential that we keep our finger on the pulse of business to ensure that we are preparing students with a relevant knowledge base. Internship programs provide opportunities for faculty to interact with business professionals and thus better understand business needs. Internships can also facilitate joint research projects. At Wisconsin, we have developed such a joint endeavor where, with the assistance of an undergraduate intern, we jointly with The Haney Group, conduct annual surveys to identify emerging consumer issues.

A primary consideration to be weighed when developing an internship program is the necessary resource commitment. One can easily underestimate the resources necessary for program success. For programs just beginning, faculty course release and a permanent administrative assistant with whom long term sponsor relationships can be developed is necessary. This is especially critical if faculty plan to rotate among themselves, responsibility for the internship program.

As to the future of these ventures, as we grow in our understanding of what we and our students have to offer businesses, so does our responsibility to develop new internship opportunities. We need to better educate ourselves in international consumer affairs and develop student opportunities for international internship experiences. I further believe that business's consumer research needs can be highly consistent with our graduate student educational objectives and as such more advanced level internships are needed.

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CRIS in Class: Purdue's Experiment with Teaching Consumer Response and Information Systems in a Computer Laboratory.

Karla A. Hay, Purdue University

The GRAPEVINE was developed to give the Consumer Affairs' students in the Department of Consumer Science and Retailing at Purdue University an opportunity to operate a Consumer Response System. The "hotline" gave the students "hands-on" experience with developing, operating and maintaining a consumer response system.

For the past few years, educators and executives have been emphasizing customer satisfaction to their students and their employees. One method of increasing customer satisfaction is by listening to their customers. Ergo, the development of 800 hotlines.

With 800 numbers consumers were given a chance to voice their opinions about products and services. At the same time, companies were becoming overloaded with all the information they received. TARP (Technical Assistance Research Programs) Information Systems was one of the leading computer software companies that developed a system that would trap the information companies were receiving. With this information kept in a data base companies were now able to use this information to better analyze their market and promote their product. After some refinement CRIS was developed. CRIS (Consumer Response Information System) was designed to be used by consumer affairs departments to simultaneously trap incoming communications from the customer.

In the Department of Consumer Sciences and Retailing at Purdue University, Dr. Widdows sought a 800 system that could be used in a college setting. A course was developed to take advantage of the technology available and also give the students experience with corporate America. Thus CSR 391W - Computerized Consumer Response and Information Systems course was developed.

Course Objective

To involve the students in the development and administration of a computerized consumer response and information system for the Purdue community.

Course Goals

1) To develop by mid-April a hotline for the CSR department to allow students to air concerns, inquiries, comments and complaints.

2) To implement a tracking system that will provide an identifiable focused source of information for the CSR students.

3) To promote and enhance student involvement and satisfaction within the CSR department and university.

4) To train consumer affairs students in all aspects of consumer information handling.

5) To offer the student operators certification in the TARP response system.

6) To establish a core system for the Consumer Science and Retailing department and the eventually expand the system throughout the university.

Class Structure

The class was structured to replicate a corporate setting. Each student was required to sign up for at least 2 of the departments within the company The GRAPEVINE. The four departments were 1) Research Department; 2) Programming Department; 3) Finance Department; and 4) Marketing Department. The department heads were required to report to the Vice President (professor) and the Executive Assistant to the Vice President (teaching assistant).

Research Department

The Research Department consisted of three areas Focus Group, Survey Team, and the Interview Team. Each area was responsible for gathering information from the target market.

The Focus Group solicited opinions as to the usefulness of the program from other students who would be benefiting from the system.

The Survey Team developed categories and subcategories to be used as the basis for the coding system.

The Interview Team solicited opinions of the faculty as to their concerns about the system and the problems the may see develop.

Programming Department

The principle function of the programming Department was to finalize the codes groups and subcategories of all problems that could occur.

Finance Department

The Finance department was responsible for developing the budgets for the implementation and maintenance of a system of this magnitude.

Marketing Department

The Marketing department was responsible for developing a marketing plan to promote the system to the target market.

What Business Consumer Affairs Professionals Want in Graduates

John T. Brady, University of Utah[1]

As institutions of higher education train students for careers in consumer affairs, it is necessary to identify those competencies and traits most desired by the profession. This study reports the results of a Purdue University survey of business consumer affairs professionals which attempted to identify those competencies.

Defining the Consumer Affairs Major

In the best two decades, colleges and universities began offering degree programs in consumer affairs, principally within home economics programs (Burton & Bower, 1980).

The competencies required of consumer affairs graduates are often were ill-defined or in dispute (Goebel & Miller, 1983; Christner, 1988; Goldsmith & Vogel, 1990). For an educator in consumer affairs, information concerning the needs of the profession is critical. As Christner (1988 p. 55) observed, "For most of us (educators), employers are the final arbiters with regard to career paths..."

Are educators in consumer affairs programs providing students with the skills required by potential employers in the field? Findings from a Society of Consumer Affairs Professionals (Goldsmith & Vogel, 1990) survey indicated communications and business administration would be the most advantageous majors for those intending to begin a career in business consumer affairs. In order to better meet the needs of the profession, Goldsmith and Vogel (1990) and Garman (1990) suggest greater information flows between academia and the profession are needed.

Survey Results

A survey of firms represented in the Society of Consumer Affairs Professionals was conducted in the summer of 1991 by the faculty in the Consumer Affairs program at Purdue University. One hundred and fifty-five consumer affairs professionals in different firms responded to the survey. A majority of the respondents reported department functions included complaint resolution, consumer education, issue tracking, hot line management, and public relations.

As with Goldsmith and Vogel (1990), the consumer affairs professions surveyed identified communications as the most important area of study for new employees in consumer affairs. Consumer behavior and business writing were other areas of study also identified as important. Applied areas of study tended to be cited as the least important courses for a new consumer affairs employee.

The traits identified as most important in an employee in a consumer affairs department were interpersonal skills, oral communications ability, and the ability to plan. The traits which were identified as least important included social involvement and goal orientation.

Forty-five percent of the responding professionals believed that employment opportunities within their department would be growing. Most of the growth, however, was expected in support and technical positions with less in the professional or managerial level.

Overall, respondents were optimistic about the future of consumer affairs within their companies. Over half expected increased support from management, better relations with other departments, improved status for consumer affairs, and better relations with consumers into the 1990s.

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Journal Compendium in Family and Consumer Economics

Mark Lino, U.S. Department of Agriculture[1]

Journal compendiums help researchers better prepare their studies for publication. Because no compendium existed specifically for researchers in the field of family and consumer economics, the Family Economics Research Group of the U.S. Department of Agriculture and the NCR-52 Family Economics Committee produced such a compendium.

The NCR-52 Family Economics Committee identified 131 journals relevant to family and consumer economics. The Family Economics Research Group developed and pretested a mail questionnaire that was sent to the editors of each journal in July of 1991. A letter reminding editors to return the questionnaire was mailed a few weeks later. A second mail questionnaire was sent to nonresponding journal editors in September of 1991.

Responses were received from 92 journal editors (a response rate of 70%). Of these, 82 completed the questionnaire, 4 indicated their journal did not accept outside manuscripts, 3 believed the journal covered topics not in the realm of family and consumer economics, and 3 stated the journal had ceased publication either temporarily or permanently.

The following information was collected from each journal:

Sponsor: Journal's affiliation, usually a professional association or university.

Appropriate topics: Consumer education, consumer/ family economics, consumer/family finance, consumer/ family law, consumer/family policy, consumer/family psychology, consumer/family sociology, financial counseling/planning, or other related topics.

Primary audience: Academic, practitioner, government, or other category.

Frequency of issue: Number of issues each year.

Copies per issue: Paid and nonpaid subscriptions.

Type of review: Double blind (authors and reviewers unknown to each other), single blind (authors known to reviewers or reviewers known to authors), open (authors and reviewers known to each other), or editorial (review by in-house editors only).

Acceptance rate: Percent of manuscripts submitted in 1990 that were eventually published or are very likely to be published.

Average review time: Amount of time between when a journal first receives a manuscript and when the authors are notified of the results of the first review.

Number of reviewers: Number of people, excluding in-house editors, who review a submitted manuscript.

Percentage of invited articles: Percent of articles published in 1990 that were requested specifically by the editor or were from an annual conference or meeting.

Minimum page length and preferred range of pages: Length of submitted manuscript, double spaced, including tables, figures, references, and appendices.

Page charge to publish manuscript: If there is such a charge, the amount. Many journals also noted a submission fee.

Manuscript guidelines: Where to obtain guidelines-- the journal, editor, or elsewhere. Many journals

[1] Exonomist, Family Economics Research Group

noted a particular style guideline.

Other information: Editors were asked to give any other information that would help researchers interested in publishing in their journal.

Bound and diskette copies of the compendium will be sent to the deans of Colleges of Human Ecology, Home Economics, or Agriculture in the coming weeks. Researchers are free to copy the diskette. If a person is not able to obtain a copy of the compendium at their institution, they may contact the Family Economics Research Group (301-436-8461).

What Consumer Economics Textbooks Say About Service Contracts

Norleen M. Ackerman, Utah State University[1]

Substantial effort is devoted to marketing service contracts (SCs) to consumers. However, there is evidence that SCs may not be a good buy for consumers. Education could assist consumers in understanding and evaluating SCs. The purpose of the study was to compare the SC information in college and high school consumer economics textbooks using content analysis.

The sample was all 5 college textbooks in consumer economics published in 1988-1991, and 5 available high school textbooks from the same period. The college textbooks, with citation numbers used hereafter, were: 1=Garman 1991, 2=Herrmann 1988, 3=Lee & Zelenak 1990, 4=Leet & Driggers 1990, and 5=Miller 1990. The high school textbooks and citation numbers were: 6=Bonnice & Bannister 1990, 7=Campbell 1988, 8=Green 1988, 9=Ryan 1990, and 10=Wyllie, Lang, Green, & Warmke 1988. Textbooks were classified as college or high school level based on authors' preface statements. Index terms searched were SCs and extended warranties/contracts. If not found, the terms warranties, repairs, and services, were searched in the index and the listed pages. The quantity of SC information was measured in textbook lines; columns were converted to full line equivalents.

Findings

All 5 college textbooks contained SC information, varying from 3 to 93 lines. Four texts (1,3,4,5) indexed SCs; the 5th text (2) included SC information under automotive repairs. One text (1) added that SCs were commonly called "extended warranties" although they were not warranties and explained how SCs differed from warranties. Four college textbooks (1,2,4,5) defined SCs. Defini- tions varied and had some inconsistencies, partly because they were about different products (major appliances, electronic equipment and automobiles). One text (1) added that SCs are a form of insur- ance. Three texts (2,4,5) stated SCs were avail- able at product purchase; two texts (1,4) stated they were available when the warranty expired. All college texts commented on sellers' profits from SCs or the high price of SCs in comparison to average repair costs. One text (2) suggested that those making very heavy use of the purchased product might find SCs a good buy. One text (4) suggested purchasing a SC after one year of ownership if the product was a "lemon". Two texts (2,4) suggested an alternative to SCs: add money monthly to a repair fund for use if needed. Three texts (1,2,4) suggested purchase criteria.

Four high school texts (7,8,9,10) contained 12 to 20 lines of SC information; the other text (6) did not mention SCs. Three texts indexed SCs (7,8) or extended SCs (9); the remaining text in- dexed warranties, including SC information there. One text (10) used the term extended service contract or warranty and 1 text (9) most frequently used the term extended warranty. One text (10) distinguished between warranties and extended SCs. Four textbooks (7,8,9,10) defined SCs. One text (8) added that SCs were like insurance policies. One text (8) reported the tendency of SCs to be overpriced, briefly reporting findings from the MIT Center for Policy Alternatives. Two texts suggested the value of SCs to consumers was peace of mind (10) or repair insurance (8). Selection criteria were listed by 2 texts (7,10).

Discussion and Conclusions

Most textbooks contain SC information. College texts generally provide more information. The preferred term is SCs, but variance in terminology may not be resolved soon. The FTC and consumer educators generally prefer the term SCs; sellers often use the term extended warranty. SC definitions are somewhat inconsistant as to coverage and contract time period. Conflicting

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Home Economics & Consumer Education

information may leave false impressions of the protection provided. All college texts and one high school text evaluated the cost effectiveness of SCs. Authors may be describing SC provisions inconsistently because more complete information is not available. Further research on the usual terms and cost effectiveness of SCs is needed.

Children and Consumer Decision Making A La Carte

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A significant body of research exists documenting children's cognitive strategies as a determinant of consumer socialization (Carlson & Grossbart, 1988; John & Whitney, 1986; Peracchio, 1992). An interesting developmental component is the holistic view of children's scripting processes as they become potential participants in the marketplace. Learning a script about shopping requires variable levels of adult involvement as opportunities for modeling, behavior approximation, and practice.

Methodology and Sample Description

Data were collected from a grocery store where the retailer provided down-sized models of wire shopping carts for children to use. A total of 139 unobtrusive in-store observations of children aged 2-9 were made. The data were collected with consideration to demographics, method/process of item selection, check-out and payment procedures, adherence to prescribed guidelines for proper cart behavior, and parent/child interaction.

Findings and Discussion

Mothers provided more direction than fathers in terms of item selection and in-store behavior. Mothers were also more likely than fathers to engage in higher levels of parent-child interaction. There was a strong positive relationship between length of shopping trip and degree of parent-child interaction. Mothers shopped with lists more than fathers, and were more apt to share the list with female children who, on average, demonstrated a higher level of involvement in the shopping process. Most children were not highly involved/included in the check-out procedure, but male children were more likely than female children to be allowed to handle money in the exchange process. Children who shopped with their mothers were less likely to abandon their carts than those who shopped with their fathers.

Children who had used the carts before were generally more well-behaved in terms of cart usage, exhibited higher levels of involvement in the shopping experience, interacted more with their parents regarding the shopping process, and thus tended to model adult shopping behavior more so than the less experienced cart users. It is yet unclear whether parents perceived the carts to be a teaching tool; children who had prior experience with the carts did not treat them as toys, but rather as props to aid in modeling their parents' shopping behavior.

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Adoption of Financial Planning Practices by Midlife and Older Women

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In 1987 the American Association of Retired Persons initiated the Women's Financial Information Program (WFIP) for midlife and older women. A major objective of the WFIP is to enable participants to adopt financial planning practices that can help them gain control over their lives.

Methodology

To assess WFIP effectiveness, a six-page followup survey was mailed to a stratified sample of 1547 participants of programs held nationwide from September 1989 to May 1990. Useable questionnaires were returned by 578 participants, a 37% response rate.

Findings

The survey listed 28 financial practices corresponding to the concepts covered during the seven week WFIP series. Respondents were asked if they had adopted or planned to adopt a practice as a result of series attendance. They also indicated whether a practice had been adopted before series attendance or whether they were in the process of adoption. The proportion adopting a particular practice ranged from 10% for using strategies to reduce taxable income to 44% for developing or updating a net worth statement.

Respondents indicated that before WFIP attendance many had adopted the 13 basic financial planning practices covered in the first three sessions. These practices include budgeting and paying bills. Substantial proportions, however, had adopted or planned to adopt these practices as a result of series attendance.

Before WFIP attendance 29% of the respondents had determined retirement and/or future income needs and how to meet them; about 16% had adopted the practice and 23% were now doing so. Before WFIP attendance 25% had set up or reviewed an investment plan while 23% had adopted the practice and 14% were now doing so. An additional 25% were planning to adopt each practice. Many respondents had done some estate planning before series attendance which may explain why only 13% had drafted or revised a will and only 18% had set up or reviewed an (existing) estate plan. About a third were planning to adopt each practice.

Conclusions

Findings indicated that WFIP participation had motivated respondents to adopt financial planning practices. While encouraging, the substantial proportions still planning to adopt practices related to retirement planning, investments and estate planning is of concern. This is because it could mean that some respondents were using intentions as a way to put off long range financial planning. Even if these respondents eventually adopt intended practices, the fact that nearly three fourths are over 55 makes any delay hazardous to future financial security.

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Financial Freeway:
A Financial Management Program for the High School

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SITUATION

"FINANCIAL FREEWAY," was developed by Nevada Cooperative Extension in response to a problem experienced by a local bank. The bank agreed to provide funding which enabled Cooperative Extension Professionals to develop a curriculum, produce teaching materials, and hire Extension Associates to teach a week-long financial literacy program in the high schools in Clark County. **"FINANCIAL FREEWAY"** was presented as a portion of the curriculum in nine high schools, in twelve different courses, and included students in grades ten through twelve.

The Program

The objectives of the program were to enable participants to: 1. compare the costs of financing the purchase different automobiles; 2. determine how insurance costs affect the cost of owning and operating three different automobiles; 3. develop a budget for a given level of income, including car payment, insurance premiums, daily living costs, and a savings plan; 4. select the financial institution and/or instrument that will yield the greatest rate of return on savings; and 5. recognize and determine the consequences of irresponsible financial behaviors.

The program materials included a pre-test and a post-test, four locally produced videos, work sheets, and a simulation game. Financial literacy was assessed during the initial class hour. Each student then selected one of six automobiles to purchase. That was used as the basis for making insurance decisions and determining the car payment that would be included in their budgets. Current wage rates and jobs the students actually held were used as the basis for determining the income for the budget. Before completing the multiple response test at the end of the unit, students participated in a simulation game that reinforced the concepts they had studied during the week.

Results and Implications

Over 6,000 high school students participated in **Financial Freeway**. Responses to the pre-tests and post-tests of a sample of 1706 students were analyzed. Post-test mean scores (M = 22.71) were significantly higher than pre-test scores (M = 19.00) (t = -34.37; $p < .000$).

The analyses also provided information which helps identify the audience which would be most effective to target with this program. Juniors had the highest mean post-test scores (M = 23.32), and mean scores for both juniors and seniors (M = 23.22) were significantly higher than those for sophomore's (M = 22.33) (F = 6.84; p = .0011). Mean post-test scores of students in Accounting (M = 25.64) and Marketing (M = 23.82) were significantly higher mean scores on the post-test (M = 23.45), than those who were not working but looking for part-time work (M = 21.53) (F = 5.00, p = .005). Those who already had a car and who had a driver's license had significantly higher post-test scores than those who did not have a car or did not have a driver's license.

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The program was effective for all students, however, those who had a vested interest in managing their money had the most knowledge. That included students who had a car, had an income, and were enrolled in classes that had a pertinent curriculum. It was likely that these students had financial management classroom lessons reinforces through practical experience in their lives and were at a teachable moment. This project had shown that a brief encounter with financial management education, especially at a teachable moment, pays off with significant learning.

The ALPHA Study
A Look At Pre-Need Horizons in America
A Perceptual Study of Opinion Leader Knowledge

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The purpose of the study was to provide a vital "snap shot" of the pre-funded funeral marketplace in 1991, as seen by opinion leaders among the funeral service industry, government regulatory agencies, consumer educators and advocates, and older adult volunteers and counselors. Topics explored included: how pre-funded funerals are being marketed in 1991; who is selling pre-funded funerals, where, when, why and how; how pre-funding trends are expected to track in the next five years; what do consumer and older adult opinion leaders know about pre-funding; what are the problems associated and anticipated with pre-funding; what information do consumers need in order to make sound decisions; how is pre-funding being regulated in 1991; how do the opinion leaders feel pre-funding should be regulated, when and by whom?

Methodology

A four-page, short-answer, mailed survey was sent to 1000 opinion leaders in the funeral industry, consumer education, and government regulatory agencies.

General Observations

The researchers identified three categories of observations, and ultimately three sets of recommendations.

Knowledge Level

It was apparent that consumer opinion leaders were much less able to describe themselves as knowledgeable about the issues surrounding the pre-funding of funerals than either industry opinion leaders or government/regulators. The responses also indicated that when consumers do not have a specific interest in, and knowledge of a particular field, the lack of information may be manifested through a skeptical attitude which can result in a perceived need for increased regulation.

Consumer Protection

A common thread throughout all categories of respondents indicated there is a concern that the potential for consumer abuse is real. None of the groups indicated that there should be no regulation. Rather, the question seemed to be how extensive should the regulation be, and should the regulation be on the state or federal level. Clearly there was no strong agreement for federal legislation that would include preemption of existing state laws. However, the interest in uniformity and in commonality was apparent.

Consumer Education

The responses indicated the industry has been doing as good a job as can be expected of educating the public about what they are buying. Given the fact that they are the sellers of the product, and have a vested interest, their efforts may be of limited value. The respondents also indicated the consumer education efforts generated from the public sector are perceived as inadequate.

Recommendations

Knowledge Level

The industry will need to locate credible organizations with established consumer ties to assist in creating and carrying out joint educational initiatives.

Consumer Protection

A working conference should be convened of interested persons to determine the recommended components of pre-need regulation. The conference should also adopt the goal of ultimately drafting uniform legislation that could be adopted on a state by state basis.

Consumer Education

The production and dissemination of high quality information, produced by independent sources, through cooperative approaches and subsidization by interested industry members.

A Computer program to Help Families Analyze Their Spending

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Families facing economic and life cycle transitions often wonder whether their spending is appropriate for their goals. This may occur when a family is trying to decide how to increase savings for future goals, or to allocate more money to key spending categories such as insurance. One way to view these issues is to ask "How do families like us spend their money?" (Hanna, 1983; 1990). A computer program can answer this question (Hathaway, 1986). The program, however, has not been subject to intensive academic scrutiny regarding its assumptions. The purpose of this paper is to describe a prototype computer program for helping families analyze their spending, and to solicit feedback regarding program assumptions.

The program consists of three main parts:

1. A module for "predicting" family spending in 16 categories, based on age of householder, education, income, family size and other variables;

2. A module for prompting the user to estimate the family's actual spending on these categories; and

3. A module for interacting with the user for "what then?" questions. The module, for example, might point out that the user spends more on food away from home than similar families, and would provide suggestions for reducing spending in that category.

One of the challenges in developing a program is defining the level of detail of the expenditure categories. If the categories are too broadly defined, users may not be able to understand what the category includes, lessening its usefulness in budgeting. For example, if food is one category, a user will not get insight into food-away-from-home spending. On the other hand, with very narrow categories, many households may have zero expenditures during time periods of a year or less, which creates problems for statistical estimation and interpretation. The prototype version of program uses 16 categories: food-at-home, food-away-from-home, alcoholic beverages, apparel, housing, utilities, household equipment, household operations, transportation, entertainment, personal care, reading/education, tobacco, insurance, health care expenditures, and miscellaneous expenditures such as charity contribution, life insurance and etc.

Another issue is how to define "similar families" in terms of demographic characteristics. The variables used are income and variables for region of residence, size of city, family size, education, rent or own and age, plus some interaction terms. A two-stage process of statistical estimation was used for each expenditure category: a linear probability regression for predicting whether the household had nonzero expenditures (logit may be used for a future version), and an expenditure regression estimated for households with nonzero expenditures. The dataset used for the prototype program was the first quarter of the 1986 BLS CES Interview Survey. The estimated coefficients from the regressions were used in the computer program to predict expenditures for each category for a particular household: predicted expenditure = predicted probability times predicted expenditures for households with nonzero expenditures (Li and Bae, 1992).

A consumer using the program is prompted to enter aftertax income, which is used to estimate total expenditure using a prediction equation based on BLS data. The estimate of total spending is a proxy for normal income, and is used for the probability and expenditure predictions based on parameters estimated from BLS data. The prototype program can be used to estimate average spending for families of particular combinations of characteristics.

Because the purpose of the program is to prompt families to analyze their spending,

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assumptions used in the third part of the program may be as important as the assumptions used in the first part. Ultimately what is needed is an expert systems approach which would simulate the interactions of the most competent human expert in asking the user about family goals and prospects in order to help the user analyze his or her budget.

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EFNEP Plus: A Money Management Calendar and Education Program for EFNEP Clientele

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Data from an experiment to test money management materials for limited resource audiences was presented. Statistically significant differences were found between the control and experimental groups in the change from pre- to post-test concerning whether clients kept a list of expenditures and, financial goals.

Between 1970 and 1988, the number of families in poverty within the state of Indiana increased. Based on experiences of working with EFNEP clientele and other limited resources audiences, the 1991 Report of the Limited Resource Audiences Committee of the Cooperative Extension Service also indicated that new programs designed to include management components were needed. However, few materials and little data existed about low income persons and their money management.

Purpose

The purposes of the study were to gather descriptive information about the intended audiences and to identify changes in money management practices by the participants after receiving or not receiving money management instruction.

Methodology

The study employed a nonequivalent control-group design to test the effectiveness of the materials and the instruction. The control group members were provided the money management calendar and workbook which they either read as a group or took home for self study. The experimental group consisted of EFNEP clientele who received a calendar and instruction for each of the twelve lessons included in the corresponding workbook.

A survey questionnaire was used to collect information regarding money management behavior in the pre- and post-test format to both control and experimental group members. Demographic data was collected for both groups using the intake form in use by the EFNEP program assistants.

Findings

Change in money management behavior was significantly different for the experimental group who had received both the materials and the instruction. The experimental group members were more likely to maintain a list of personal expenditures and to make a list of future money management goals, and put aside money for the future.

Implications

Money management materials specifically developed for low income persons coupled with individualized instruction can assist clientele in making changes in money management behavior. Materials can be especially relevant when developed with input from those receiving and/or providing the instruction.

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Factors Affecting Households' Expenditures for Entertainment Services

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Introduction

Little is known of households' expenditures for leisure or entertainment services. Such expenditures are often considered frivolous, sometimes even unnecessary. In an economic sense, leisure is a concept that lies towards the apex of a Maslowian pyramid since one is more likely to engage in leisure activities only after basic consumer needs (food, shelter etc.) have been satisfied to at least a certain threshold level (Culligan and Murphy, 1989). However, leisure is an important element of one's life and is known to contribute positively to an individual's sense of well-being. Marans and Rodgers (1975), found nonwork activities, which includes recreation and leisure experiences, and family life to be the best predictors of the quality of life. Since 1982, the rate of increase in prices for entertainment services has been greater than that for all services and all items. In spite of this, the average expenditures for all entertainment services, by purchasing households, was $574 ("Households with Expenditures for Entertainment Services," 1990). The purpose of this research is to examine the relationship between a variety of socio-demographic and economic variables and households' expenditures for entertainment services.

Methodology

The data base for this research was the interview component of the 1986 Consumer Expenditure Survey. The sample of 2974 households used in the study included married couple households, single parent households, and single households. Multivariate tobit regression analysis was used to assess the influence of a variety of socio-demographic and economic variables on expenditures for leisure services. These services included: 1) club memberships, 2) fees for participant sports, 3) fees for recreation lessons and instructions 4) admission fees, 5) fees for vacation rentals, and 6) expenditures for other entertainment services. The independent variables used were 1) household income, 2) household size , 3) education of reference person, 4) race of reference person, 5) age of reference person, 6) household composition, 7) number of household earners, 8) home ownership status, and 9) region of country.

Results

As was expected, household income was positively associated with expenditures for entertainment services. Higher levels of education were also positively associated with such expenditures. The notable exception was in the area of participant sports where those households with reference persons who had a post-graduate education spent less. Households with a reference person who was black spent less on entertainment expenditures. Age had a distinct effect on entertainment expenditures: the older the reference person, the lower were such expenditures in the household, except in the case of club membership.

Of the households with children, those with children between the ages of 6 and 17 influenced entertainment expenditures the most. These households spent more on club memberships, participant sports, fees for lessons, vacation rentals and other entertainment services. Single parent households spent less in every category other than fees for lessons. Contrary to what one might expect, there was also less expenditure among

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single householders for almost all the entertainment services. Home owners were more likely to have a greater demand for all entertainment categories with the exception of admissions fees. Households in the Midwest tend to spend less on entertainment than households in the Northeast and West.

Conclusion

Expenditures for entertainment services were positively associated with household income and education. The impact of the age and household composition variables on such expenditures demonstrate the possibility of a distinct life cycle effect. It is interesting to note that married couple households spent more on entertainment services than either single parent households or single households. Home ownership was also found to have a positive influence on such expenditures. Studying entertainment expenditures of households is important as it provides us with a more complete picture of the relevance of entertainment among American households especially in uneasy economic times.

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Credit Card Annual Fees: Do Consumers Get What They Pay For?

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Are consumers given additional features with credit card plans that have larger annual fees? Results indicate that annual fees significantly increased from 1990 to 1991 and no additional benefits were added.

Consider that bank card debt has increased from \$25 billion to \$91.4 billion between 1980 and 1987 (Statistical Abstracts 1989). Not included in the level of bank card debt would be the many consumers who use credit for convenience. Obviously, credit issuers do not make money on the non-revolvers. In an effort to "cover the costs" of extending credit to the consumers who do not pay a finance charge, annual fees were instituted.

Specifically, the purpose of this study is to address whether credit cards are providing consumers with features that are proportional to the cost, or annual fee. Is the general assumption that 'you get what you pay for' true to the credit card industry? The intention of this study is to consider APR to be among the features of the credit card, one that the consumer more or less purchases. One would expect cards with lower APRs, longer grace periods, and more features to have a larger annual fee.

Federal Reserve statistical releases (January 31, 1990 and January 31, 1991) were accessed.

To examine how the "price" for such features have hanged between 1990 and 1991, paired comparisons between sample means were utilized.

Annual fee significantly increased (\$2.42). However, has the increase in fee from 1990 to 1991 resulted in more advantages to or features for the consumer?

A significant difference in the number of days in the grace period did increase from 23.9 to 25.1 days. Aside from the increased length in grace period, which would benefit the non-revolver, the consumer apparently did not receive additional benefits for the larger fee. APR did not significantly change between 1990 and 1991 (18.26% to 18.37%).

A significant difference in the occurrence of three features was observed: (1) extension of the manufacturer's warranty [$t(150)=1.779$, $p<.007$], (2) purchase option [$t(150)=2.242$, $p<.026$], and (3) discount on goods [$t(150)=1.771$, $p<.079$]. Despite the observed increase in annual fee from 1990 to 1991, these features occurred less frequently as part of the credit plans offered in 1991. No other significant differences were observed regarding travel accident insurance, travel related discounts, car rental insurance, credit card registration and rebates on purchase.

Generally speaking, consumers selecting credit plans in 1991 were paying more, a larger annual fee, for fewer features than were those who selected plans in 1990.

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Identifying Family Economic Well-Being Program Priorities And Target Audiences by an Environmental Scan

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Cooperative Extension uses environmental scans as a process of obtaining broad input to establish program priorities and identify target audiences. In this study, consumer/financial issues were identified by gathering local statistical information and by noting consumer problems from recent research. A focus group comprised of credit and financial professionals was used to define issues which were most problematic locally. Finally, a survey of a proposive sample of subjects from an urban 4-county area was used to prioritize the issues.

Method

Prospective survey participants were identified by Cooperative Extension faculty based in each of the 4 counties to be surveyed. Participants were selected to represent professionals from social work, education, credit, business and public agencies as well as representatives from minority groups and the general public. Potential respondents were contacted by telephone to explain the survey and request participation. The survey was mailed to 60 subjects.

The instrument included 5 topics with 6 concerns identified under each topic. Respondents were asked to rank each set of concerns in order of importance for their community. Respondents were also asked to rank the 5 most important audiences to target out of a possible 13. Fifty usable surveys were returned for an 83% response rate. Rankings of the concerns in each set and of target audiences were computed.

Findings

The key Community Economic Concerns were: the working poor (92%), unstable family income (86%), and the increasing number of children living in poverty (64%).

Top Consumer Education Concerns were the consumer's lack of: decision making skills (76%), educational opportunities to learn money management skills (66%), and adequate information about how to select goods and services (62%).

The primary Money Management Concerns, were the consumer's: difficulty in setting spending priorities (74%), limited skills in managing financial resources (70%), and spending more than earned (70%).

Debt Management Concerns were that consumers: don't know how to control their use of credit cards (74%), don't understand how to use credit appropriately (72%), and don't know how much debt they can (safely) afford (68%).

The foremost Financial Planning Concerns were that consumers: fail to make long- and short-term financial plans (92%), are unable to save (78%), and fail to financially prepare for retirement (72%).

Audiences ranked as first, second, or third most important to target by over 45% of the respondents were: Young Families with Young Chidren (66% of the respondents); Single Parent Families (62%); Adolescents (56%), Teen Parents (50%), and Low Income Families (46%).

Implications

The top-ranked family economic well-being concerns centered on the lack of ability to manage financial resources. Respondents indicated that people not only lacked the ability to decide, plan, control, and evaluate, but that there were not adequate opportunities within the communities to learn these skills. The challenge to extension educators is to make programs visible and readily accessible within the community.

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Factors Affecting Consumers' Selection of Nursing Care Facilities

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Introduction

The criteria used by families in their selection of a nursing home is a topic that has generated conflicting research.[1] The purposes of the study were to determine tasks performed by consumers in their nursing home selection process and to investigate relationships between these tasks and a) satisfaction levels, and b) respondents' demographic characteristics. In addition, relationships between the ranking of factors consumers considered important when selecting a nursing home and respondents' demographic characteristics were investigated.

Methodology and Analysis

The sample consisted of 411 "responsible parties" (families) of nursing home residents of seven nursing homes. Data were analyzed using Chi square, Wilcoxon rank-sums test, Spearman's rank correlation, and the Friedman two-way analysis of variance by ranks. Level of significance was $\alpha = .05$.

Findings[2]

The tasks specified in the survey questionnaire and the percent of respondents who reported performing them were as follows: "visited at least one home prior to placement," (89%); "checked about reputation of the home," (51%); "investigated all homes in the area," (37%); "forced to make quick decision about placement, (36%); "chose home all family members agreed upon," (32%); "did not have enough time to thoroughly investigate homes," (22%); "used checklist," (18%); and "selected first home with space available," (14%).

Relationships were found between particular tasks and the following respondent characteristics: income, education, gender, number of homes available, relationship to patient, and distance of respondent from the chosen home.

Consumers were less satisfied with their choice of homes when they a) had limited time for adequate investigation, b) had made a quick decision following the illness of the patient, and c) had chosen the first home contacted that had space available. Satisfaction levels were higher when consumers had investigated all homes in the area before selecting one and when the entire family had agreed on the chosen home.

Overall, consumers ranked quality of care as the most important nursing home characteristic. Ranking of other characteristics, in order, was: physical appearance, atmosphere, location, reputation, building safety, quality of food, cost, and activities. Relationships were found between some demographic variables and ranking of specific nursing home characteristics.

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Implications

Consumer educators helping families in the decision-making process related to nursing home selection might consider the relationships between tasks performed in the selection process and levels of satisfaction. Suggestions for an improved search process could be formulated, and appropriate programs developed accordingly. Characteristics considered important, such as quality of care, physical appearance, and atmosphere are best assessed by observation. Therefore, those assisting families should encourage visitation of homes under consideration. Thorough investigation of all facets of the nursing home is critical, for the likely result of more informed choice would be more people getting the services they specifically need or want.

Endnotes

1. Complete bibliography available from authors

2. Complete findings available from authors

In Search of a Theory (or Approach) to Better Understand Consumer Decisions in a context of Varied Cultures: Case Study - Food Consumption in U.S. and Japan

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Economic theory alone often appears to be inadequate in identifying, specifying and interpreting characteristics of specific food products. This study represents an initial step in integrating a hedonic price function model and an organizational decision making model to better understand consumption of food products. A holistic model of this time is even more appropriate when studying consumption in various countries. Work has begun on a number of foods in the United States and Japan.

Traditional Approach To Consumer Demand

Traditionally, economists have approached the analysis of consumer demand by assuming prices of market goods sold at a specific time and place are predetermined. Theoretically, the assumption of predetermined prices is reasonable. For example, the consumer enters a grocery store and decides whether or not to purchase a particular product at the price charged by the retailer. Based on this premise, consumer demand can be estimated with the quantity of a good dependent on prices, income, and socio-demographic information. Unfortunately, this traditional approach to consumer demand provides little insight into the tastes and preferences of consumers. Several economists (e.g., Gorman (1956), Lancaster (1966), and Hanemann (1982) proposed specifying a utility function with both the market goods and the measurable characteristics of the goods as arguments.

The Hedonic Approach to Consumer Behavior

One of the structural relationships that results from this utility maximization process is commonly referred to as a hedonic price function. These functions have the price of a good as the dependent variable, and measurable characteristics of the good, socioeconomic and demographic variables, and income (or expenditure) as the independent variables.

The hedonic approach, although not new, provides a method of potentially integrating theories and concepts from a number of

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disciplines to better understand consumer behavior. This type of approach seems to be especially necessary when viewing consumer behavior from a multi-cultural perspective. Therefore, in addition to economic theory, consumer research needs to utilize theories and concepts from psychology, sociology, anthropology and nutrition (if studying food consumption) to develop models for empirical analysis. Reliance on these varied disciplines provides conceptual approaches which can utilize both quantitative and qualitative methods of analysis and provide a broader base for interpretation of results.

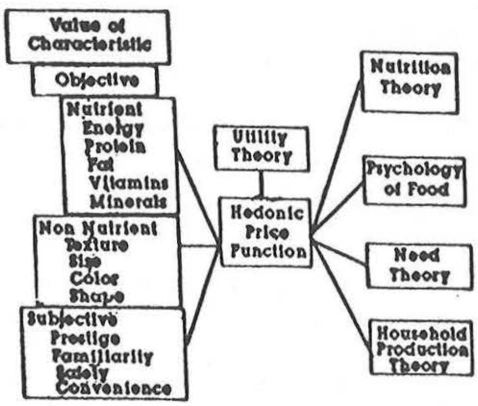

Figure 1
Food Purchase Decision

Proposed Study

A proposed organizational model, integrating a number of disciplines has been developed for study and analysis of consumer decision making. This model developed by Hodge and Johnson (1981) has been modified by Price and Nelson (1989) for specific use with consumers.

There are many different approaches to understanding the functioning of an organization. No single one is universally accepted as superior, and all include essentially the same elements. The illustration in this paper has been selected as a framework to use in interpreting results from hedonic analysis. This model illustrates the various factors that have an impact on any one organization and can be related to consuming units in American or other societies.

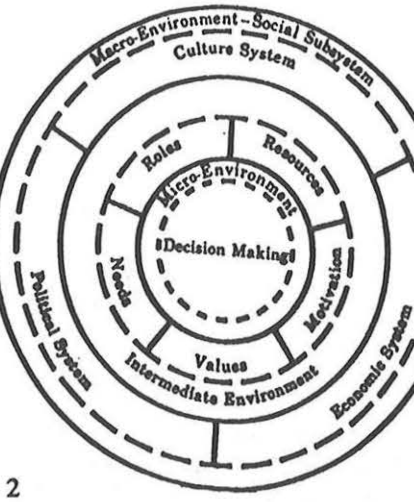

Figure 2
Decision Making

Brief Discussion of Current Research

This study is beginning to estimate values for specific characteristics of foods. These values change with respect to time, place, and specific food items. The value placed on fat in the diet is different now than it was 50 years ago. It is different in meat than it is in breakfast cereal. It is likely different in the U.S. than it is in a third world country, but may be similar in some aspects in a developed country, such as Japan. When it differs, the explanations provided by disciplines other than economics become even more important. In a basic economic sense value depends on scarcity. Essential elements which are in good supply have little value. Vitamin C has little value in breakfast cereals because it can be obtained cheaply by eating fruits or taking vitamin pills.

Values have been determined for nutrients, grain type, type of processing and other special objective factors for breakfast cereals in the U.S. Initial data in regard to expenditures, quantities purchased and nutrient intake have been obtained for rice and noodles in Japan.

Further work will concentrate on continuing specification of objective and subjective characteristics and interpretation of these within the organizational decision making framework.

A FINANCIAL COUNSELING PROTOTYPE
Implications For Use of Expert Systems Technology In Extension Programming

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The purpose of this project was to explore the potential application of experts systems technology to financial counseling as conducted within the Cooperative Extension environment.

Purpose

The major goal of Counselor 1 is to provide families with a ratio analysis of their financial statement. The advice generated by Counselor 1 is similar to that offered under similar conditions by a financial expert. The knowledge base consists of facts and rules supported by the literature on ratio analysis and financial counseling.

Prototype Development

The prototype development was accomplished in several phases. The first step was to identify literature on financial analysis using ratios as an analytical tool. In designing the prototype it was important to understand the role of ratios in financial analysis.

Assessment of the literature was the second phase. The literature suggested that an expert system designed to assist in financial advising, using ratios as the analytical tool should contain two elements: (1) client evaluation to assess the consumers financial situation and to gather additional pertinent information (2) ratio limit determination to allow the conclusions of the expert to formulated.

A review of the financial planning literature provided information for the third phase. Information obtained in this review was used to construct the data base used by Counselor 1 to draw conclusions and offer recommendations.

The final phase entailed investigating potential programming languages for Counselor 1.

Implementation and Design

Counselor 1 has two components, client evaluation and a rule base of expert knowledge.

Client Evaluation. The literature suggests that interpretation of ratios should not be based solely on the financial information used to determine the ratio (Mason & Griffith, 1988).

This part of the program addresses factors that improve the interpretation of ratio results. Information about economic environment, life cycle and client objectives are obtained. A balance sheet is used to obtain a description of the financial condition of the consumer.

Ratio Analysis. Despite the absence of sound theory, ratios are considered to be useful in analyzing various aspects of a consumers financial condition (Mason & Griffith, 1988). Financial planners, for instance, consider them valuable for evaluation of a clients financial situation (Lytton, et al., 1991).

The ratios used were adapted from those suggested by the literature as important indicators of financial position. The ratio limits used are those found in the literature and the marketplace.

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Computer Programming. Counselor 1 was programmed using the programming language Pascal.

Implications

An expert systems program designed to help evaluate the financial position of families could be helpful to Extension Home Economist in various ways. Helping to relieve work pressure is one benefit that might be realized. It also could enhance the quality of information consumers receive in their counseling session as well as reduce time needed to prepare for the session. The system may also function as training support to fill skill gaps that exist.

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"It's One Day at a Time Because Tomorrow's Not a Promise": An audience analysis for financial management education

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The design of a limited resource audience analysis study for Extension money management education and preliminary analyses of interview data were displayed. Study objectives are to: (1) develop propositions about learners, (2) use learner perspectives in program development, and (3) compare learners' perspectives to curricular themes and processes.

Sensitivity to learners and careful selection of educational processes, as well as sound financial management concepts, are important attributes of programs. Education for limited resource audiences should involve learners in program development and assess learners on the basis of credible research rather than stereotype and myth (Reaching Limited Resource Audiences 1991). Family financial management literature contains primarily a normative, analytic style of management, not practiced by most families, and not appropriate for all (Rettig and Schultz 1991). Mullis and Schnittgrund (1982) found that the majority of low income persons who said they budgeted did not have a written plan but rather an idea.

Twenty-six focus group and individual interviews were conducted with a total of 94 learners and educators. Ongoing analysis uses qualitative research principles of reducing volume, making sense, and identifying significant patterns that are grounded in the data (Strauss 1987, Patton 1990). Later, interview findings will be compared to a content analysis of curricula.

The poster displayed illustrative category quotes from transcripts and a conceptually clustered matrix. Talking about budgeting, one learner described money struggles while questioning her know-how,..."I still don't know how to budget my money, 'cause...every two weeks I get seventy dollars;...and start buyin' things that I need, by the time I think about it, all the money is gone...because I don't know how to budget it out...because I think it's such a little amount to budget out." The matrix contained patterns about education and financial management found in the perspectives of learners and educators.

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The Concept of Consumption Community in the Modern Era

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The concept of consumption community, first proposed by historian Daniel Boorstin, claims that in the modern era of high mobility, people look not only to neighborhood as a basis for feelings of community but also to communality of consumption behavior (e.g., drinking the same brand of beer). The idea was tested cross-nationally by administering a newly devised psychological sense of community (PSC) scale to adult respondents in Belgium and the U.S. The findings support the Boorstin thesis.

This study looks analytically and empirically at the concept of consumption community. In his social history of America, Boorstin (1973) proposed that since the Civil War advertising has been responsible for the creation of "consumption communities" consisting "of people with a feeling of shared well-being, shared risks, common interests, and common concerns. These came from consuming the same kinds of objects: from those willing to "Walk a Mile for a Camel", those who wanted "The Skin You Love to Touch", or who put faith in General Motors. The advertisers of nationally branded products constantly told their constituents that by buying their products they could join a select group, and millions of Americans were eager to join." (p. 147)

This thesis, while lacking the objective language of a social science definition, suggests that consumer usage of certain product brands and models has performed an unexpected social function by engendering feelings of community among those who share the commercial identification. Indeed, Boorstin contends that in America's increasingly immigrant society of the late 19th and early 20th century, community ties weakened leaving many individuals with painful feelings of separation from their local origins. To compensate for these feelings of loss and alienation, Boorstin claims that consumption communities formed, centered around the common brands and models of goods people buy and use.

It is these contentions of Boorstin which stimulated the empirical study reported herein. The study asks if people perceive themselves as being part of consumption communities of various types. It also asks if these self-perceptions can be reliably measured and if they behave like self-perceptions of membership in more traditional kinds of community, such as neighborhood. Finally, the study asks if these self-perceptions of community membership, sometimes called psychological sense of community (PSC), seem to serve a substitutive function, so that individuals with a weak neighborhood-based PSC have a strong consumption-based PSC.

The Approach to PSC Adopted Herein

In light of the thorny problems associated with more than two decades of scholarly efforts to come to grips conceptually with PSC, it was decided not to adopt a particular theoretical perspective as the appropriate one to guide this study. Instead, following the lead of Chavis et al. (1986) who used self-reported PSC to test the McMillan and Chavis (1986) formulation, it was decided to measure PSC by securing respondent self-reports on a six-point

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scale, varying in strength from the complete absence of PSC to a very strong PSC. This scale was applied to a wide variety of respondent characteristics and behaviors including neighborhood and other areas of residence, as well as demographic and consumption descriptors. Since the primary focus of the study is on consumption communities, the data analysis and interpretation deal principally with a) respondent reports of PSC for consumption items, and b) how these reports compare with those for more established forms of PSC (i.e., PSC in relation to residential neighborhoods).

Procedure

<u>The Survey Instrument</u>

A 92-item survey instrument on PSC was developed and pre-tested in English for use in the United States and Belgium. The instrument consisted primarily of self-report items each of which asked the respondent to indicate on a six-point scale how strong (or weak) a PSC he/she had in relation to a group of people with whom he/she had a certain characteristic in common. The scale ranged from 0 (the complete absence of PSC) to 5 (a very strong PSC). Intermediate values were 1 (very weak), 2 (weak) 3 (neither weak nor strong), and 4 (strong). In each instance PSC was defined as the feeling that one is part of a community when he/she thinks about his/her association with a group of people with whom he/she has a certain characteristic in common. Among the characteristics examined were ten consumption behaviors; other characteristics included geographic residence areas, demographic indicators, and several relating to family, friends and co-workers.

The consumption items consisted of an overall qualitative item (people who share your consumer lifestyle - buy the same kinds of products and services that you do) and an overall quantitative item (people who spend as much as you do on consumer products and services). The remaining eight consumption items looked at specific commodities commonly purchased in the United States and Belgium. They included living quarters, automobiles, furniture, kitchen appliances, entertainment choices (films, books etc.), clothing, household cleansers, and toiletries (toothpaste, shampoo, etc.).

Associated with each PSC item was a question relating to the certainty with which the PSC answer was given. A five-point scale was employed ranging from 1 (very uncertain) to 5 (very certain). Questions were also asked relating to the basis used by the respondent to make the PSC judgment. Three primary choices were offered here ("people I know or have known personally"; "people I have learned about in other ways"; and "people I know or have known personally, or have learned about in other ways").

Questions were included too concerning the value-expressiveness of the eight consumption items dealing with specific consumer commodities. Respondents were asked to indicate on a five-point scale the extent to which their choices of the particular commodity (e.g., clothing) express their personal values. Scale points ranged from 1 (very weakly) to 5 (very strongly).

Finally, demographic questions relating to gender, age, marital status and occupation were asked of the respondents together with questions relating to the total time they had engaged in various activities noted in the survey (e.g., time lived at current address and in same neighborhood).

<u>The Respondents</u>

Two groups of respondents were tested. Both groups consisted of part-time MBA students, most of whom were working full-time. The first group was associated with a Belgian university near Brussels. All instruction in the Belgian MBA program was in English and all student enrollees were fluent in English. The second group was studying at an American university near Detroit, Michigan. Both groups were volunteers who were recruited in evening and weekend classes at the business schools of the two universities. The surveys were completed during the last month of 1990 and the first few months of 1991.

Consumption Communities in Empirical Context

What do the study findings have to say about the concept of consumption communities? The question is easier to pose than to answer, partly because the concept has never been articulated with the necessary precision to permit rigorous social scientific analysis and measurement. We are presented only with some basic ideas which seem to be that consumer usage of certain product brands and models has engendered feelings of community among those who share the commercial identification, and that, in aggregate, these consumers constitute consumption communities. Boorstin also claims that the formation of these communities resulted in part from the declining importance of common geographic origins as a basis for establishing community.

Of these three basic ideas it is the first that has received the most concentrated attention in this empirical study of American and Belgian respondents. For the study asks if people in two western societies have developed PSC with regard to others who buy and use the same subclass of an individual class of consumer goods (e.g., same make and model of automobile), as well as others who share more highly aggregated consumption behaviors (consumer lifestyle and consumer expenditures).

Within the constraints commonly found in empirical research, the study results seem to suggest that such PSC's have indeed developed. The results indicate that both at the individual product class level and at the aggregate level of consumption behavior, most respondents report feeling a sense of community in relation to others who share their consumption behaviors. And the strength of sense of community they report is not markedly different from that reported for residential neighborhood, a community focus many social scientists believe to be of paramount importance in the modern era. Also supportive of the Boorstin thesis is that the PSC measures used to tap these feelings appear to be reliable and that the respondent reports are generally issued with a high degree of certainty. Encouraging too are the strong correlations found for the PSC measures with other measures, correlations which are consistent with social science theory. Particularly impressive here were the high correlations at the individual commodity level and between PSC and value expressiveness as well as the substantial correlations between the PSC consumption scale values and PSC for personal income level. Also impressive was the trend toward a difference in cognitive basis for the PSC consumption decisions as compared to PSC decisions for more traditional kinds of community (i.e., neighborhood). Since individuals in consumption communities are less likely to have contact with each other than is the case for communities of neighbors, it would be expected that consumption PSC decisions would be less likely to derive primarily from personal knowledge of other members of the community; and this indeed is what was found.

That the consumption community coin may be two-sided is suggested by other empirical findings which question the significance of the concept. Perhaps most evident in this regard are the low values for the consumption PSC's. Very few respondents in either sample reported strong or very strong PSC's at the individual product level or at the aggregate level of lifestyle and consumer expenditures. While these findings may be disappointing to advocates of the Boorstin thesis, two caveats suggest that the situation may not be as negative as it seems. The first is the low values generally found for non-consumption PSC's and especially for neighborhood PSC's - the one arena that community psychologists and sociologists have studied more extensively than any other. The second is the claim by Boorstin that consumption communities are different from residential communities in that they are unlikely to be tied together by strong links of attachment. He uses the metaphor of "gossamer webs" to suggest the weak and fragile nature of their connective tissue.

Also questioning the significance of the consumption community concept are the near-zero correlations found for both samples between consumption PSC and PSC for neighborhood. While this finding does not question the existence of the consumption community concept, it raises concerns about its ability to serve as a substitute for residential community for those who feel little or no sense of connection to their neighborhoods.

Thus the study results tend to support the Boorstin thesis by suggesting that people do indeed feel a sense of community, albeit a weak one, in relation to others with whom they share certain consumption behaviors. What is less clear from this preliminary study is that Boorstin is correct in claiming that 1) people with PSC toward the same consumption behaviors can be referred to as a consumption community, and 2) such communities can serve a psychologically substitutive function with regard to neighborhood-based communities.

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Counting the Coins: A Cross Cultural Evaluation of the Money Beliefs and Behaviors Scale

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Jean Lown, Ph.D., Utah State University, Logan[2]

This is a cross cultural examination of the Money Beliefs and Behaviours Scale (MBBS) (Furnham, (1984). Using factor analysis, the MBBS in Great Britain measured six attitudes toward money. This study attempted to replicate Furnham's finding. In the U.S. the MBBS was found to measure only two statistically valid attitudes toward money--Obsession and Security/Retention. Several reasons are suggested to explain the inability to replicate Furnham's findings in the U.S.

Introduction

Despite the significance of money in Western society, few cross cultural studies have been conducted on attitudes toward money. This situation is due in part to the lack of adequate assessment instruments (Furnham and Lewis 1986). Another hinderance to comparative research in this area is the various societal taboos against studying beliefs about money (Goldberg and Lewis 1978; Krueger 1986). However, with increased international business and trade, it is imperative that researchers specializing in consumer issues begin to develop reliable and valid instruments to measure attitudes about money (Furnham 1984; Price 1968; Yamauchi and Templer 1982). In addition, there is a need for research on cross cultural variations on this important attitude (MacFadyen & MacFadyen 1986).

Cross cultural research studies of attitudes toward money should begin with societies and nations that appear to be similar in cultural values and attitudes rather than widely disparate. The societies and nations should share a common language to avoid problems in translation of previous research articles, measurement instruments, or findings of future research. They should also have corresponding economic systems, such as market capitalism, and preferably, a close historical and international trading relationship. Two nations that meet these criteria are the United States and Great Britain. This study is a cross cultural comparative evaluation of the 60-item Money Beliefs and Behaviors Scale (MBBS) which was developed in Great Britain by Furnham (1984).

Literature Review

There have been few attempts of develop a valid and reliable instrument to measure beliefs and behaviors regarding money. A few instruments were developed by individuals in the United States who were interested in the relationship between psychology and economics. They include measures such as those by Goldberg and Lewis (1978), Rubinstein (1980), and Yamauchi and Templer (1982). Few of these instruments were subjected to rigid empirical and statistical analysis. For example, the instrument produced by Goldberg and Lewis (1978) was published in a popular book with only face validity reported. Rubinstein (1980) collected data from 20,000 readers of Psychology Today; the only statistics published were percentages. The Money Attitude Scale (MAS) developed by Yamauchi and Templer (1982) was designed using factor analysis.
Adequate internal reliability of the MAS was demonstrated through statistical analysis. As far as can be determined, the MAS has not been evaluated by other researchers in an attempt to replicate the original instrument design or its findings.

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Furnham (1984) developed a multifaceted instrument to measure attitudes toward money in Great Britain. He developed a 60-item Money Beliefs and Behaviors Scale by combining various items from the MAS (Yamauchi and Templer 1982), the Midas Scale (Rubinstein 1980), and from Goldberg and Lewis (1978). The 60-items were rated on a 7-point agree-disagree scale. Using a sample of 33 subjects the Alpha reliability was .84. A convenience sample of 256 British adult subjects was recruited from a variety of sources to evaluate the original 60-item instrument.

Using factor analysis with varimax rotation, Furnham (1984) identified 47 items that loaded higher than .40. Six different attributes or factors of money beliefs and behaviors were identified: Obsession, Power/Spending, Retention, Security/Conservative, Inadequate, and Effort/Ability. Obsession reflected a preoccupation with all aspects of money. The items in the subscale Power/Spending referenced the giving of money and its use as a means to control others. The Retention subscale reflected the attitudes of persons who where extremely careful with their money. The items in Security/Conservative indicated an "old fashioned approach to money" (p. 505). The items on the Inadequate subscale indicated that individuals who scored high on this scale believed they did not have enough money. The sixth subscale of Effort/Ability implied that money is gained through individual work or talent.

In the article discussing the development and analysis of the MBBS, Furnham revealed sufficient detail to allow for the replication of his study. However, Furnham only published the 47 items comprising the six factors. He included Eigenvalues and the amount of variance explained by each factor. Overall, the six factors accounted for 35% of the variance. In addition, for each of the forty-seven of the sixty original items that loaded higher than .40, he included factor loadings and mean scores. The article did not include the 13 items which failed to load higher than .40. At the request of one of the authors, Furnham provided the complete 60-item scale which formed the basis of this replicative study (personal correspondence 1988).

Previously published research in the United States has not used the original 60-item scale with adult subjects. Bailey and Gustafson (1986) used a modified 42-item version of the MBBS to examine gender and gender-role differences in attitudes toward money among college students. They also examined the relationship between personality and attitudes toward money using the same modified version of the MBBS with college students (Bailey and Gustafson 1991). Wilhelm and Varcoe (1991) used the Bailey and Gustafson (1986) form of the MBBS to examine financial well-being with an adult sample. However, since they did not have the full 60-item MBBS (Furnham 1984), there has been no previous cross cultural studies of the MBBS comparing American and British subjects and their attitudes toward money. One goal of this replication was to develop an instrument that could be used with American adults.

Purpose of Study

The purpose of this research was to replicate Furnham's original study using the full 60-item Money Beliefs and Behaviors Scale with an American sample to provide a cross cultural comparison. Specifically, the intent was to determine if the same six factors were found with American adults. Due to the paucity of valid and reliable instruments to measure the psychological meaning of money attitudes and spending behaviors, it is a significant research endeavor to attempt to develop such as scale. In addition, previous studies with the MBBS using only American college students as subjects (Bailey and Gustafson 1986; 1991) suggest there may be substantial differences American and British subjects in the factor structure of this instrument.

Methodology

Using a convenience sampling methodology, data were collected from 654 adults in three Western states. One group of subjects was recruited from a Cooperative Extension Adult Leaders school which attracted a state-wide audience. In addition, university students in personal finance classes collected data from full-time employed (non-student) adults. This sampling procedure was similar to Furham's since some of Furnham's subjects were students while others were aduits recruited by students in their home towns in

England, Scotland, and Wales. The instrument was self-administered. In addition to the 60 item MBBS, various socio-demographic data were collected.

Results

Subjects

The respondents in this study were markedly different from Furnham's (1984) in a number of socio-demographic characteristics. Of the 654 subjects, 54% were male and 46% were female. Of those reporting age, 34% were 17-30 years of age, 41% between 31-50 years, and 21% were over 50 years of age. The respondents were educationally diverse with 23% with a high school diploma or less, 37% reporting some college or technical school training, and 12% college or professional degrees. Furnham (1984) used party affiliation as a determinant of political orientation. This study used a one item seven-point scale to measure political attitudes. The subjects placed themselves on a continuum ranging from one (very liberal) to seven (very conservative). The American respondents reported a rather conservative political perspective with 4.65 as the mean and 5.0 as the mode. There was a wide range of annual income in the sample with the mode being between $35,000-$49,999. The majority of the subjects were married (60%) with 21% never married, and the remaining 19% widowed, separated, or divorced. The religious affiliation was varied with 40% being members of the Church of Jesus Christ of Latter Day Saints (Mormons), 27% Protestant, 17% Catholic, 10% other, and only 5% reporting no religious affiliation. Sixty-five percent of the respondents reported full-time employment with 17% employed part-time. Only 12% of the sample were full-time homemakers with 5% of the sample retired. Table 1 compares the socio-demographic characteristics of the American and British samples.

Table 1
Comparison of Socio-Demographics of the Two Samples

		U.S. N	U.S. %		Great Britain N	Great Britain %
Gender						
Males		305	54%		132	52%
Females		296	46%		124	48%
Age Groups						
17-30		228	36%		147	57%
31-50		267	41%		75	29%
50+		150	23%		34	14%
Education						
High School or Less		148	27%		43	19%
Some College or Technical		323	57%		80	36%
College Degree		80	16%		102	45%
Political Orientation	1 item scale			Party Affiliation		
1 = very liberal	1	12	2%	Liberal/	35	12%
	2	21	3%	Social		
	3	71	11%	Democratic		
	4	178	28%	Labor Party	81	32%
	5	182	28%	Conservative	91	36%
7=very	6	134	21%	Other	49	20%
conservative	7	33	5%			
Income						
< $10,000		56	9%	Reported range of		
$10,000-$14,999		48	8%	£2,000 ($3000 Est. U.S.)[a]		
$15,000-$19,999		62	10%	to		
$20,000-$24,999		80	12%	£15,000 ($22,500 Est. U.S.)		
$25,000-$34,999		110	17%			
$35,000-$49,999		159	25%			
$50,000-$64,999		68	11%			
$65,000 +		55	8%			
Marital Status						
Never married		129	21%	Unmarried	122	48%
Married		376	60%	Married	94	36%
Divorced, Separated, Widowed		48	9%	Other	40	16%
Religious Affiliation						
LDS (Mormon)		261	40%	Church of England	95	37%
Protestant		171	27%	Protestant	31	12%
Catholic		113	18%	Catholic	41	16%
Other religion		33	5%	Other	12	5%
None		68	10%	Agnostic or Atheist	61	27%
Employment Status						
Full-time		421	66%	"Regular Employment"	180	70%
Part-time		109	17%			
Homemaker		76	12%	Student, Unemployed	76	30%
Retired		34	5%			

[a]Whitaker's Almanack 1984. London, p. 87. Reported that in September, 1983, the British pound was worth $1.49 American.

Factor Analysis of the MBBS

The primary goal of the study was to determine if the MBBS created six clearly defined factors of attitudes toward money among adults in the United States similar to those reported by Furnham (1984) in Great Britain. In order to replicate as closely as possible the study conducted by Furnham, similar statistical procedures were performed. A factor analysis using a varimax rotation procedure was conducted on all 60-items. Only those items that loaded at .40 or higher were printed since this was the loading score selected by Furnham. This procedure failed to replicate the six factors Furnham identified in Great Britain.

An examination of Table 2 indicates the numerous differences between the factors identified in this study and those reported by Furnham (1984). Table 2 contains the items for only three factors since no items loaded at higher that .40 on Furnham's Factor 4, only one item on Factor 5, and no items on Factor 6. Additional statistical procedures were conducted to determine the internal reliability of each the three factor subscales. Tests for Cronbach's Alpha revealed adequate coefficients for exploratory research, for Factors 1 (.88) and 2 (.59), but were inadequate for Factor 3 (.11).

An examination of Factor 1 indicated that it is similar in item content to the factor Furnham entitled Obsession. Since item content is so similar, Obsession will remain this subscale's label. Individuals scoring high on this scale appear to be concerned or obsessed with all aspects of money. In addition, many of the items in this subscale appear to refer to spending behavior. An examination of the items in Factor 2 indicate a miserly attitude toward money; thus this subscale is labeled Retention/Security. There will be no further discussion of Factor 3 since the Cronbach's Alpha was too low for its use in further analysis.

Discussion

These data suggests that the Money Beliefs and Behaviors Scale does not measure the same attributes in the United States as it did in Great Britain. This conclusion was reached after factor analysis and other statistical procedures similar to those used by Furnham (1984) in Great Britain. Differences may result from a number of interrelated phenomenon.

It is theoretically possible, and maybe probable, that Americans and Britains perceive money somewhat differently. There are numerous cultural differences between the two nations including different governmental forms, class structures, educational systems, and monetary systems. As a result of these cultural differences, the British may have a broader perspective on attitudes and behaviors toward money in their lives than do Americans.

The American subjects in this study appear to perceive money as a bipolar construct. Money is either to be spent (Obsession) or to be saved (Retention/Security). There is little in between these two diametrically opposed views. However, this finding is not consistent with previous empirical research. Bailey and Gustafson (1991) used a modified version of the MBBS and found three distinctly different attitudes toward money among college students. In addition to Obsession and Retention/Security, they found that college students felt Inadequacy in relationship to money.

The most logical explanation for this variance with the current study is that college students had considerably less income and, most likely, experience with money than the subjects in this study. Yamauchi and Templer (1982) also found other perspectives on money beliefs and behaviors using American subjects.

This study conducted additional statistical analysis that Furnham did not use to examine the internal reliability of each of the subscales. Furnham did not report conducting tests for internal reliability, such as Cronbach's Alpha, on any of the subscales. The current study did measure the Cronbach's Alpha of each subscale and found the third subscale to be internally unreliable (see Table 2).

The third reason the American study did not replicate the findings of Furnham's (1984) may be related to the differences in the socio-demographics of the subjects. The American subjects are older, more likely to be married, have higher incomes, less education, are more politically conservative, and have different religious affiliations than the British subjects in Furnham's study. Previous studies such as Furnham's (1984) have suggested these socio-demographic variables are related to beliefs and behaviors regarding money.

These are only a few of the possible reasons why this study did not replicate Furnham's original six attitudes toward money using the MBBS. Cross cultural research needs to continue to examine similarities and differences among international groups on attitudes toward money and economic values. In addition, it is also apparent that a valid and reliable instrument is necessary to continue this research. This project will continue using the MBBS with subjects from other regions of the United States while expanding the ethnic representation within the sample.

The results of this study support the need for better understandings about attitudes toward money within American society. The value placed on money in western societies and by individuals within those societies makes it essential that we clarify individual and societal attitudes and behaviors toward money. In order to continue the process of developing better understandings we must have an adequate measure of these factors. This study provides a first step in developing and evaluating such a measure. Further research will facilitate the refinement of an instrument for assessing attitudes and behaviors toward money.

Table 2
Factor Analysis of the MBBS--Varimax Rotation

Item	Loading U.S.	Orig MBBS Factor	Orig Ldg
Factor 1 Obsession			
I firmly believe that money can solve all my problems.	.61	1	.46
I often use money as a weapon to control or intimidate those who frustrate me.	.60	1	.52
I feel than money is the only thing that I can really count on.	.60	1	.71
I sometimes feel superior to those who have less money than myself regardless of their ability and achievement.	.58	1	.46
I believe that a person's salary is very revealing in assessing their intelligence.	.55	1	.48
I believe that time not spent in making money is time wasted.	.55	1	.51
I sometimes buy things that I don't need or want to impress people because they are the right things to have at the time.	.54	2	.52
I sometimes "buy" friendship by being very generous with those I want to like me.	.51	2	.42
I would do practically anything legal for money if it were enough.	.50	1	.57

Table 2 Continued

Item	Loading U.S.	Orig MBBS Factor	Orig Ldg
Factor 1 Continued:			
If I have any money left over at .42the end of the month (week) I often feel uncomfortable until it is all spent.	.49	2	
I often feel inferior to others who have more money than myself, even when I know that they have done nothing of worth to get it.	.49	1	.58
I am proud of my financial victories--pay, riches, investments, etc. and let my friends know about them.	.47	1	.58
I feel stupid if I pay more for something than a neighbor.	.47	1	.46
Most of my friends have more money than I do.	.46	5	.61
Compared to most other people that I know, I believe that I think about money much more than they do.	.46	1	.53
Every time I make a purchase I "know" people are likely to take advantage of me.	.42	---	---
Eigenvalue 6.44 Variance 10.7%	Furnham's Eigenvalue 7.49 Furnham's Variance 12.5%		
Factor 2 Retention/Security			
I prefer to save money because I'm never sure when things will collapse and I'll need cash.	.61	3	.42
I know almost to the penny how much money I have in my purse, wallet or pocket at all times.	.50	4	.50
I don't like to borrow money from others (except banks) unless I absolutely have to.	.48	---	---
I often say "I can't afford it" whether I can or not.	.47	3	.64
In making any purchase, for any purpose, my first consideration is	.44	1	.46

cost.			
Even when I have sufficient money I often feel guilty about spending money on necessities like clothes, etc.	.43	3	.59
Eigenvalue 3.57 Variance 6.0%	Furnham's Eigenvalue 3.97 Furnham's Variance 6.6%		
Factor 3			
I am better off than most of my friends think.	-.50	5	-.53
I often feel inferior to others who have more money than myself, even when I know that they have done nothing of worth to get it. (Double load from Factor 1)	.45	1	.49
Most of my friends have less money than I do.	-.47	---	---
I am worse off than most of my friends think.	.43	5	.56
When a person owes me money, I am afraid to ask for it.	.42	---	---

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Environmental Constraints in Consumption

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Concern about overpopulation, resource depletion and pollution stems from our response to population growth as we strive for better living standards without regard for the earth's welfare.

This paper refutes the belief that science can solve planetary problems, shows that faith in our ability to eliminate pollution is a delusion, and casts doubts on the value of new energy sources or recycling. Instead, it proposes a new outlook in attitudes to consumption, in direct conflict with traditions, particularly relating to marketing practice.

Introduction

Current concerns about the future of the planet are too familiar to need amplification. The problems of overpopulation, resource depletion and pollution are discussed regularly in both scientific and popular literature, and the potentially damaging effects of global warming, ozone depletion, acid rain, water pollution, deforestation or other flaws in the ecosystem are well enough known for us to acknowledge their relevance in modern society.

It is generally accepted that population control is a fundamental need in trying to find a solution to the world's ills, though a more important root cause, the response of humanity to rapidly rising population levels, is less openly acknowledged, possibly for political reasons. The correlation between growth in population and environmentally-damaging pollution is a clear one, from historical evidence and by simple logic, yet we appear reluctant to admit, as a species, that any attempt to control planetary decline must involve new ways of thinking.

In the past, we have placed too much emphasis on traditional means of attacking population, resource depletion and pollution problems. We have concentrated on the search for new energy sources, the redistribution of wealth, or the reliance on rational argument, common sense or education. Close examination of our attitudes from an analytical scientific standpoint, however, reveals that these efforts, and the more recent ones such as recycling, are not only ultimately doomed to failure but can compound the severity of the situation.

Population and Consumption

If we examine the relationship between population and consumption, we find the oft-quoted idea (Corson, 1990; Jørgensen and Johnson, 1989) that a few areas of the world, comprising North America, Australia, Japan and Europe, contain less than 25% of the earth's population but consume 80 to 90% of its resources. If we take account of typical wealth and consumption distribution patterns in these regions, it follows that the "top" 10% of the population of the planet (that is, the heaviest consumers) are using up at least 80% of the world's resources. If we assume, in round figures, that there are five billion inhabitants on earth, this means that a mere five hundred million people are responsible for this consumption. Thus, if we try to share planetary wealth by universally increasing living standards to that of the top 10%, rather than limiting our distribution to the resources currently available, simple mathematical calculation tells us that the planet can only tolerate 625 million people at this level of consumption. Conversely, we can reduce our lifestyle to match the average of the 90% of the inhabitants consuming only 20% of the planetary resources. If we do that, then 22.5 billion people could live on the earth without exceeding current levels of resource depletion or pollution.

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Thus, we can establish, in theory, some kind of empirical relationship between population and permissible lifestyle. In order to do so, we need to examine carefully factors governing the interdependence of the two, looking at the limit situations, when automation is either totally universal or totally absent, respectively. If the world ever reaches the stage when everything is done by machine, its inhabitants will be part of a society where the presence or absence of a few million extra bodies makes virtually no difference to the planet, because all the resource depletion and pollution (apart from the relatively minor component needed to provide subsistence existence for people) will result from the use of machines operated by a small proportion of the human race for the development of added luxuries or comfort to be enjoyed by the species as a whole. In addition, if we want a stable planet, we shall have to make sure that pollution production remains below a level lower than that existing today. The combination of these two factors leads to an estimate that a fully-automated planet would probably be unable to cope with more than, say, 25 million inhabitants.

On the other hand, if we abandon all machinery and become totally dependent on our own unaided resources, then the earth can cope with many more people. In the limit, with no artificial aids to agriculture, no medical technology, no industry, no energy sources except manual- or animal-driven ones, no power-driven means of transportation, no communications and (probably) no national or centralised governments, an estimated fifty or one hundred billion people could live on earth, with the upper limit governed by some external factor, such as lower life expectancy or food-growing space or the greenhouse effect from their fires.

There are signs that we are beginning to appreciate in some small ways the dangers of our wasteful behaviour in potentially causing planetary exhaustion. Politicians, for example, speak of plans to protect the environment, but they are only prepared to implement them if the economy does not suffer as a result. It is, though, clearly impossible to reduce manufacturing capability to save the planet without harming the economy. We hear the current catch-phrase of "sustainable development" bandied round, but this is an oxymoron, since development implies continuous expansion, which cannot be prolonged indefinitely without sacrificing the environment in some manner.

An alternative possibility to be considered is that modern (by which we mean Western) thinking will allow all the countries of the earth to reach the lifestyle of the developed nations. Present-day economic theory tells us that the lack of a decent living standard in the Third World is caused by the fact that there is insufficient employment there. There is therefore a pursuit of capital in underdeveloped countries, because its acquisition will give them riches, and hence a better life. Thus, in theory, if we redistribute all the available wealth evenly to all parts of the world, there will be more work and hence higher living standards in the poorer parts of the planet.

Unfortunately, this theory does not seem to be working. As discussed earlier, there is not enough "wealth" (defined in terms of the products obtainable by resource consumption) on the planet to enable all of humanity to achieve the lifestyle currently enjoyed by the more affluent nations. People in the Western world, too, are reluctant to commit a fair share of what is actually available to those in developing countries, mainly for reasons of human selfishness. Even where some aid is provided, there is no guarantee that it will reach the people in need of it. Government officials may be corrupt, or powerless to organise efficient distribution (especially of food) to remote parts of the country before supplies are lost to black marketeers, terrorists or by natural factors. In addition, there are often problems of compatibility, stemming from religious or cultural objections, to the type of aid sent. Finally in this respect is the sad but true fact that aid often enhances the suffering of a poor country. Its provision enables, and sometimes encourages, population growth to continue (or even accelerate), so that the initial problem of a shortage of food, or work, worsens in consequence. If, as is unfortunately the historical case, the survivors saved by the aid produce children, the suffering is likely to be compounded many times over twenty years later.

It is possible, by making reasonable assumptions, to estimate the approximate effect of population and consumption growth factors. In the last two decades, there has been a fourfold increase in the impact of North American consumption on the environment (Jørgensen and Johnson, 1989) and, since a similar figure can be assumed for the other members of the world's "top" 10% consumers, we can assume (with a margin for safety to allow for probable over-consumption at the beginning of this period) that the human race is producing about five times as much pollution as a healthy planet can tolerate. We can thus postulate that five billion people are consuming resources at a rate which could only be sustained by about one billion with the equivalent consumption distribution pattern. Thus, we need to make some very careful decisions in the near future. We are faced, in short, with a choice of either drastically reducing our population, or lowering our Western lifestyle, or throwing away our planet. Current predictions are that, in about 35 years, the earth's population will double (Barney, 1980). If we hope to maintain the same social support systems as at present, it follows that the need for food, water, clothing, housing, fuel, schools, hospitals, and all the other requirements on which human beings depend will also double. The biggest population increases, 90% of the total, are unfortunately taking place precisely where extra mouths to feed can least be tolerated, in the Third World (Eisenbud, 1978; Mungall and McLaren, 1990), so that the need for these services will be considerably more than doubled if we hope to expand them to a greater proportion of the earth's inhabitants.

Population and Consumption Reduction

If we seriously want to save the planet, then, we either have to cut down our lifestyle or reduce our population. All indications at present, though, are that we are increasing both. Our attempts to achieve the latter alternative are ineffective, for a variety of reasons, under present social mores. The grim possibility of either drastically reducing birth rate (by such means as compulsory abortion, birth control or sterilisation, for instance) or drastically increasing death rate (by compulsory euthanasia of selected members of the population, for example) would prove unacceptable to most societies today, especially in view of the enormous decrease needed in numbers for such control to be effective in planetary salvation.

We are thus left with the reduction of consumption as the only real alternative to sacrifice of the planet. As one of the driving forces behind consumption, therefore, marketing may well become a focus for the need to change radically our ways of thinking. Techniques previously used for reducing consumption include some form of rationing or taxation, either of a voluntary kind or through regulation. We have always tended to shun this solution except as a last resort, again because of such human traits as selfishness or greed, preferring instead to rely on new technology to solve the planetary problems. This illusion is easily shattered, unfortunately, as a realistic engineering analysis of these hopes, exemplified in pollution disposal, the search for new energy sources, and recycling, can demonstrate.

Our supposed efforts to rid our environment of garbage are, in fact, merely exercises in hiding, transforming or disguising pollution. We get rid of visual pollution by burning the objectionable material, but produce harmful gases in the process. We "scrub" exhaust gases to reduce industrial air pollution, but we then have to dispose of an acidic or salt solution which is potentially fatal to plant growth. We bury toxic materials, but they leach into the water supply.

At the same time as we delude ourselves into believing we are curing our pollution problems, we rail against the decline in air, water or land quality. Our protests, though, are invariably identifiable as merely thinly-disguised selfishness for the human species, not for the planet. We hear, for example, of complaints about heavy metal contamination, deforestation and air or water pollution, yet closer inspection reveals the true causes of our concern. The reason why we are so adamant that lead, mercury and other heavy metals must be eliminated is not just that they can kill birds or animals, but that the birds and animals then get into the food chain and eventually kill people. The loss of rain forests, changing the climate, is denigrated not because the planet will suffer, but because human communities will be destroyed by the global warming effect. The ozone layer depletion is disastrous not because it will wipe out irreplaceable species, but because it will allow an increase in the cosmic radiation reaching earth, with a consequent rise in the number of deaths from cancer. The pollution of our waters by sewage and other refuse is a crime not because of the fish which are dying, but because fishermen are losing their livelihood as a result of depleted stocks and because the dead fish are unsafe to eat by humans.

The main hopes stemming from scientific or technological advances, the development of new energy sources which are being actively sought at present, are destined to failure on several grounds, but mainly as a result of the environmental cost of production. No potential new energy source can ever meet the continually increasing demands for power, for reasons which emerge only too clearly from logical analysis. All of the possibilities depend in some way on factors which cannot be included without some shift along the path to planetary destruction. Nuclear energy, for instance, produces toxic wastes, is heavily energy-dependent in development, and causes visual pollution in the form of mine tailings. Reservations about development and visual pollution apply also to suggestions for harnessing power from the sun, wind or tides; despite their enormous potential for supplying energy, comparable limitations can be identified. Added to this is the fact that conversion efficiency to electrical energy is relatively low, so that collectors have to occupy very large areas, introducing problems of space limitation and more visual pollution. In addition, electrical energy (the only feasible way of making these natural sources conveniently usable) cannot easily be stored, so has to be distributed by an unsightly grid system over a large area. For solar energy, too, any successful gathering is limited to daylight hours, when demand for electricity is usually at its minimum.

The most critical defect in any new energy source, though, is the matter of containment. The energy produced from nuclear reactions or sunlight or water or wind needs to be trapped in some form of container, and its concentration reduced (in the case of nuclear or solar energy) to the point where the collector will not melt as a result of containment. At present, there is no material capable of achieving this aim on a scale large enough to cope with the planet's energy demands. Even if one were to be discovered, its financial price would be astronomic and the environmental cost of producing the high-temperature-resistant container from mineral sources which are either rare or difficult to extract could not be met without some tendency towards sacrificing the planet once again.

The other major idea proposed to "cure" environmental difficulties is that of recycling. What this admittedly does, in essence, is reduce to some extent the consumption of natural mineral resources, but critical examination of the process reveals the fact that it inevitably uses up different kinds of resources and causes pollution. It combines an intensive consumption of energy and oxygen with the release of carbon dioxide, the main culprit in global warming, as an undesirable by-product, so is ineffective as a long-term solution. In particular, metal recycling can never be completely successful, because rusting can only be reversed by complex (and environmentally-destructive) reactions which, once again, almost always also involve the use of carbon, releasing carbon dioxide or other gases as polluting by-products into the atmosphere.

Planetary Needs

The inescapable conclusion is that, if we wish to save our planet, we must reduce consumption, especially in the Western world. This is diametrically opposed to all current economic doctrine, which presupposes a need to increase consumption to sustain market forces and hence financial well-being. The control of population, resource depletion and pollution, if it is attempted, will have to be carried out by observing rules for planetary survival, which can be summarised simply, in logical order.

The first of these is that the planet is more important than any of its inhabitants, a self-evident requirement. If there is no planet, there can be no inhabitants, so any discussion of a future in which our planet is not surviving in a healthy state is purely academic from the human perspective.

The second is that a species is more important than any individual in it, a fact which, if the rule is adopted, imposes on us the need to sacrifice some of our rights as individuals for the greater good of the human race as a whole. The intent would clearly be opposed by virtually all the religious teachings to which we are exposed, since it contains the implicit assumption that we may eventually have to decide to eliminate some members of the human race before their natural life span has expired, when they begin to consume resources too heavily without contributing to planetary well-being.

Thirdly, each species is of equal importance. We have totally ignored this obligation in our thoughtless subjugation of the world's resources. In our relentless pursuit of luxury, we are impervious to daily press reports that tell us we are wiping out species by destroying rain forests, by polluting our water, and by hunting animals for food or economic gain. We are just beginning to appreciate the fact that we do not yet understand the complex workings of Nature well enough to condemn any species, no matter how unpleasant we find it, to extinction, but this knowledge will arrive too late to save many co-inhabitants of the earth. In a few cases, we even unthinkingly accept the implications of the rule. The mutual dependence of a blind person and a guide dog, or a pet animal and the compnaionship it provides for its elderly owner are cases in point.

Fourthly, all individuals of a species are not of equal importance, a rule which again, at least on the surface, appears to contradict all our social conditioning. It presupposes that some people will have to suffer restrictions since, if we fail to control unlimited individualism, we cannot expect human beings to abandon willingly their rights to a luxurious lifestyle. On close inspection, we find that we are already following this rule. We place specific members of the race, such as royalty, pop stars, or personalities in sport, in a position of eminence, paying them exorbitant salaries out of all proportion to their true value to the planet or to society. At the same time, we happily condemn 20% of the world's population to live in near-starvation conditions (Corson, 1990).

Finally, all individuals of a species should have equal opportunities. This follows from the previous rule since, if we do not grant equal importance to all individuals, we must provide an equal chance for each person to develop his or her abilities to the full, in order to avoid potentially destructive unrest in those members of society denied a fair chance of the success enjoyed by others. It is important to stress that any solution to the impending demise of the world as we know it will have to be based on some kind of international leadership, with identical opportunities and equitable conditions imposed on all parts of the planet, to avoid envy and its resulting struggle for betterment.

In considering the possibility of adopting these rules, two vital factors should be taken into account. First, we should note that all of them are followed implicitly by all species in Nature, with the sole exception of our own. Secondly, as implied in the comments accompanying them, we should bear in mind that the rules already govern the lives of a major proportion of the inhabitants of the planet. It would be hypocritical of us to refuse to allow them to be imposed on all members of the human race merely to prolong the position of advantage currently enjoyed by the wealthier nations.

Clearly, though, the rules as quoted, if applied to their logical conclusion, will bring us into direct opposition with most of the ideas cherished in virtually all societies, religious groups, legal codes, economic theories and other human institutions accepted today. They will drastically alter, in particular, our industrialised, Western, way of life, and a brief examination of the adjustments needed in the area of marketing can be carried out in an effort to illustrate the enormity of the changes typically to be made in all sectors of our modern society.

Effects on Western Lifestyle

The major Western contribution to an improved planet would, of necessity, be an acceptance of lower living standards. This would require strong political will, a new approach to education, and changes in all the societal traditions. It is, for instance, obvious that no political party campaigning on a platform of reduced consumption, with consequent limitation of goods available, could hope to be elected to power. It would be necessary for an all-party agreement, with arrangements for equitable sharing of the reduced benefits available, to be made before the idea would have any possibility of being accepted. Legal, moral, religious and other social scruples would also be difficult to overcome, especially if any attempt to control population by compulsion were to be added to the erosion of current individual rights of citizens to consume without restriction.

In the area of marketing, involving as it would a deliberate attempt to reduce, rather than increase, consumption, the changes needed would be especially devastating. Reduction in consumption would lead to vast unemployment, both in production and in marketing areas. Efforts would be directed not only to a reduction in the polluting effects of processes, an aim which is just beginning to affect manufacturers, but also to a deliberate and large-scale decision to cut down production. It is only too apparent, when economic factors bring about this type of change, how much misery is produced in a developed nation, and we are currently seeing the results of this misery in former Socialist republics suddenly thrust into a free-market economy.

Two major corollaries would be the abandonment of financial motivation and the near-elimination of advertising, both of which are important driving forces in consumption. It would be necessary, presumably by government intervention in the market place, to remove (either completely or at least partially) the profit motivation from manufacturers, retailers and other market segments, so that the incentive for constant increase in sales would be lost. It may even be necessary to eliminate the credibility of money itself, a process which many observers feel is well on the way to becoming a reality with the advent of cashless, credit-card-using societies. It is worth noting that, of the three reasons for using money (the purchase of necessities, the acquisition of luxury, and the control of other human beings), only the first is a valid one in the context of planetary and species preservation. In a future society, perhaps, some kind of quota system will have to be imposed on consumers to prevent unlimited shopping sprees from defeating the goal of environmental restraint.

The first problem for such a system is to identify the needs and luxuries of a society. Strictly speaking, the only necessities for life (as evidenced by the fact that people are currently surviving on them) are clean air continuously, clean water daily and food occasionally. In addition, we can regard protection against the elements as a necessity at our present state of development, since we have lost the ability of our ancestors to survive without shelter and clothing. All else is luxury, from the viewpoint of Nature, though it would be a brave fool who would dare to suggest restricting all of humanity to have just these aids to life with nothing more. What is needed is to examine the "luxuries" of life to see just which ones are "valid" and which are "unfair" from the planetary perspective. Thus, for instance, it is reasonable to ask for tap water, a house which is warm enough, clothing, emergency surgery in life-threatening situations, public transport, or holidays, but it is not reasonable to expect as a right unlimited pure water for washing and flushing toilets, a luxurious or second home, air-conditioning, an extensive wardrobe, cosmetic surgery, a private car or foreign travel. Thses are all possessions or "mental-health needs" which we have grown accustomed to demand, mainly because of pressure placed on us by the expectations of modern society.

In particular, if we are to reduce our consumption, the use of advertising would have to be curtailed severely. Without regard for its actual effectiveness in accomplishing its aim, a factor constantly under review by the advertising industry itself, it is reasonable to point out that, if advertising did not work, it would be pointless to employ it. Yet there can be no question about the adverse environmental effects which virtually all advertising produces. There are statistics, incomplete but nevertheless telling ones, which reveal how much paper (and other resources in the form of metal or plastic) is needed for the purposes of advertising. We are told that 77,000 trees are required to make the paper for a single day's issue of a newspaper (Mungall & McLaren, 1990). Even if this paper is not produced by deforestation, it involves energy-costly and polluting recycling. The paper consumed in printing all the newspapers and magazines of the world on a regular basis must be enormous (Wilson, 1984). Since a major source of revenue for any newspaper is its advertising, it must account for a significant proportion of this paper use. If we then add the paper used in all the other forms of advertising, together with that needed for administrative activities, it is obvious that the environmental cost of this occupation is enormous.

In addition, successful advertising, by its very nature, increases the demand for goods. This increase, which can be correlated directly with increased resource consumption and pollution derived from the manufacture of products, can also thus be traced to the result of advertising activity. The demand for more modern goods of superior quality, too, can be a major factor in, for instance, the process of tropical deforestation of exotic trees and of premature dumping of unwanted, though still serviceable, discarded goods. Packaging, accounting annually for 52.3 million tons of paper in the U.S.A. in the past (Nobile and Deedy, 1972) and showing no tangible signs of decreasing, adds still more to the burden of the planet in trying to respond to the pressures of advertising.

There are, too, other environmental costs associated with advertising. The need to build, light, heat and otherwise service premises used for the trade must not be forgotten. Nor must the need to transport supplies to the premises, the products of the advertisers's efforts to market, or people to and from their workplace. Added components used by modern companies will account for more resource consumption; colouring agents, computers, telephones, fax machines and all the paraphernalia of a modern business all add to the environmental load for which advertising is ultimately responsible.

If a serious attempt to reduce consumption is to be made, then, present advertising practices will have to be abandoned, or at least seriously curtailed. They could, perhaps, be replaced by consumer-controlled (rather than producer-controlled) advertising. Electronic lists of goods, selected by the consumer when replacement of an item became necessary instead of from continuous exposure, would allow some degree of market diversity without exerting undue pressure either on prospective buyers or the ecosystem. It would be a challenge for advertisers to present their information in such a way that a potential consumer, searching electronically for goods, would be attracted at first encounter to a specific item, and would then become involved in the quest for more detailed information by continually asking for it to be presented on additional "pages" of the computer screen where the advertiser described the particular item.

This scenario, then, is one which will eventually be imposed on the human species if the earth is to survive relatively unscathed. Reasoned debate leads most informed observers to speculate that our race has between twenty and one hundred years to alter its hedonistic lifestyle before it is too late to save the planet. When the truth is brought home to us, and we are forced to change our living standard expectations, the marketing sector will be hard hit by new, earth-saving, regulations. It is only reasonable that those people responsible for developing marketing policy should begin, as soon as possible, to make their plans, in readiness for the time when the new reality is forced upon them.

Conclusions

The environmental problems affecting the earth at present will not be solved by scientific measures or technological innovation. New forms of energy cannot be expected to meet the rising demand, nor can recycling ever be a long-term means of avoiding planetary damage. The only satisfactory method of preventing global destruction by pollution is through rigorous enforcement of planetary laws which significantly reduce the importance of individuals and of the human species. Their adoption will, of necessity, change lifestyles, particularly in the Western world, and the marketing sector will be especially hard hit. New ways of thinking, aimed at actively reducing production and advertising, will have to be adopted. If the advertising industry hopes to meet the challenge, it should begin the process of planning its future strategies at once.

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Consumer Interest of Minority Market Segments and Marketplace Problems

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The United States stands at the brink of an ethnic revolution. If the growth for minorities continue, "minority consumers" will become "majority Consumers" in the next century. Factual information about these minority consumer segments must be used by both the public and private sectors in formulate strategies to effectively meet the needs of these consumers.

Minority Markets Define the Consumer of the 21st Century

The United States stands at the brink of an ethnic revolution. If the growth for minorities continue as projected into the next century, it is predicted that "minority consumers" will become "majority consumers."

Minority consumers are the dominant market for retail goods and services in many cities now. By the year 2000 it is projected that they will constitute a majority of the population in one third of the nation's fifty largest cities. The fact is that we do not have to appeal to the future for understanding the importance of minority markets. The top three minority markets (African-Americans, Hispanics and Asians) represent nearly a 300 billion dollar market now according to Deloitte and Touche and Impact resources (1990).

Minority consumers are an opportunity waiting to happen. In an arena of increased saturation and competitiveness, the existence of an untapped major consumer market should become a beacon for major consumer goods and services.

Demographic Trends - The Percentage of the White Population is Declining and Minority Consumer Markets are Emerging.

Minority consumers are growing at a faster rate than non-minorities.

Facts:

1. The traditional "white Majority" is rapidly losing its majority status within the overall U.S. population. The most rapid growth in the U.S. population is occurring for ethnic minority groups.

2. By 2010, non-Hispanic whites may comprise only two-thirds of the total U.S. populations (down from 1980 proportion of 80%), and 2020, only about half (50%) of the total population.

3. Preliminary figures from the 1990 census reveal that racial changes are transforming the nation much more rapidly than expected... In 1980, non-Hispanic whites represented a majority in six of the 10 biggest cities in the country; today, they are a majority in only three. (Shell and Lisack, 1991).

Minority Markets Are Emerging.

Minority consumer segments are experiencing rapid growth rates which the country cannot ignore.

Table 1
Size and Growth Rate of the Three Largest Ethnic Markets.

African-American Market

Size: 30.8 Million (1989)

[1]Coordinator, Retail Management
Consumer Sciences and Retailing

12% of U.S. Population

Growth Rate: 3 times the white population rate

Hispanic-American Market

Size: 22.35 Million (1989)
9% of U.S. Population

Growth Rate: 9 times the white population rate

50% are immigrants, and the majority are under 25 years of age.

Asian-American

Size: 3.73 Million (1980)

Growth Rate: Fastest Growing group in 1985, now the second fastest group.

70% are immigrants, and the majority are under 25 years of age.

Minority Consumer Segments are Profitable.

Minority consumers have a need for a wide variety of products and services, and the income to purchase them. These consumers represent attractive markets for businesses.

Table 2
The Purchasing Power of Minority Consumer markets.

African-American	255 Billion	(1991)
Hispanic-American	170 Billion	(1990)
Asian-American	35 Billion	(1990)

Source: Deloitte & Touche & Impact Resources 1990. Zakian, 1990.

Minority Consumer Segments are Untapped Markets.

Minority consumers have substantial buying power, a willingness to buy and a need for a variety of products and services. Although minority markets are not without risks, consumers are underserved and thus represent a fertile target market for companies. Yet, few marketers have aggressively targeted these consumer segments.

Problems Faced By Minorities in The Marketplace

Some marketers have overlooked minority markets or are making decisions based upon misinformation. There are numerous myths about minority consumers, but here we will only discuss four.

Myth 1: Minority consumers and white consumers are the same. Therefore no customized marketing approach is needed to reach minority consumer segments.

Fact: White it is true that all humans have the same basic needs for existence, cultural and social differences do exist.

All ethnic groups want to see themselves portrayed as positive members of the American society. All ethnic groups place great value on their family ties, wish to live in a good home and neighborhood, be accepted by their peers, wish to preserve their native culture and language and place great emphasis on education and achievement.

But, differences do exist among the three largest ethnic minority groups with respect the language, family roles, shopping behavior, media usage, etc. All of these factors affect the buying and purchasing behavior of consumers.

Myth 2: Minorities are monolithic groups.

Fact: Each of the three minority segments are made up of very distinct sub-populations just as with the majority society. Therefore, a customized marketing approach will be needed that is consistent with cultural and social norms for products and services. A standardized advertising strategy of substituting in Black, Hispanic and Asian models will not necessarily be appropriate.

Myth 3: Minority Segments are low-income consumers.

A myth held by some marketers is that minority consumers, especially Blacks and

Hispanics have little discretionary income.

Fact: There is a substantial and growing black middle class that has been overshadowed by the perpetuated image of the low-income black. Hispanics are also economically diverse. American Demographics (1989) reported that approximately 10 percent of black families had annual incomes of over $50,000 in 1987 and over 2 million adult blacks live in affluent households (O'Hare 1989). Cuban Americans had $26,800, Central and South Americans has $22,200 and Mexican Americans has $19,300 in 1986 according to American Demographics (1988).

Myth 4: Minority marketing is a passing fad.

Fact: Minority consumer segments are growing at a faster rate than the White population. Therefore, one has to only look at demographic trends and projections for the population and the labor force to know the fallacy of this argument.

Recommended Directions for Consumer Education, Policy and Research Programs

What should be done to effectively serve the needs of minority consumer segments? The blueprint for change:

1. U.S. marketers must rely on research and not myths and misconceptions about minority consumers.

2. Consumer education brochures, shopping guides, consumer response cards, credit card applications etc. must be in a language form understandable to ethnic minority segments. There must be people who speak the language of minority segments on 800 numbers, behind service desks, serving as sales associates, sales representatives, and in top managerial positions. Companies must employ or seek out firms with expertise on the selected minority segment for marketing and advertising campaigns. Some companies are even setting up minority marketing departments, either as a separate or as a joint section of their marketing departments, or forming ethnic marketing teams.

3. More cultural education and sensitivity training is needed for members of the public and private sectors so they can effectively deal with minority consumers in the marketplace and in the workforce.

Here are some select comments on the African American, Hispanic and Asian consumers from retailing students in my multicultural marketing and retail class at both the graduate and undergraduate levels.

Table 3
Comments from Undergraduate Students on Ethnic Minority Segments

AFRICAN-AMERICANS

Good Dancer
Welfare
Use Slang
Like B.B.Q.
Like Chicken
Sensitive about Racial Issues
Close Unit
Like Large Cars
Female has Power in Family
Wear Colorful Clothes
Greater Sex Drive
Lots of Kids
Smile a Lot
Fat
Drugs

HISPANICS

Religious
Large Number of Migrant Workers
Don't Want to Learn English
Close Family Ties
Friendly
Large Number of Children
Love to Cook and Eat
Fat (Women)
Hot Spicy Foods
Drugs

ASIANS

Good at Math
Strong Family Traditions
Like to Save Money
Friendly
Easy Going
Non-Aggressive

Introverted
Japs
Healthy
Own Restaurants/Grocery Stores

Table 4
Selected Comments From Graduate Students

AFRICAN-AMERICANS

Very dark brown skin
Larger noses
Loud, boisterous
Laid back, Easy going
Kinky hair
Strive for equality, yet segregate themselves
Worried with physical appearance
Frustrated
Need for revenge
Artistic, Musical
Athletic
Sloppy

HISPANICS

Many speak Spanish
Light brown skin
Poor, Rude
Lively, Talkative
Usually smaller framed physically
Curvaceous bodies
May have children hanging around them

ASIANS

Dark, yellow skin
Straight course hair
Rounded faces, Squinty eyes
No bridge on the nose
Respectful, Considerate
Shorter, generally (<5'10")
Clannish behavior
traditional cultural values
Dedicated to education
Treat women poorly (by U.S. standards)
Good copiers
Sneaky
Unclean (in food prep.)
Talk in circles

The stereotypes and generalization held by these students will affect their management and service behavior to these minority consumers. If you were a CEO, would you want your front line people working with minority consumers or workers believing they have a "greater sex drive" as just an example.

Also included are survey results from a recent study on the shopping experiences of minority consumers in retail stores and malls.

- 78% believed that Black consumers do not receive the same level of service as White consumers in retail stores.
- 65% believed that sales clerks give preferential treatment to White consumers over minority consumers.
- 77% believed that sales people often assume that minority consumers cannot afford to buy expensive products.
- 43% believed that sales help often steer minority consumers to cheap merchandise rather than more expensive merchandise.

Research Needs

More research should be done on the Black, Hispanic and Asian markets to identify the specific subsegments within each ethnic group and to compare and contrast their purchase behaviors.

Most research on minority consumers has dealt with "how" they behave rather than "Why" they behave as they do. Emphasis should be places on explaining rather than describing behavior.

Conclusion:

Minority segments are receptive to a wide variety of products and services such as financial services, life insurance, upscale products/services, etc. (Deloitte and Touche and Impact Resources, 1991). They seek products from companies that show a sensitivity to their culture, values, and lifestyles.

Such sensitivity and understanding will require businesses and those that train individuals to work in these businesses to develop new attitudes and marketing approaches to sell their goods and services, and to develop loyal customers within minority markets. Be aware that I am not advocating that businesses do anything different to minority markets than for majority markets. Understanding your target market is the foundation of all marketing. Marketers will actually have no choice but to think in multicultural terms in the 21st Century and beyond, because it will be crystal clear by then that minority markets are a significant source of profit.

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