informative labeling of consumer goods sold in retail trade. The purpose of informative labeling is to guide the consumers' choices by providing them with useful facts concerning the contents and features of the product. A special label called Varefacta (Facts About the Product) is attached to those goods meeting minimum standards set by the Institute. The label, known as DVN for Dansk Varefakta Naevn, does not mean high quality or approval of the product or the company as such, but only that minimum standards have been met. Those companies who wish to use the DVN label must ask for a permit and pay a fee. The labeling permit may be withdrawn if its use is abused. The DVN is somewhat similar to seals of approval in the United States such as the UL Seal of Approval for electrical appliances. However, the DVN is more inclusive since it can be placed on food groups, home furnishings, clothing, household equipment, sport goods and toiletries; the United States seals are not so inclusive.

Symbols are used to guide consumers in caring for the product rather than words as is common in the United States. For example, a picture of an iron with three dots on it would indicate that the temperature for ironing is 200 degrees Centigrade; two dots, 150 degrees; and one dot, 110 degrees. No iron is to be used on any garment bearing a label which shows the iron crossed out. Both countries face the problem of labeling the interaction of one drug with another. Recently the U.S. Food and Drug Administration asked the Danish Institute for assistance in the labeling of its products.

The Danish Consumer Council is a non-party organization independent of public authorities and of trade and industry. Founded in 1947, its objective is to protect consumer interests through an active consumer policy. They receive a government subsidy and private contributions. Five main goals of the Council are: 1) to inform public authorities, trade and industry, etc. about consumer views, 2) to represent consumer interests on committees, 3) to promote standardization and informative labeling of all kinds of products, 4) to promote a coordinated consumer service, and 5) to cooperate with consumer organizations in other countries. They hold four to six meetings a year, as well as an annual meeting. Any interested person may become a member of the Consumer Council by paying dues. There is no age limit, but a member must be at least 15 years of age to vote. The Council promotes the consumer's right to safety, the right to be informed, the right to choose, and the right to be heard just as we do in the United States. Their publication titled Think, published 10 times a year, includes results of comparative investigations of qualities and prices, deals with questions of services, public and private, and debates advertisements. Much of the material from this publication is reprinted in the press and is reported by radio and television. Since 1964 the magazine has accepted no advertisements.

The Danish Consumer Complaints Board Act was passed in June, 1974. Since that time, the Council has operated a complaint center. The Minister of Commerce controls those complaints which may be brought before the Board. They handle complaints both by phone and letter and have been quite successful in resolving them. Local consumer groups have been set up in many towns, and an attempt has been made to serve both the rural and urban populations. There is a specific complaint form which is filled in by the consumer. The form enables consumers to be specific about their complaints and encourages them to put it into writing. Since 1973, the Council has tried to work on legislation for something like the 1969 Truth in Lending Act passed in the United States but has been unsuccessful in its attempts. Although the Council feels that it is successful in much of its work, it also feels that while the consumer information is good, it is not enough. A greater effort needs to be made to encourage people to use the information provided them.

The state institution known as the Consumers' Ombudsman was established in 1975. The ombudsman takes action in cases which violate regulations laid down in the Marketing Act. The Danish Marketing Practices Act, passed in June, 1974, encourages the use of proper marketing practices. No gimmicks, gifts, stamps, coupons, or lotteries are allowed. This is in contrast to the United States, where sweepstakes are still common even though some legislative attempts have been made to outlaw stamps and gimmicks. The Consumers' Ombudsman possesses the qualifications and fulfills the general conditions necessary for appointment as a judge. He tries cases in the Copenhagen Maritime Commercial Court, and the decisions made there are final. Decisions cannot be appealed, and violators may be fined, ordered to serve a mitigated jail sentence not exceeding six months, or sentenced to ordinary imprisonment not exceeding two years. There is no small claims court or class action suit in Denmark, but they are looking into possibilities of using these. They prefer to negotiate instead of taking cases to court. However, the Consumers' Ombudsman seems to be moving in the direction of using the legal system to solve consumer problems.

Denmark differs from Norway and Sweden in two ways: 1) it is a part of the European Common Market and 2) it is the first Nordic country to propose a Consumer Product Safety Law patterned after that of the United States. The Scandinavian countries regard the United States as a leader in product safety.

SWEDEN

Sweden, a country about the size of California with a population of eight million, has a social democratic atmosphere. The National Swedish Board for Consumer Policies determines the direction of consumer activity. This Board is the central authority responsible for consumer affairs, its purpose being to support consumers and strengthen their position in the market. The Director-General of the National Board is also the Consumer Ombudsman. In cases of minor importance, the Consumer

Ombusdman can himself issue prohibition injunctions and information injunctions where he thinks fit. If a matter cannot be resolved by negotiation or by the approval of an injunction, the Consumer Ombudsman may bring an action in the Market Court, presided over by a government judge. If the Market Court sanctions the Ombudsman's recommendation, it issues a prohibition or an injunction against a trader and normally lays down the conditional penalty. There is no appeal against decisions made by the Market Court. The finality of these decisions is in contrast to the United States, where it is difficult to enforce market decisions.

If a case involves an important principle and if the Consumer Ombudsman wishes to make it a precedent, he may take the case to the Market Court even though it could have been settled by negotiation. A trader may be fined or imprisoned for certain actions, especially for misleading descriptions which are likely to affect the demand for a commodity or service.

The Ombudsman also has jurisdiction over the Marketing Act, the Unfair Contract Terms Act, and the Consumer Credit Act.

The Marketing Act relates to actions by a firm or some other trader when marketing goods and services. The trader must reveal the fact that a commodity will not stand a certain kind of usage, and if the product is harmful, its sale may be prohibited.

The Unfair Contract Terms Act was passed to protect consumers against unreasonable contract terms used by traders, especially in standardized contract forms such as sales contracts, order forms, and guarantees.

Section 7 of the 1979 Consumer Credit Act requires the trader to demand a deposit normally equaling 20% of the cash price. This is done to prevent impulsive buying, and it also serves to reduce the credit given and the cost of credit to the consumer. The consumer is permitted to trade in an item as part of the cash deposit. In the United States, credit purchases are frequently made with no down payment. Sweden's success in achieving such a credit act is in contrast to Denmark's situation.

The National Swedish Board for Consumer Policies consists of two Departments of Survey and Negotiation concerned with the areas of production in the home, including food, clothing, household appliances, and other domestic aid, housing, transportation and other consumption such as insurance, bank services, health, and culture. Credit purchases common to all four areas are also dealt with here.

In addition, four divisions conduct negotiations and investigations. The Technical Division tests consumer products. Tests may vary from an examination of doll safety to the complicated testing of household durables.

The General Division is responsible for three units: 1) distribution and household economy, which includes the Council for the Sparsely Populated Areas. This Council insures that the more isolated people have goods and petrol; 2) education and research, which includes efforts to improve consumer education activities in schools and in higher education; 3) consumer activities carried out by the local authorities and the regions. Local authorities already have Consumer Counsellors; however, this unit stands ready to advise and assist in local and regional matters.

The Information Division's purpose is to make people aware of circumstances that have a bearing on consumer policy. Their publication, Advice and Results, reports test results and market surveys. Articles deal with such topics as "Bicycle Safety", "Convection Ovens", and "Use of Credit". This publication also instructs its readers in the matter of filling out complaint forms. The advice they give, such as the recommendation not to purchase the convection oven because it is not worth the money, is different from the approach used in the United States where the decision is left entirely up to the consumer with no advice given. A second publication titled Consumer Law and Economy is designed for those in marketing, decision-makers in business, lawyers, and teachers. Articles describe the activities of the Consumer Ombudsman and the Market Court, Consumer Law, and economic matters. In 1981 this publication discuessed the decrease in funds available for consumer policy.

The Administrative Division is responsible for the National Board's central administration. It deals with such questions as those relating to staff, finance, premises, and documentation, It also coordinates the National Board's planning and budgeting functions and is responsible for certain other questions of a general nature.

The Public Complaints Board is an independent authority which, at the request of individual consumers, settled disputes between buyers and sellers chiefly concerning defects and shortcomings in goods and services. There is no appeal against rulings by the Board. Three suggestions for improving the effectiveness of the Board are: 1) that the Board be given the opportunity to assess cases concerning real property, 2) that they be allowed to publish traders' names who do not comply with decisions of the Board, and 3) that the Consumer Ombudsman be given the necessary standing to litigate for individuals in civil cases before a public court. Written complaint forms are widely used in Sweden to assist consumers in communicating their affairs. In 1981 the following complaints were registered in the ten sections of the complaint board:

Motor Vehicles	1300
General Department	1067
Textiles	933
Tourism	870
Electronics	633
Footwear	507
Laundry	481
Furs	212
Insurance	195
Boats	112

The rate of compliance after complaints are processed is 85%.

Since 1974 Sweden has had a small claims court in which claims have been enforced. In the United States small claims are not enforceable.

An additional activity of the National Board for Consumer Policies has been the publication of Car Maintenance, a comprehensive, informative report of investigation begun during 1980 to acquire the maximum amount of information about the problems and costs incurred by car owners of Sweden.

NORWAY

Norway has a population of 4 million, and their social democratic form of government finances their consumer activities.

There is broad political agreement that great importance must be attached to solving consumer questions in all avenues of consumer activity, research, education and information, and protection of consumers. The main objectives of consumer policy are to make each household capable of utilizing its resources and to influence industry and the public sector to function to the greatest possible degree in accordance with the needs of the household.

The Ministry of Consumer Affairs and Government Administration consists of six departments. One of these--the Family and Consumer Department--is responsible for the administration of consumer affairs. This Department prepares its budget, formulates consumer policy, cooperates both internationally and with the Scandinavian countries on consumer affairs, legal questions, labeling, and consumer research. In addition, they manage a research grant which can be spent on projects within the department's sphere of interest. The Department's four basic areas of activity are: 1) research, 2) information, 3) protection, and 4) the influence of consumers.

The following consumer organizations function within the framework of the Family and Consumer Department: 1) The Consumer Council, 2) The Committee for Informative Labeling, 3) The State Institute for Consumer Research, and 4) The Consumer Ombudsman and the Commission on Marketing.

The Consumer Council, founded in 1953, is an independent institution aimed at promoting the interests of the consumer through cooperation with public authorities and with institutions and organizations. The Council consists of eight members and a chairman who is appointed by the Government. The Council cooperates with the Consumer Ombudsman, the State Institute for Consumer Research, and the Committee for Informative Labeling. Since 1958 they have been a member of the Nordic Committee for Consumer Matters, and since 1961, a member of the International Organization for Consumers' Union. The Secretariat of the Consumer Council as part of its legal duties prepares the cases that are to be discussed and decided upon in the main Council and deals with consumer complaints and consumer questions. The Secretariat consists of five departments: 1) the Administration Department, 2) the Department of Legal and Economic Affairs, 3) the Consumer Information Department, 4) the Consumer Report, and 5) the Technical Department. The Consumer Information Department provides books, brochures, folders and courses in consumer education. Consumer education is a compulsory subject in the primary school. Seventy-five percent of the expenses of the Consumer Council are covered by the government; the rest are covered through sale of the magazine, Consumer Reports. That publication, with its circulation of 275,000 copies ten times a year, is the largest in the world in relation to population.

In each of the 19 counties in Norway, the County Board appoints a Committee for Consumer Affairs, composed of a chairman and a minimum of four members. The Committee coordinates and initiates work to the benefit of the consumers in the county; this takes place within the framework of the consumer politics outlined by the National Meeting and the Consumer Council. A consumer office in each county receives inquiries from consumers concerning complaints or guidance in buying products or in home economics matters. The offices are approached by individuals, groups, and clubs in connection with different kinds of information work. As a rule, the staff of the offices consists of one consumer consultant, two home economics consultants, and one office clerk. In the United States, only the state of New Jersey has a system like this in which 300 people are serving at the county level as liaison between the lay people and the government. The expenses of the County Consumer Offices are covered by the Consumer Council. The Small Claims Court has been effective in Norway since 1980. More than 77,000 consumer complaints have been received each year in Norway, with motor vehicle complaints at the top of the list.

The Committee for Informative Labeling, begun in 1954, performs as in Denmark. Their practical work is aimed at providing suitable labeling of all the types of consumer goods concerning which consumers need information. They work on the labeling of foodstuffs, textile goods, and domestic appliances. Work is now being done on devising some system whereby labels would have comparative information on them so the consumer could more easily make a choice among several goods.

The State Institute for Consumer Research, begun in 1976, is a reorganization of the Home Economics Office which functioned in the 1940's. Research is conducted on foodstuffs, textiles, detergents, flammable fabrics, food consumption patterns, and consumer behavior. Additional testing is done on tools, machines, and equipment for all household tasks. They combine research and teaching and are in close contact with the State Teacher's Training College of Home Economics at Stabekk. They also cooperate with other Scandinavian countries both directly and through the Nordic Committee.

The Consumer Ombudsman and the Commission of Marketing, established in 1973, has the goal of protecting both business and consumer interests in healthy market conditions. The Consumer Ombudsman has a secretariat with up to 15 employees, some of whom are temporary. He is financed out of the State Budget. The Consumer Ombudsman is responsible for the day-to-day aministration of the rules and for creating a climate of opinion in business favorable to their observation. The Ombudsman forbids activities that are contrary to sound business principles or unreasonable to consumers, requires honest and reliable marketing, and forbids the use of irrelevant inducements, bonuses, or lotteries. He also cooperates with the Consumer Council, the Swedish Ombudsman, and the Nordic Committee. The current Ombudsman in Norway has suggested that the name be changed to Ombuds so that no bias is evident between men and women. He further indicated that advertising with sexual overtones is banned in Norway even though it might be allowed in other European counties. His office has handled 2000 to 2500 cases each year, and they are currently working on packaged tours and prefabricated houses. He also indicated that his job is difficult because, as the sociologist said, "You make a rule or law to satisfy half the people; then you don't enforce it to satisfy the other half."

COMPARISONS BETWEEN SCANDINAVIAN AND U.S. CONSUMER PRACTICES

In comparing Scandinavian consumer practices with those of the United States, the following are evident: 1) both countries have a desire to foster effective consumer education for all ages, 2) both have a consumer product testing service, which publishes its results in a magazine for distribution to its populations, 3) both cooperate with other countries in promoting the interests of the consumer, 4) both seem to be getting a lower quality of consumer products at higher prices, and 5) both have promoted consumer rights such as the right to safety, the right to be informed, the right to choose, and the right to be heard.

The constrasts are: 1) the two consumer approaches differ because one is funded by the government, and the other is not, 2) the consumer framework in Scandinavia consolidates and unifies their activities to a greater extent than is evident in the United States, 3) the attitude toward regulation differs between the countries, 4) consumer laws are enforced in Scandinavia, whereas enforcement is unsuccessful in the United States, 5) the Scandinavian system is able to help the lower class, while the United States system is organized to serve primarily the middle class, 6) the attention paid to labeling is greater in Scandinavia than it is in the United States, 7) written complaint forms are available in Scandinavia, whereas a complaint letter to the company is common in the United States, 8) more legal help is available in Scandinavia through the office of a Consumer Ombudsman, which does not exist in the United States, 9) the Consumer Council in the Scandinavian countries performs many functions which are done in part by scattered organizations in the United States, 10) the consumer county system in Scandinavia is not duplicated in the United States except for the state of New Jersey, and 11) the United States surpasses the Scandinavian countries in its efforts with consumer product safety.

The experience of direct learning about consumer affairs in other countries exposes us to the wide range of possibilities for policy and action by both the government and its people. The Swedish consumer is becoming increasingly militant and willing to exert some individual effort for change --like Americans. Sweden has opted for the middle way. It seems probable that those in charge of extending the welfare state to the Swedish consumer will continue to find ways to preserve a significant amount of freedom of choice for the individual while seeking ways to minimize the hidden dangers which come with such freedoms. That balance between the demands for consumer protection and preservation of the right to free choice plus the efforts to achieve it should be of continued interest and importance not only to the American consumer movement but also to other consumer movements throughout the world.

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FAMILY COMPOSITION AND STOCK ADJUSTMENT PATTERNS: COMPARISONS BETWEEN HUSBAND-WIFE AND FEMALE HEADED HOUSEHOLDS*

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ABSTRACT

This research examines the issue of whether the stock adjustment patterns of female headed households differ from those of traditional, husband-wife households. Results from this study indicate that some important allocation differences exist between the two household types. In particular, (1) female headed households generally have fewer available resources than do their married counterparts, (2) they are slower to adjust to any disequilibriums in their asset holdings, and (3) the female headed households' cross-adjustment patterns do not conform with the patterns generally found in the literature. Investigation of these patterns provides us with added insight as to how general household resource allocations will change as the proportion of female headed households rises in our society.

During the past twenty years, dramatic changes in household composition have occurred in the United States. Some of the greatest compositional shifts have been in the categories of husband-wife and female headed households. Although the shear number of husband-wife families continues to rise in this country, the proportion of households that fall into this traditional family type has been declining. In 1960, 74.8% of all households were made up of the husband-wife type. By 1975, this number had dropped to only 65.4% and projections are that by 1990, the figure will be 54.9%. Their percentage decline has been due in part to the rapid growth of the female headed household. In 1960, 17.2% of all households were headed by women. In 1975, the number had risen to 23.6% and projections are that by 1990, female headed households will account for over 29% of all household types [6, p.57]. These household composition changes have the potential to greatly alter consumption patterns within our society. Indeed, as the proportion of husband-wife households decline and those headed by women alone rise, it becomes more and more imperative that researchers try to analyze and understand the implications of this demographic change for patterns of household resource allocations.

This paper examines household resource allocations to various capital stocks and to consumption by two groups: the traditional, husband-wife household, and the rapidly growing category of female headed households. The paper is divided into three parts. In the first section, a general model of household behavior is outlined. In the second section, the data base is described and descriptive information on the socioeconomic characteristics of the two household types is presented. In the final section, a stock adjustment model is estimated separately for each household type. Discussion of the results focuses on the differences between the adjustment patterns of the two groups and what implications these differences have for changing resource allocation patterns in our society.

A GENERAL MODEL OF HOUSEHOLD STOCK ADJUSTMENT

In what manner if any, are a household's investment allocations related to each other and to consumption expenditures? This question has been investigated quite extensively in the economics literature. One framework that has been frequently adopted when asking this question is the portfolio model of household stock adjustment. The basic premise of this model is that households have a portfolio of investment alternatives over which they must make choices. The portfolio includes such items as housing, automobiles, and financial assets (e.g., stocks, bonds, savings, etc.). Household allocations to these investments are generally thought to depend on the investments' rates of return, the complementarity (or lack of it) between investment alternatives, and the household's permanent income.

Most portfolio work to date has examined the behavior of "average" household types either because they used aggregate data in their empirical work [7,8] or because they homogenized the house-

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holds in their sample to avoid estimation problems [3,10]. Bryant's portfolio work on rural, poor households is the one exception [1]. In the work that follows, we expand the empirical picture some by estimating a stock adjustment model for two different household types. In this formulation we follow the framework used in past micro-data portfolio research [see 1,2, and 10].

Our description of the model begins at the level of the household's desired (or equilibrium) capital demand equations. Let X^{p}_{jit} be the desired long run stock of item X_j by family i, in year t. In most aggregate models, X^{p}_{jit} is formulated as a function of the rates of return for all stocks in the portfolio. Unfortunately, in the disaggregate models that are estimated here, it is nearly impossible to calculate rates of return for each household's portfolio of stocks. Following Bryant [1], we circumvent this estimation problem by assuming that once we control on a series of demographic characteristics that may alter a household's returns, rates of return are hypothesized not to vary.

The remaining variable included in each of the desired stock specifications is planned or permanent income. Desired investment is made on a basis of permanent rather than current income, because current income has a random, transitory component in it that a family cannot anticipate, and therefore does not incorporate into its decision-making process.

Despite the fact that households have desired demand functions, at any point in time, a household's current capital stock levels (X_{jit}) will in all likelihood deviate from their desired stock levels (X^{p}_{jit}) because of adjustment lags. Adjustment lags are inherent in the nature of capital goods acquisition. They occur because of the costs associated with changing a household's capital stock(s). These nonlinear costs may stem from two sources: (1) the monetary costs of adjustment that increase with the magnitude of the disequilibrium, and (2) the money and time costs to the household of gathering relevant information about the market. For example, if a household wanted to add a room on to their house (i.e., increase their existing housing stock), they must search out information about construction costs and room designs (among other things) and these search costs will rise in a nonlinear fashion as the value of the new room they want to build rises.

In a portfolio model, households are seen as being in a continuous process of moving toward their desired stock holdings, which in turn change as the household's permanent income and market rates of return fluxuate. In the world of discrete time that most empirical work deals with, only adjustments within a dictated time frame can be observed. Thus, an examination of the adjustment process reduces to estimating the observed change in a stock between two periods as a function of the household's current transitory income and the magnitude of stock disequilibriums that existed in the initial period.[3]

Given that we do not observe the household's desired holdings of any stock at a point in time, estimation of the adjustment process can be done only after substituting the determinants of the desired stocks directly into the stock adjustment equation. In this context the adjustment system has the following general mathematical form:

$$(X_{kit}-X_{kit-r}) = \gamma_{x_k x_k}\left[X^{p}_{kit}(D_{it-r}, Y^{p}_{i})-X_{kit-r}\right] + \sum_{j \neq k}^{j} \gamma_{x_k x_j}\left[X^{p}_{jit}(D_{it-r}, Y^{p}_{it})-X_{jit-r}\right] + \gamma_{x_k y_t}(Y^{t}_{it}) \quad (1)$$

where, D_{it} = the vector of demographic characteristics for household i in period t.[4]

y^{p}_{i} = permanent income for household i.[5]

y^{t}_{it} = household i's transitory income in period t.[5]

and all other variables continue to be defined as they were previously. For our purposes, t=1972, and (t-r)=1969. In addition, each adjustment system that we estimate will have four equations (K=1,2,3,4) like equation (1), one for each of the portfolio elements that are outlined below.

THE DATA

The ideal data set for this study would be a panel of husband-wife and female headed households that responded to questions directed at obtaining information on all physical and financial investments that the household made over its life cycle. Unfortunately, micro-data on household investments are difficult to obtain because of expense, disagreement about what constitutes investment, and once it is defined, how it should be empirically measured. The data which require the fewest definitional compromises and which will be used for this study were taken from the Panel Study of Income Dynamics (PSID).

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[3] See Zick [10] for a more detailed explanation of the adjustment process.

[4] In our estimated model, these demographic characteristics include region of residence and urban/rural dummies, a race dummy, a dummy for ever having children, age of the youngest child if the household has children, years of marriage (for the married sample only), and a previous marriage dummy (for the female headed household sample only). Table 1 gives the descriptive statistics for all of these variables.

[5] Permanent income is defined using the conventional approach first suggested by Friedman [2]. Essentially this involves taking a weighted average of the household's past income. The weight given to each year's income is a function of the household's time horizon and discount rate. Past work [2] suggests that the choice of a three-year horizon and a discount rate of .35 is reasonable. Correspondingly transitory income is defined as the difference between the household's current income in 1969 and its permanent income as it has just been defined.

Three household stocks along with a measure of household consumption expenditures are identified in the PSID. Physical capital is represented by two of the household's largest durable goods: housing and automobiles. It is assumed for the purposes of this work that both housing and automobile stocks are directly proportional to their reported net dollar value in each year. Financial capital is approximated by the dollar value of the household's stocks, bonds, trusts, savings, and property.[6] Finally, to round out the model, some measure of consumption expenditures had to be derived.[7] In this data set, consumption is measured by a set of annual household expenditures that include rent, property taxes, food expenditures, and income taxes. While these items do not exhaust a household's consumption possibilities, they are the only measures available in the PSID, and thus, it is assumed that their sum is directly proportional to total household consumption.[8] Therefore, within the constraints of the data, a portfolio of four resource allocation categories are identified: housing, cars, financial assets and consumption.

Two subsamples are drawn from the PSID for the purposes of estimating this four equation stock adjustment model. The first sample includes only households where the respondent is married and the spouse is present throughout the period of analysis. The second sample includes only households where there is a nonmarried female head who remains single throughout the period of analysis. The traditional husband-wife sample contains 990 households and the nontraditional female headed sample contains 194 households. In the analyses that follow, all responses in both samples are weighted to make them representative of a random cross-section of husband-wife and female headed households in this country.[9]

Table 1 presents descriptive statistics for both subsamples. By examining these figures some interesting information emerges. First, it appears that on average, a female headed household has only half the annual permanent income of a husband-wife household. Thus, simply because of monetary resource constraints, it would seem that female headed households should have different (slower?) adjustment patterns than do two-adult households. Second, it seems that female headed households' asset holdings in 1969 are on average, substantially lower than those of husband-wife households in all categories. To further investigate how changes in the households' resource holdings complement or compete with one another in each of the two samples, we turn to the estimates of the stock adjustment systems.

Table 1. Descriptive Statistics for the Two PSID Subsamples

	Husband-Wife Sample		Female Headed Sample	
Variable[1]	Mean	Standard Deviation	Mean	Standard Deviation
House Value[2]	9191	9766	5207	8564
Car Value[2]	1123	945	632	1008
Consumption Expenditures	3964	2588	2540	1477
Financial Assets	11360	27923	6573	26890
Permanent Income	12470	7019	6760	3746
Transitory Income	481	1865	313	1309
Head's Race (1=black,0 otherwise)	.072	.259	.165	.372
Urban/Rural (1=urban, 0 otherwise)	.690	.463	.784	.413
North East (1=NE,0 otherwise)	.254	.435	.286	.453
Northcentral (1=NC,0 otherwise)	.332	.471	.321	.468
South (1=South,0 otherwise)	.261	.433	.240	.428
West (omitted cate.) (1=West,0 otherwise)	.153	.441	.153	.408
Previously Married (1=yes,0=no)	-----	-----	.641	.481
Years Married	18.26	9.39	-----	-----
Have Children (1=yes,0=no)	.925	.263	.620	.460

[1]All information here came from the 1969 wave, however all dollar figures have been measured in deflated dollars (where 1967=100)

[2]This includes the zero values for those households that did not own a home or a car.

EMPIRICAL RESULTS OF THE STOCK ADJUSTMENT MODELS

For each sample, the four equation stock adjustment system should be estimated simultaneously to allow for mutual correlation of the error terms across equations. However, given that this seemingly unrelated system is just identified, and that each equation has the exact same vector of independent variables, ordinary least squares (OLS) estimates of the regression coefficients are unbaised, consistent, and efficient [5]. Therefore, each of the equations in the system are estimated separately

[6]The PSID does not contain information on the dollar value of the financial stocks held by a family in each period. However, it does contain information on the dollar flows generated by the stocks of financial capital over each year. For this work, these dollar flows were aggregated and multiplied by the reciprocal of the average rates of return for 1969 and 1972 to obtain an estimate of a household's financial wealth in each year.

[7]Wachtel [8] and others [9] have argued quite effectively that the allocation of income and wealth are made simultaneously and therefore a portfolio model should include both assets and consumption.

[8]Other types of consumption measures were tested however the proportional measure used here performed best. See Zick [10] for details.

[9]The PSID data oversamples poor households and the weighting primarily corrects for this.

using OLS. The own- and cross-adjustment parameter estimates obtained from each sample are presented in Tables 2 and 3.[10]

Interpretation of the estimated own- and cross-adjustment coefficients can be best illustrated by example. For instance, in Table 2, row 1, column 2, the reported adjustment coefficient is .0606. This figure states that in 1969, if a female headed household had an excess demand[11] for housing of $1000, then between 1969 and 1972, her financial asset holdings increased in value by $60.00, ceteris paribus. The positive sign for this adjustment coefficient thus indicates that an excess demand for housing complements a female headed household's investment in financial assets. If we examine the coefficient in row 1, column 3, of Table 2, we observe the reverse situation. Here an excess demand for housing competes for resources with the household's automobile stock. Indeed, the adjustment coefficient indicates that given the same excess housing demand, by 1972 the household's automobile stock will have dropped (depreciated) on average by $13.00, ceteris paribus.

Table 2. Weighted Parameter Estimates of the Own- and Cross-Adjustment Coefficients for the Sample of Female Headed Households (t statistics in parentheses)

Independent Variables[1]	Dependent Variables[1] (the change in...)			
	House Value	Finaicial Assets	Car Value	Consumption Expenditures
House Value	.0410 (1.20)	.0606 (.806)	-.0130 (-2.32)**	.0183 (2.97)**
Financial Assets	-.0300 (-1.79)*	.365 (10.1)**	.00171 (.620)	.0138 (4.64)**
Car Value	-.359 (-.809)	1.03 (1.06)	.823 (11.1)**	.0970 (1.22)
Consumption Expenditures	.570 (1.82)*	-.644 (-.940)	.0160 (.307)	.218 (3.38)**
$\bar{R}^2$	.353	.750	.627	.601
F	9.10	46.4	25.9	23.4

[1]All variables are measured in deflated dollars (where 1967=100).

**Significant at the .05 level.

*Significant at the .10 level.

Given this interpretive guide, we can now make some comparisons between the adjustment coefficients presented in Tables 2 and 3. First, it appears that married households adjust to disequilibriums more quickly than do their nonmarried counterparts. In almost every instance, the own adjustment coefficient (those along the main diagonal of each table) is higher for the husband-wife households. For example, if a husband-wife household had an excess demand for financial assets of $1000 in 1969, on average, by 1972 they would have increased their holdings of financial assets by $500, ceteris paribus. However, an average female headed household with the same excess demand would only close the gap by $365. Thus, it appears that female headed households are slower to remedy differences between their desired and actual holdings than are traditional husband-wife households.

Table 3. Weighted Parameter Estimates of the Own- and Cross-Adjustment Coefficients for the Sample of Husband-Wife Households (t statistics in parentheses)

Independent Variables	Dependent Variables[1] (the change in...)			
	House Value	Financial Assets	Car Value	Consumption Expenditures
House Value	.229 (9.51)**	-.272 (-2.93)**	-.0186 (-4.31)**	-.0184 (-2.31)**
Financial Assets	-.0108 (-1.44)	.500 (17.3)**	-.00557 (-4.14)**	-.00373 (-1.50)
Car Value	-.0569 (-.249)	-3.47 (-3.93)**	.491 (12.0)**	-.126 (-1.66)*
Consumption Expenditures	.900 (5.12)**	.339 (.500)	-.000592 (-.0191)	.530 (9.08)**
$\bar{R}^2$	.152	.270	.151	.143
F	13.6	27.1	13.5	12.8

[1]All variables are measured in deflated dollars (where 1967=100)

**Significant at the .05 level.

*Significant at the .10 level.

The only exception to this adjustment pattern occurs with respect to automobile stocks. The estimates show that female headed households adjust their car stocks almost twice as quickly as do the traditional households. This unanticipated result may be due to differences in the absolute holdings of automobile stock and work patterns of the two groups. From Table 1, we can see that on average, female heads have half the initial car stock that their married counterparts have (i.e., they have one car rather than two). In addition, all of the female heads (but not all of their counterpart wives) in this sample work outside the home and thus, their automobile is probably an indispensible part of their fixed costs of employment. Therefore, if a female head's car should malfunction (causing the household to experience a positive excess demand for automobile stock), resources must soon be diverted to repair or replacement of the automobile so that her employment is not jeopardized. Conversely, husband-wife households with their higher initial stock levels (e.g., two cars rather than one) can afford the luxury of adjusting any deficits in their automobile stock at a slower pace.

[10]See Zick [10] for a detailed explanation of how the adjustment coefficients are derived from the regression estimates.

[11]For the purposes of this research, excess demand is defined to exist whenever the household's actual holdings of the stock in question are less than their desired holdings.

Turning to comparisons of the cross-adjustment coefficients, several interesting contrasts emerge. In particular, in the case of financial assets and consumption expenditures, household adjustment behavior completely flip-flops between the two subsamples. For married households, an excess demand for all three investment alternatives competes with resources that would otherwise be devoted to maintaining a specified level of consumption expenditures. In addition, housing and automobile investments compete for resources with financial assets. The behavior exhibited by the married households conforms with what economists usually posit. That is, to some extent, husband-wife households appear to finance investment by decreasing their current consumption. And furthermore, they finance physical investments at the expense of some financial investments and vice versa. However, this scenario appears not to hold for the female headed households.

One plausible explanation for this phenomenon is that female headed households tend to finance both additional investments and consumption out of debt to a greater extent than do husband-wife households. Perhaps because female headed households initially have such low levels of assets and consumption they cannot afford to reduce any of them further in order to increase their holdings of another portfolio component. Unfortunately, the PSID data does not have debt information and so debt was omitted from this model. Further examination of this hypothesis therefore must wait until more complete longitudinal household investment data can be found.

SUMMARY AND CONCLUSIONS

It is clear that the composition of American households has been and will continue to change. In particular, the proportion of female headed households is on the rise. Investigation of their resource allocation patterns provides us with added insight as to how investment and consumption will change in our society as a whole, as our demographic composition changes. In this paper, we have investigated the issue of whether the stock adjustment patterns of female headed households differ from those of traditional, husband-wife households.

Results from this study indicate that some important allocation differences exist between the two household types. First, female headed households in general, have fewer available resources (both financial and physical) that do their married counterparts. Thus, if the proportion of female headed households continues to rise, under the current conditions the average family's economic resources will decline in the United States. Second, they are slower to adjust to any disequilibrium in their asset holdings than is the traditional household type. This implies that as the number of female headed households increases, we can expect to observe slower adjustments to changing market conditions (e.g., changes in rates of return to investment) by the general population of households. As a result, it is possible that the general rate of household capital acquisition may decline. This could have serious implications in particular for the already troubled housing market. Finally, with respect to cross-adjustment patterns, husband-wife households adjust in the same direction as economic theory would lead one to posit while female headed households do not. One possible explanation for this is that these two household types make differential use of debt to adjust their portfolio composition. If this is the case, this fact coupled with the changing demographics could put new resource demands on lending institutions in the future.

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HUSBANDS AND WIVES REPORT ON ECONOMIC HELPING BEHAVIOR: A STUDY OF RESPONSE AGREEMENT[1]

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ABSTRACT

Data from fifty-nine couples surveyed regarding the frequency and perceived value of economic help given and received by their families were used to determine the degree of consensus in husband and wife response. Analysis revealed a high level of consensus for the majority of couples. A significant difference in means of husbands' and wives' responses was found for only one variable.

It has been fifteen years since Morgan [12] published results of his study of family economic behavior based on a survey in which both husbands and wives were respondents. His analysis of couple consensus illustrated the erroneous conclusions about family economic behavior that were possible when relying on behavioral reports of only one spouse.

In the years since, the problem of the reliability of survey data reporting economic behavior of families has continued to engage researchers. Although the family may be conceptualized as an integrated discrete economic unit using commonly determined purposes, the empirical measurement of the economic behavior of families is complicated by the methodological issue of discrepant responses of husbands and wives to questions about financial behavior. Studies of husband-wife response consensus about family affairs suggest that consensus varies widely, leading one to the conclusion that the validity of family research may vary widely also.

Furthermore, as the cost of surveys has risen, the added concern for producing maximum reliability and validity while keeping cost within reason has emerged. Identifying those aspects of economic behavior of families where respondent choice may have greatest impact would provide useful information for those planning family research.

The research reported here concerns the consensus of husband and wife responses to survey questions regarding one aspect of family economic activity, the flow of transfers, specifically the giving and receiving of economic help.

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LITERATURE REVIEW

Several studies have discussed the degree of consensus of husband and wife responses and have found that responses are very similar when considered on an aggregate basis, with the average scores of husbands and wives being of primary interest. However, when individual families are the focus, the discrepencies within families may be great in many cases [5, 6, 7, 14, 17].

The degree of husband-wife consensus is an indicator of the degree of accuracy of a measure of family response if only one spouse is surveyed. Granbois and Willet [7] found that 68% of husband-wife responses were congruent; Scanzoni [16] reported that in about 50% of the cases, the wife's response was in exact agreement with that of her husband and that in 75% of the cases the responses were in approximate agreement.

A recent study of satisfaction across several life domains, e.g., family, family income, savings, standard of living, among 1200 families based on husband and wife reports found a high degree of consensus among family members [10].

Factors related to spousal response consensus have been examined as well. No consistent pattern of discrepancy linked to sex of respondent has been noted [7, 11]. Other studies suggest that differing perspectives on life contribute to the level of response discrepancy [3, 12, 13, 15]. Lack of communication was cited as a factor in lack of consensus [6, 12, 13]. Demographic characteristics were found by some investigators to be linked to discrepant response. Husband's education level and occupational status [2] and age [8] were to shown to be linked to consensus. Spouses with similar educational backgrounds tended to have greater consensus [8], although in another study no evidence of relationship between demographic homogeneity and spousal consensus was found [9].

Other studies have explored consensus as related to the nature of the information being sought. Balweg [1] noted that information about the family that is numerically quantifiable may produce more congruent responses from husbands and wives than information that is not. Family relationships, decision-making, power structure, family planning and household tasks are family matters about which spousal response agreement is less likely [4, 15, 17].

In reporting family income, husbands were found to report higher income than wives [8, 12].

METHODS

Data for this analysis was collected as part of a regional investigation of quality of everyday life.[1] A sample of 200 families was drawn using a systematic sampling plan with clustering in the final stage. One hundred families lived in a SMSA of 2 million in the upper midwest, the remaining families lived in a community of less than 10,000 population. Criteria for inclusion in the sample were an intact fmaily with at least one child under 18 years of age. Both spouses were interviewed using structured questionnaires; one spouse was interviewed in person by a trained interviewer, a second questionnaire was left with the other spouse with directions for completing and return mailing. Sex of respondent to the in-person interview was controlled to achieve equal representation among in-person and self-administered schedules.

The interview schedule was designed to measure the frequency and perceived value on in-kind economic transfers (help received from persons outside the family without pay; help provided to persons outside the family without pay). The kinds of transfers for which frequency and value measures were made include child care, home maintenance, car care and repair, housework, transportation and gifts of home produced consumer goods. Frequency of transfer was measured on a five-point scale ranging from never to several times a week. Scale positions for frequency were assigned numerical values, 0 for never to 4 for several times a week. Perceived value of transfers was measured by a 5-point scale with no value, little value (less than $25), some value ($25-$100), and much value ($100-$500) as the intervals. Intervals of the value scale were assigned numerical values from 0 to 4. The scale values were used to construct scores for each respondent, husband and wife, for each item measured. Discrepancy scores were constructed for each couple and each variable by subtracting the wive's score for each variable from the husband's score for that variable, retaining the sign. For example, the wife's score of "3" was subtracted from the husband's score of "5" producing a discrepancy score of +2, indicating that for this particular variable and couple the spouses' scores were discrepant by two intervals with the husband reporting a higher level of transfer.

FINDINGS

The frequency distribution of the signed discrepancy scores is shown in Tables 1 and 2. With respect to the reports of economic transfer behavior, more than three-fourths of the discrepancy scores are within ±1 interval or

TABLE 1

DISTRIBUTION OF HUSBAND-WIFE DISCREPANCY SCORES FOR FREQUENCY OF TRANSFERS

TYPE OF HELP	N	DISCREPANCY SCORE											$\overline{X}$
		0	+1*	+2	+3	+4	+5	-1	-2	-3	-4	-5	
		f	f	f	f	f	f	f	f	f	f	f	
Babysitting													
Help Given	58	17	11	4	1	1	-	12	11	-	1	-	-.207
Help Received	56	14	12	5	3	2	-	12	4	3	1	-	.107
Home Maintenance													
Help Given	58	17	13	5	-	-	-	20	3	-	-	-	-.052
Help Received	57	20	17	4	-	-	-	12	4	-	-	-	.088
Vehicle Maintenance													
Help Given	58	25	10	7	1	-	-	8	3	3	1	-	0
Help Received	57	32	10	7	-	-	-	6	2	-	-	-	.246
Housework													
Help Given	54	19	9	4	2	-	1	11	5	2	1	-	-.056
Help Received	56	25	9	3	-	3	-	13	2	1	-	-	.125
Food Sharing													
Help Given	55	17	8	5	1	-	-	16	8	-	-	-	-.200
Help Received	57	21	7	8	2	-	-	14	5	-	-	-	.088
Transportation													
Help Given	56	18	8	3	3	1	-	14	6	3	-	-	-.143
Help Received	57	18	5	8	2	3	-	12	6	2	1	-	.088

*+ = Husband's score higher than wife's score; - = Wife's score higher than husband's score

TABLE 2

DISTRIBUTION OF HUSBAND-WIFE DISCREPANCY SCORES
FOR VALUE OF TRANSFERS

VARIABLE	N	0	+1*	+2	+3	+4	+5	-1	-2	-3	-4	-5	$\overline{X}$
Babysitting													
Help Given	56	17	13	3	-	1	-	16	3	2	1	-	-.161
Help Received	54	26	16	-	1	-	-	6	4	1	-	-	.037
Home Maintenance													
Help Given	55	16	18	5	1	-	-	8	6	1	-	-	.145
Help Received	54	21	9	6	2	-	-	13	1	2	-	-	.111
Vehicle Maintenance													
Help Given	55	18	17	5	1	-	-	9	5	-	-	-	.200
Help Received	54	26	9	4	1	-	-	10	3	1	-	-	.019
Housework													
Help Given	52	21	13	4	-	-	-	7	3	4	-	-	-.077
Help Received	54	25	10	2	2	1	-	8	3	1	2	-	-.019
Food Sharing													
Help Given	55	20	13	5	1	-	-	11	4	-	-	1	.036
Help Received	53	26	10	3	-	-	-	8	5	1	-	-	-.094
Transportation													
Help Given	48	17	12	3	-	-	-	12	3	1	-	-	-.063
Help Received	53	24	10	5	-	-	-	7	4	3	-	-	-.075

*+ = Husband's score higher than wife's; - = Wife's score higher than husband's

less. For specific variables, the range is from 61% to 89%. The mean discrepancy score for each kind of help was determined by adding all discrepancy scores, retaining the sign, and dividing by the number of cases for which both husband and wife responded. These means are shown in Tables 1 and 2. Mean discrepancy scores ranged from ± .019 to .246.

The mean of husbands' responses and the mean of wives' responses were computed for each variable. A test of significance of differences (t-test) indicated that the mean of husbands responses differed from the mean of wives' responses in only one instance - the reporting of help received with car care and repair (see Tables 3 and 4). Husbands reported higher levels of help received with the care and repair of car than did wives.

The summed means of all husbands' and all wives' responses for the four groups of variables - frequency of help given, frequency of help received, perceived value of help given, perceived value of help received - are shown in Table 5. No significant difference between any of these means was found.

CONCLUSIONS

The consensus of husband-wife reports on frequency and value of inter-family economic transfers, specifically in-kind help, leads to the conclusion that the relatively small increase in the reliability of the measure of family transfer behavior that collecting data from both spouses provides is not equal to the substantial increase in cost that collecting responses from both spouses entails.

The greatest discrepancy in husband-wife responses occurs around reports on helping that is sex-role related, i.e., baby-sitting and care and repair of cars. Researchers using family-level measures of economic behavior that are sex-role sensitive variables may need to pay careful attention to issues of relatability in such cases.

TABLE 3

MEAN SCORES OF HUSBANDS' AND WIVES' FOR FREQUENCY OF TRANSFERS

TYPE OF HELP	N	MEAN OF HUSBANDS' RESPONSES	MEAN OF WIVES' RESPONSES	p. VALUE
Babysitting				
Help Given	58	2.2069	2.4138	.285
Help Received	57	1.8947	1.6842	.399
Home Maintenance				
Help Given	58	1.7241	1.7759	.713
Help Received	58	1.3793	1.1724	.256
Vehicle Maintenance				
Help Given	58	1.2931	1.2931	1.000
Help Received	58	1.1552	.7931	.035
Housework				
Help Given	54	1.5556	1.6111	.798
Help Received	57	1.0702	.8246	.253
Food Sharing				
Help Given	55	1.9091	2.1091	.236
Help Received	58	1.8448	1.6724	.358
Transportation				
Help Given	56	2.3393	2.4821	.484
Help Received	58	1.7759	1.5690	.425

TABLE 4

MEAN OF HUSBANDS' AND WIVES' SCORES FOR VALUE OF HELP GIVEN AND HELP RECEIVED

TYPE OF HELP	N	MEAN OF HUSBANDS' RESPONSES	MEAN OF WIVES' RESPONSES	p. VALUE
Babysitting				
Help Given	56	1.6250	1.7857	.380
Help Received	54	1.3148	1.2778	.792
Home Maintenance				
Help Given	55	1.8182	1.6727	.399
Help Received	54	1.4444	1.3333	.523
Vehicle Maintenance				
Help Given	55	1.2545	1.0545	.207
Help Received	54	1.0926	1.0741	.903
Housework				
Help Given	52	1.1538	1.2308	.667
Help Received	54	.8519	.8704	.926
Food Sharing				
Help Given	55	1.5636	1.5273	.839
Help Received	53	1.4151	1.5094	.520
Transportation				
Help Given	48	1.6250	1.6875	.695
Help Received	53	1.1887	1.2642	.659

TABLE 5

SUMMED MEANS OF ALL HUSBANDS' AND ALL WIVES' RESPONSES

VARIABLES	N	SUMMED MEANS OF HUSBANDS' RESPONSES	SUMMED MEANS OF WIVES' RESPONSES	p. VALUE
Frequency of Help Given	59	11.9153	12.5424	.566
Frequency of Help Received	59	10.1356	7.7288	.060
Value of Help Given	59	11.1017	11.4237	.838
Value of Help Received	59	9.6271	9.3220	.871

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FAMILY SPENDING NORMS

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ABSTRACT

This paper describes a computer program developed to answer the question "How do families similar to mine spend their money?" Multiple regressions were run for 24 spending categories using data from the BLS Survey of Consumer Expenditures. The computer program incorporates the regression results.

Families often ask "How much should we be spending on various spending categories?" Usually they want, or are satisfied with "How much are other families spending" [3]? The frequency with which this type of question is asked suggests budgeting and financial planning are difficult for families. If families were well informed and rational, perhaps they would not be so concerned with the spending patterns of other families. Nevertheless, spending is not the only aspect of life for which people ask "Am I normal?"

Typical or normal spending patterns also provide important information for various aspects of public policy and legal cases. The amount a family needs to live on is presumably related to community norms [9] and typical patterns of spending. Income tax exemptions and welfare payments have been somewhat based on spending patterns of particular samples of families. There has been an extensive amount of research done on expenditure patterns [8], much of which has been directed toward estimation of elasticities, and some of which has been directed toward estimation of equivalence scales. Both of these topics are relevant to this paper, but space limitations prevent a review of the literature.

The most commonly used and abused spending guidelines have been the U.S. Bureau of Labor Statistics Urban Family Budgets. Textbook authors [5;6] and others [2] have discussed these budgets as if they were for the typical or average American family of four persons. The BLS budgets for four-person families and for retired couples are based on spending patterns from the 1960-61 Survey of Consumer Expenditures. The budgets have been useful for comparisons over time and between locations, but they were not designed to show how average families should or did spend their money [13]. The Bureau of Labor Statistics is eliminating its program for revising them, due to its own budget cuts [13].

The Survey of Consumer Expenditures could be used to show average spending patterns, but the overall pattern of spending is not very meaningful because of the variety of household types and income levels represented. One could use the published tables of mean spending levels by various categories, such as income, family size, age of head, and location [1;11], but this procedure is limited because of the lack of tables simultaneously controlling for two categories. There are a huge number of possible combinations of relevant characteristics (e.g. black husband-wife families with two teenage children owning their own home, living in a Standard Metropolitan Statistical Area of a million or more population.) It would not be practical to publish a table of mean expenditures cross-categorized by many categories. The last Survey of Consumer Expenditures for which there are published results available was conducted in 1972-73. A continuing survey of consumer expenditures is being conducted, but no results have been published [4].

A customized breakdown is needed to help families budget, to provide norms[1]--average spending patterns for similar families. The rest of this paper will discuss a method of calculating average spending patterns for any particular type of American household. The method involves regressing spending in each category on family characteristics. The regression coefficients are used in a computer program that can be used by any family to obtain spending patterns of similar families. Before discussion of the regressions, simple univariate statistics from a subsample are discussed to illustrate some methodological issues.

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1 Note that the term "norm" in this paper does not have the same meaning as is often used in sociological theory. As Morris and Winter state, "Cultural norms include the full range of rules that society promulgates in more or less formal ways to govern the way people live and behave" [7]. It may be a mistake to infer norms directly from behavior. There are family housing expenditure norms in terms of minimum amounts that can be spent on housing (enforced by building and housing codes, zoning regulations, and social pressure from neighbors) and maximum amounts (enforced by lenders.) Because of the prevalence of the fixed rate mortgage, for homeowners family spending on housing typically has been a high proportion of the budget when the first home is purchased, then a declining portion of the family budget until retirement, when income and other spending fall.

METHODOLOGICAL QUESTIONS

Data

The BLS 1972-73 Survey of Consumer Expenditures is the only large recent set of data available to researchers. The 1973 survey included 10,106 consuming units. When the data from the continuing survey of consumer expenditures is made available to researchers by the BLS, similar procedures can be applied.

Specificity of Categories

How narrow should the spending categories be? The BLS Urban Family Budget categories are fairly broad. Greater detail may in some cases be more meaningful, e.g. having hair care at barber shops and beauty parlors separated out from personal care. In other cases, extra detail may not be as meaningful, e.g. relatively few people pay for home improvements in any year, so the mean expenditure levels reflect many families with zero expenditures and some families with very large expenditures. To give more insight into this issue, Table 1 shows spending as a percent of total consumption for 24 categories for a subsample of 61 families. In 17 categories, some households reported zero expenditures. The reporting of zero expenditures was due to actual family practices and situations (e.g., homeowners with paid-off mortgages do not have any mortgage payments) and perhaps also due to limitations of the data gathering methods [11].

Mean or Median?

The median spending for a category may seem to be more typical than the mean amount, but the mean is easier to work with. As shown in Table 1, the spending categories for which all households spend at least some money have means close to the medians. For instance, mean spending on food away from home is 20.8% of total consumption, compared to the median of 20.1%. In contrast, the median amount for home improvements as a percent of total consumption was only 0.1 percent, but the mean was 3.1 percent. There are obvious explanations for the cases with substantial discrepancies between the mean and median. For instance, about half of the families spend nothing on home improvements, while a few families spend very large amounts. Means will be used in this paper because of the advantages of the regression technique and the unavailability of median expenditure figures for updating.

Distribution Around the Central Tendency

It may be useful to know whether one is spending more or less than the median amount for a category, but it would be even more useful to know how deviant one is. If we use the 50 percent range (mean or median plus or minus 25 percent of the distribution) as the nondeviant range, Table 1 shows how well the 50 percent range around the mean (based on the assumption of a normal distribution) compares with the actual distribution around the median in this subsample (shown by the range from the 25th percentile to the 75th percentile.) For categories for which most households spent some money, the 50 percent range around the mean is fairly close to the actual 50 percent range around the subsample median. Some of the deviant cases (especially fifth and 95th percentiles) may be due to infrequent large purchases (e.g., furniture and equipment) or different habits (e.g., tobacco and alcohol, for which there is also the factor of under-reporting.) The 50 percent range around the mean may be useful in budget analysis for some of the larger categories, such as food at home. The 50 percent range would not be very useful for alcohol or home improvements.

Updating

Consumers change their spending patterns in response to changes in family composition, tastes, real incomes and relative prices. One method for updating is to use per capita consumption in current dollars from the National Income and Product Accounts (NIPA) [10]. The percentage increase in current per capita spending in each category from the survey year (1973) to the latest year for which the NIPA figures are available can provide a reasonable method of updating. Even though the per capita changes may not be appropriate for all subgroups in the population, on the average the percentage changes should reflect all of the causes of changes listed above.

Reference Groups

If a consumer asks "How do families like mine spend their money?", the researcher is confronted with the question, "What is the appropriate reference group? All families of the same size? Similar income? Similar age of head? Similar family life cycle stage?" The specificity of the reference group is limited by the size of the sample used. The Table 1 sample has 61 families, even though it was from a sample of 10,106 consuming units in the 1973 Survey of Consumer Expenditures. The size of the sample could have been doubled by also using 1972 data, but note that in Table 1 there were no controls for education or occupation of the head, ages of the children or other household members, or other factors that might influence spending patterns. Multiple regression can give more flexibility by allowing a choice of the factors which are most significant for each spending category.

THE REGRESSIONS

Multiple regressions were run for each spending category, using all households with fewer than 10 members.[2] The spending in each category was regressed on total current household consumption,

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2 To avoid unusual or ambiguous cases for defining family life cycle. Details of the regressions and other aspects of this paper will be available in a monograph from the author.

Table 1. Expenditures as Percent of Consumption for 4 person husband-wife families with pretax incomes from $12,000 to 14,999, in SMSA, white, head over 34, not retired

Expenditures as Percent of Total Consumption[1]

Category	% with zero expenditures	Mean	50% range[2]	5th percentile	25th percentile	median	75th percentile	95th percentile
Food at Home	0%	20.8%	16.5% to 25.0%	12.3%	15.9%	20.1%	24.0%	34.1%
Food Away From Home	3	4.0	2.0 to 6.0	0.6	1.7	3.7	5.2	10.2
Clothing, Shoes, Jwlry	0	6.3	4.2 to 8.4	2.4	4.3	6.1	7.4	12.5
Alcohol	25	1.0	-0.2 to 2.2	0.0	0.0	0.3	1.1	4.0
Home Energy	0	4.9	3.7 to 6.2	2.1	3.2	4.8	6.1	8.2
Tobacco	33	1.8	0.5 to 3.2	0.0	0.0	1.5	2.7	4.8
Gasoline	8	4.7	3.1 to 6.4	0.0	2.9	4.7	5.9	9.2
Other Transportation	2	13.5	6.5 to 20.6	3.3	5.3	8.4	21.4	33.7
Hair Care	3	1.3	0.6 to 1.9	0.1	0.5	1.0	2.0	2.9
Vacations	23	3.5	0.9 to 6.0	0.0	0.1	2.2	5.0	11.5
Home Recreation	0	4.2	2.3 to 6.0	0.6	1.9	4.0	6.0	9.0
Reading Materials	5	0.8	0.0 to 1.6	0.0	0.2	0.5	0.8	1.7
Misc., Education	18	1.4	-0.3 to 3.0	0.0	0.0	0.4	1.2	7.4
Gifts, Contributions	0	3.6	0.6 to 6.6	0.2	0.8	2.2	4.1	12.5
Medical Expenses	2	3.4	0.3 to 6.4	0.2	1.0	2.6	3.8	7.2
Health Insurance	30	2.1	0.6 to 3.5	0.0	0.0	1.2	3.5	6.1
Household Operations	0	3.0	1.6 to 4.5	0.8	1.5	2.4	3.5	7.2
Furniture, Equipment	3	5.3	2.1 to 8.5	0.1	1.5	4.2	7.2	13.0
Life Insurance	21	2.7	1.0 to 4.5	0.0	0.1	2.5	3.8	6.5
Rent or Mortgage[3]	15	8.5	3.9 to 13.1	0.0	3.6	7.4	12.0	21.5
Property Tax on Home	10	4.2	1.8 to 6.5	0.0	1.5	3.8	5.7	9.3
Home Maintenance	25	2.5	-0.9 to 5.9	0.0	0.0	0.6	2.7	8.4
Home Improvements	49	3.1	-5.2 to 11.4	0.0	0.0	0.1	1.4	8.6
Home Insurance	21	0.8	0.3 to 1.3	0.0	0.3	0.7	1.1	1.7
TOTAL CURRENT CONSUMPTION AS PERCENT OF PRETAX INCOME		73.8	55.8 to 91.8	41.8	55.9	69.3	80.2	114.8

[1] Current consumption: not including home improvements, gifts and contributions, or life insurance

[2] 50% range is mean - .675 (standard deviation) to mean + .675 (standard deviation), if variable has a normal distribution.

[3] Mortgage payment does not include payments to principal. Table 2 shows housing and ownership charcteristics of subsample.

Table 2. Comparison of Subsample Percentages to Comparable Regression Results

Spending as Percentage of Total Current Consumption Expenditures

Subsample Mean	1973 Regression Predictions	Estimated For 1981	Category
20.8%	20.1%	19.0%	Food at Home
4.0	5.3	5.7	Food Away From Home
6.3	7.3	6.1	Clothing, Shoes, Jewelry, Watches
1.0	0.8	0.8	Alcoholic Beverages
4.9	5.2	7.0	Home Energy: Elec.,Heat, Cooking
1.8	2.1	1.6	Tobacco Products
4.7	5.7	8.6	Gasoline, Oil for vehicles
13.5	14.1	12.4	Other Transportation, car pmt., insurance, repairs
1.3	1.4	1.3	Hair Care: Barber Shops and Beauty Parlors, etc.
3.5	2.8	2.6	Vacations
4.2	3.7	3.4	Home Recreation
0.8	0.5	0.4	Reading: newspapers, books, magazines
1.4	1.6	1.6	Misc. Consumption, education
3.6	5.4	5.4	Gifts, Contributions, Alimony.
3.4	3.8	4.9	Medical, Dental Expenses
2.1	1.0	0.9	Health Insurance
3.0	2.9	2.4	Household Operations: phone, etc.
5.3	4.7	3.9	Furnishings, Equipment
2.7	3.5	3.9	Life Insurance
8.5	15.8	16.6	Rent or Mortgage
4.2	3.2	3.4	Property Tax on Home
2.5	1.9	2.0	Home Maintenance
3.1	3.5	3.7	Home Improvements
0.8	1.0	1.0	Home Insurance

*Regression results based on 4 person husband-wife family, head aged 45, high school graduate, factory worker, wife not employed, boy aged 6-11, girl aged 12-18, North Central region, suburb of SMSA with 400,000-999,999 population, single family house, gas heat, paying mortgage, dwelling is 25 years old, 1973 income = 13,491.

and the square and cube of total current consumption, on the region and type of area (size of SMSA, central city versus outside central city of SMSA, or rural or non-SMSA urban area), race, education, and occupation of head, whether the household was headed by a married couple or not, whether the wife was employed, and the difference in education between the husband and wife. Two regressions were run for each spending category, each with the variables listed above, plus either family composition variables and age of head, or family life cycle variables and household size. All independent variables except age of head, difference in education between the husband and wife, and the total consumption variables were coded as dummy variables. The regressions were rerun with the variables which were significant at the one percent level. For each spending category, the model with the highest adjusted R squared was chosen.

THE FAMILY SPENDING PROGRAM

The regression coefficents from each of the models chosen were incorporated into a computer program which can ask a consumer about household characteristics, then print predicted spending amounts for each category. The program has been used by about 50 consumers of various ages and educational levels, with no substantial problems reported. The computer program asks for gross annual income in 1981, estimates equivalent 1973 income based on changes in per capita income between 1973 and 1981, then estimates total consumption expenditures for 1973. Total estimated 1973 consumption expenditures, along with current characteristics for the household are used to estimate 1973 spending in each category.[3] Percentage changes in per capita spending in each category are used to update spending in each category to 1981. Since detailed NIPA personal consumption expenditures are published each year in the July issue of the Survey of Current Business, the computer program can be easily updated by changing the data for the current per capita expenditures.

Table 3 shows how the regression results compare to the roughly equivalent mean spending levels for the subsample. The results are similar for the most part, which suggests that the regression model (with the implicit assumption of an additive model) does not grossly violate reality. For instance, food at home amounted to 20.8 percent of current consumption in the subsample. The regression predicted an amount for 1973 which was 20.1 percent of current consumption. Changes in the predicted percentages between 1973 and 1981 suggest the importance of updating to reflect changes over the eight year period.[4]

CONCLUSIONS

This paper has described a method of developing a computer program for estimating spending patterns for different types of households, based on the 1973 BLS Survey of Consumer Expenditures, and updating by the National Income and Product Account per capita consumption expenditures. Similar procedures could be used with more recent cross-sectional expenditure survey data as it becomes available. The computer program developed can be used by consumers and financial counselors as a starting point in discussing family spending patterns.

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[3] The estimates of the typical (e.g., 50 percent) range for each expenditure category have not been incorporated into the computer program. The prediction interval [14, p. 261] can be calculated, but incorporation would greatly complicate the computer program.

[4] Not all categories from the National Income and Product Accounts correspond to the Bureau of Labor Statistics categories. The mortgage payment was updated by the increase in actual and implicit rents in the NIPA accounts, which probably underestimates the actual increases.

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CONSUMERS IN A NEW ECONOMIC CLIMATE

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ABSTRACT

Evolving economic conditions will require adjustments in individual orientations and lifestyles, and in institutional policies, in response to constraints on economic growth and real income. The public will reflect intensified concern for both individual and collective consumer interests, and for policies that provide opportunity and equity on the income side.

Consumer interests are experiencing some stormy weather, caused by both fundamental conditions and current economic and social policies. Weather is a short-term phenomenon; it changes with the seasons, and sometimes more frequently than that. Climate, on the other hand, is a more fundamental, long-term condition.

This paper is addressed primarily to the long-term picture. Its purpose is to make some predictions regarding future economic conditions, and to provide a combination of forecast and hope regarding how our society, individually and collectively, might respond. These projections are cast against the backdrop of current conditions, which in some respects may be just short-term showers or rays of sunshine, and in other respects harbingers of basic change in the climate.

Short of nuclear war--an eventuality that would render these projections, and perhaps the entire human race, null and void--the over-riding factors that will determine the shape of things to come are natural resources and demographics. Additional factors that will play key roles in painting the future scenario are human capital development, technological innovation, evolving lifestyles and orientations regarding what constitutes "the good life," and the social and economic policies which society puts into place to shape its collective condition and experience.

Among the straws in the wind that suggest the nature of future conditions are these:

-Recurrent economic stagflation. We face ever more insistent inflationary pressures, operating in tandem with recessions. While our current economic malaise is in large measure a response to inane economic policy, the ubiquitousness of the threat of stagflation suggests that its root causes are deeply embedded in our institutional structures. A primary wellspring of the problem is the reluctance of capital to be brought into being in a private enterprise economy, in absence of a high anticipated rate of return. This endemic characteristic, which is by its very nature bound to be exacerbated in an economy with a rather mature industrial base, confronts us with a continuing combination of an inflationary bias and the reduction in real investment that occurs, not just when the rate of economic growth slows down, but when the rate of increase abates. Thus we are presented, with disturbing regularity, not with a bunch of blooms with benign stems, nor with the rose of prosperity to go with the thorns of inflation, nor the rose of price stability to accompany the thorns of recession, but with a bouquet consisting completely of economic thorns in the form of both inflation and recession. And the nostrums we increasingly seek are tax breaks which add to the maldistribution of income and wealth, centralization of market power, inflationary pressures, and rewards for speculation and mining the tax laws, while doing nothing to stimulate real investment, or provide jobs or purchasing power for the masses of consumers (which, combined with government expenditures and foreign orders, is the only viable basis for real capital investment decisions).

A noteworthy and somewhat disconcerting development growing out of our recent period of economic instability is the change in the relationship between market institutions and the consumer in financial transactions, with the shifting of economic risk to the consumer-borrower via variable rate home mortgages and even consumer loan arrangements. Here we witness the burden of economic uncertainty relative to market rates being lifted from the financial institution, which enters such arrangements in quest of profits, and loaded on the backs of consumers, the less powerful and less financially sophisticated party in the transaction. That shift creates a significant measure of additional economic vulnerability for many consumers in an already increasingly-uncertain climate; the outcome of that fundamental change in market roles and relationships merits close observation.

-Natural resource constraints. Data on depletion of fossil fuel stocks indicate that we have been using energy as though it were going out of style--and as a result, it is. Mineral resources grow scarce, with projections that world reserves of many important ones will be exhausted within the next half century; and even when available, remaining stocks become more costly to mine. Interstate quarrels over water rights, reports of depletion of underground water resources and soil erosion, and the pace at which we are allocating good land to the last crop it will grow--asphalt--reflect the enormous demands we have placed on those resources to expand production of food, fiber, industrial output, and commercial ventures, and suggest constraints on our future productive capacity, the recent relatively abundant food supply resulting from bumper crops notwithstanding. And our belated realization that we cannot forever treat the environment as if it were just a big combination vacuum sweeper/cesspool to absorb the waste of our industrial production and throwaway lifestyle points to continued need to factor the costs of what used to be regarded as externalities into our production

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and consumption processes.

-Population. While the U.S. population gives evidence of perhaps stabilizing at a sustainable level, world population continues to increase at rates that suggest frightening pressures on resources in a finite context. This has serious implications for consumers worldwide, and most certainly for consumers in the U.S., as our high material level of living is threatened by competition for the world's resources. Within the U.S., even assuming a sustainable total population, the changing mix, which will find a proportionately smaller working age group trying to support a proportionately larger group of elderly--and perhaps in some future period also a proportionately larger group of children--has significant implications for the distribution of work effort and rewards, and for the total pie that can be made available for distribution.

-Aspirations and sense of entitlements. While mitigated somewhat by recent and current conditions, the prevailing desire for more, bigger, and better, has generated competing claims on resources and productive capacity by various segments of the U.S. society, and between the developed and developing countries of the world.

-Incomes. Real incomes of workers have failed to make continued gains. Median U.S. family real income was at the same level in 1980 as in 1970, with the modest gain experienced during the decade lost by the end. The only demographic group that gained in real income over the decade was that over age 65. This result prevails despite the tremendous migration of secondary workers, including teenagers, into the labor force. Many families have thus exhausted their primary response to what they feel is an inadequate money income to meet their material aspirations--sending multiple members out to earn wages at market--and thus have no untapped capacity to respond in that manner against further pressures on incomes.

It is likely that the maldistribution of income will be increased as income shares flow increasingly to those with high technical, specialized market skills and/or large capital stocks; that trend is likely to be reinforced by the tendencies to cut social programs and reduce private charity during periods when the public senses an economic pinch, and to provide subsidies and tax breaks for the wealthy. Increased maldistribution of income would not only have unhappy results for consuming units at the lower end of the income spectrum, but impair the effective functioning of our economic system and be detrimental to societal cohesiveness, as well.

If we have failed to solve the problem of poverty amidst affluence during times of economic expansion, when we could take some solace in the notion that a rising tide lifts all the boats, then how are we going to attain a pattern of income distribution that provides an equitable share of the national pie for each of our citizens when the tide is stilled or falling? Failure to develop a satisfactory response to that question would bring with it the evolution of a mean, divisive society, and potential for disintegration of the social fabric.

-Productivity. We have not experienced in recent years the productivity gains that came to be accepted as the normal course of events in an earlier period. The extent to which our bumping against a productivity ceiling is due to slowdown in technological innovation, reduction in rate of capital formation, inadequacy of management to create an environment and adopt processes that enhance productivity, deterioration of the work ethic, failure of our educational institutions to achieve optimal development of our human capital, addition of large numbers of inexperienced young and secondary workers to the work force, or internalization of worker safety and former externalities into production processes, is not readily evident. What does seem apparent, however, is that the cornucopia which resulted from ever-increasing productivity is beginning to reach limits. While a reasonable degree of optimism about the capacity of mankind to develop means of coping with problems is wholesome, and perhaps justified, it is becoming increasingly clear that unbridled faith in technological innovation as a panacea--a breakthrough a day keeps the crisis away--is unwarranted. Indeed, we must keep perspective not only on the limitations of technology to solve problems, but also on the extent to which technological developments have in fact created or exacerbated some of the problems we face.

What we have until recent times blithely regarded as delightful improvements in material well-being, as measured by industrial and commerical output, came about in part at the expense of safety and well-being of workers and consumers and despoliation of the environment. Production of goods at the expense of hazards to life and health of humans, adulteration of our ecosystem, and destruction of aesthetic elements of our habitat, has never been an unmixed blessing, although our profit-oriented, industrial society has been slow in coming to recognize that fact.

-The military dimension. Unless and until humankind learns to live in other than a constant state of active or potential confrontation, the needs and wants of consumers will compete for resources with the demands of a military establishment with its priority claim based upon the specter of threats to national security and survival (with the resulting irony that the resources so diverted create weaponry which makes anyone's survival doubtful, and, if possible, largely unappealing). It is incumbent on each individual everywhere, as citizens of planet earth, to help achieve a world condition in which the war machine does not constitute the drain on resources and threat to our very existence that it is today.

The combination of factors outlined above suggests increasing pressure on our capacity to provide continuing increases in real incomes. A future historian's perspective may well suggest that the late 1960's were the "golden age" in terms of the real cost of living, and that we are on the decline in that regard in the current period. Clearly, the public is beginning to sense that the halcyon days when it was reasonable to anticipate that, as a matter of course, ever-increasing expectations would be realized, are perhaps gone forever.

If the projections of the economic climate presented here are fairly accurate, then we as a nation need to make some fundamental changes in individual orientations, aspirations, and expectations, including a careful assessment of what will constitute the good life for us, and in our economic and social policies and institutional structures. That will be essential for us to come to grips with conditions of the evolving future with minimal pain of adjustments, equitable distribution of that pain, minimal strain on the fabric of society, and maximal societal well-being. This prognosticator is predicting that conditions call not for some minor adjustments in the national thermostat to see us through a chilly spell, but for some major retrofitting and new construction that will serve us well as we hunker down for the long haul.

What are the response tendencies of individual consumers, of business, and of the body politic, to the combination of factors and trends suggested above? The initial tendency, of course, is to hope that we are facing just a brief squall, and that we do not have serious long-term problems on our hands. Everybody hopes for a quick fix, preferablyat the expense of others. Consumers would like to not only maintain their current material lifestyles, but to achieve their aspirations as well. Our orientations and expectations do not enable us to accept the prospect of a decline in material abundance very graciously; the philosophy of "more, bigger, and better" has become rather deeply ingrained in the American mentality. In this quest consumers are encouraged by the promotion of market goods and services as the essence of the good life. Individual consumers are given to seeking their private enjoyments, even if those come at the expense of someone else needing to tighten his/her belt, or at the expense of future generations; humankind has a strong tendency to discount the future at a rather high rate--particularly when the issue involves such long-term considerations as nonrenewable natural resources, and the trade-off is with someone else's future, rather than one's own. This situation--the intertemporal trade-off between one's own satisfactions from use of non-renewable resources in the present and the potential needs of some anonymous future generation--constitutes a rare but noteworthy case in which the interests of people as consumers is not consonant with the long-run interests of the society.

Business enterprise, too, tends to have a short-run orientation. The quest to maximize the interests of the firm, even at the expense of consumer satisfaction, consumer and worker safety, environmental degradation, waste of natural resources, and behavior that is antithetical to the ideal of an effectively functioning market economy, has been sufficiently documented and needs no elaboration here. The quest for market power, protectionism, huge profits from scarcity of necessities, inequitable and ineffective tax breaks, along with the traditional problems of product and service quality, are matters with which consumers will have to continue to cope, both individually and via policy and regulations.

The tendency among policy-makers, meanwhile, has been to address fundamental problems with patchwork responses that are short-run oriented, and cater to the selfish interests of powerful pressure groups.

The combination of self-interest orientations, and the marketplace behaviors and political pressures that emanate from them, provide a seedbed for an inflationary bias, inequities, and dislocations in our economy. Our systems and institutions are quite good at responding to the weather; our societal thermostats permit adjustments to short-term changes in the weather with modest disjunctions and inconveniences. But neither our societal orientations, nor our economic and political systems, nor our institutional structures, are geared to dealing with long-run climatic changes very effectively, and particularly not when the long-run outlook is for a harsh climate. Our system is geared to economic expansion, to the distribution of an increasing bag of goodies; it does not handle effectively the process of contraction, the allocation of pain.

Do the projections outlined above suggest that the outlook for the future is necessarily bleak? Not by reasonable human standards. Leveling off, or modest reduction, in our current level of material affluence would not, after all, constitute squalor. A shift in orientations could well alleviate any sense of deprivation. Scarcity is, in substantial measure, a function of materialism--of greed, as much as need. We need not live in terror of impending Armageddon; dispelling visions of Atlantis will suffice. A strong case can in fact be made that the quality of our life experience could well increase with some reduction in focus on material goods and market services, with increased emphasis on human interactions, on being and doing rather than having. To the extent that the focus of consumerism was ever upon the narrow matter of acquisition and enjoyment of more and more market goods and services, it has contributed to whatever bind we may sense as we face the future; to the extent that the movement contributes to realization of efficiencies in the need- and want-satisfying process, and to providing for equitable access to the national larder, it will enhance the well-being of our society as we journey into the unfolding future.

In the context of these conditions and projections, what long-term behavior of consumers, individually and collectively, might we forecast? The most fundamental, pervasive factor may be a reassessment of what constitutes the good life. There seems to be growing restiveness about the meaning and the quality of life. There are signs that, while still materially oriented, at least some of the populace are rethinking their goals, altering traditional lifestyles, becoming sensitive to the increased incidence of social pathologies--which both impact negatively upon our life experience and place an additional drain on our resources--and reflecting that a virtually unmitigated quest