Running Head: CONSPICUOUS CONSUMPTION AMONG WIDOWS

Measuring the Effects of a Widow's Conspicuous Consumption and its Impact on Child Welfare: An Empirical Analysis[a]

University of Michigan-Flint

Kyle R. Fluegge

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Abstract

This research seeks the use of a pilot study to assess the impact of widowed, female-headed households on child outcomes. Studies have explored the dichotomy present between male and female marital and non-marital spending habits, both with and without children. It is a general concession that single, female-headed households have a more adverse effect on child outcomes. Studies explicating a link between a cause of this concession and the ensuing effect on child welfare have been relegated to the exogenous effects of a discriminatory labor market and educational disparity, among others. We principally focus this study to assess the impact of grief and bereavement in losing a spouse for a woman with dependent children and how their welfare is affected. We seek to control the marriage, income, and gender variables, using a comparison of thirty consumption categories for four cohort groups. Through an initial difference-of-means analysis of survey data for N=25, our study rejects the hypothesis that widowhood will not incline mothers to engage in significantly different consumption habits in eight categories. We then used an ordinal logit analysis to produce regression models to predict the probabilities that a member of each cohort group would consume a good in one of these categories. Our measure was based on the participant's survey responses to their own visible attentiveness to a neighbor's changing consumption of those eight categories, thus minimizing self-report bias. This latter analysis outlines the willingness for a widow to pay for luxury goods versus necessities. The results showed a "crowding out" of a child's education for the luxuries of jewelry, furniture, and cable, pets, sports, and concerts; however, an added income constraint does mitigate consumption of the first and third categories, although this result was not statistically significant. This has major policy implications regarding a constricting Social Security system as a result of the aging 'baby boomers.' Thus it might be necessary to initiate mandatory grief counseling for

widows whose labor supply decreases both in the short- and long-term to ensure government support is indeed benefiting the widow and/or her dependent children.

Measuring the Effects of a Widow's Conspicuous Consumption and its effects on Child Welfare: An Empirical Analysis

"General happiness can at best be optimized by distributing social rewards in such a way that a comparison is favorable for most citizens, for by preventing conspicuous consumption by a few very wealthy compatriots."

-Ruut Veenhoven, 1991, "Is Happiness Relative?"

This archaic idea – admitted by Veenhoven - brings a rather utilitarianistic viewpoint to the concept of capitalism, possibly so far as to say socialistic. However, is there even a subtle reference to reality here? Most of us could say that at some point we make decisions regarding our lives and welfare based in part on what we see are the choices of others, whether they be in restaurants, work, school or dealing with our homes, cars, or luxury items. As a brief example, we can consider the decision to purchase a new vehicle. One can pursue significant savings perhaps in buying a vehicle that is slightly used and/or a couple of years old and turn around and use those savings to invest for their future or that of their children. However, the opportunity costs involved would be in giving up the chance to flash a brand new vehicle to one's friends and family. After all, isn't half the fun in purchasing a new vehicle showing it off? As a result, the individual is happy and others are happy for them (although they might stealthily try to trump the individual in question with a "bigger and better" vehicle.) So then is there really anything wrong with conspicuous consumption? If it promotes self-interest, then wherein lays the drawback? What about the children of conspicuous consumers? What happens when those conspicuous consumers are found in single-parent families? These questions then bring into discussion several constraints on consumption with regard to scarce resources: widowhood, children, and income.

Much research has been done regarding the link between poverty and single-headed households, specifically elderly female-headed households. Public policy researchers have been

focused on this particular social group because of their sustained prevalence in recent decades (U.S. Census Bureau, 2005). Some causes of this ubiquitous trend have been attributed to women living longer as widows and women who marry have husbands who are significantly older. This is particularly the case in developing countries, such as India and Bangladesh, where one of five women is widowed (United Nations, 2007). Other topical explanations include widowhood resulting from war and the aging "baby boomers." Since women have consistently faced gendered wage discrimination and lower educational status (Symons, 1999; Hecker, 1998; Branch, 1994), it has been hypothesized that children of widowed mothers are worse off in terms of health and education, as the "… presence of a father has beneficial effects for children in terms of educational and economics attainment and psychological well-being. The presence of a spouse has a beneficial effect on child well being" (Bronte-Tinkew, 1999, pg. 8).

This study seeks to drift away from these well-known exogenous factors that hinder a widow's attention to her family's welfare and instead focuses on more interactive, family-derived variables that are characteristic of Paul Ormerod's notion of "butterfly economics" (1999). Ormerod rather amusingly utilizes an ant metaphor to show how human behavior can change based on what we see others do. His idea is not essentially unique, as many teenagers encounter some kind of peer pressure almost on a daily basis. We seek to ascribe just this kind of vulnerability to a widow and her family.

Economics in general deals with systems of constraints resulting from scarce resources. Sudden widowhood has an implied association with scarce resources, and in most cases does indeed represent a major constraint that requires extreme adjustments in order to surpass, both on a financial and emotional level. The question becomes what happens to consumption when these constraints are juxtaposed. Many studies have examined the expenditures of single-parent

families (Boyle, 1989; Abdel-Ghany & Schwenk, 1993; Lino, 1994; Paulin & Lee, 2002; and Fan & Zick, 2006), which show a reduced per capita expenditure on transportation, healthcare, entertainment, household expenses, apparel, and personal care for single-parent families. This is most likely due to the reduced income levels these families face: you earn less, so you spend less. However, for widows and divorcees who receive Social Security benefits, this income variable is not quite as burdensome for a single-parent head-of-household (HOH). We attempt to show that this important distinction is the root of a conspicuously motivated type pattern of behavior – one that could diminish the benefits for whom these public transfers are intended, the women and children themselves.

Conspicuous consumption is an economic concept once described by Thorstein Veblen in his 1899 book The Theory of the Leisure Class. In its simplistic form, the term essentially refers to having or obtaining what your neighbors have. Indeed, this brand of consumption has been spurred not only by advertising avenues but also our own desires to display what we have in a manner consistent with climbing the social hierarchy. As Grover, Hemmati, and Flenley point out, "(Conspicuous consumption) can have a potentially detrimental effect on poor people and gender relations when consumer wants become dominated by social pressures. Increased spending, whereby households aim to emulate the lifestyles of wealthy people can crowd out essentials such as food, education, and health care" (1999**,** pg. 26)**.** The reference to "gender relations" is vital in understanding consumption patterns in two ways: first, what happens to consumption when a female and male parent are present and second, what happens to consumption when only one gender – in our case, female - is the HOH, resulting specifically from spousal death.

The process of mourning – a seemingly solitary process - has been referenced as being incorporated into the social fabric of our lives (Markus, 1997) as well as instigating a process of "deprivation, role change, and stigma" for those surviving the deceased (Hsu, 1997, pg. 9). As with just one example, determining when the level of conspicuously motivated consumer behavior yields its dominance can be plainly seen in the burial process of a loved one: a symbol of how much a spouse cherished their loved one is determined in part by their level of expenditure on the funeral. Fan and Zick (2006) found that households where a spouse was about to die spent a greater portion of their earnings on funeral and burial costs at the expense of other necessities such as food. Thus, understanding the psychology of losing one's spouse is rudimentary to understanding the outcome a child faces in the future (Wade and Pevalin, 2004). This is especially important for those families receiving government transfers as a "…family whose breadwinner dies at a young age can receive a total of $403,000 in survivors' benefits" (qtd. by the Office of the Chief Actuary in Furman). For those 6.6 million families receiving benefits, it is a rather large outlay for a subpopulation that is grouped together with other single-parent families who receive no such transfers. Study of the traumas of widowhood – a dubious distinction from other single-parent families - to assess how these transfers might be allocated is therefore warranted.

In this study, we seek to identify those consumption patterns for psychologically distressed individuals identified for a single social group: female-headed households whereby the mother is a widow supporting at least one child under the age of 18. Our focus should only be considered a subset of the conspicuous consumption arena, as the term and its meaning could apply extensively to younger male widows receiving Social Security who adopted more of a parent-oriented coping style addressing their own needs before their children's (Lee & DeMaris, 2007;

Boerner & Silverman, 2001) and to “depressed-improved” divorcees – those who previously suffered from an abusive relationship and thus seek to redefine their existence away from social isolation by pursuing a marital dissolution (Bonanno, Nesse, & Wortman, 2004). As a broad fact underscoring its importance, single-mother families have increased 233% in the time period from 1970 to 2003. Single-father families have also increased by over 300% during those years as well (Fields, 2004). Although our populations of interest are smaller than these percentages, children of widowed families might very well grow up to be a single parent, carrying on the same consumption habits of their widowed parent.

Research indicates the delineation between male and female spending habits: men are prone to spending their earnings on items related to their own personal consumption whereas women's earnings are directed to the health and welfare of themselves and children (Hampden-Thompson & Pong, 2005). The heart of the research rests upon this division of personal spending between genders. While the principle aspect of this pilot study seeks to understand personal spending patterns between widowed females and married females, the analysis will draw heavily upon this aforementioned research between genders. The history of research on the subject typically finds that gender ideologies support the notion that men have a right to personal spending money which they are perceived to need or deserve and that women's income is for family support (Ahmad, 2005). Indeed as a preliminary approach to this study, we did seek to verify this outcome among our consumption categories.

This dynamic can be generalized for most married families. However, we seek to remove that constant. The hypothesis will seek to identify if indeed an environmental change, such as that of widowhood, causes women to shift in their familial roles given the appropriate financial means to do so; specifically, now from less of a focus on consumption for their families and instead to

more of a focus on production for themselves. In turn, this shift causes women to assume the right to personal spending money in the same manner as their late husbands. A theoretical answer to this changing psychological nature can be reasoned by the fact that many widowed women face the dilemma of how pursuing a new relationship will affect the child or themselves. Many widowed women might avoid male companionship out of respect for her children and their father's memory or simply to avoid a marriage penalty on their government benefits (Brien, Dickert-Conlin, Weaver, 2004). In the process, these widows might unload one burden for another: financial debt that detours the emotional pain. An interesting perspective includes those widows receiving government transfers to support their families. We suspect that the conclusion that "Children who live in households that receive additional support, for example remittances, are therefore likely to have more positive outcomes" is not altogether accurate (Bronte-Tinkew, 1999, pg. 8).

A general relationship can be detected by examining the consumption tendencies over thirty lifestyle categories to see any pertinent trends. Overall, when female widowhood is taken into account with a given income floor, consumption generally falls in the direction of the male consumer. Grover, Hemmati, and Flenley suggest, however, that research – much like what this author proposes here – is needed to determine to what extent behavioral changes alters a female HOH's consumption for her and her children (1999) as well as other biopsychosocial changes (Hsu, 1997). We seek to provide just such behavioral differences, by examining the effect of widowhood on consumption.

Method

Hypotheses

This research studies the impact of female widowhood on the sustainable consumption of families. We examine three categorical variables: x_1 = married (no $\equiv$ 0, yes $\equiv$ 1), x_2 = income (less than \$10,000 $\equiv$ 0; \$10,000 - \$19,999 $\equiv$ 1; \$20,000 - \$29,999 $\equiv$ 2; \$30,000 - \$39,999 $\equiv$ 3; \$40,000 - \$49,999 $\equiv$ 4; \$50,000 - \$59,999 $\equiv$ 5; more than \$60,000 $\equiv$ 6), and x_3 = gender (female $\equiv$ 0, male $\equiv$ 1). Although we collected other demographic details (see Table 1), we choose to focus on the three specified. We sought to collect survey information to test the hypothesis that consumption elasticities for our four cohort groups would not differ in any significant context using a cross-sectional design procedure. Mathematically, we define our relationship by

$$\varepsilon_i = f(M, I, G), \qquad (1)$$

where ε_i with i = 1,2,…30 represents a visible consumption elasticity, M represents our married variable, I represents income status, and G is the gender identification.

In the traditional sense of applying price elasticities for consumables, we talk about what effect price has on consumption. In other words, a larger demand to price ratio for a good will induce a rather large, negative ratio, which implies a rather elastic (or luxury) good. On the other hand, a small demand to price ratio would indicate a rather inelastic good, such as a lifestyle necessity like electricity. Instead of this type of elasticity, this survey will use a "visible elasticity." In this design, a larger visible elasticity would indicate a lifestyle necessity, whereas a smaller visible elasticity symbolizes a luxury good. The theory ends up with the fact that neighbors are not likely to scrutinize another's use of a lifestyle necessity since they all share in their demand for that necessity; however, neighbors are much more likely to engage in observations of a friend's conspicuous consumption of a luxury good since differentiated constraints (such as our principle factors of widowhood, children, and incomes) might inhibit

their own use of that good. Our null hypotheses are then that the visible elasticities for each cohort over all thirty categories would not be different in any significantly notable way. Thus, our null hypothesis is the standard

$$H_o : \bar{x}_{1i} = \bar{x}_{2i} = \bar{x}_{3i} = \bar{x}_{4i}, \qquad (2)$$

where *i* represents one of thirty consumption categories. Once this hypothesis has been tested, we will then individualize the research, or test each category separately to scope whether any consumables are significant on their own. If any are found to be significant, we will explore the use of an ordinal logit model to outline the probability that a member of the population at large who belongs to our cohort group, but did not complete this survey, would notice a neighbor's consumption of a good.

Survey

We seek the use of a survey design produced by Ori Heffetz in his research on conspicuous consumption to first address our hypotheses. Please see Heffetz for clarification on the survey as it relates to conspicuous consumption. By asking about a neighbor's consumption habits, we will hopefully take the self-serving bias out of what a HOH would choose to divulge for their own household in the context of this survey. In terms of interpretation, we would tend to suggest that for a HOH who answers 1 for the visibility measure of clothing or furniture at home for a neighbor, that that HOH would associate himself or herself with conspicuous consumption for that good. This person would potentially consume larger (or more than what they consider to be normal) quantities of that good. Those parents who have a high conspicuous consumption visible elasticity measure (1 or 2) would notice another person's frequent possession of a good quickly and place value on purchasing those goods themselves since "when considering buying something, one may be more inclined to do so if knowing that other people buy it" (Karlsson,

Dellgran, Klingander, and Gärling, 2004). Those who have a low conspicuous consumption visible elasticity coefficient (4 or 5) would not notice others' possession of the good quickly and thus place less value on having those goods for themselves or their offspring.

For purposes of our research, we used the same lifestyle consumption categories as provided by Heffetz. These thirty categories are reproduced in Figure 1. For our survey, we asked thirty questions covering each of these categories individually and in the order represented. We further assimilate the following categories as luxury goods not necessary for sustainable consumption: cigarettes, alcohol, clothing (optional: could be a necessity), undergarments, jewelry, cosmetic, hotel expenditures, furniture in home, new cars, air travel, books, newspapers, computers, games, TVs, music, cable, pets, sports, concerts, and charitable contributions. We take the remaining consumption categories in Figure 1 as necessities.

An ordinal logit model was selected since our dependent variable - visible elasticity – was a categorical variable whose value was discrete and could be ranked. Whereas research conducted by epidemiologists might seek to confirm the status of whether a person has a disease without account as to the severity of that disease, in our analysis deciphering the scale is crucially important as to the meaning of our results. This is to say that a numerical value of 1 represents a highly visible consumable by any given survey participant and therefore a conspicuous consumption pattern. A score of 5 would not have this same interpretation; we would have confusing results otherwise.

Participants

Our first cohort group would consist of women, aged 18-55, married, with one or more children under age 18. This group would serve as the control group. Obviously, since this research is concerned primarily with the effects of widowhood on consumption patterns and their

effects on economic essentials, having a control of married women would provide the basis for this shift in sustainable consumption for those families without a paternal influence. We would expect to find that the women in this group would have lower visible consumption elasticities for luxury goods (less likely to buy goods that are unnecessary for the collective welfare of the family, including alcohol, jewelry, cosmetic, etc.). These women would therefore be more sensitive (or more inelastic) to goods and services necessary for her husband's and children's daily needs including clothing, food, home utilities, etc. We would expect these results would show in the 4-5 scale range on the visibility index for the former and in the 1-2 range for the latter.

The second cohort group would consist of women, aged 18-55 and widowed with one or more kids and with incomes less than $30,000. This group would constitute our first test group. However, with incomes only inclusive to less than $30,000, we are expecting the results to show that although these women might indeed be visibly more inclined to the purchase of luxury goods for themselves, their actual purchase of these luxury goods are limited by their reduced income. Therefore, the women in this cohort group might be confounded by what they would like to have as far as personal spending with what they can reasonably afford. Their true feelings might be subdued by the actual reality. We suspect that this dissonance problem might indeed be represented in the collected survey data.

Our third cohort group seeks to eliminate this confound by using a survey of women who make more than $30,000. Nevertheless, our use of this second group should not be ignored since advertising or some other method to entice a purchase could be used to sway a woman's mind. In this case, conspicuous consumption could crowd out essentials that are deemed the most important because of the limited financial resources of the women surveyed in this second group.

In other words, this group is the most relevant for policymakers because in the pursuit of consumption beyond sustainable development, home essentials for children or the women themselves are most likely to be crowded out because of the limited salaries of the women in question. Thus we could potentially see a shift in answers towards the 1-2 range for the visibility index for luxury goods.

This third cohort group would identify women, aged 18-55 and widowed with one or more kids and with incomes greater than $30,000. We would expect women in this third cohort group to display the greatest support for any rejection of our null hypothesis. These women would be expected to display a higher degree of conspicuous consumption (i.e., are more price inelastic to luxury goods presented above). Due to their higher income brackets, we would expect to see less of a confound in terms of what these women would like to have for themselves versus what they can actually afford. In this regards, using our survey instrument would potentially yield the same results as our second group of widows, only this time the results could mean more for legislators as these widows might indeed be willing to spend money on items and services not in the best interest of herself and/or her children. From a logit analysis perspective, a widow (married $\equiv 0$) would have a higher log odds ratio and hence an increased probability of noticing a neighbor's consumption of luxury goods versus necessities, all else being equal.

The final cohort group would consist of men, aged 18-55 and married with one or more kids. The purpose of including men in our study is not to study their consumption patterns necessarily. We are using this data as a benchmark so to speak. Therefore, we seek not only to confirm or deny our own study hypothesis that widowed women adopt the consumption patterns of men in terms of personal spending with regard to visibility, but also to display the difference of male and female consumption patterns in general. According to historical research and the use of

surveys we have brought in for our pilot study, men's consumption patterns would potentially show a 1-3 response for the visibility index. If we compare these answers with our second and third cohort groups, it would become clear that widowed women's consumption does indeed change. Further analysis of the specific answers would be necessary in order to discern exactly what items are "crowded out" (i.e., have the highest rankings of 5 on the visibility index). If these items indeed include services such as education and healthcare, our hypothesis will have been rejected for this particular pilot study. For the assessment of our fourth cohort group and for simplification, we will make the assumption that the man is the head-of-household, regardless of whether the wife works or not.

Procedure

Upon checking each participant's self-reported demographic data to belong to one of the cohort groups for this study, each respondent was then given the survey to fill out. Upon completion and return of the survey and informed consent forms, each respondent was given a gift card for their participation. The researcher had planned to organize a sample size of 80 participants living in Eastern Michigan through advertisements in *The Flint Journal* to include areas north to Saginaw and south to Pontiac, Michigan, evenly divided among the four subcategories. However, due to the hardship in finding respondents, especially for cohorts 2 and 3 (C2 and C3), we settled for a total N-size of 25. This sample size should be noted when interpreting the results and is further addressed in the discussion.

Results

We collected survey data from the four cohort groups (C1, n=7; C2, n=6; C3, n=7, C4, n=5) as well as the means and standard deviations for each question among each cohort group as well as among all twenty-five participants. We observed that the consumption elasticity mean for C1

was 2.9619 (SD: 0.8742); C2 was 3.156 (SD: 0.7319); C3 was 2.881 (SD: 0.7354), and C4 was 2.82 (SD: 1.1166). Thus, when isolating the marriage and income variables to account for widows with children who make more than $30,000 annually, the new mean produced does in fact decrease to the fourth cohort group's statistic over all thirty categories. In comparison to the second cohort (C2 = widows with children who make less than $30,000 annually), our consumption mean increased. This result was a bit unexpected; however, its analysis is not altogether surprising. We did not place as much emphasis on the income constraint for single-mothers who perhaps might need to work more than one job to make ends meet. In that regard, a time constraint becomes a burden to superficial conspicuous consumption pattern. Trends are notable; however, to answer our hypothesis, we care about whether these results are statistically significant. In using a between subjects analysis, in comparison of C1 and C2, our t-statistic was -.4; between C1 and C3, our t-statistic was 0.1735; and between C1 and C4, the t-statistic was .214. Thus none was significant.

Although this data is informative on a broad aspect, we seek something more specific. Hence, we undertook a within-subjects analysis to find those consumables that are indeed significantly different between cohort 1 and the remaining cohorts. We used a difference-of-means test for each consumption category to test this. After calculating these t-statistics (see Tables 2 and 3), we first found that nine categories were statistically different between married women and men (C1 vs. C4). These were food at home (X1), food out (X2), alcohol in public (X5), clothing (X6), laundry (X8), legal fees (X18), car repair (X21), education (X29), and charitable contributions (X30). We also found sixteen categories that were significant in either one or both comparisons between the first three cohorts. We focus on those categories that were significant for both cohorts, which reduced the pool to eight consumption groups: clothing (X6),

jewelry (X9), furniture in home (X13), home utilities (X14), medical care (X17), cable, pets, sports, and concerts (X28), education (X29), and charitable contributions (X30). See Tables 4 and 5 for ranking and category significance.

Next, we used an ordinal logit regression model to compute the probabilities that an individual belonging to one of our four cohort groups would notice a neighbor's consumption of one of the significant categories previously mentioned. This probability would then represent their consumption probability and thus quantify their reliance on luxury goods versus necessities. Specifically, we employed the Polytomous Universal Model (PLUM) using SPSS principally because our dependent variables – the seventeen total significant consumption categories – are ranked from one to five, albeit their exact distance apart is open to much variability for each respective participant.

To begin with, we express our ordinal logistic models by the equations

$$\ln(\phi_{i,k}) = \alpha_{i,k} - \beta_n x_n \qquad (4)$$

$$\ln(\phi_{i,k}) = \alpha_{i,k} - \beta_{m,p}(x_m * x_p), \qquad (5)$$

where $\ln(\phi_{i,k})$ is the logit, or the odds that a participant will select the k^{th} observation category ($k = 1...5$) for the i^{th} significant consumption group ($i = X6...X30$ for the first three cohorts and $i = X1...X30$ for C1 vs. C4). Equation (4) addresses our three predictor variables separately, whereas (5) addresses the interactive effects of marriage and income together. Since our comparison among cohorts C1 and C4 involved different consumption categories as well as different independent variables, we choose to separate our presentation data. We will only use (4) to analyze this relationship as gender will be our only independent variable. We will then use (4) and (5) to quantify the relationship among the significant categories found to exist between

cohorts 1, 2, and 3. First we will use (4) to analyze the married variable on its own, then the income variable, and finally the two taken together using (5). Furthermore, we have

$$\phi_{i,k} = prob(score \leq k) \,/\, prob(score > k)\,. \qquad (6)$$

Additionally, α_{ik} represents the x-intercept of each documented observation category for each significant consumption group, represented by the threshold values. This term is not necessarily vital to our analysis, but we have included the results nonetheless. The β-terms represents the coefficients for our independent variables, x_n and x_p, as represented by the location values in Tables 4 and 5. We used the interpretation that a negative β_n coefficient produces a positive term in our regression model and thus likely describe scores of three or lower in the observation category for married or widowed women (higher conspicuous consumption). A positive β_n, on the other hand, produces a negative term in the model and would mean scores mostly in the upper range, or greater than three (lower conspicuous consumption).

Higher cumulative percentages for response categories in the 1-2 range indicate a stronger degree of conspicuous consumption. Please contact the author for specific response rates regarding survey data. Since the widows from cohorts 2 and 3 seem to engage in conspicuous consumption in the categories of clothing, jewelry, furniture in home, and cable, pets, sports, and concerts, we expect to find negative coefficients (β_n) for the predictor variables married $\equiv 0$ and income $\equiv 0$ in those location categories. Married women engage in more of a conspicuous consumption type pattern for goods and services dealing with home utilities, medical care, drugs and dental visits, education, and charitable contributions. These categories would then have positive coefficients for the predictor variables. This intuitively makes sense. Women who have lost their husbands might indeed engage in habits that relate more to spending for herself rather than spending for the family. It should be noted however that the consumption categories were

not specific enough to delineate whether the luxury spending was restricted to the widow or her children. On the whole, however, these goods and services can be considered luxuries.

Next we further test the relationship between the consumption categories and the cohorts using the Wald statistic, which is the square of the ratio of the coefficient to its standard error. Tables 4 and 5 denote summaries of these statistics and their levels of significance for our comparison of married women versus married men and married women versus their widowed counterparts (C2 and C3). While the data sufficiently support our preliminary notions of differences in conspicuous consumption between married men and women and married and widowed women, we now seek to assign a quantifiable likelihood of this occurrence. Thus for food at home, we would say that for a one unit increase in gender (i.e., going from female $\equiv 0$ to male $\equiv 1$), we expect a 2.337 increase in the log odds of noticing a neighbor changing his/her consumption of food at home. An interpretation from Table 5 leads us to the conclusion that a one unit increase in married (i.e., going from widowed $\equiv 0$ to married $\equiv 1$) leads to a 5.485 decrease in the log odds of consumption of jewelry. However, it is also prudent to point out that a one unit increase in income (i.e., going from income less than \$10,000 annually $\equiv 0$ to income between \$10,000 and \$20,000 annually $\equiv 1$) leads to a 5.417 increase in the log odds of consumption of jewelry. This is addressed further in the discussion.

Next we seek to estimate the cumulative probabilities for those significant scenarios. Thus we have the following equation

$$prob(eventk) = 1/(1+e^{-(\alpha_{ik}-\beta_n x_n)}), \qquad (7)$$

which we will use to calculate our $\phi_{i,k}$ value. As an example, we examine our gender variable from Table 4 and look at the consumption category of clothing, X6. The probability that a

woman will specify a rank of 1 on the visibility index for her observation of consumption of this durable good would be

$$prob(eventk = 1) = 1/(1 + e^{-(-3.461+3.648)}) = .54661.$$

Here our β_n was set to zero since gender $\equiv 0$ for female. Then we observe that our logit, $\ln(\phi_{X6,1})$, is 0.18698. Then we know that $\phi_{X6,1} = 1.20561$. Thus the probability that a woman will specify a rank of 1 on the visibility index for the same category would be .54661, assuming ceteris paribus. In the context of our altered interpretation of the survey, a woman is approximately 55% likely to notice a neighbor's changing consumption of clothing almost immediately, whereas a married man would notice it almost immediately about 3% of the time. Although these results were in accordance with previous research, the other significant categories were not as similar. Table 6 displays the probabilities for all significant scenarios.

Discussion

Survey Significance

Engaging in this research, it appears we have tried to establish causation rather than correlation in predicting consumer expenditures for families of widows, which can be considered rather taboo for social research. However, the purpose of this article is not to ascribe a child's lacking education or otherwise heedless upbringing to a widowed woman's conspicuous consumption tendencies. Rather it is one exogenous factor generated within the family out of many exogenous variables (such as wage discrimination) in the workplace that could explain why child outcomes for single-parents are not as positive as those of more nuclear families. Indeed, this paper has sought to bridge the existing gap between the psychologically dynamic perspective of the family and the economic transitions they face. At its most extreme, this analysis has perhaps called into question a main assumption in economics: that all parties are

indeed rational beings, as losing a spouse is decidedly one of the most emotionally traumatizing experiences an adult faces and thus makes bereavement research among variable populations necessary (Bisconti, Bergemen, and Boker, 2004). Keeping this in mind, we underscore the importance of a difference between "happiness" and "utility" (Kimball & Willis, 2005). We posit that the expenditures of single-parent families represent their utility whereas the survey design used here is more a description of their happiness. As a result, the added "happiness" measure can help to alleviate the self-report bias that might afflict many survey respondents in previous research. A parent might feel guilty in reporting expensive purchases on jewelry or other luxury items rather than in her child's educational future. On the other hand, the participant would not hesitate in an honest reaction to another's expenditures, since that action does not immediately affect their own offspring. Although any measurement of "happiness" has confounded economists for years, its very neglect is what might stunt further research in understanding human behavior.

In his research on the topic, Heffetz found a high correlation among a good's visibility and its classification as a luxury *only* among a higher American income bracket (2006, pgs. 37-38). This research with widows confirms that finding. Reducing income to near or below poverty levels reduces the probability of conspicuous consumption for our second cohort group, although never quite completely eliminates it. Although Heffetz's goal for further research is to examine this type of consumption across races and urban and rural populations, we have advanced that empirical notion through the study of widows and yet simultaneously addressed a concern of a wash-out of Social Security with the retirement of "baby boomers."

Interpretation of Results

With our results, we find that higher percentages in response categories 1 and 2 likely mean that those participants value that good or service for themselves and/or their children. Specifically, we see that with the gender variable, women place more interest in clothing and alcohol in public than men, perhaps suggesting that women are more inclined to drink socially away from the children than men. This last interpretation is to be taken loosely, as the category alcohol at home (X4) was not significant for either gender. However, men (gender $\equiv 1$) place more emphasis on goods and services related to food and car repair.

Additionally, we see that our dissonance problem with women in the second cohort group was found to be accurate. One category that was significant for income $\equiv 0$ was that of jewelry (X9) where $p < .10$. Using our probability measure from (7), we see that under 2% of women surveyed would notice a neighbor's change in consumption of jewelry a while after meeting them. On the contrary, widowed women in general have a 99% chance of noticing the change a while after. Since these results are just about polar opposites, it is not surprising that the scaled variable (married $\equiv 0$ * income $\equiv 0$) is not significant. Similar results were found for the intersections of income $\equiv 0$ and married $\equiv 0$ in the category of cable, sports, pets, and concerts (X28) and income $\equiv 5$ and both married $\equiv 0$ and married $\equiv 1$ in the category of education (X29).

We now turn to our principle analysis – those category differences between the married and non-married groups. In the categories of jewelry (X9), furniture (X13), and cable, sports, pets, and concerts (X28), we find that widowed women place higher value in the possession of these goods and services. This same group places considerably less importance on education that those in the married cohort. In terms of a "conspicuous consumption" analogy, we could interpret this as three mainly visible expenditures crowd out the necessity of education. We had thought that other necessities might be crowded out, including home utilities and medical care; the results

were not significant for these categories. Thus, it is conceivable that widowhood and the process of coping and bereavement for a spouse might have an impact on child welfare. Of course, a detailed expenditure analysis would be needed to confirm this finding. However, a research endeavor of that magnitude has its limitations. A longitudinal analysis is difficult to carry out with this population since widowhood is not a controllable affair; expenditures after widowhood are hard to assess since comparison data is not readily available. As mentioned previously, self-report bias is another obstacle.

Relevance and Limitations

This analysis is highly relative to child outcomes research. Previous literature attributes the overall scarcity of time and financial resources of single-parent families to deteriorating child outcomes. In addressing these issues, researchers suggest job training and educational programs to alleviate these economic constraints (Lino, 1994). This article, however, is suggestive of a psychological dynamic for our subpopulation of interest. Thus, mandatory grief counseling might be a necessity, not merely an option, for widows with children since they are the recipients of Social Security survivors' benefits (Silverman and Englander, 1975). Indeed, while pursuing this research, the author realized that this same root of psychology may very well be seen in divorced parents who receive benefits as well, particularly those cases of highly contestable divorces where the parents might feel some liberty in the outcome, what was previously mentioned as a "depressed-improved" group. Although divorce was not a variable considered in this study, it is pertinent to further research. We suspect that an even stronger link of the so-called "conspicuous consumption" might be at work for this particular subpopulation.

Using divorced parents might also help to improve our own test results. The principle weakness we had in this research is locating enough widows to draw any conclusions about this

subpopulation in general. While we located thirteen individuals who would complete our survey, we initially contacted twenty-one. It is imperative to note that just because the prevalence of widows is low does not make the study of the impact of their occurrence any less relevant. With over half a million widows with children under the age of forty-five receiving transfers, research into the psychological dimension of consumption for vulnerable populations is mandatory. Furthermore, a widow's labor supply fluctuation[b] due to the family shock of a deceased spouse might be a necessary mitigating factor towards the receipt of government doles for those families in which conspicuous consumption is prevalent.

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[b] The author plans to further address this research extension of this topic as a research assistant of the Center for Human Resource Research (CHRR) at the Ohio State University.

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Table 1. Demographic Statistics

Participants	Family Income**	Number of Children (average age ≤ 18)	Education Achieved	Age
Cohort 1 Married Females (n = 7)	≈ $49,286 σ = 14.7	1.3, σ = 0.49 (10.6, σ = 5.6)	Graduate degree (1), Bachelors (1), vocational (1), Some college (2), GED (2)	≈ 37.86 years σ = 7.6 years
Cohort 2 Widows under $30,000 (n = 6)	≈ $20,333 σ = 4.6	1.8, σ = 1.2 (9.3, σ = 3.9)	Some college (2), GED (2), some high school (2)	≈ 31.3 years σ = 8.0 years
Cohort 3 Widows over $30,000 (n = 7)	≈ $40,857 σ = 8.0	1.1, σ = 0.38 (16.8, σ = 1.1)	Vocational (1), Bachelors (2), Some College (1), GED (3)	≈ 49.9 years σ = 7.3 years
Cohort 4 Married Males (n = 5)	≈ $49,600 σ = 11.1	2, σ = 0.70 (13.3, σ = 4.2)	Bachelors (3), Some college (2)	≈ 47.0 years σ = 8.3 years

** All forms of public assistance were included in the survey question.

Table 2. T-Statistics for Cohort Groups C1 vs. C2 with df=12 (1) and C1 vs. C3 with df=13 (2) and the levels of significance (p-values)**

	X2	X6	X7	X8	X9	X10	X12	X13	X14	X15	X16	X17	X19	X28	X29	X30
Tstatistic(1)	1.49[1]	1.46[1]	.77	1.99[2]	1.99[2]	1.01	-2.71[3]	2.69[3]	1.71[1]	1.99[2]	1.87[2]	3.74[4]	1.42[1]	1.80[2]	2.9[5]	4.11[4]
Tstatistic(2)	1.24	2.51[3]	2.47[3]	1.03	5.44[6]	1.73[1]	.267	1.95[2]	-1.4[1]	0	.89	2.93[5]	.97	2.27[3]	1.7[1]	-1.9[2]

Table 3. T-Statistics for Cohort Groups C1 vs. C4 with df=11 (3) and the levels of significance (p-values)**

	X1	X2	X5	X6	X8	X18	X21	X29	X30
Tstatistic(3)	2.49[3]	1.72[1]	-1.37[1]	-1.85[2]	-2.15[2]	1.41[1]	2.87[5]	-1.73[1]	-1.39[1]

** Using only two-tail tests

[1] Level of significance to be .2
[2] Level of significance to be .1
[3] Level of significance to be .05
[4] Level of significance to be .01
[5] Level of significance to be .02
[6] Level of significance to be .001

Table 4. Significance Values for Consumption Comparisons – Independent Variable: Gender

Values	Consumption Categories	Estimate	Std. Error	Wald	df	Sig.
Threshold	[Food, home=2.00]	2.993	1.223	5.992	1	.014
	[Food, home=3.00]	5.307	1.548	11.756	1	.001
Location	[Gender=.00]	2.337	1.229	3.617	1	.057
Threshold	[Food, out=2.00]	3.940	1.284	9.414	1	.002
Location	[Gender=.00]	2.821	1.251	5.087	1	.024
Threshold	[Alcohol, public=2.00]	1.760	1.140	2.383	1	.123
Location	[Gender=.00]	-2.402	1.219	3.882	1	.049
Threshold	[Clothing=1.00]	-3.461	1.275	7.373	1	.007
Location	[Gender=.00]	-3.648	1.297	7.909	1	.005
Threshold	[Car repair=3.00]	19.624	.559	1232.3	1	.000
	[Car repair=4.00]	21.630	.469	2128.6	1	.000
Location	[Gender=.00]	21.011	.000	.	1	.

Table 5. Significance Values for Consumption Comparisons – Independent Variables: Marriage and Income

Values	Consumption Category	Estimate	Std. Error	Wald	df	Sig.
Threshold	[Jewelry=1.00]	-3.853	1.835	4.408	1	.036
Location	[Married=.00]	-5.485	1.763	9.682	1	.002
	[Income=.00]	5.417	3.011	3.238	1	.072
Threshold	[Furniture=3.00]	3.785	1.873	4.086	1	.043
Location	[Married=.00]	-3.583	1.454	6.074	1	.014
Threshold	[Medical = 2.00]	18.600	6254.380	.000	1	.998
Location	[Married=.00]	4.677	1.640	8.134	1	.004
Threshold	[Cable=1.00]	-2.376	1.611	2.175	1	.140
Location	[Married=.00]	-3.848	1.483	6.730	1	.009
	[Income=.00]	5.339	2.861	3.482	1	.062
Threshold	[Education=1.00]	-3.257	1.816	3.217	1	.073
Location	[Married=.00]	2.691	1.357	3.931	1	.047
	[Income=5.00]	-3.687	2.079	3.145	1	.076
Threshold	[Charities=4.00]	2.920	1.554	3.532	1	.060
Location	[Married=.00]	2.312	1.208	3.661	1	.056

Figure 1. Titles of Thirty Consumption Categories

X1=Food at home
X2=Food out
X3=Cigarettes
X4=Alcohol at home
X5=Alcohol in public
X6=Clothing
X7=Undergarments
X8=Laundry
X9=Jewelry
X10=Cosmetic
X11=Rent for home
X12=Hotel expenditures
X13=Furniture in home
X14=Home utilities
X15=Home phone use
X16=Home/fire insurance
X17=Medical care, drugs, dentists
X18=Legal fees
X19=Life insurance
X20=New cars
X21=Car repair
X22=Gasoline
X23=Car insurance
X24=Public transportation
X25=Air travel
X26=Books, newspapers, etc.
X27=Computers, games, TVs, music (cellular phone)
X28=Cable, pets, sports, concerts
X29=Education (tuition)
X30=Contribution to charities

Table 6. Estimated Cumulative Response Probabilities*

Descriptive Status Category	Probability for Response 1	Probability for Response 2	Probability for Response 3	Probability for Response 4
Married ≡ 0				
Jewelry (X9)	.83644	.98128	.99897	
Furniture (X13)	.92649	.99143	.99937	
Medical care (X17)		1.000		
Cable/sports/pets(X28)	.81336	.98851	.99802	
Education (X29)	.00260	.07116	.38485	1.000
Charity (X30)		.03406	.26993	.64748
Married ≡ 1				
Jewelry (X9)	.02078	.17858	.80059	
Furniture (X13)	.25942	.76278	.97780	
Medical care (X17)		1.000		
Cable/sports/pets(X28)	.08502	.64726	.91498	
Education (X29)	.03708	.53046	.90221	1.000
Charity (X30)		.26250	.78868	.94883
Income ≡ 0				
Jewelry (X9)	.00009	.00096	.01752	
Cable/sports/pets(X28)	.00045	.00873	.04913	
Income ≡ 5				
Education (X29)	.60587	.97831	.99729	1.000
Gender ≡ 0				
Food at home (X1)	.29111	.65836	.95120	
Food out (X2)	.19608	.75380		
Alcohol in Public (X5)	.65521	.98466		
Clothing (X6)	.54661	.86164	.98543	.99427
Car repair (X21)	.00000	.00000	.19989	.64999
Gender ≡ 1				
Food at home (X1)	.80954	.95226	.99507	
Food out (X2)	.80377	.98092		
Alcohol in Public (X5)	.14679	.85321		
Clothing (X6)	.03044	.13955	.63784	.81891
Car repair (X21)	.20005	.40011	1.000	

*Since logit regression is a cumulative percentage distribution for each response category, each probability represents the probability $prob(score \leq k)$ with k=1…5. Thus we have excluded a column for the probability response 5 since that would include 100% of the responses for all categories.